# The Role of Physicians in Creating Health Equity

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**Professor of Medicine**

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**University of Texas Southwestern Medical Center**

# Conflict of interest

- I have no conflicts of interest to disclose

# Learning Objectives

- Elucidate the health disparities nationally and in our midst locally
- Focus attention on the role of physicians in improving health equity
- Provide evidence of successful interventions for healthcare providers to improve health equity

# What is Health Equity ?

- Healthy People 2020 defines health equity as "attainment of the highest level of health for all people. Providing the opportunity for every individual to reach their optimal level of health.

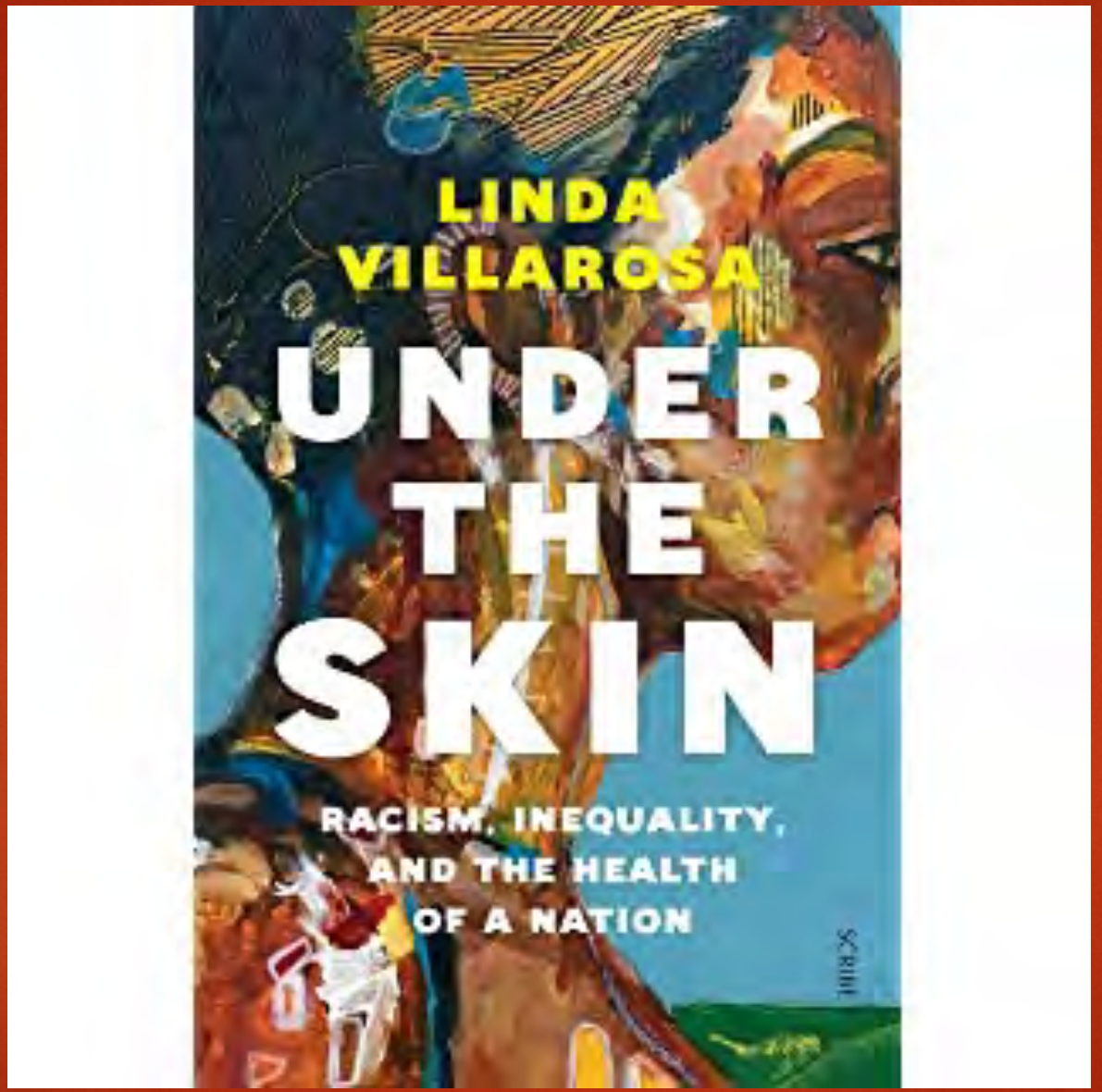
- Health Equity does not mean giving everybody the same thing.


EQUALITY

# What is a health care disparity?

- "Health care disparity is not simply a difference in health outcomes by race or ethnicity, but a disproportionate difference attributable to variables other than access to care."

Gomes C, McGuire TG. Identifying the source of racial and ethnic disparities. In: Smedley B, Stith AV, Nelson AR, eds. Unequal Treatment. National Academies Press: 2003


LINDA VILLAROSA
UNDER THE SKIN
RACISM, INEQUALITY, AND THE HEALTH OF A NATION
SCRIBE

# Three Main Reasons for Racial Health Disparities

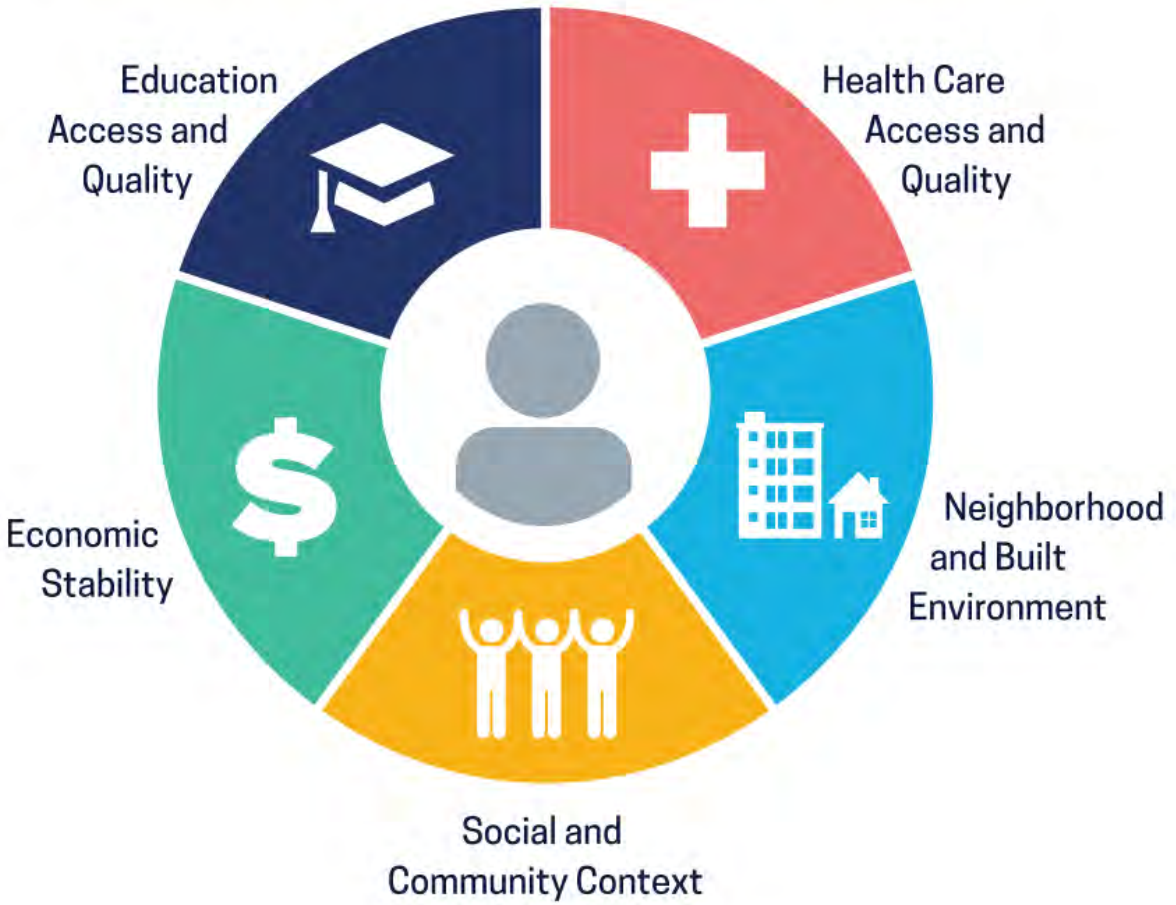
**Longstanding discrimination** in the institutions and structures of American society that has harmed and continues to harm Black and other minority **communities making them less "healthy".**

Racism in society **that wears away the bodies** of Black people and others who are treated poorly

**Bias in healthcare** that creates a system of **unequal treatment**

Villarosa, L. Under the Skin: The Hidden Toll of Racism on American Lives and on the Health of our Nation. 2022 ISBN 9780385544887

# Social Determinants of Health




Social Determinants of Health
Copyright-free

Healthy People 2030

# Why does this matter to you?

## WHO DO WE SERVE?

**Figure 21: Dallas County Key Characteristics, 2016 - 2020**


**Total Population**
2,613,539

**Medial Household Income**
$61,870

**BS degree or above**
32.5%

**Employment Rate**
65.4%

**Total Housing Units**
1,038,656

**No Healthcare Coverage**
20.8%

**Total Employer Establishments**
67,311

**Total Households**
945,996

**Hispanic/Latino (any race)**
1,057,835

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

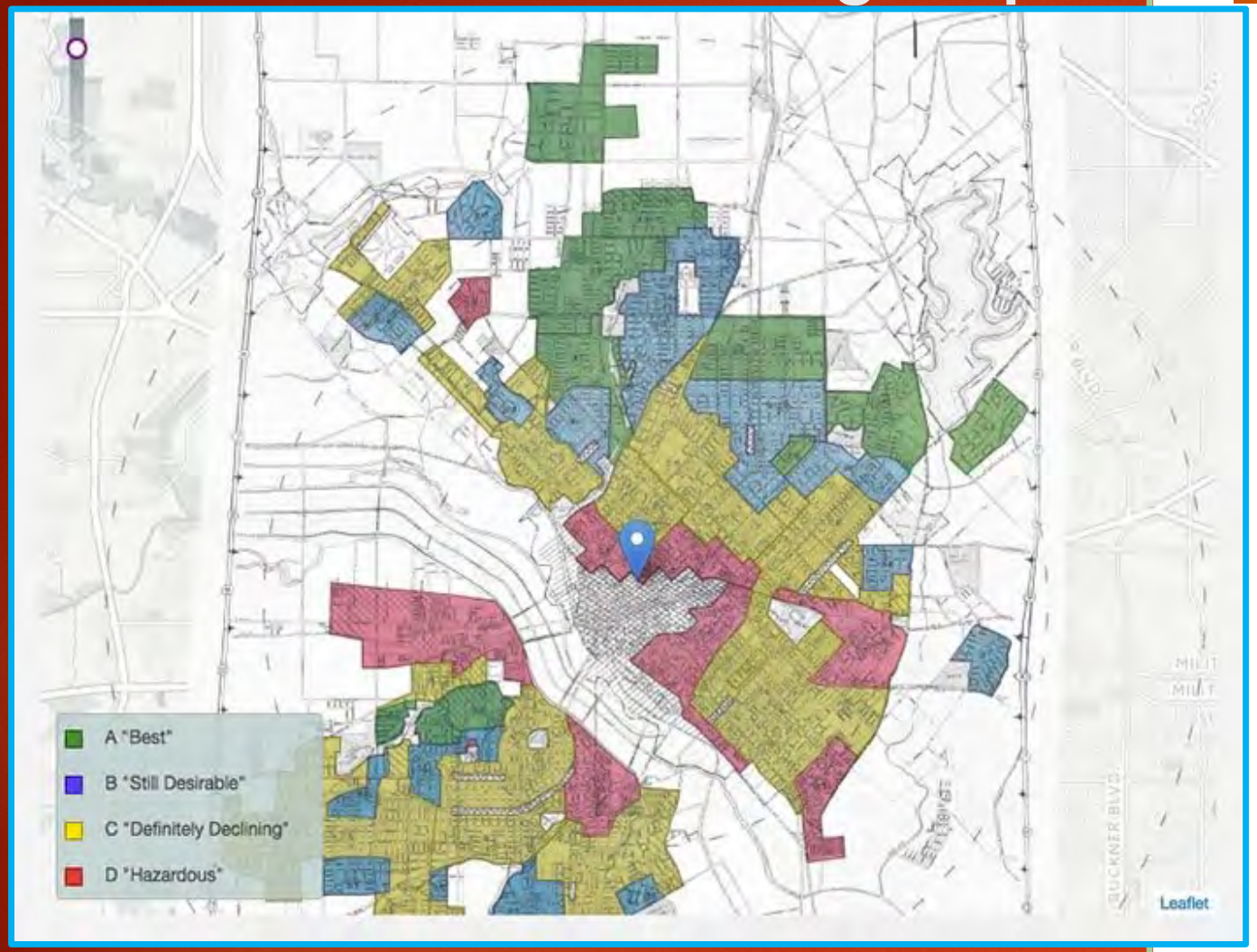
DALLAS COUNTY
HEALTH AND HUMAN SERVICES

Community Health Needs Assessment
Predominant Race/Ethnicity by Zip-code

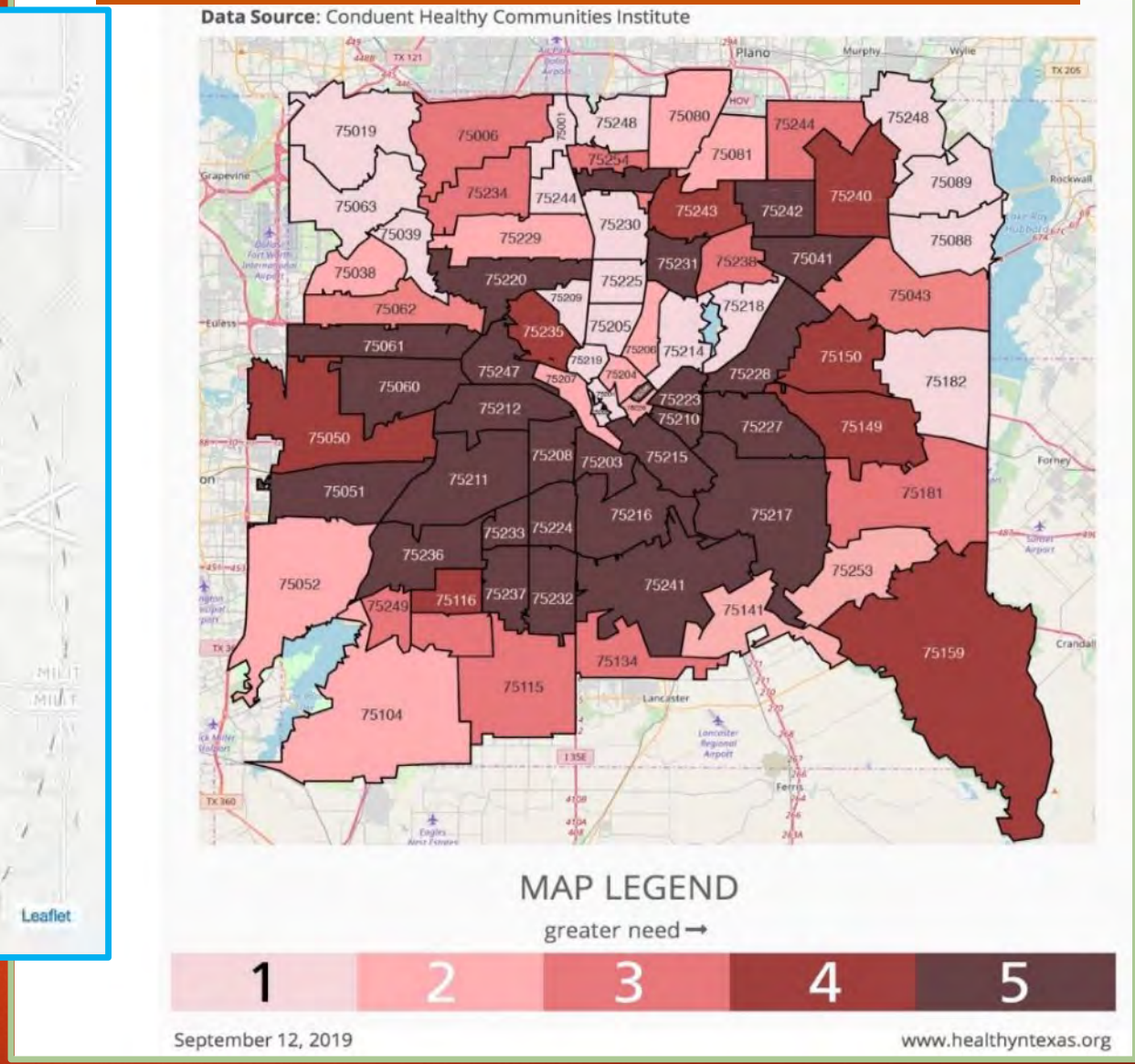
Caucasian 31%
Latino 39%
African American 23%
Asian 6%


New Solutions, Inc.

