

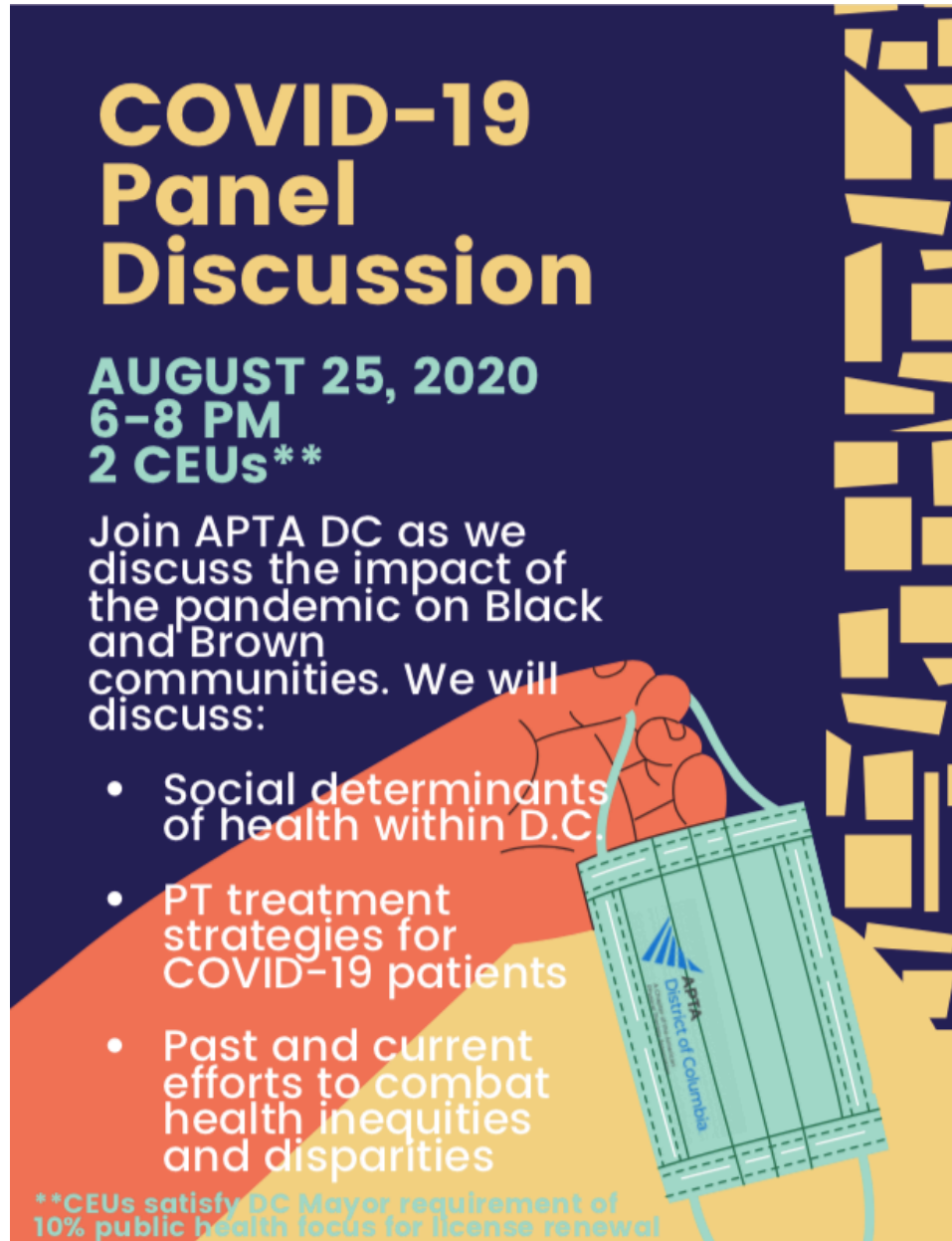
# COVID-19 Panel Discussion

**AUGUST 25, 2020**  
**6-8 PM**  
**2 CEUs\*\***

Join APTA DC as we discuss the impact of the pandemic on Black and Brown communities. We will discuss:

- Social determinants of health within D.C.
- PT treatment strategies for COVID-19 patients
- Past and current efforts to combat health inequities and disparities

\*\*CEUs satisfy DC Mayor requirement of 10% public health focus for license renewal



# COVID-19 PANEL

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**Addressing Health Disparities in the Black  
Community**



Hosted by HEART (Health Equity &  
Anti-Racism Team) of APTA DC

# Panelists

- **Erin Wentzell, PT, DPT, PCS**
- **Cherise Lathan, PT, DPT, NCS, CBIS**
- **Titilayo Akinmusuru, PT, DPT**
- **Johnette Meadows, PT, MS**

# SOCIAL DETERMINANTS OF HEALTH & HEALTH EQUITY

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Erin Wentzell, PT, DPT, PCS



# Objectives

- Recognize the **impact** of social determinants of health and structural inequities on health.
- Understand the **role** that health disparities play in health inequities in Washington, D.C.
- Identify the **communities** most impacted by the COVID-19 pandemic in Washington, D.C.



# Land Acknowledgement of the *Piscataway and Nacotchtank People*

A Land Acknowledgement is a formal statement that recognizes the unique and enduring relationship that exists between Indigenous Peoples and their traditional territories.

- <https://www.nps.gov/articles/native-peoples-of-washington-dc.htm>
- <http://www.ala.org/aboutala/indigenous-tribes-washington-dc>
- <https://americanindian.si.edu/>

# Definitions

- Health Disparities
- Equality
- Equity
- Justice



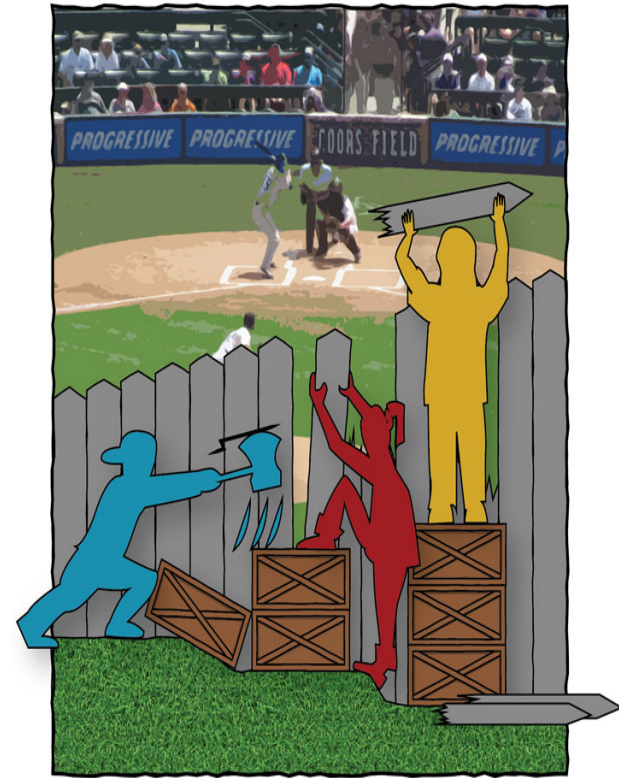




**EQUALITY**



**EQUITY**

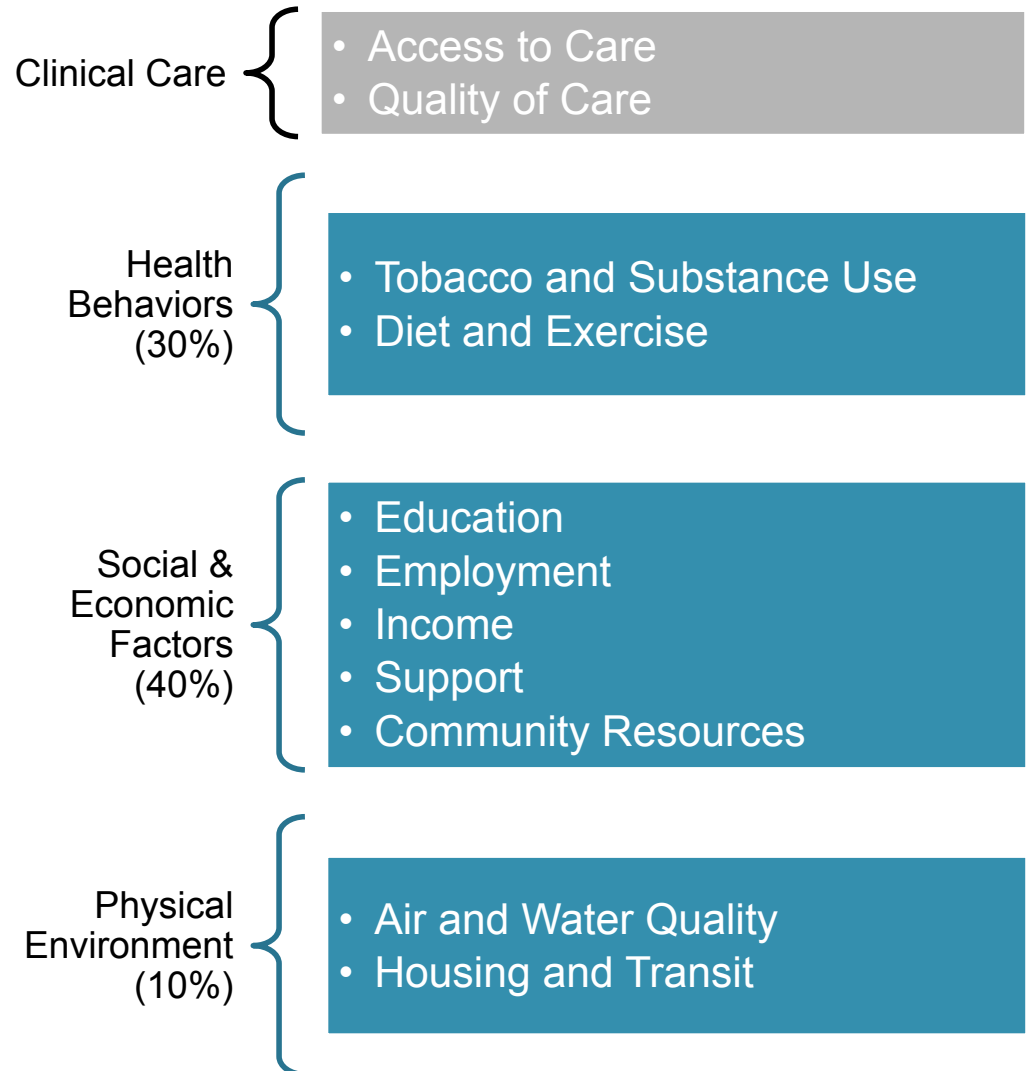
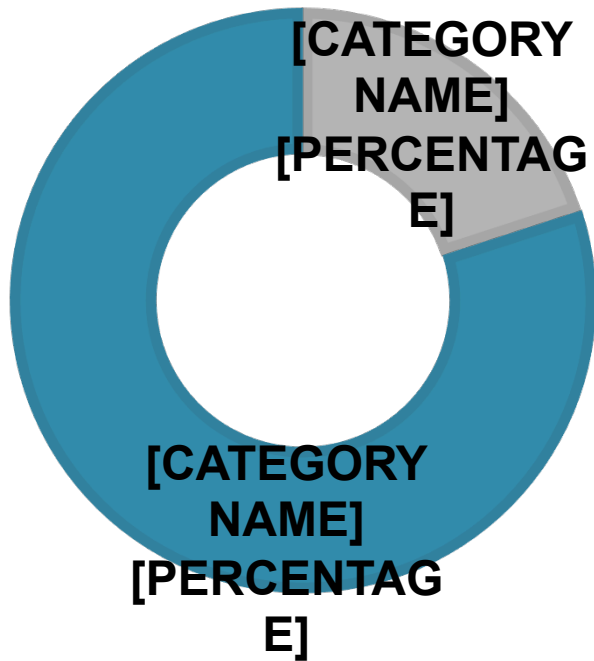