# 1937 Dallas Redlining Map




# 2019 SocioNeeds Index Map

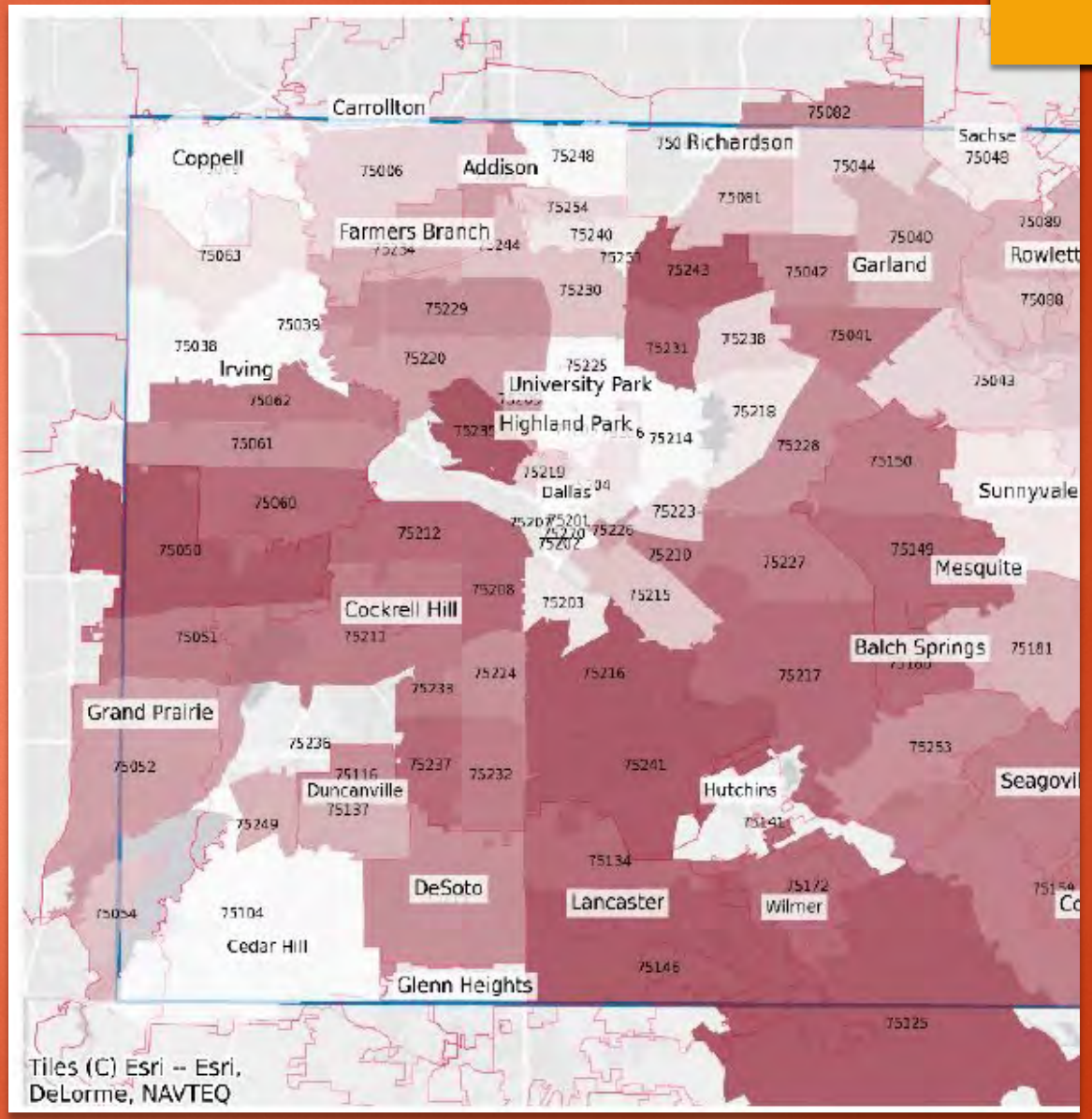


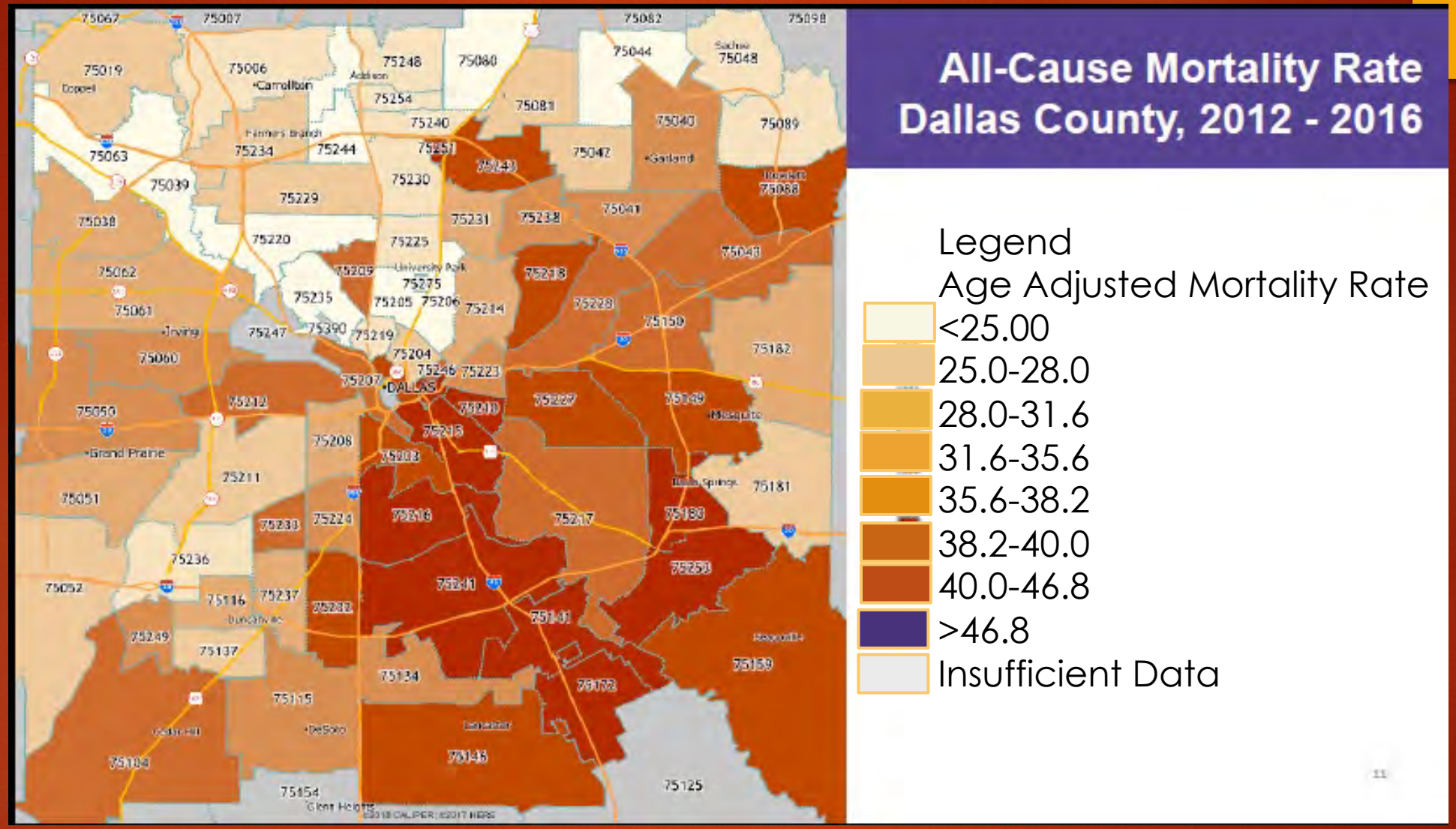

WWW.HEALTHYTEXAS.ORG
TEXAS DEPARTMENT OF STATE HEALTH SERVICES

Indicators: Education, Income, language, occupation, poverty , unemployment

# Deprivation Areas of Dallas County 2020

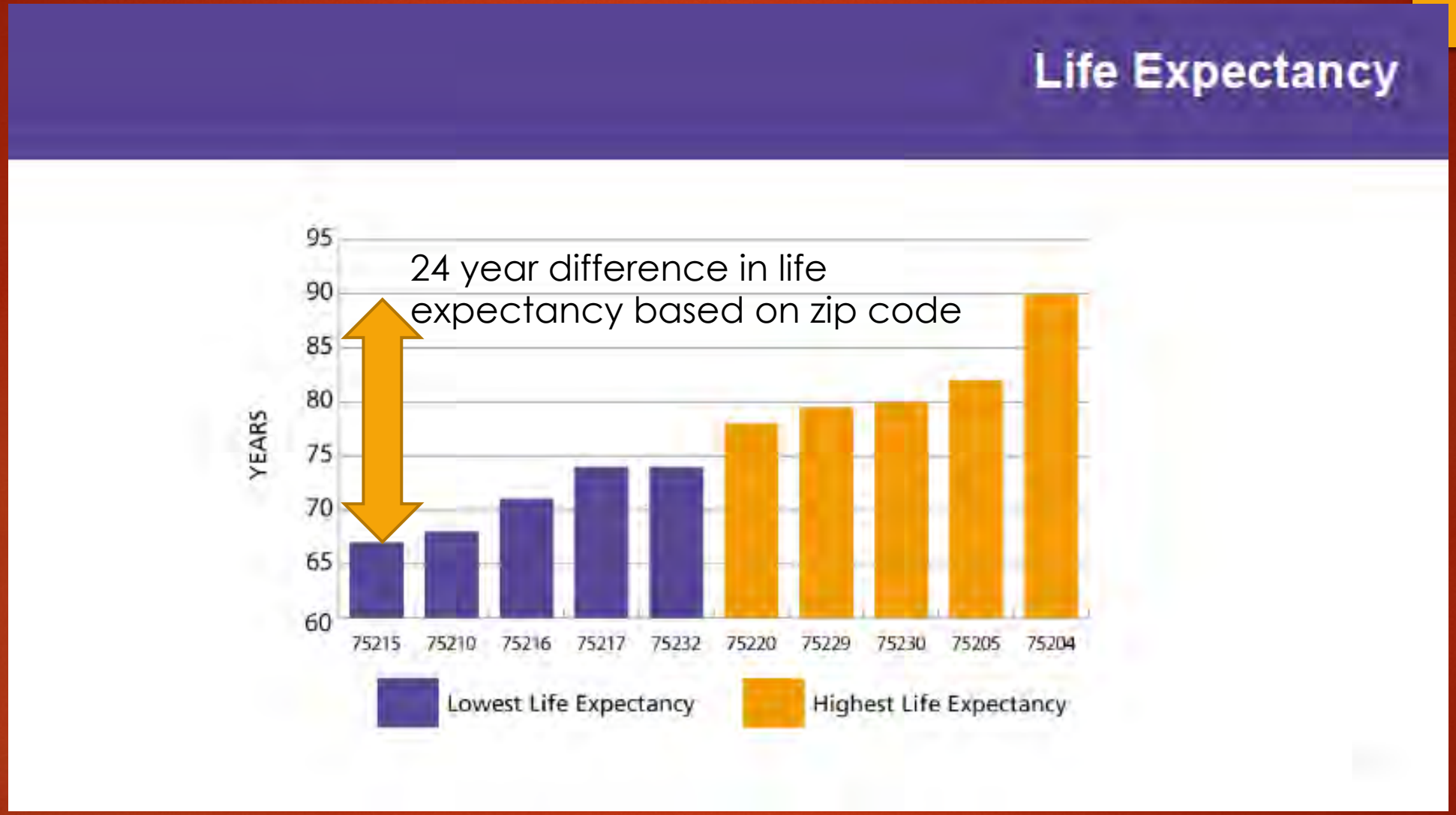
- ADI is an index of poverty, education, housing and employment. The darker the color, the greater the need.






Texas Department of State Health Services

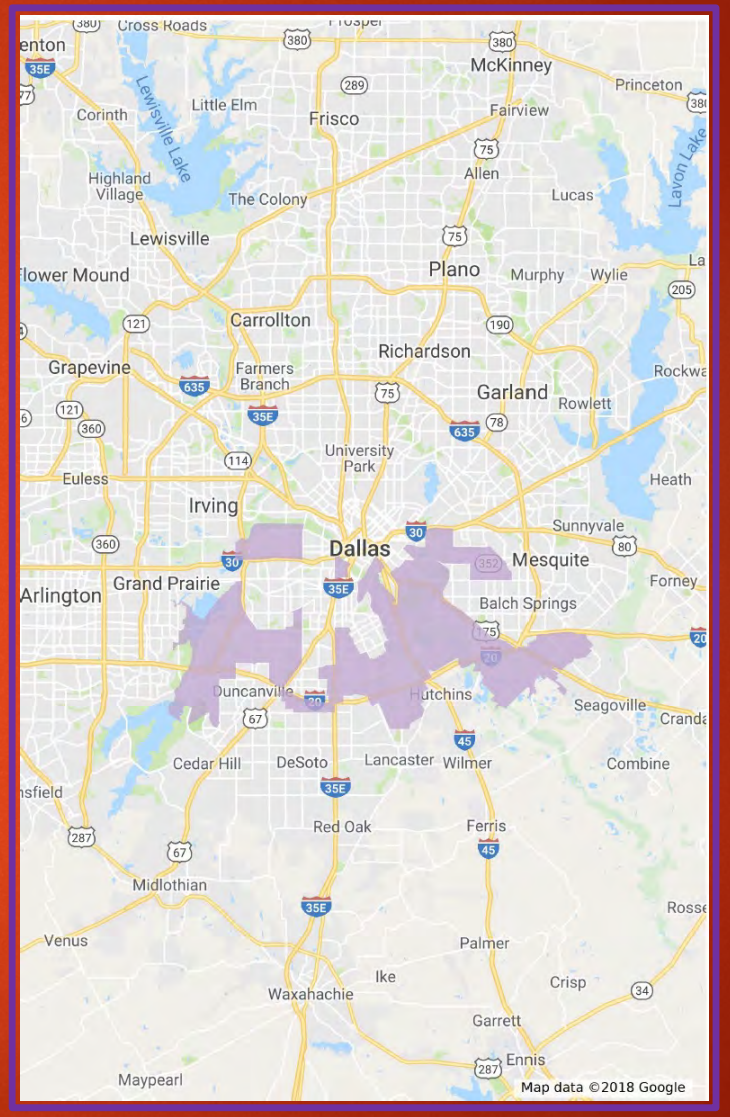
# Dallas County Life Expectancy by Zip Code




DFWC Foundation Regional Data 2018
Dallas County Community Health Need Assessment 2019

# Current Food Deserts in Dallas TX 2018

A food desert is an area that lacks access to affordable fruits, vegetables, whole grains, low fat milk, within a 1 mile with no transportation.

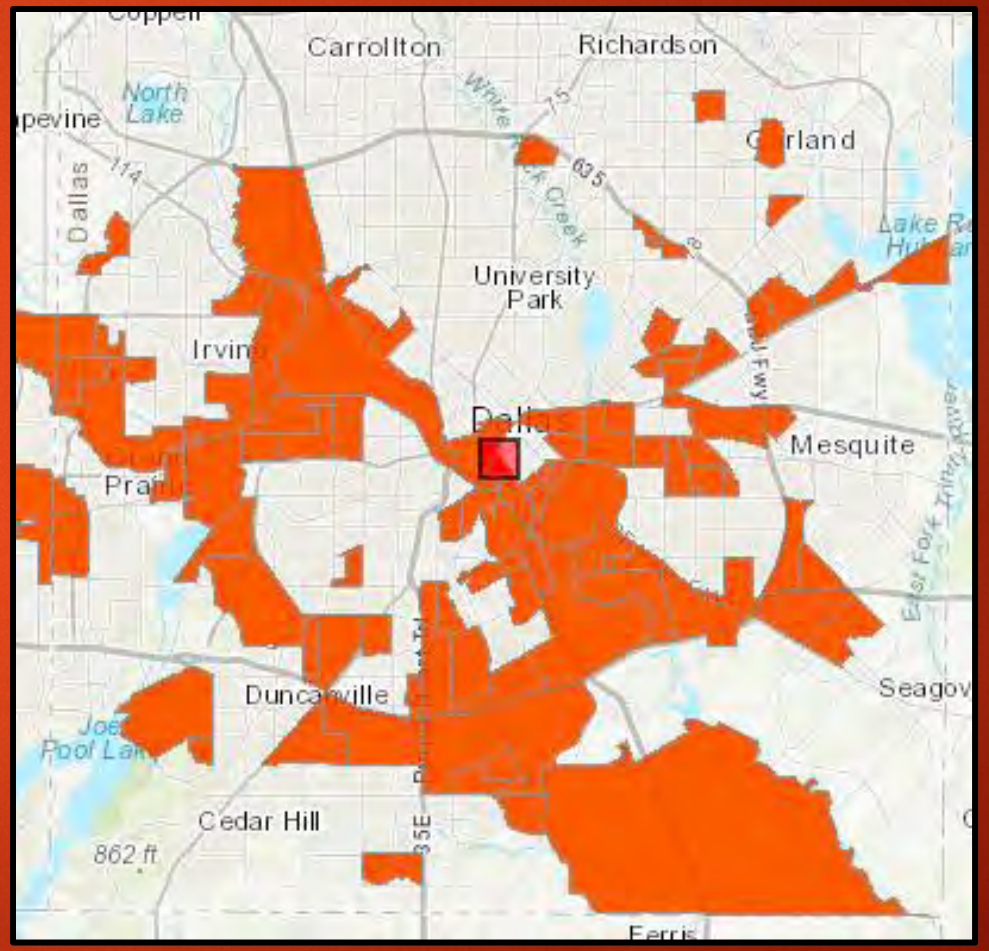



* Food Deserts shown in purple

# Current Food Deserts in Dallas TX 2022

Low income, low access areas

A food desert is an area that lacks access to affordable fruits, vegetables, whole grains, low fat milk, within a 1 mile with no transportation.




* Food Deserts shown in purple

# Food Deserts

**23.5** million people live in urban neighborhoods and rural towns with limited access to fresh, affordable, healthy food, according to the USDA.

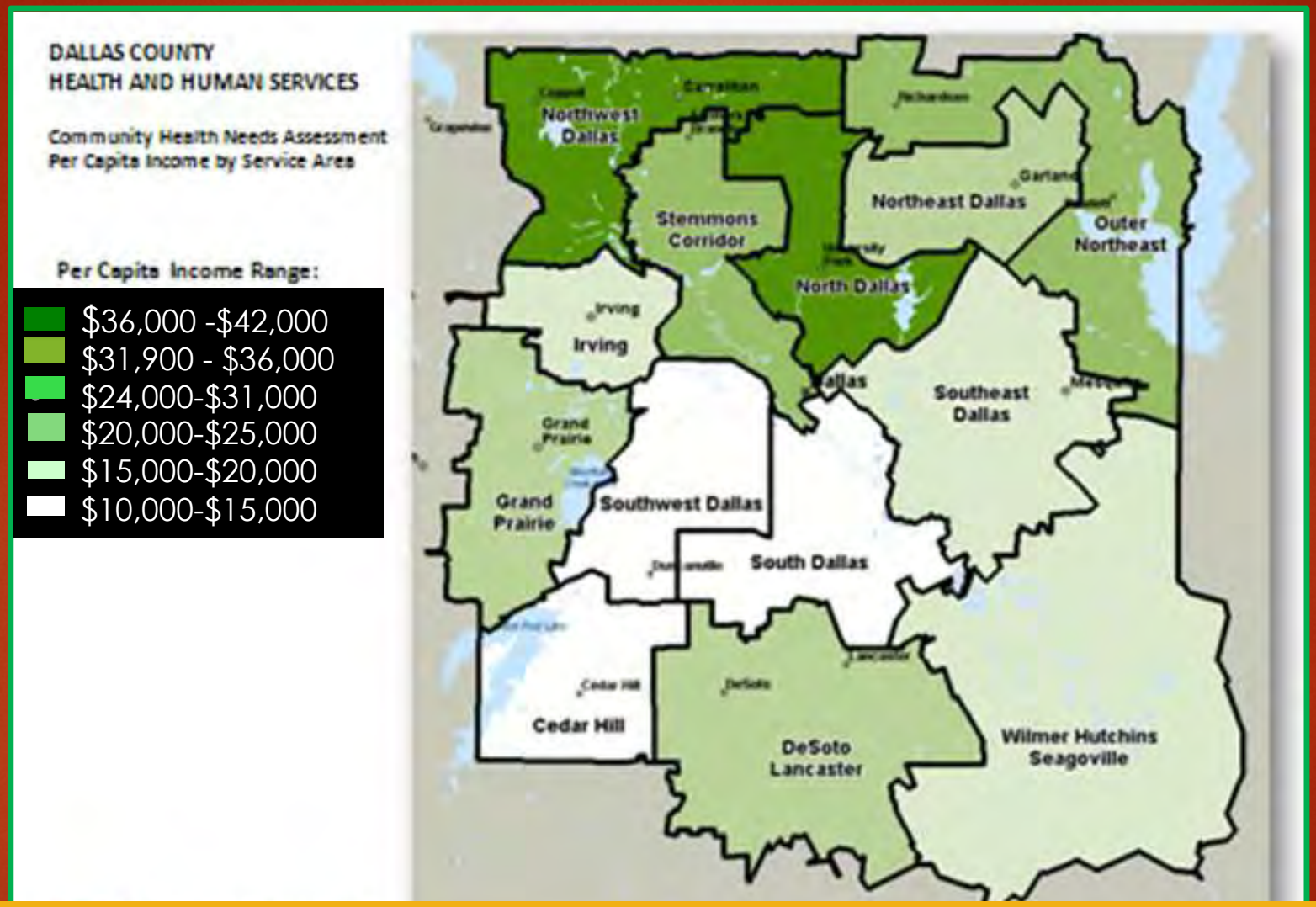
**2.1** million households do not own a vehicle and live more than 1 mile from the nearest grocery store.

People of the poorest socio-economic status have **2.5 times** the exposure to fast food restaurants compared to those living in the wealthiest areas.


Low income zip codes have more **30%** convenience stores, which tend to lack healthy items, than middle-income zipcodes.

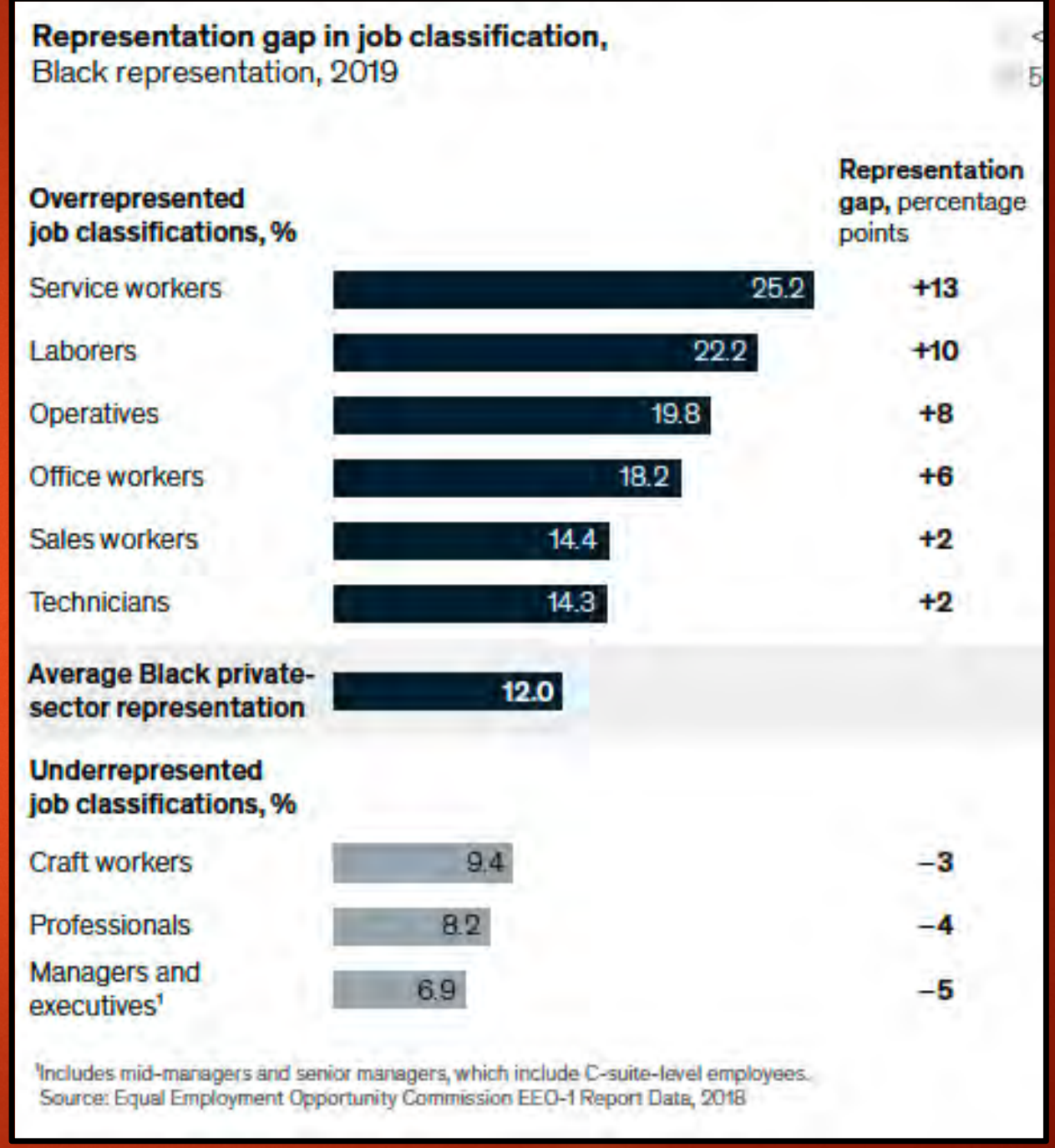
**150-200** jobs can be created by a large retail grocery market.

# Dallas County Per Capita Income Level



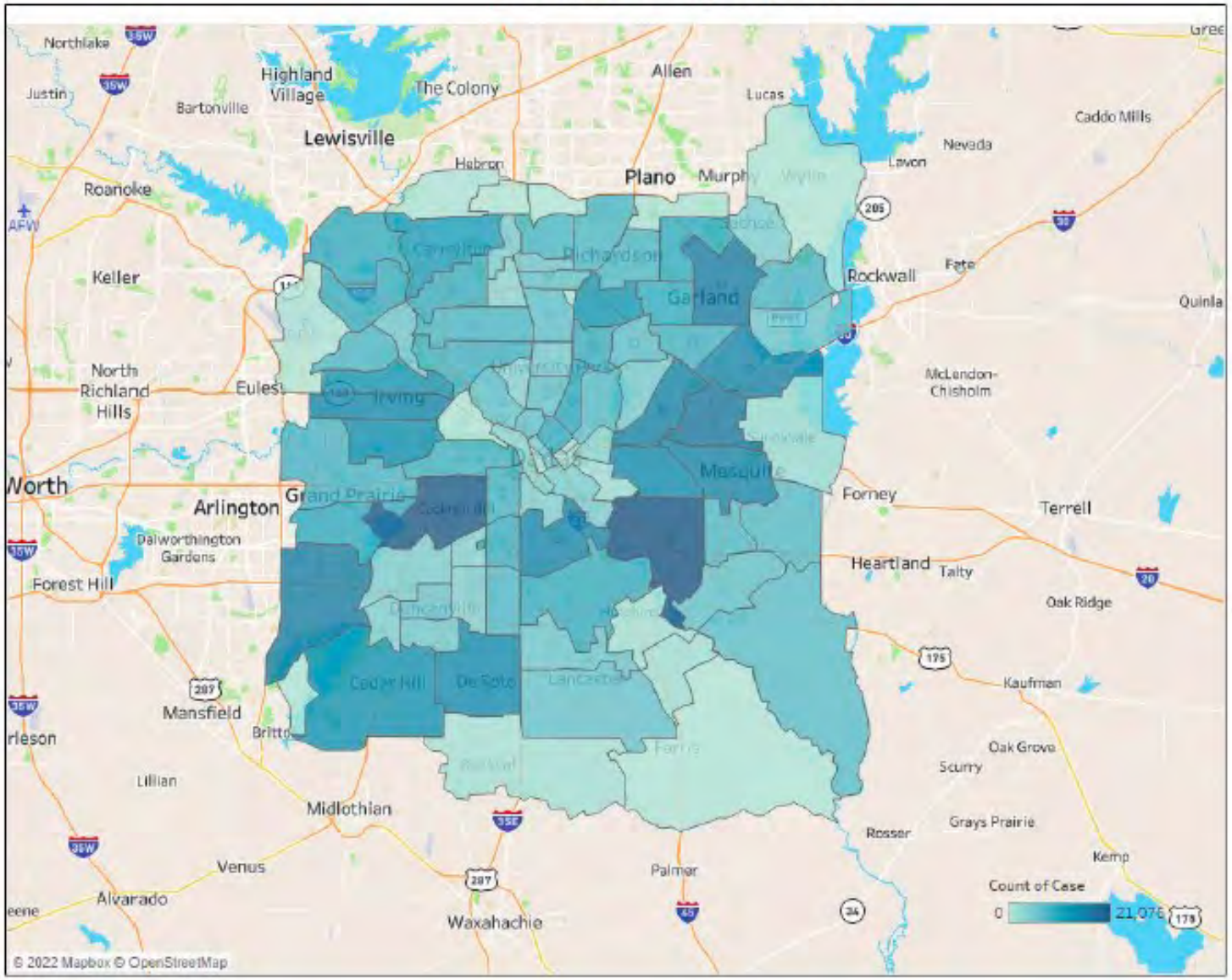

Average per capita income $24,200
14% County Residents below poverty level
24.5% < High School Education

***Blacks are 2X more likely to be service worker and 25% less likely to be managers or professionals.***

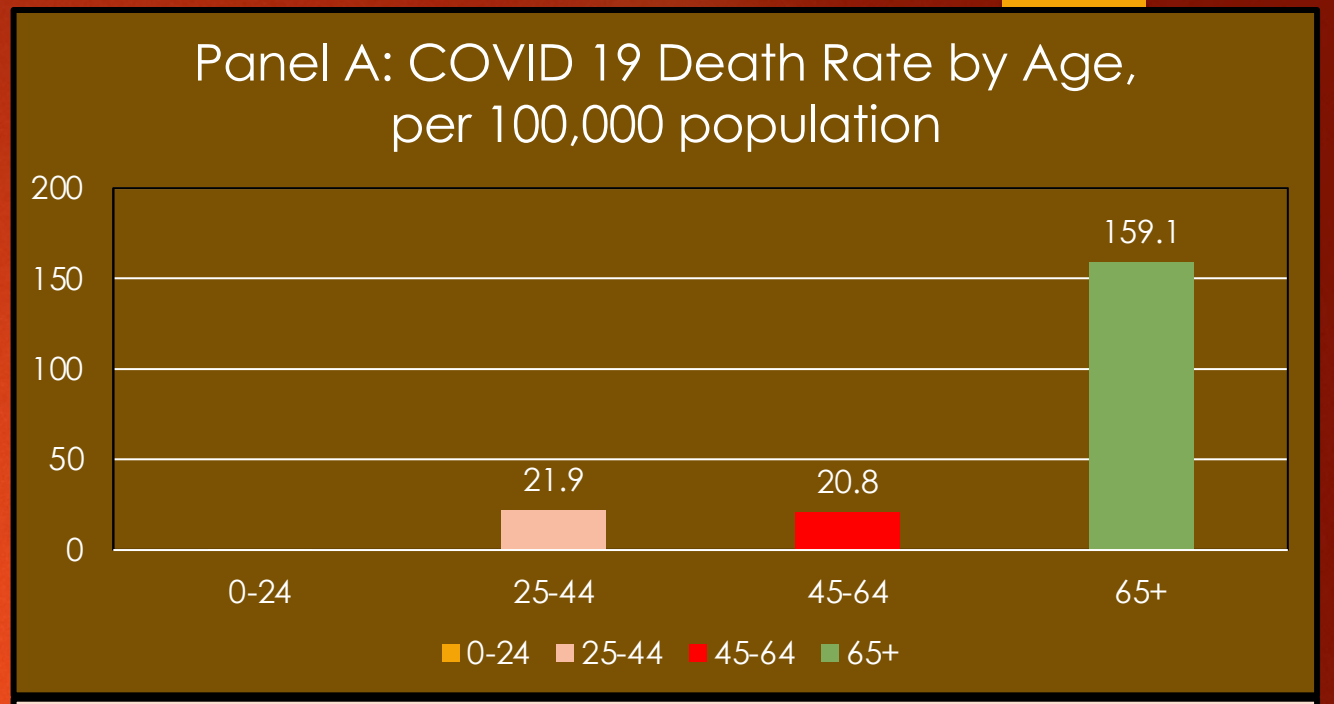


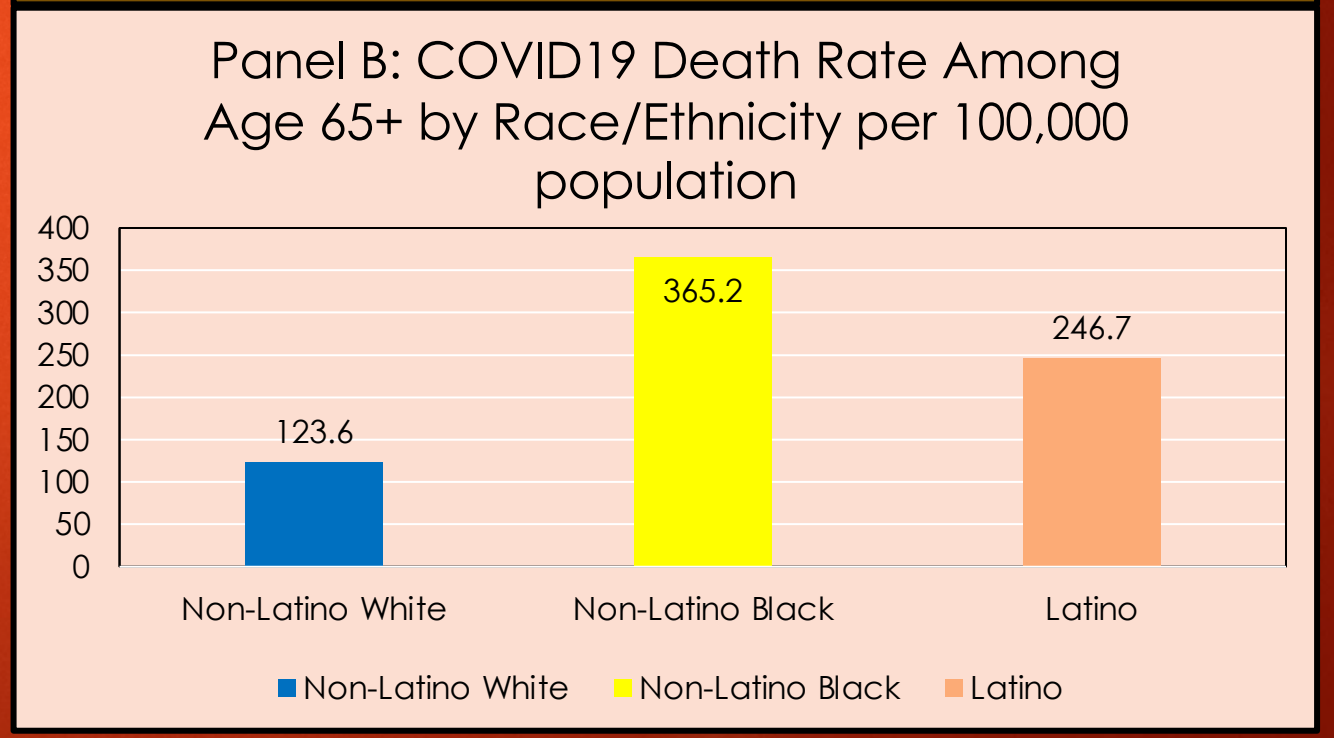

Mckinsey & Company Report 02/2021: Race in the Workplace

Figure 1. Cumulative COVID-19 Cases by Zip Code, Dallas County
Total as of July 15, 2022



# The Color of COVID-19: Structural Racism and the Pandemic's Disproportionate Impact on Older Racial and Ethnic Minorities




Garcia MA Gerontology Society 2020

# HOW is COVID-19 related? (as of May 25, 2020)

> 28% of people diagnosed with COVID-19 in the United States are Hispanic, (CDC).