**JUSTICE**

# The Determinants of Health

## WHAT DRIVES HEALTH?

■ Clinical Care   ■ Non-Clinical Determinants







Programs &  
Policies

Determinants  
of Health

Health  
Outcomes

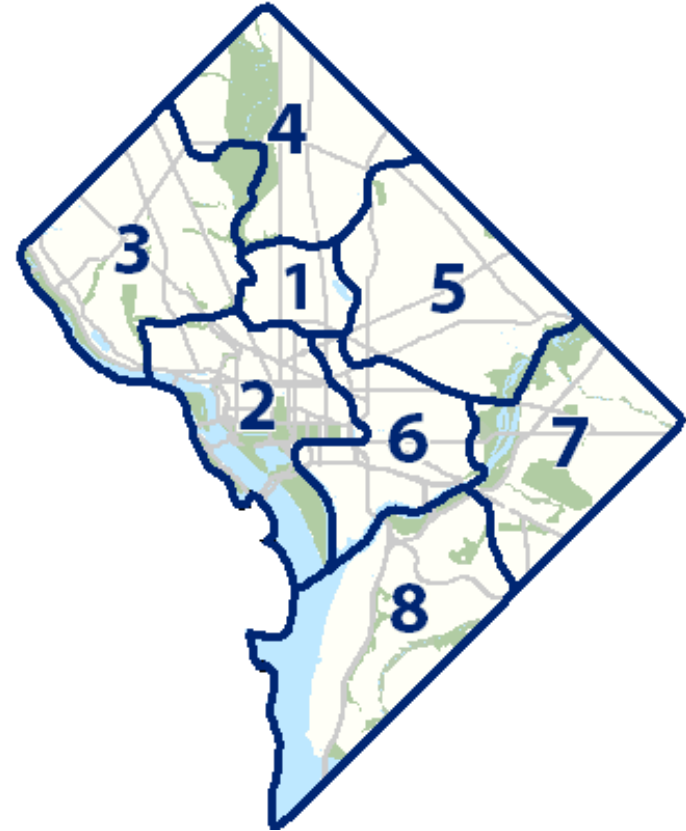
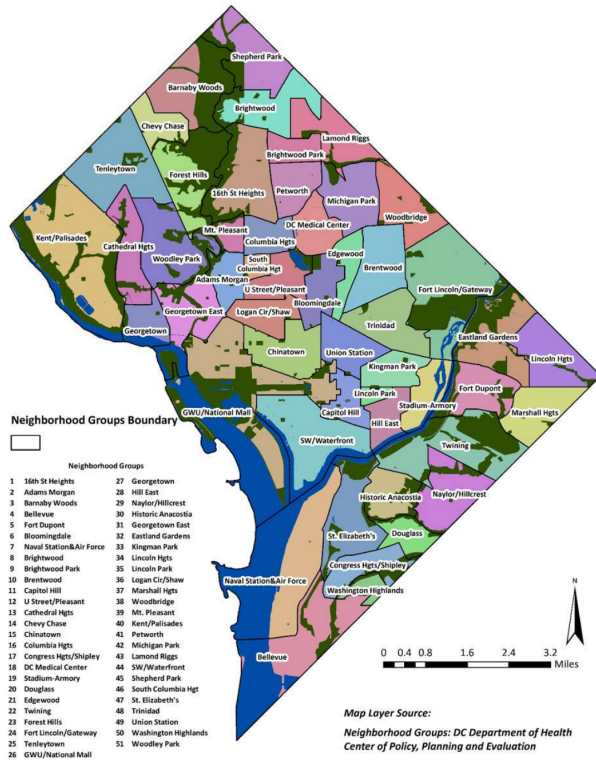
*Equity*