In predominantly Black counties versus White Counties in the

- COVID-19 infection rate is 3 times higher
- COVID-19 death rate is 6-fold higher

***Social Determinants of Health:***

- Densely populated communities
- High crime rates
- Poor food sources
- Low SES

It's not just the cities:

**Iowa:** Latinos 6% population but 20% of COVID-19 cases

**Washington State:** Latinos 13% population, but 31% COVID-19 cases

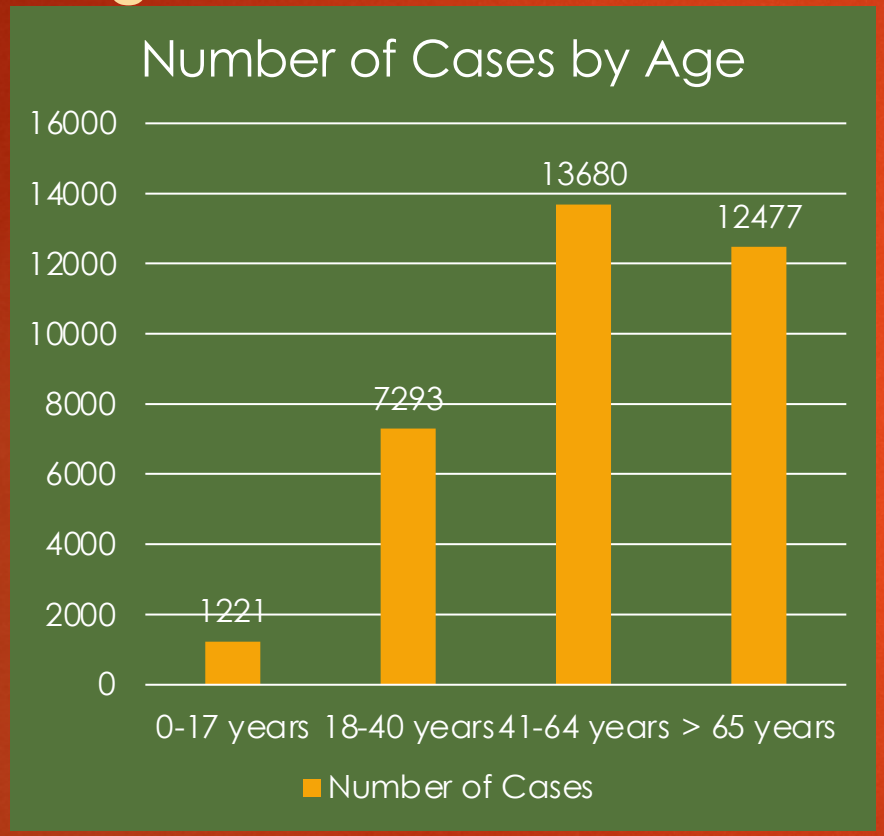
**Florida:** Latinos 25% population, but approximately 40% of COVID-19 cases

New York Times May 27, 2020

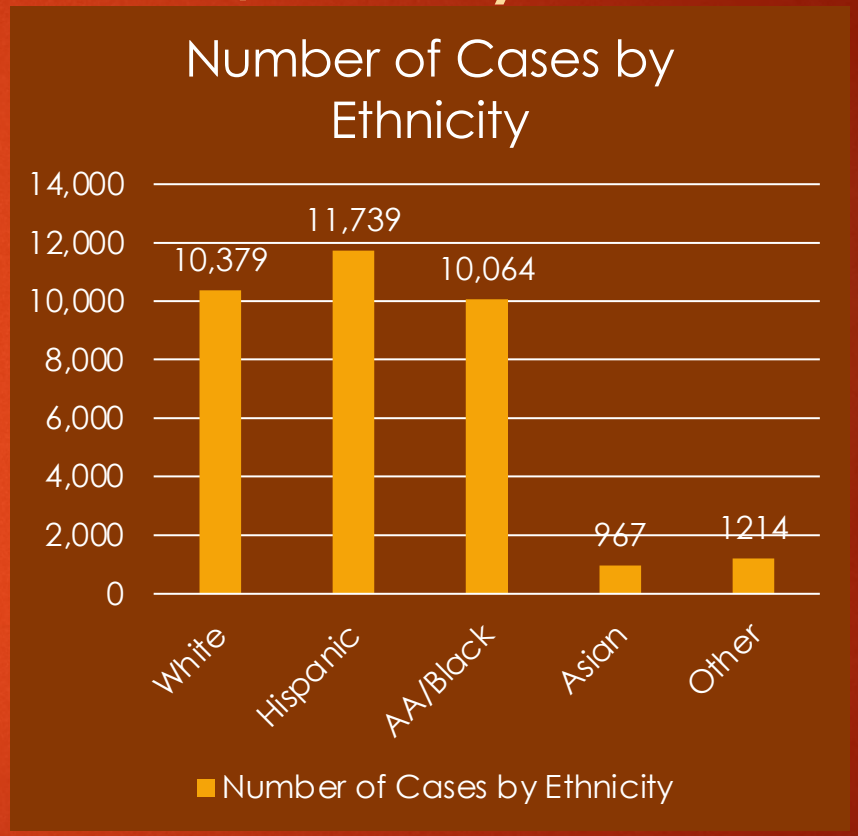
Sources: CDC; Johns Hopkins University; American Community Survey

# Dallas County Cumulative Hospitalized Confirmed COVID-19 as of 7/15/22

## Age

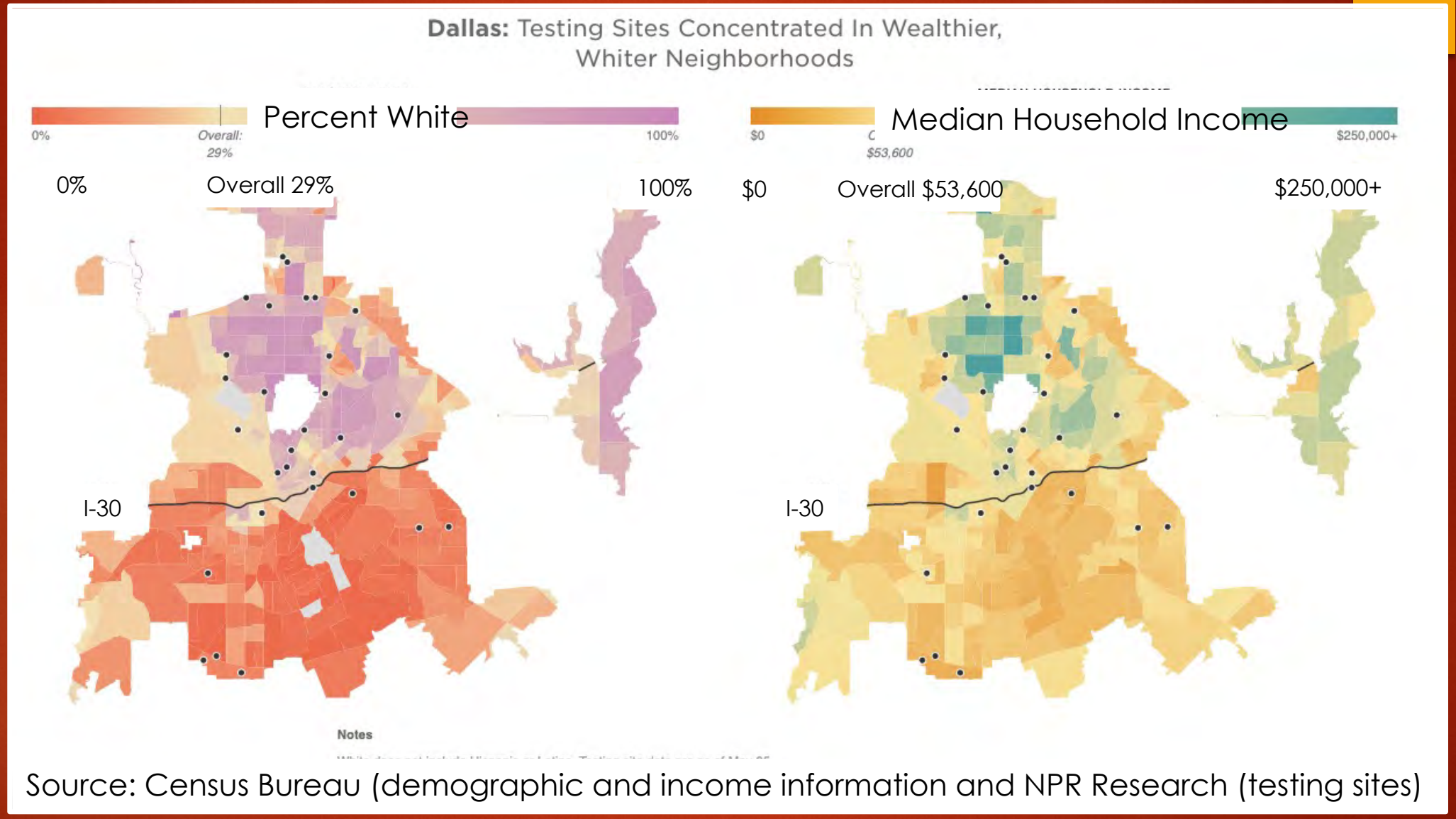



## Race/Ethnicity




Total Cumulative Hospitalizations: 34,672
Total Cumulative ICU Admissions: 8113
Total Cumulative Cases on Ventilator: 4393

# Dallas: Testing Sites Concentrated in Wealthier Neighborhoods

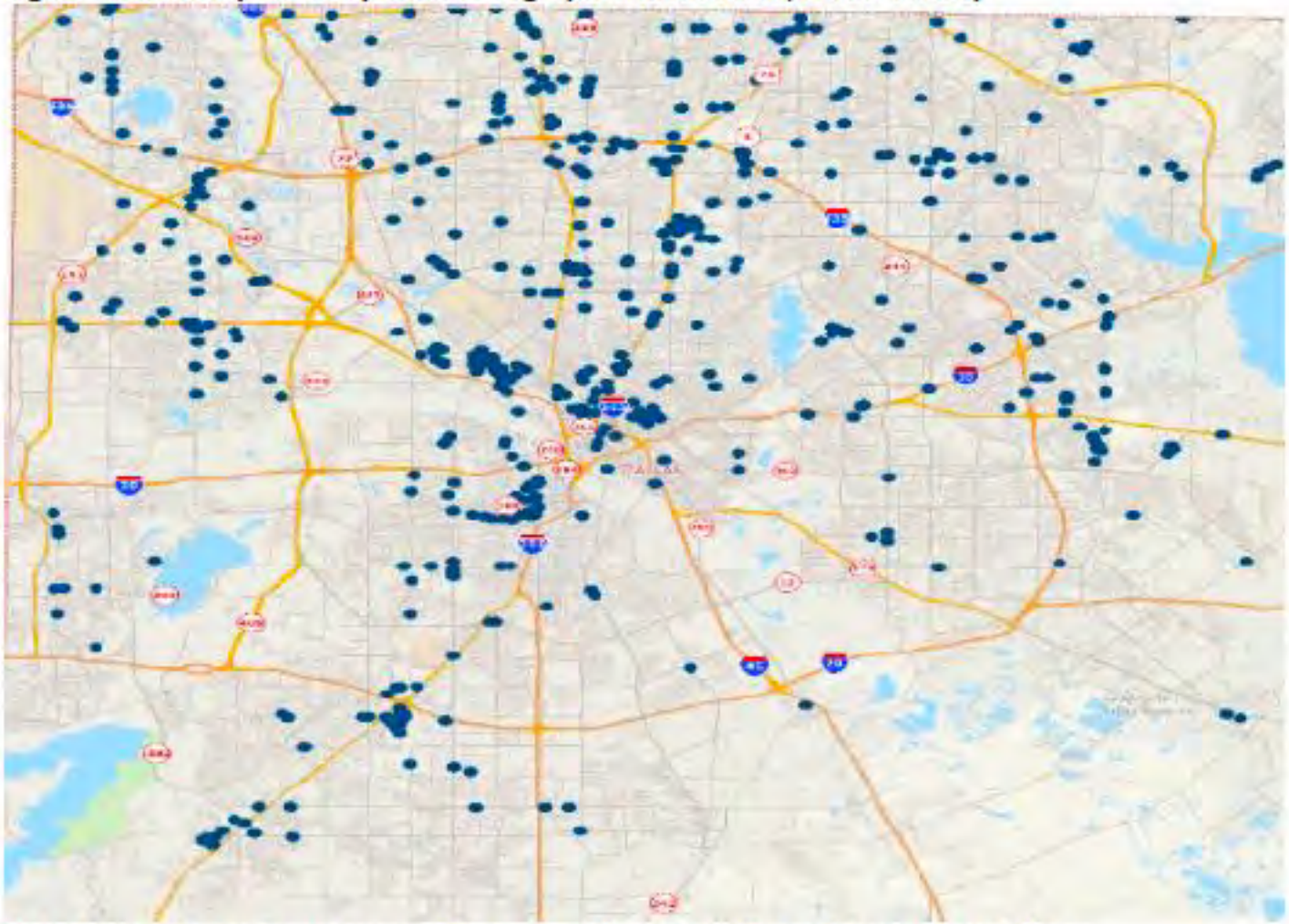



Source: Census Bureau (demographic and income information and NPR Research (testing sites)

(as of May 25, 2020)
May 25, 2020 NPR.org Morning Edition

There is an insufficient number of physicians to address the demand for care in communities in the southern sector of Dallas County TX.

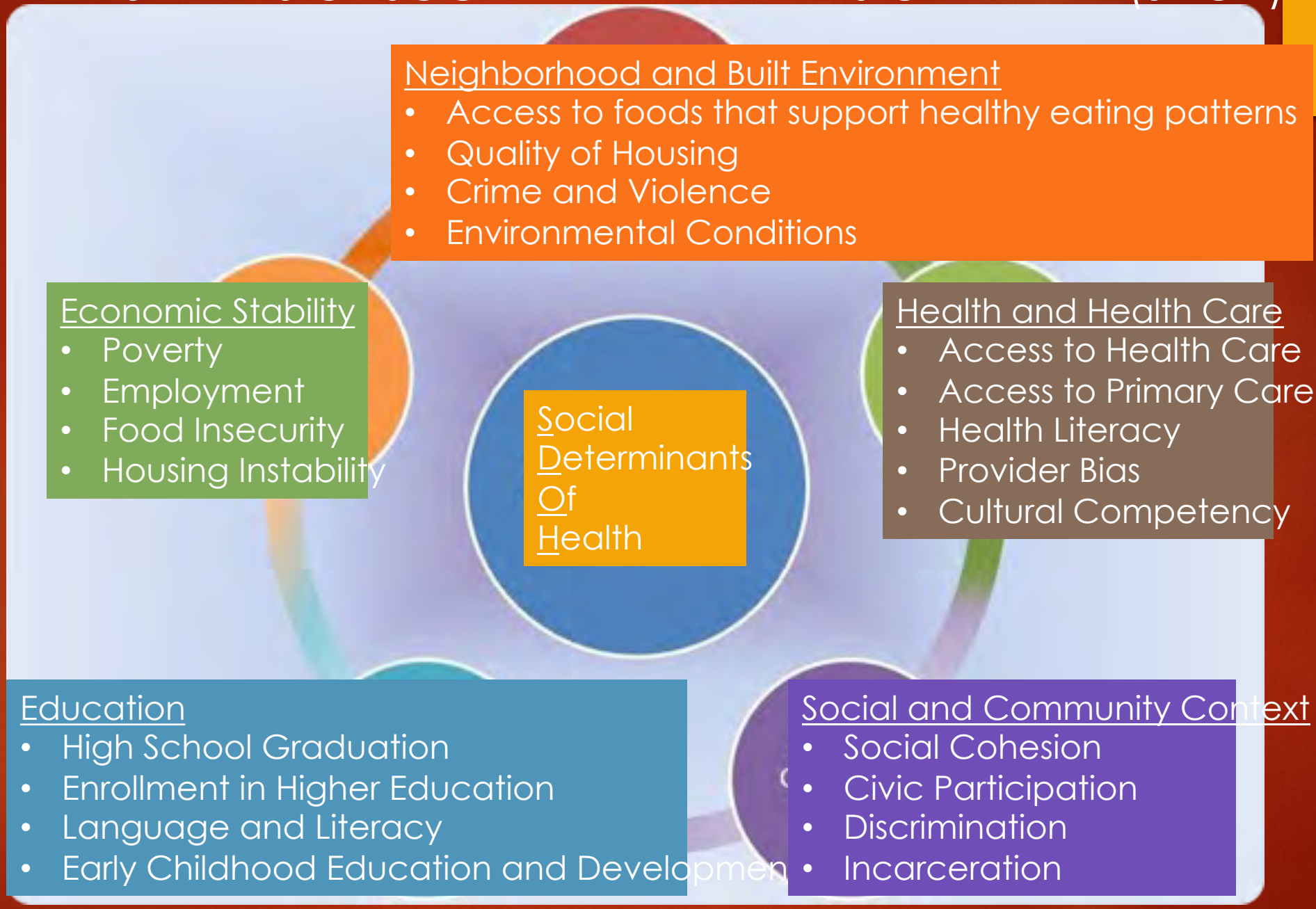
Figure 44: Primary Care Physicians Geographic Distribution, Dallas County



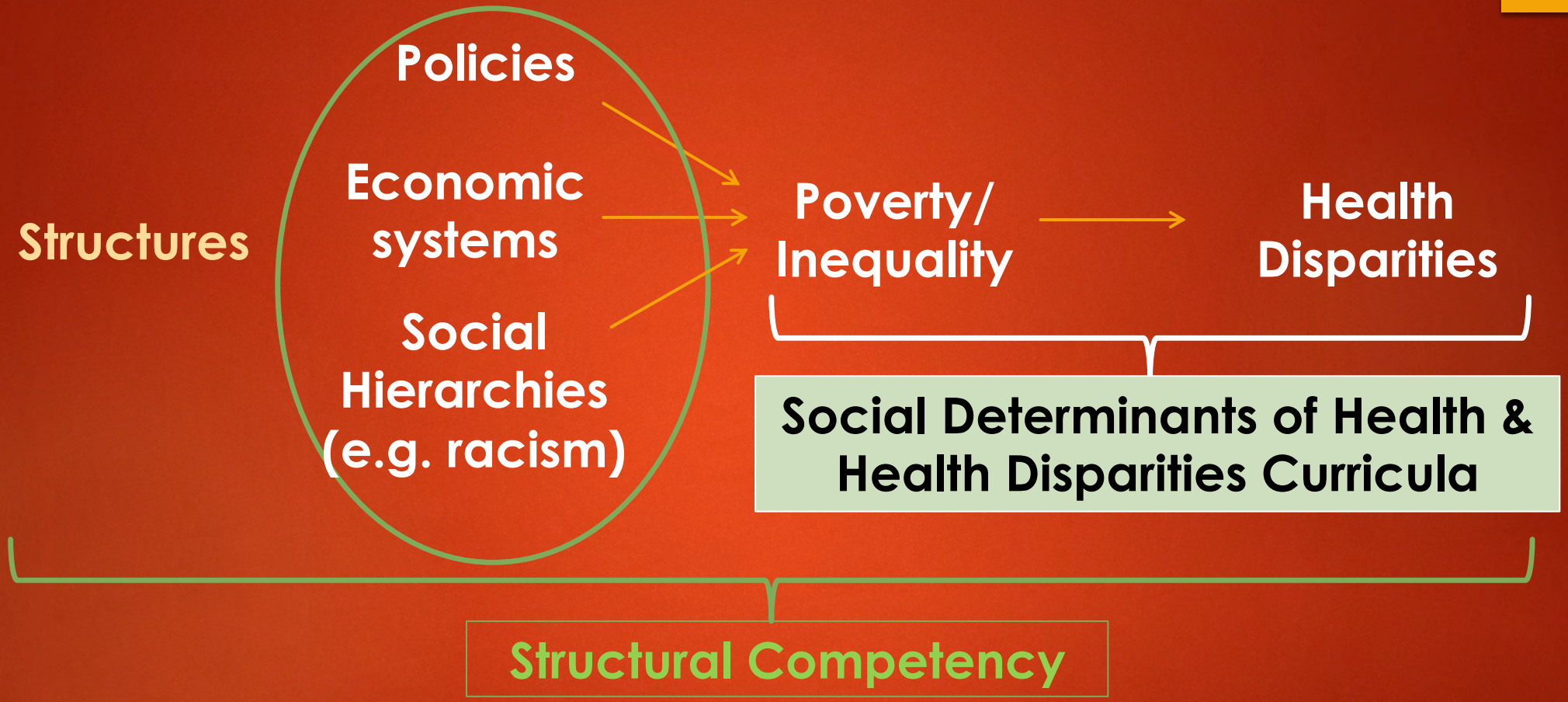
Data Source: Texas Department of State Health Services Texas Primary Care Office

Year 2020

# 5 AREAS OF SOCIAL DETERMINANTS OF HEALTH (SDOH)



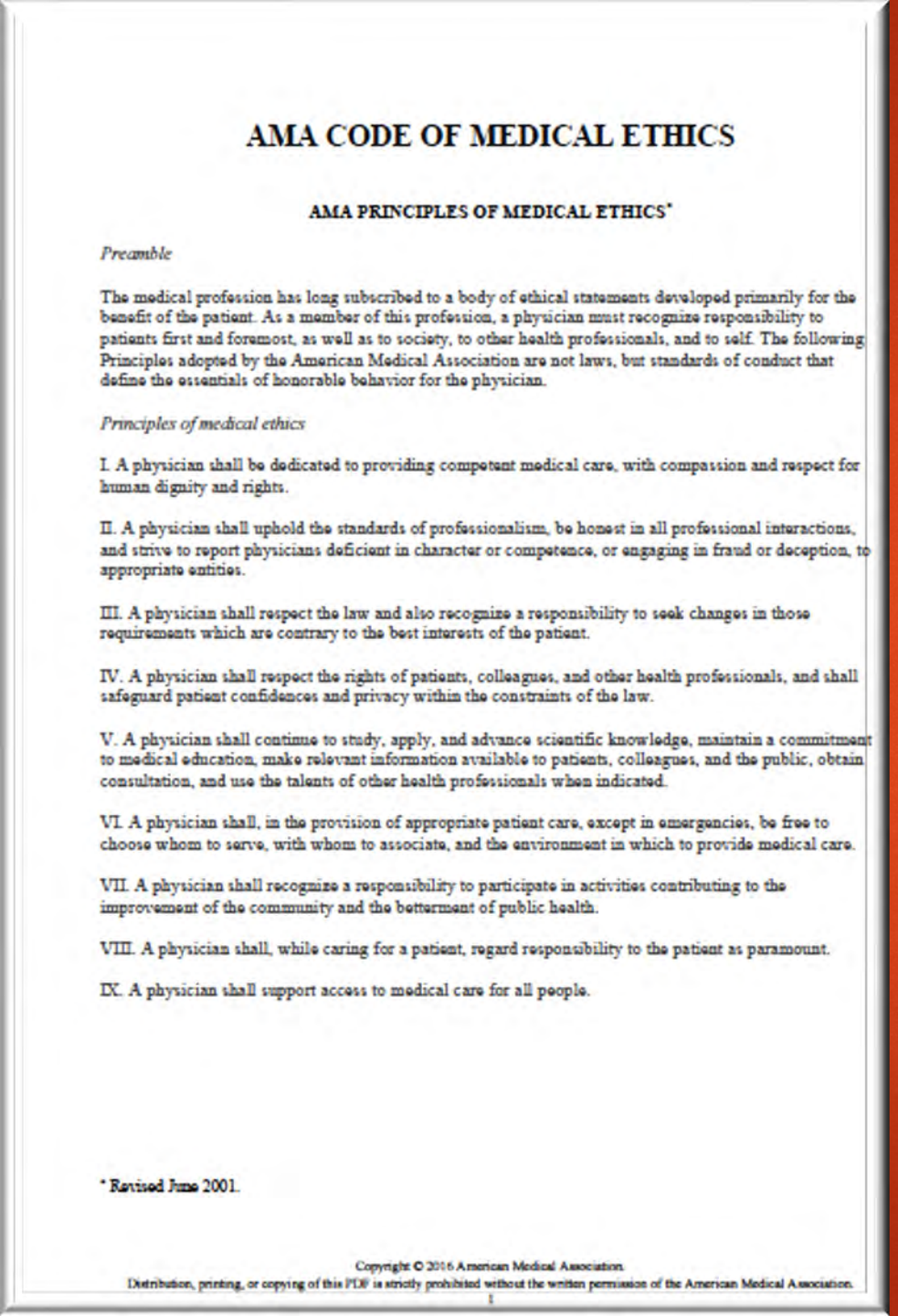

Healthy People 2020; Healthy




"Structural determinants of the social determinants of health"

Slide by J. Neff

# What is the role of the physician?



AMA CODE OF MEDICAL ETHICS

AMA PRINCIPLES OF MEDICAL ETHICS*

*Preamble*

The medical profession has long subscribed to a body of ethical statements developed primarily for the benefit of the patient. As a member of this profession, a physician must recognize responsibility to patients first and foremost, as well as to society, to other health professionals, and to self. The following Principles adopted by the American Medical Association are not laws, but standards of conduct that define the essentials of honorable behavior for the physician.

*Principles of medical ethics*

I. A physician shall be dedicated to providing competent medical care, with compassion and respect for human dignity and rights.

II. A physician shall uphold the standards of professionalism, be honest in all professional interactions, and strive to report physicians deficient in character or competence, or engaging in fraud or deception, to appropriate entities.

III. A physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient.

IV. A physician shall respect the rights of patients, colleagues, and other health professionals, and shall safeguard patient confidences and privacy within the constraints of the law.

V. A physician shall continue to study, apply, and advance scientific knowledge, maintain a commitment to medical education, make relevant information available to patients, colleagues, and the public, obtain consultation, and use the talents of other health professionals when indicated.

VI. A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve, with whom to associate, and the environment in which to provide medical care.

VII. A physician shall recognize a responsibility to participate in activities contributing to the improvement of the community and the betterment of public health.

VIII. A physician shall, while caring for a patient, regard responsibility to the patient as paramount.

IX. A physician shall support access to medical care for all people.

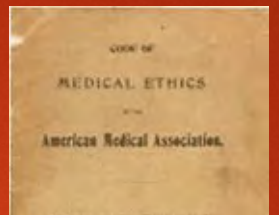
* Revised June 2001.

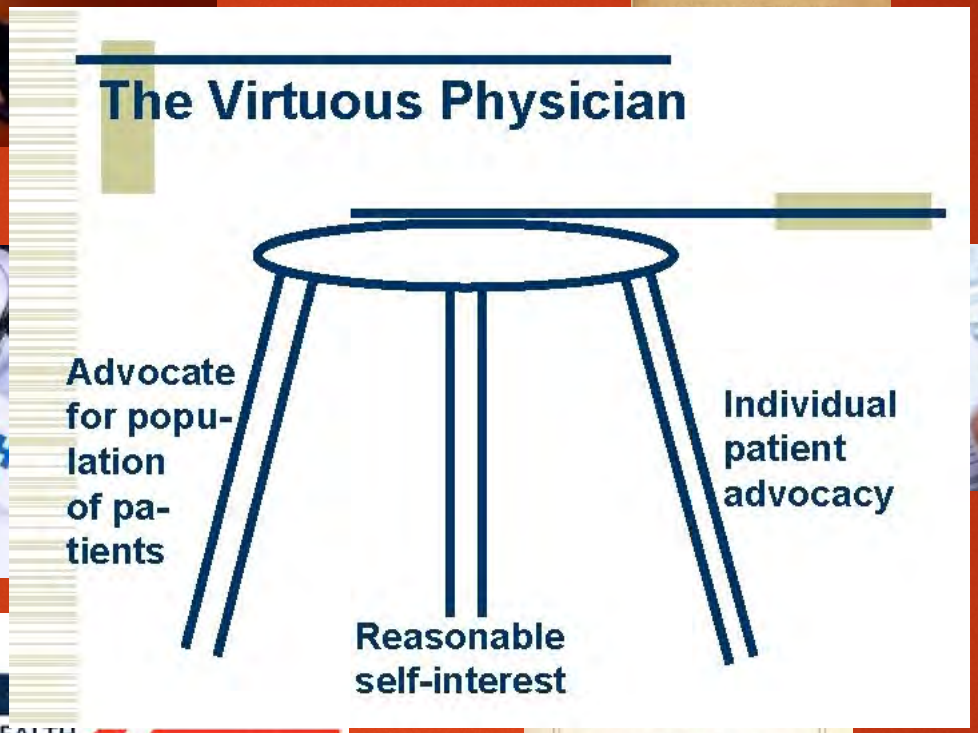




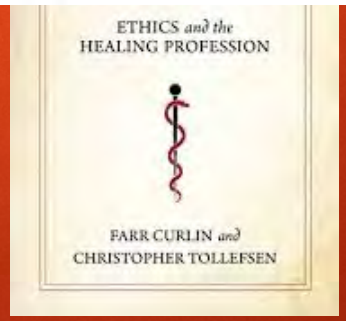
# AMA Code of Ethics

- VII. A physician shall recognize a responsibility to participate in activities contributing to the improvement of the community and the betterment of public health.
- "A Doctor's job doesn't stop at individual care."






Bryan CS. What is the Oslerian Tradition? Ann Intern Med 1994;120:682

# Review: Increasing Awareness and Education on Health Disparities for Health Care Providers

Shawna Nesbitt, MD, MS[1];
Rigo Estevan Palomarez, MS[1]

The focus of this review is to highlight health care disparities and trends in several common diseases in selected populations while offering evidence-based approaches to mitigating health care disparities. Health care disparities cross many barriers and affect multiple populations and diseases. Ethnic minorities, the elderly, and those of lower socioeconomic status (SES) are more at-risk than others. However, many low SES Whites and higher SES racial minorities have poorer health than their racial or SES peers. Also, recent immigrant groups and Hispanics, in particular, maintain high health ratings. The so-called Hispanic Paradox provides an example of how culture and social background can be used to improve health outcomes. These groups have unique determinants of disparity that are based on a wide range of cultural and societal factors. Providing improved access to care and reducing the social determinants of disparity is crucial to improving public health. At the same time, for providers, increasing an understanding of the social determinants promotes better models of individualized care to encourage more equitable care. These approaches include increasing provider education on disparities encountered by different populations, practicing active listening skills, and utilizing a patient's cultural background to promote healthy behaviors. *Ethn Dis*. 2016;26(2):181-190; doi:10.18865/ed.26.2.181

**Keywords:** Disparities; Racial, Hispanic Paradox; Food Desert; Obesity; Hypertension

[1]University of Texas Southwestern Medical Center

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## Introduction

Health care disparities are differences in treatment, morbidity, mortality, and health care outcomes that exist between one group and others. These groups can be defined by a variety of descriptors that include, but are not limited to: race, sex, socioeconomic status (SES), sexual orientation, and immigration status.[1] Groups are not mutually exclusive; individuals can be part of multiple categories, and even move in and out of them, depending on their behaviors and self-identification (eg, smoking cessation, health insurance loss, or relocation to a different area). Although discussions of disparity commonly focus on race and disadvantaged groups, health care disparity can exist in any group of people. Determinants of disparity are the mechanisms through which health disparities occur and can include a person's type of work, income level, education, ethnicity, access to health care, and geographic location.[2] Simply put, they determine into which at-risk group a patient belongs to and to what extent they are affected by disparities. The focus of this review is to highlight health care disparities and trends in several common diseases in selected populations. While it is not an exhaustive review of all populations, it will provide clinicians and educators with a new lens to view diverse patient populations.

## Disparities in Selected Diseases

Many diseases disproportionately affect racial minorities and the socioeconomically disadvantaged. Diseases such as diabetes, cardiovascular disease, stroke, hypertension, HIV/AIDS, cancer, asthma, and mental illnesses affect every ethnic and socioeconomic group, but the burden of these conditions among African American, Hispanic, and Native American communities, as well as those citizens of lower SES especially the elderly, is well-documented.[3-7]

### Hypertension

Hypertension affects the health and wellness of more 67 million people in America, and contributes to the deaths of 348,000 every year. The prevalence of hypertension in US Whites is 32% and among Hispanics it is 27%.[8] While the risks faced by Hispanics and Whites should not be ignored, African Americans have an overall hypertension prevalence of

# Three Main Reasons for Racial Health Disparities

Longstanding discrimination in the institutions and structures of American society that has harmed and continues to harm Black and other minority communities making them less “healthy".

Racism in society that wears away the bodies of Black people and others who are treated poorly

Bias in healthcare that creates a system of unequal treatment

Villarosa, L. Under the Skin: The Hidden Toll of Racism on American Lives and on the Health of our Nation. 2022 ISBN 9780385544887

# The Effect of Race and Sex on Physicians' Recommendations for Cardiac Catheterization

*"Men and whites were significantly more likely to be referred than women and blacks."*


Kevin Schulman, MD. NEJM,1999;340:618-625

# What is bias?

A tendency or inclination that results in judgment without question.

**An automatic response**

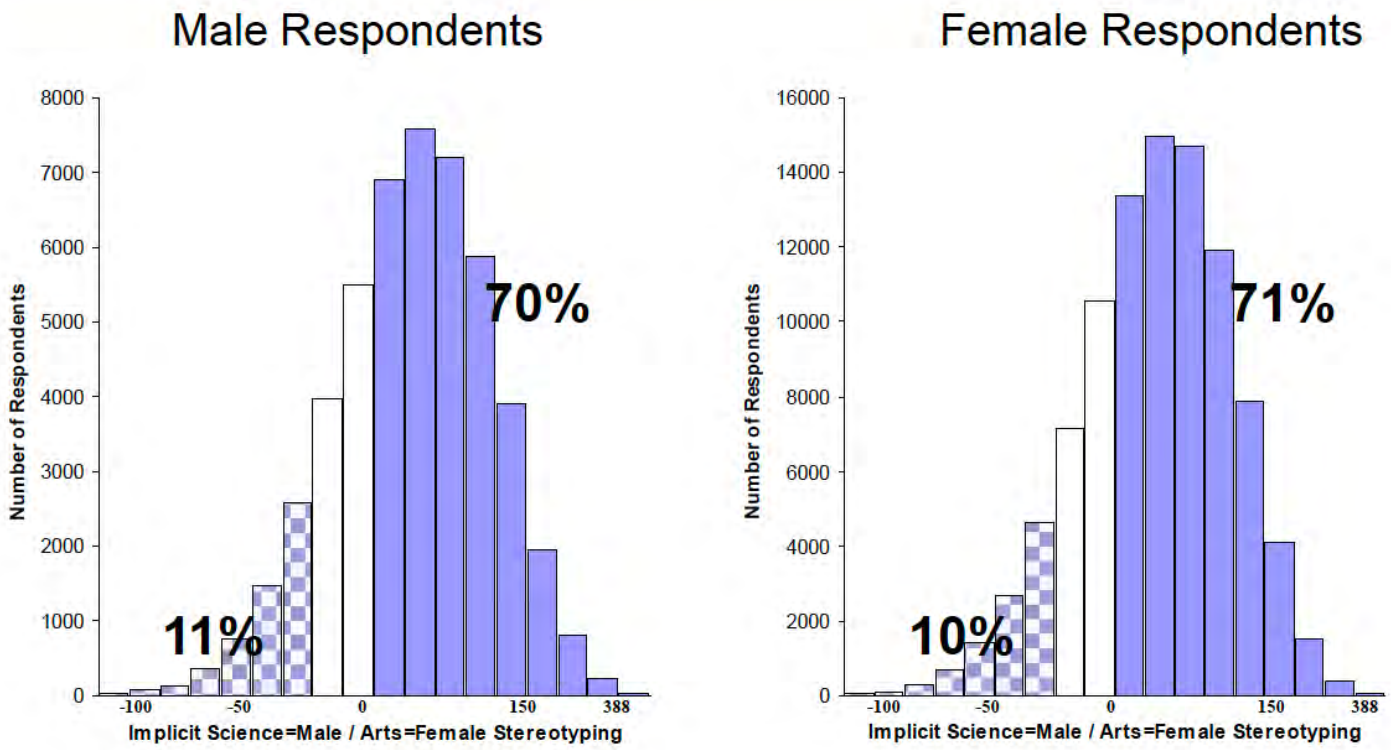
**A shortcut to interact with our world**

# Harvard's Website: Implicit Bias Test
# https://implicit.harvard.edu/implicit/


**Cell Phone**


**Laptop**

# Implicit Gender-Science Stereotypes







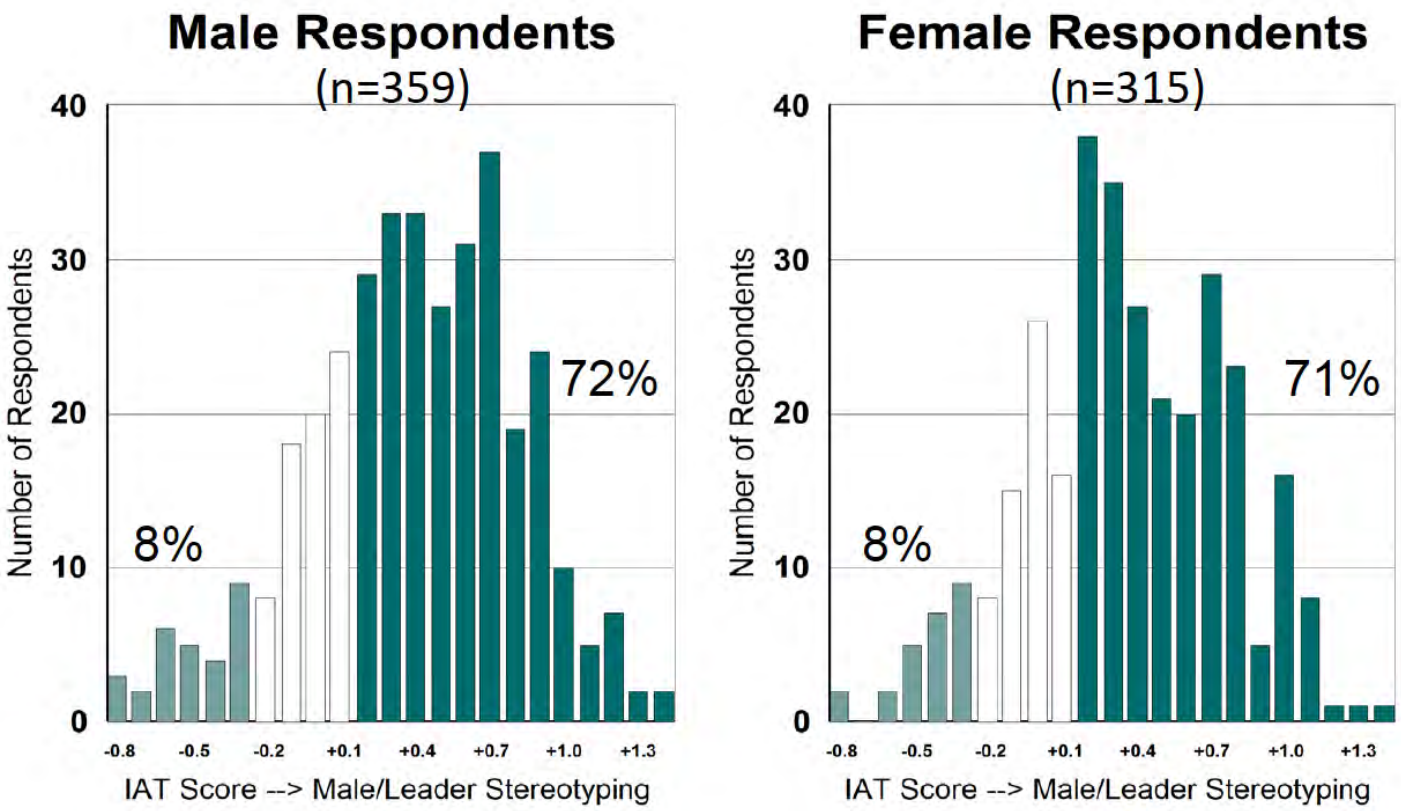
Nosek BA, Banaji MR & Greenwald AG, 2006

http://implicit.harvard.edu/

Both men and women associated men with science and women with the arts.

Salles A. JAMA Network Open 2019;2(17):e196545

Both men and women associate men with leadership more than women.

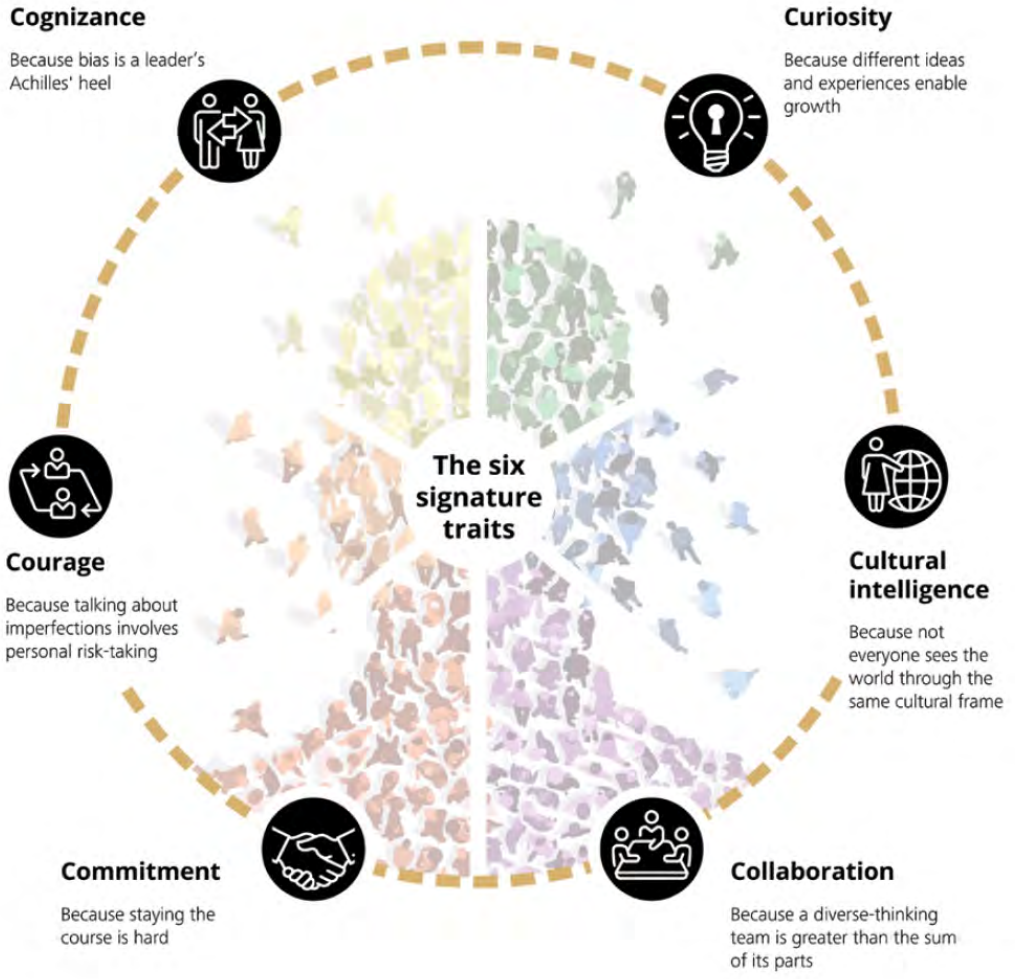



Gender and Leadership IAT Scores

# IMPLICIT BIAS AMONG PHYSICIANS AND ITS PREDICTION OF THROMBOLYSIS DECISIONS FOR BLACK AND WHITE PATIENTS

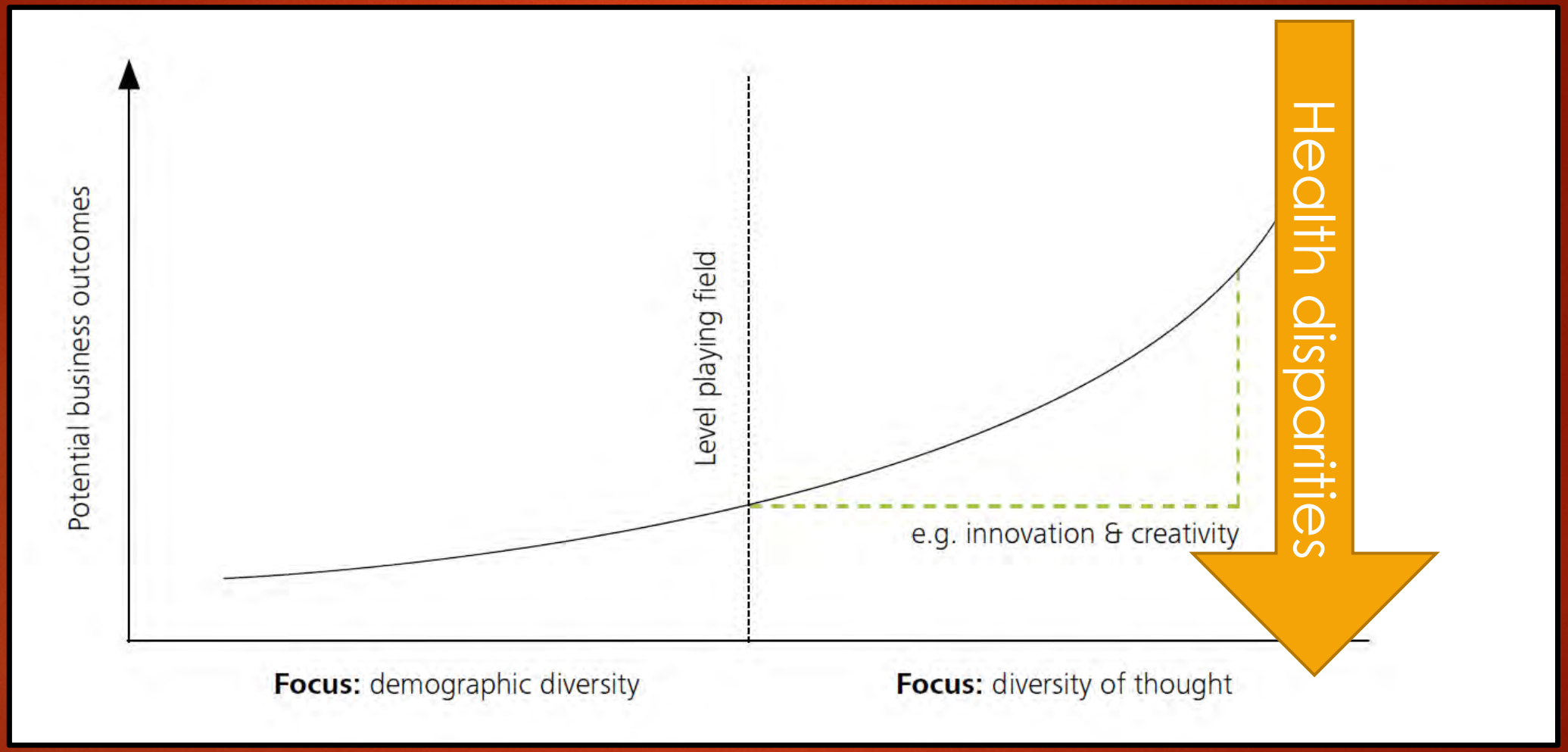
Green AR,  Carney DR, et al. Journal Gen internal Medicine 2007;22(9):1231

FIGURE 5 | The six signature traits of an inclusive leader




Deloitte: Diversity and Inclusion Report 2018

# Moving Beyond visible diversity; Connecting Diversity of thought to Engagement




**Re-examining the business case for diversity: Deloitte point of view;**
Human Capital Australia – September 2011

"It's all about the perspective that you bring"

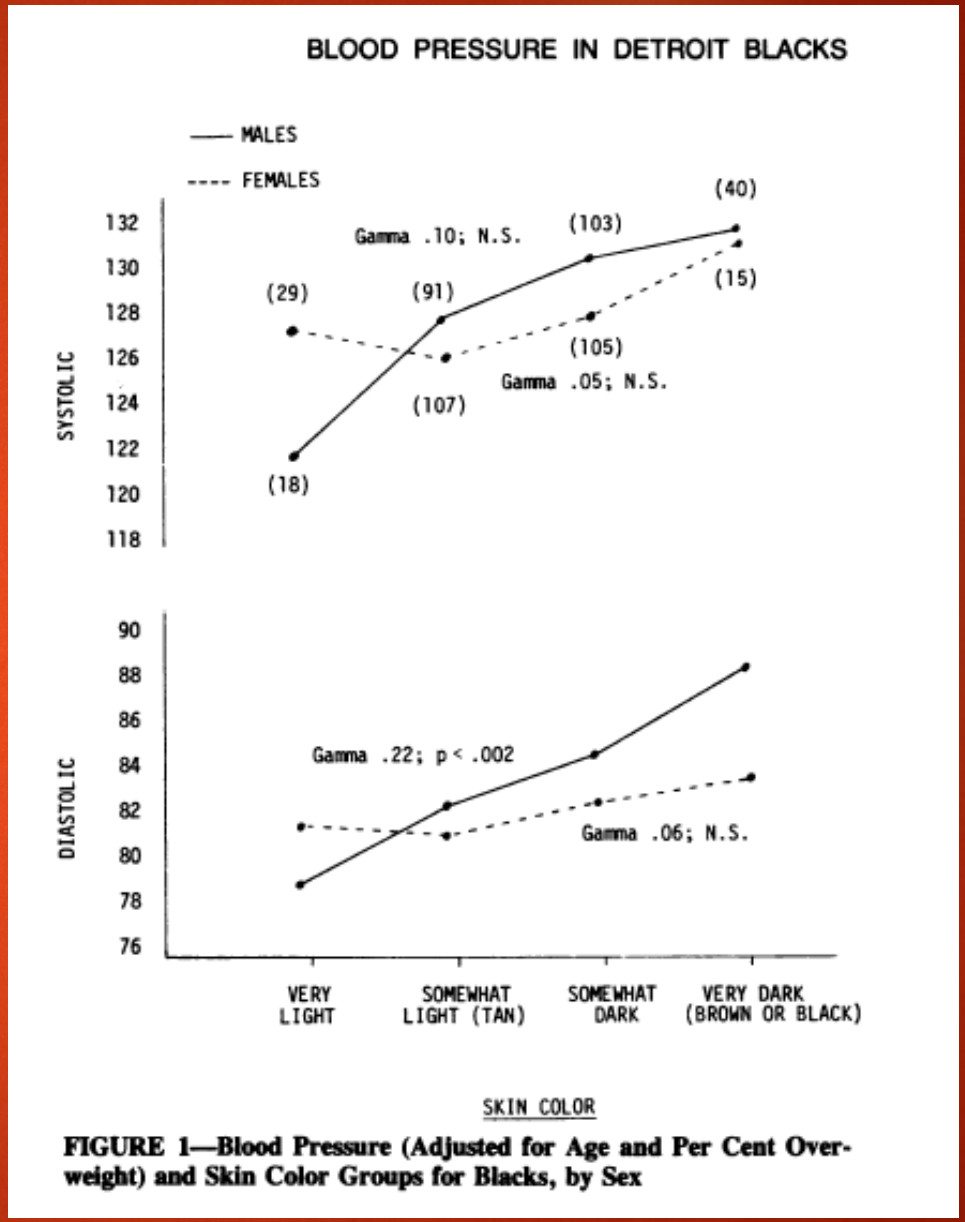
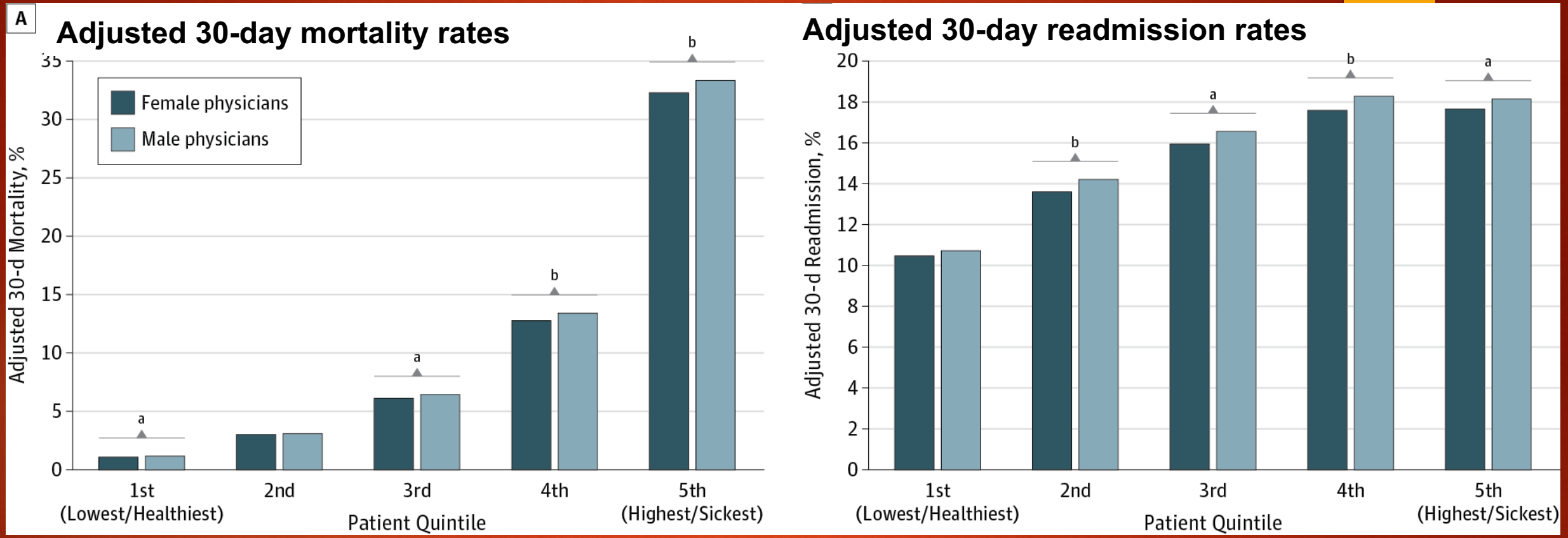



**FIGURE 1—Blood Pressure (Adjusted for Age and Per Cent Overweight) and Skin Color Groups for Blacks, by Sex**

Harburg E. American Journal of Public Health 1978

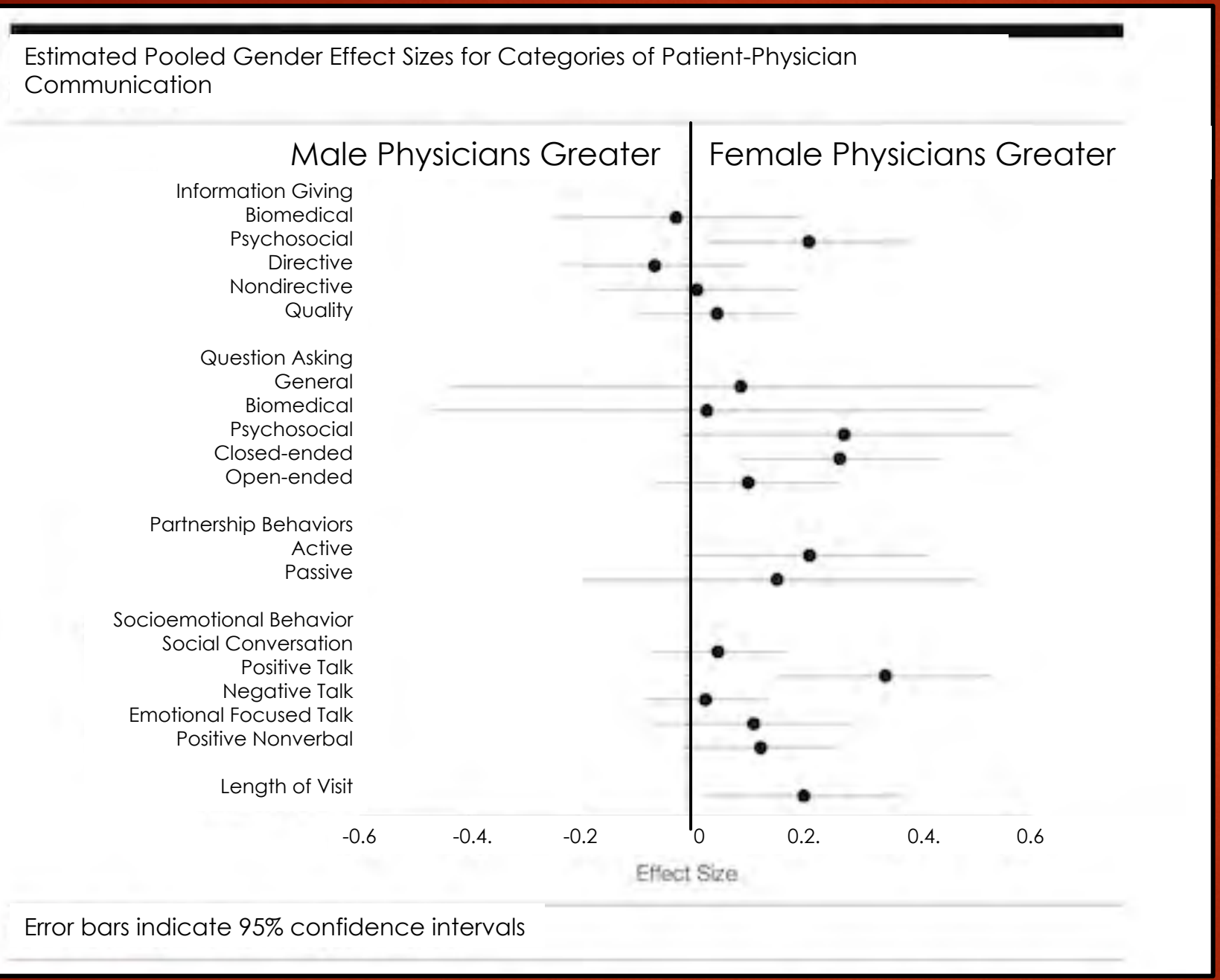
# Comparison of Hospital Mortality and Readmission Rates for Medicare Patients Treated by Male vs Female Physicians




Association Between Physician Sex and Patient Outcomes by Expected Mortality Rates A, Adjusted 30-day mortality rates. B, Adjusted 30-day readmission rates. Risk-adjusted mortality rates were calculated with additional adjustment for physician characteristics and with hospital fixed effects (model 3). Standard errors were clustered at the physician level.[a]$P < .05$.[b]$P < .001$.

JAMA Intern Med. 2017;177(2):206

# Physician Gender Effects in Medical Communication

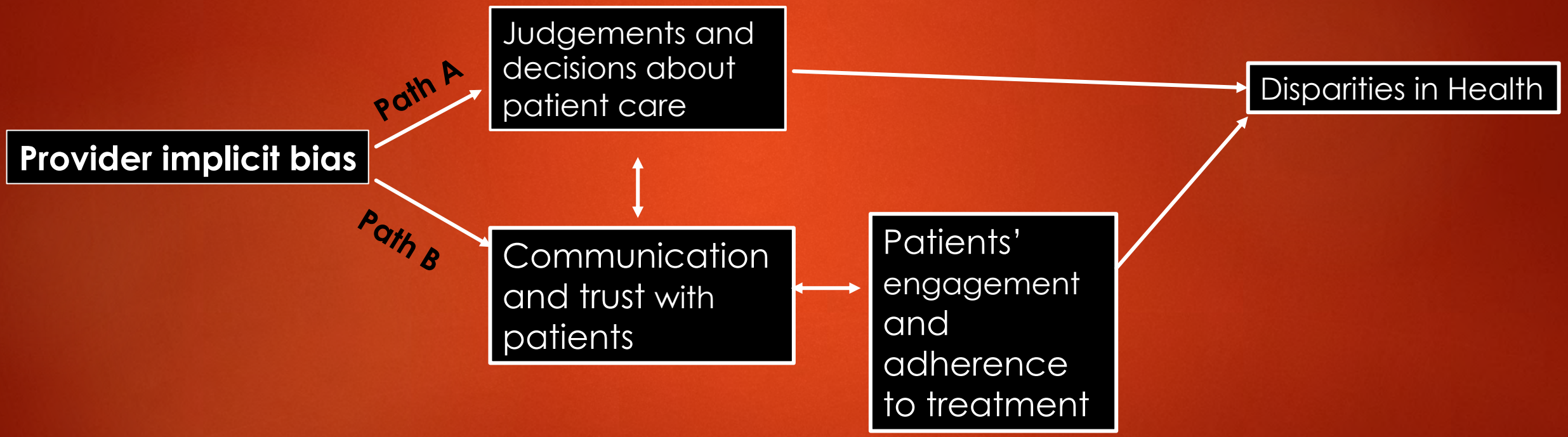



Roter D, JAMA 2002;288:756

In the room where it happens…

IT MATTERS WHO' S THERE

# Paths Modeling Provider Implicit Bias on Health Disparities




Zestcott CA et al Group Process & Intergroup Relations 2016;19(4):528

# What is Cultural Competence?

- **Culture** refers to a body of beliefs, body of behavior, body of knowledge.  (language, thoughts, customs, values)
- **Competence** is having the capacity to function effectively in the context of cultural beliefs, practices and needs of their patients and communities.

- **Cultural Competence** combines tenets of patient centered care with an understanding of the social and cultural influences that affect the quality of healthcare and treatment.

AAMC :Cultural Competence  Education
NIH: Clear Communication

# Cultural Competency Development is…

- A journey – not a goal
- A process of self-reflection
  - Understanding our own beliefs and biases
  - Knowing what we bring to clinical encounter or research experience

*Alternative Concept to Cultural Competence: "Cultural Humility"*

Jernigan VB J Health Disparities Pract 2016;9(3):150

Primary Care residents with more instruction felt better prepared for cross cultural care

| Predictor | Unprepared to provide Cross cultural care N (%) | M (SD) | Prepared to provide Cross cultural care N (%) | M (SD) | P-value |
|---|---|---|---|---|---|
| Total | 463 (41) | | 672 (59) | | |
| **Gender:** | | | | | |
| Male | 157 (34) | | 272 (40) | | |
| Female | 306 (66) | | 400(60) | | 0.03 |
| **Race/Ethnicity:** | | | | | |
| White | 279 (61) | | 379 (56) | | |
| Asian | 94(21) | | 137 (21) | | |
| URM | 82 (18) | | 139 (21) | | 0.38 |
| **Location of Med School:** | | | | | |
| US MD | 334 (73) | | 510 (77) | | |
| IMG | 126 (27) | | 156 (23) | | 0.13 |
| **Access to role model in cross cultural care:** | | | | | |
| Yes | 269(58) | | 521 (78) | | |
| No | 192 (42) | | 149 (22) | | **<0.001** |
| **Specialty:** | | | | | |
| Fam Med | 103 (22) | | 201 (30) | | |
| Internal Med | 114 (25) | | 151 (22) | | |
| Pediatrics | 124 (27) | | 167 (25) | | |
| OB/Gyn | 122 (26) | | 153 (23) | | 0.04 |
| **Mean % for cross cultural case mix during residency** | | **48.36 (19.7)** | | **53.46 (18.6)** | **<0.001** |
| **Quantity of resident reported instruction in cross cultural care** | | **2.37 (0.57)** | | **2.85 (0.60)** | **<0.001** |

Greer JA. J Gen Int Med 2007;22:1107

# Educating Physicians & Providers on Cultural competence

| Institute of Medicine Report on Unequal Treatment Recommendations for Education addressing disparities through training | |
|---|---|
| 1 | Increase awareness of racial/ethnic disparities in health care. |
| 2 | Increase the proportion of underrepresented minorities in the health care workforce. |
| 3 | Integrate cross-cultural education into the training of all health care professionals |
| 4 | Incorporate teaching on the impact of race, ethnicity, and culture on clinical decision making. |

Betancourt JR Acad Med 2006;81:788

# Health Workforce Development Intervention Primary Strategies

**Cultural Competence Training**

**Example:**

Thom et al conducted an RCT on cultural competency training for Primary Care physicians on diabetes care.

3 training modules in ½ day or (3) 1 hour sessions

- Knowledge of cultural identification
- Communication skills
- Cultural brokering (negotiating)
- Understanding community resources

Outcome Measures:

Patient Reported Physician Cultural Competence (patient satisfaction, trust and BP, A1C)

Results:

Patient Satisfaction improved but no change in BP & A1C outcomes.

**Professional Development Interventions: Mentoring**

**Example:**

Wu et al evaluated the satisfaction and healthcare experiences of 250 parents of children in a large teaching hospital.

- The intervention was cultural education by Spanish Interpreters who introduced Latino culture and home remedies to physicians.
- They were cultural mentors for physicians on individual basis.

Results:

The use of in-person interpreter was better than phone interpreter BUT culturally educated physicians increased Spanish parents satisfaction even more.

Wu A.C. et al. The Interpreter as cultural educator of residents. Archives of Pediatric Adolescent Medicine 2006;160:1145
Thom D.H. et. al. Development and Evaluation of a Cultural Competency training curriculum. BMC Med Educ 2006;6(1):1-9

# Cultural Competence education and training for health and medical students

**3 Main types of Education/training intervention strategies designed to improve the cultural competency of health professional students:**

1) Integration of Cultural Competency into core or elective curriculum.

   Content: Cultural differences, culturally competent healthcare, and health disparities.

   Delivery: didactics, interactive, experiential case scenarios.

2) Cultural Immersion

3) Cultural Education and Training

Clifford A et.al. Cultural competency training and education in the university –based professional training of health professionals: characteristics, quality and outcomes of evaluations. Divers. Equal. Health Care 2017;14(3);136-147

# Cultural Immersion

- One of the major challenges to reducing disparities relate to lack of understanding among healthcare professionals of the context vulnerable populations live in.
- Cultural immersion strategies include: education sessions, clinical placements and/or community experience.

**Example Bennett et al.**
4-8 week structured and educational clinical placement program on nursing students confidence in areas of primary healthcare delivery and culturally knowledgeable practice
5 day orientation
Extended clinical placement to establish Indigenous & non-Indigenous relationships
Pre & Post test given
3 months post placement interview shows 68% of nursing students intend to work in a rural location and 36% did so post graduation.

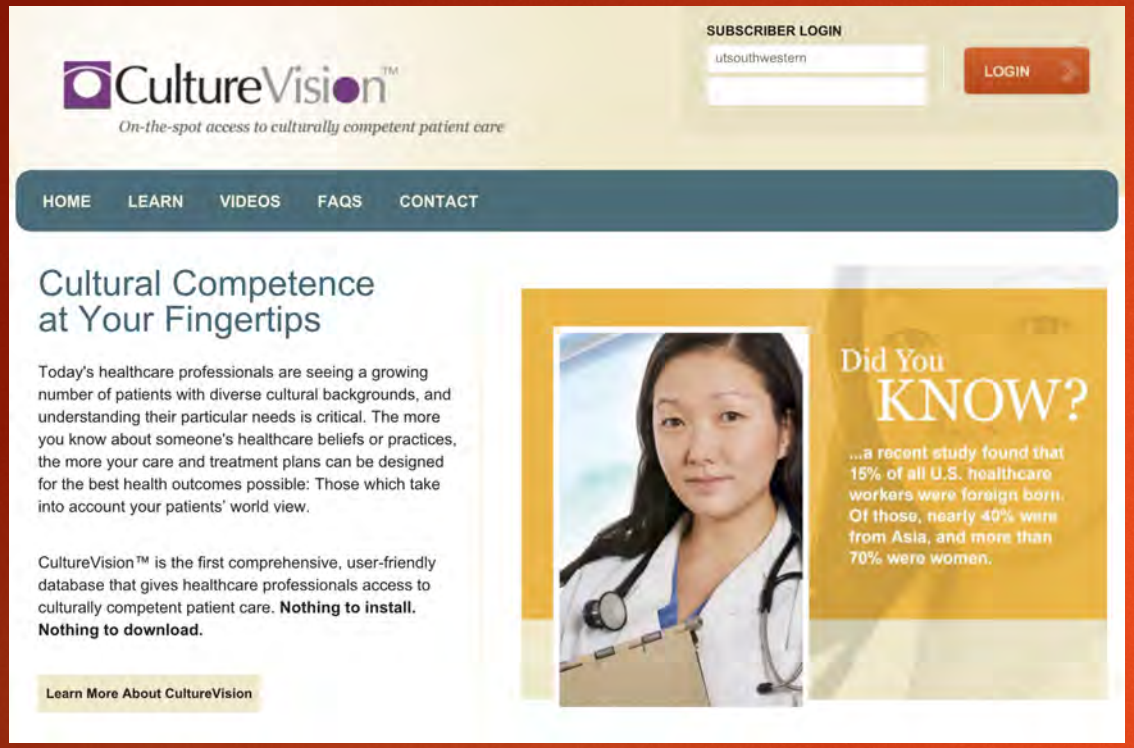
Bennett P et. al. Supporting rural/remote primary health care placement experiences increases undergraduate nurse confidence. Nurse Educ Today 2013;33(2):166-172

# Cultural Educational Enhancement

Healthcare in Underserved Communities Elective Class

- Create educational experiences in the community: Immersion experience
- Discussions with leaders in the community
- Learn about the challenges that patients face on a daily basis
- Learn about the resources for patients in the local community

# www.crculturevision.com




## How Does **CultureVision® Work?**

Let's say a patient of Hmong descent comes in for prenatal care and is nervous about labor and delivery. You want to know if there are any specific cultural traits or patterns that you should consider. What are the pertinent questions to ask? Are there any medications or diseases that are particularly relevant to this group? You simply log onto the CultureVision® website, click on to the "Hmong/Laotian" section, and click "Labor, Birth and Aftercare." Just that quickly you have the information you are looking for, and within minutes you are contributing to a better healthcare experience for your patient.

**Learn More About CultureVision® CultureVision.com**

## **Why CultureVision® ?**

Today, people of color comprise about 30% of the U.S. population. By the year 2050, various ethnic groups and people of color in the U.S. will total about half (51.1%) of the population, according to the U.S. Census Bureau. Close to 90% of our total population growth in that time will have come from higher birth rates of people of color and immigrants from all over the world.

It is imperative for healthcare providers to be attune to the needs of their diverse patients - That is the "Why?" behind CultureVision®.

# Three Main Reasons for Racial Health Disparities

Longstanding discrimination in the institutions and structures of American society that has harmed and continues to harm Black and other minority communities making them less “healthy".

Racism in society that wears away the bodies of Black people and others who are treated poorly

Bias in healthcare that creates a system of unequal treatment

Villarosa, L. Under the Skin: The Hidden Toll of Racism on American Lives and on the Health of our Nation. 2022 ISBN 9780385544887

# What is a health care disparity?

- "Health care disparity is not simply a difference in health outcomes by race or ethnicity, but a disproportionate difference attributable to variables other than access to care."

Gomes C, McGuire TG. Identifying the source of racial and ethnic disparities. In: Smedley B, Stith AV, Nelson AR, eds. Unequal Treatment. National Academies Press: 2003

# IS COVID-19 the Bellwether event for the U.S. to address healthcare disparities?

There has been clear excess of COVID-19 infection and death in African American communities in multiple states across the country.

The most effective prevention of COVID-19 was social distancing. Yet African Americans and poor individuals were far less able to do this… the absence of privilege.

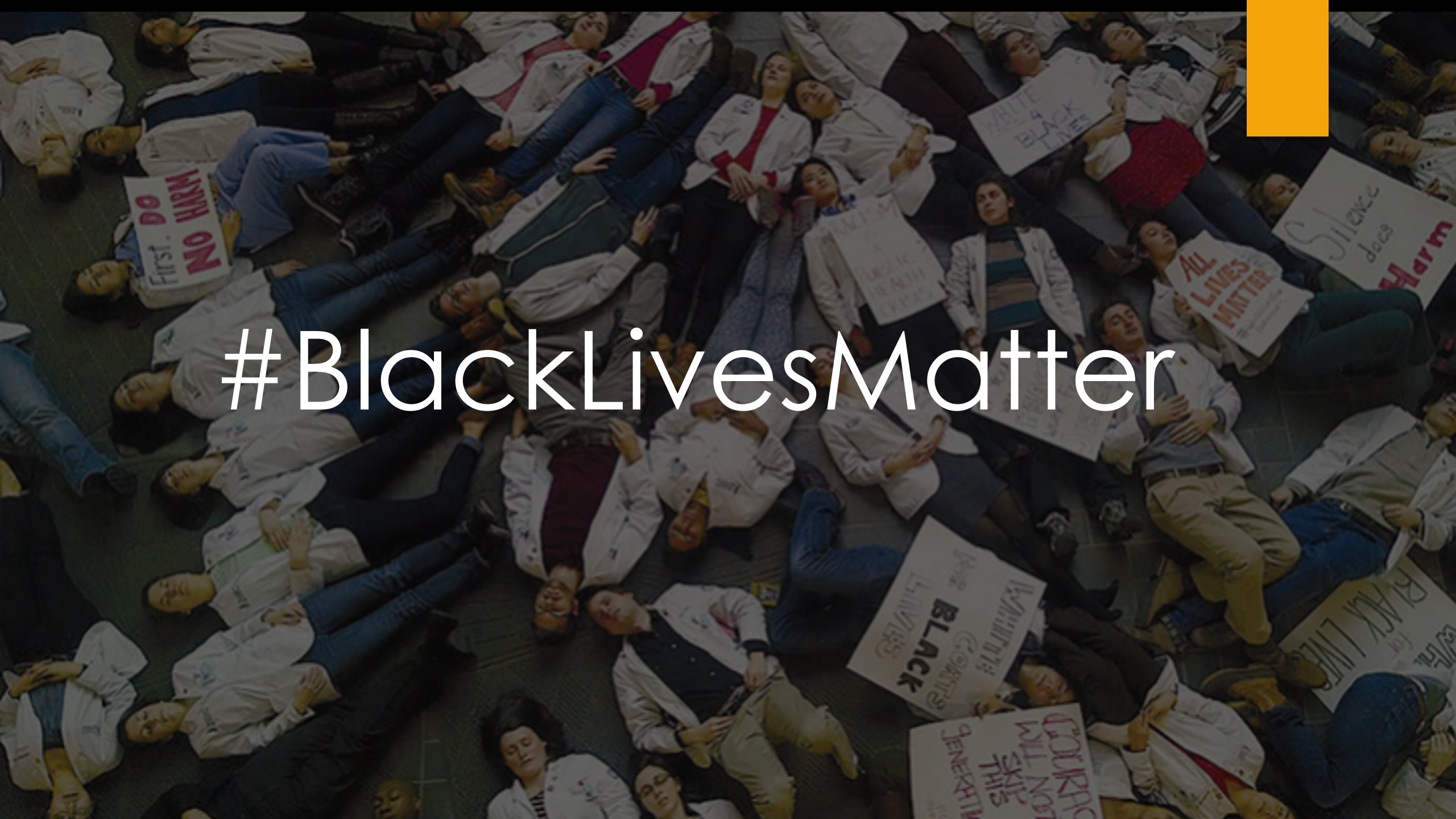
What is the action plan?- A commitment is needed: Does the U.S. chronicle this disparity along with many others and go back to normal?

Will we declare that a civil society will no longer accept disproportionate suffering?

Yancy, C. COVID-19 and African Americans. JAMA May 2020;323 (19):1891

# “Calling all doctors”

The time to act is now




# #BlackLivesMatter

# Is there Racism in medicine?

# Hidden in Plain Sight- Reconsidering the Use of Race in Clinical Algorithms

Table 1. Examples of Race Correction in Clinical Medicine.*

| Tool and Clinical Utility | Input Variables | Use of Race | Equity Concern |
|---|---|---|---|
| **Cardiology** | | | |
| The American Heart Association's Get with the Guidelines–Heart Failure[9] (https://www.mdcalc.com/gwtg-heart-failure-risk-score)<br>*Predicts in-hospital mortality in patients with acute heart failure. Clinicians are advised to use this risk stratification to guide decisions regarding initiating medical therapy.* | Systolic blood pressure<br>Blood urea nitrogen<br>Sodium<br>Age<br>Heart rate<br>History of COPD<br>Race: black or nonblack | Adds 3 points to the risk score if the patient is identified as nonblack. This addition increases the estimated probability of | The original study envisioned using this score to "increase the use of recommended medical therapy in high-risk patients and |
| **Cardiac surgery** | | | |
| The Society of Thoracic Surgeons Short Term Risk Calculator[10] (http://riskcalc.sts.org/stswebriskcalc/calculate)<br>*Calculates a patient's risks of complications and death with the most common cardiac surgeries. Considers >60 variables, some of which are listed here.* | Operation type<br>Age and sex<br>Race: black/African American, Asian, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, or "Hispanic, Latino or Spanish ethnicity", white race is the default setting.<br>BMI | | |
| **Nephrology** | | | |
| Estimated glomerular filtration rate (eGFR) MDRD and CKD-EPI equations[11] (https://ukidney.com/nephrology-resources/egfr-calculator)<br>*Estimates glomerular filtration rate on the basis of a measurement of serum creatinine.* | Serum creatinine<br>Age and sex<br>Race: black vs. white or other | | |
| Organ Procurement and Transplantation Network: Kidney Donor Risk Index (KDRI)[12] (https://optn.transplant.hrsa.gov/resources/allocation-calculators/kdpi-calculator/)<br>*Estimates predicted risk of donor kidney graft failure, which is used to predict viability of potential kidney donor.†* | Age<br>Hypertension, diabetes<br>Serum creatinine level<br>Cause of death (e.g., cerebrovascular accident)<br>Donation after cardiac death<br>Hepatitis C<br>Height and weight<br>HLA matching<br>Cold ischemia<br>En bloc transplantation<br>Double kidney transplantation<br>Race: African American | | |
| **Obstetrics** | | | |
| Vaginal Birth after Cesarean (VBAC) Risk Calculator[13,14] (https://mfmunetwork.bsc.gwu.edu/PublicBSC/MFMU/VGBirthCalc/vagbirth.html)<br>*Estimates the probability of successful vaginal birth after prior cesarean section. Clinicians can use this estimate to counsel people who have to decide whether to attempt a trial of labor rather than undergo a repeat cesarean section.* | Age<br>BMI<br>Prior vaginal delivery<br>Prior VBAC<br>Recurring indication for cesarean section<br>African-American race<br>Hispanic ethnicity | The African-American and Hispanic correction factors subtract from the estimated success rate for any person identified as black or Hispanic. The decrement for black (0.671) or Hispanic (0.680) is almost as large as the benefit from prior vaginal delivery (0.888) or prior VBAC (1.003). | The VBAC score predicts a lower chance of success if the person is identified as black or Hispanic. These lower estimates may dissuade clinicians from offering trials of labor to people of color. |
| **Urology** | | | |
| STONE Score[15,16]<br>*Predicts the risk of a ureteral stone in patients who present with flank pain* | Sex<br>Acute onset of pain<br>Race: black or nonblack<br>Nausea or vomiting<br>Hematuria | Produces a score on a 13-point scale, with a higher score indicating a higher risk of | By systematically reporting lower risk for black patients than for all nonblack patients, this |
| Urinary tract infection (UTI) calculator[17] (https://uticalc.pitt.edu/)<br>*Estimates the risk of UTI in children 2–23 mo of age to guide decisions about when to pursue urine testing for definitive diagnosis* | Age <12 months<br>Maximum temperature >3<br>Race: Describes self as bla partially)<br>Female or uncircumcised<br>Other fever source | | |
| **Oncology** | | | |
| Rectal Cancer Survival Calculator[18] (http://www3.mdanderson.org/app/medcalc/index.cfm?pagename=rectumcancer)<br>*Estimates conditional survival 1–5 yr after diagnosis with rectal cancer* | Age and sex<br>Race: white, black, other<br>Grade<br>Stage<br>Surgical history | | |
| National Cancer Institute Breast Cancer Risk Assessment Tool (https://bcrisktool.cancer.gov/calculator.html)<br>*Estimates 5-yr and lifetime risk of developing breast cancer, for women without prior history of breast cancer, DCIS, or LCIS.* | Current age, age at menar at first live birth<br>First-degree relatives with<br>Prior benign biopsies, aty<br>Race/ethnicity: white, Afric Hispanic/Latina, Asian American Indian/Alask unknown | | |

Table 1. (Continued.)

| Tool and Clinical Utility | Input Variables | Use of Race | Equity Concern |
|---|---|---|---|
| Breast Cancer Surveillance Consortium Risk Calculator[19] (https://tools.bcsc-scc.org/BC5yearRisk/calculator.htm)<br>*Estimates 5- and 10-yr risk of developing breast cancer in women with no previous diagnosis of breast cancer, DCIS, prior breast augmentation, or prior mastectomy* | Age<br>Race/ethnicity: white, black, Asian, Native American, other/multiple races, unknown<br>BIRADS breast density score<br>First-degree relative with breast cancer<br>Pathology results from prior biopsies | The coefficients rank the race/ethnicity categories in the following descending order of risk: white, American Indian, black, Hispanic, Asian. | Returns lower risk estimates for all nonwhite race/ethnicity categories, potentially reducing the likelihood of close surveillance in these patients. |
| **Endocrinology** | | | |
| Osteoporosis Risk SCORE (Simple Calculated Osteoporosis Risk Estimation)[20] (https://www.mdapp.co/osteoporosis-risk-score-calculator-316/)<br>*Determines whether a woman is at low, moderate, or high risk for low bone density in order to guide decisions about screening with DXA scan* | Rheumatoid arthritis<br>History of fracture<br>Age<br>Estrogen use<br>Weight<br>Race: black or not black | Assigns 5 additional points (maximum score of 50, indicating highest risk) if the patient is identified as nonblack | By systematically lowering the estimated risk of osteoporosis in black patients, SCORE may discourage clinicians from pursuing further evaluation (e.g., DXA scan) in black patients, potentially delaying diagnosis and intervention. |
| Fracture Risk Assessment Tool (FRAX)[21] (https://www.sheffield.ac.uk/FRAX/tool.aspx)<br>*Estimates 10-yr risk of a hip fracture or other major osteoporotic fracture on the basis of patient demographics and risk-factor profile. Calculators are country-specific.†* | Age and sex<br>Weight and height<br>Previous fracture<br>Parent who had a hip fracture<br>Current smoking<br>Glucocorticoid use<br>Rheumatoid arthritis<br>Secondary osteoporosis<br>Alcohol use, ≥3 drinks per day<br>Femoral neck bone mineral density | The U.S. calculator returns a lower fracture risk if a female patient is identified as black (by a factor of 0.43), Asian (0.50), or Hispanic (0.53). Estimates are not provided for Native American patients or for multiracial patients. | The calculator reports 10-yr risk of major osteoporotic fracture for black women as less than half that for white women with identical risk factors. For Asian and Hispanic women, risk is estimated at about half that for white women. This lower risk reported for nonwhite women may delay intervention with osteoporosis therapy. |
| **Pulmonology** | | | |
| Pulmonary-function tests[22]<br>*Uses spirometry to measure lung volume and the rate of flow through airways in order to diagnose and monitor pulmonary disease* | Age and sex<br>Height<br>Race/ethnicity | In the U.S., spirometers use correction factors for persons labeled as black (10–15%) or Asian (4–6%). | Inaccurate estimates of lung function may result in the misclassification of disease severity and impairment for racial/ethnic minorities (e.g., in asthma and COPD).[23] |

Vyas DA et al. N Eng J Med 2020;383(9):874

# AMA implements 3 new policies November 2020

**Declares Racism as a Public Health Threat**

- Acknowledges structural, systemic, and interpersonal forms of racism and bias exist across all the social determinants of health and research

**Elimination of Race as a Proxy for Ancestry, Genetics, and Biology in Medical Education, Research and Clinical Practice**

- Race is distinct from ethnicity, genetic ancestry, or biology

**Decry Racial essentialism in Medicine**

- AMA will collaborate with minority organizations & content experts to identify and address aspects of medical education and board exams, assessments and practices that reinforce institutional and structural racism.

Keeys et.al. Race, Racism, and the policy of 21st century medicine. Yale J Biol and Med 2021;153

# Summary

- Health disparities are pervasive and persistent nationally and locally.
- Health disparities are rooted in widespread institutionalized and structural racism.  This is based on longstanding policies and practices.
- The practice of medicine also has inherent health disparities
- Physicians are charged with the duty of self reflection of practices and biases to improve the care of our patients
- Physicians must become educated about the living conditions of the patients we serve.
- Our role begins outside of the hospital and clinic and our voices are critical to changing policy to address the ills of our community

# Sir William Osler
# "On race, nationality and creed" 1906

"Distinctions of race, nationality, color, and creed are unknown within the portals of the Temple of Aesculapius. Dare we dream that this harmony and cohesion so rapidly developing in medicine, obliterating the strongest lines of division, knowing no tie of loyalty, but loyalty to truth. -Dare we hope, I say, that in the wider range of human affairs a similar solidarity may ultimately be reached."

Aequinimitas : with other addresses to medical students, nurses and practitioners of medicine. By William Osler 1906