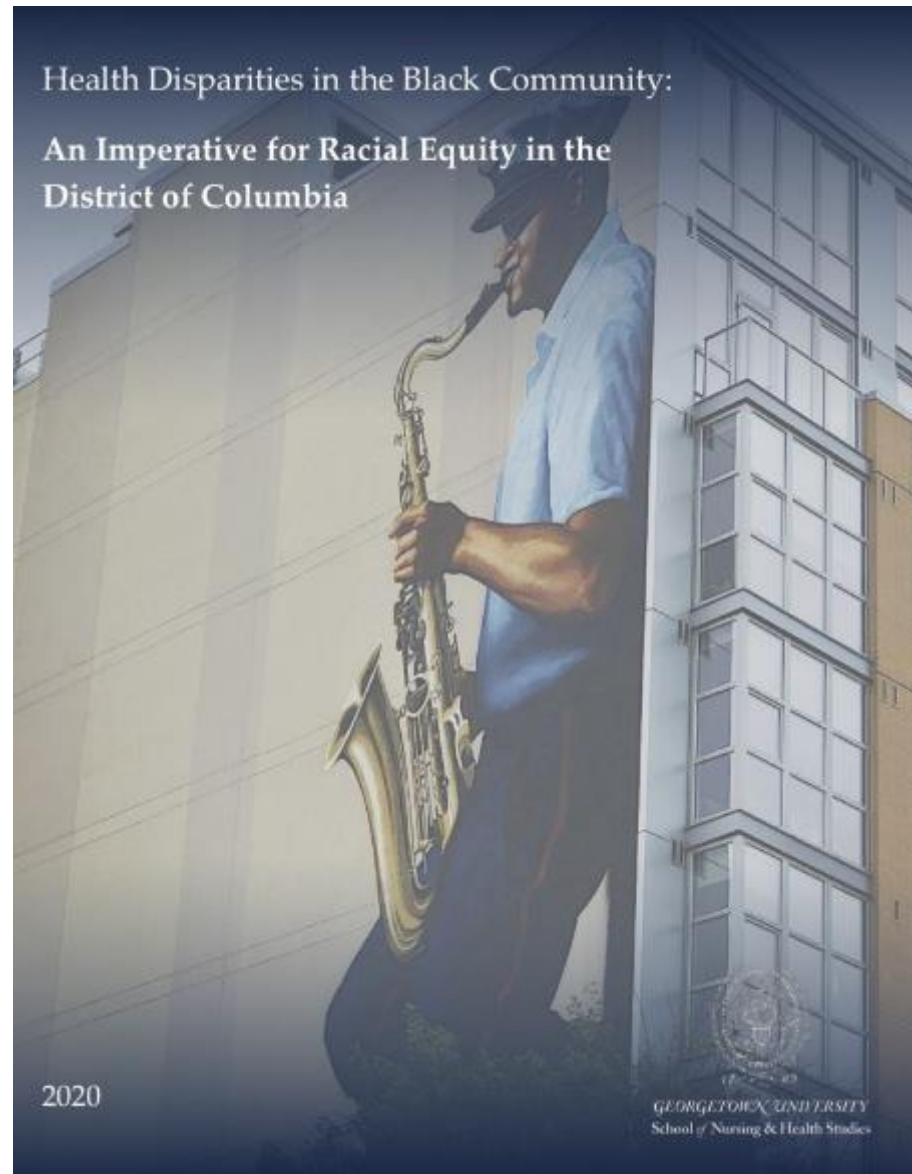


# Welcome To Washington, D.C.

## DISTRICT OF COLUMBIA (PROXIMAL) NEIGHBORHOOD GROUPS



# The Tale of Two Cities



[https://issuu.com/ck806/docs/nhs-health\\_disparities\\_in\\_the\\_black\\_community\\_repo](https://issuu.com/ck806/docs/nhs-health_disparities_in_the_black_community_repo)



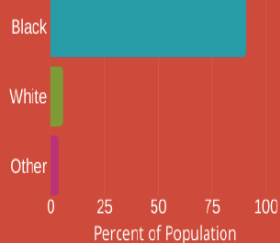
# PLACE MATTERS



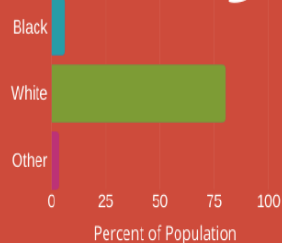
Health Disparities in DC

# The Imperative for Racial Equity In D.C.

## Ward 8



## Ward 3



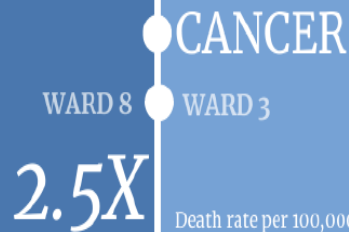
## INFANT MORTALITY



The infant mortality rate is more than 6 times higher in Ward 8 than in Ward 3<sup>3</sup>



The median household income is almost 4 times higher in Ward 3 than in Ward 8<sup>1</sup>



## CANCER

The death rate due to cancer is 2.5 times higher in Ward 8 than in Ward 3<sup>2</sup>

## EDUCATION



The percent of residents with a graduate degree is 8 times higher in Ward 3 than Ward 8<sup>1</sup>

## HEART DISEASE



The death rate due to heart disease is more than 4 times higher in Ward 8 than in Ward 3<sup>2</sup>



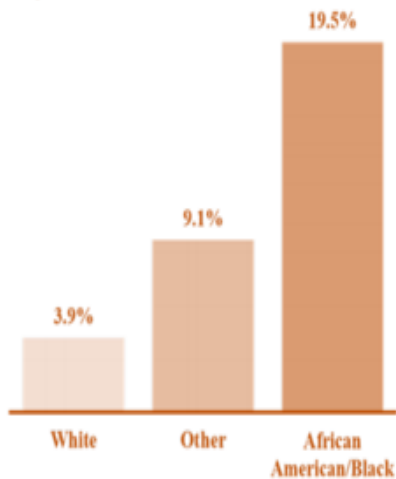
The life expectancy in Ward 8 is 16 years less than Ward 3<sup>2</sup>

<https://issuu.com/ck806/docs/nhs-health-disparities-in-the-black-community-repo>

(1) US CENSUS BUREAU, AMERICAN COMMUNITY SURVEY  
 (2) DC DEPARTMENT OF HEALTH, CENTER FOR POLICY, PLANNING, AND EVALUATION  
 (3) DC DEPARTMENT OF HEALTH, PERINATAL HEALTH AND INFANT MORTALITY REPORT  
 GEORGETOWN UNIVERSITY DEPARTMENT OF HEALTH SYSTEMS ADMINISTRATION

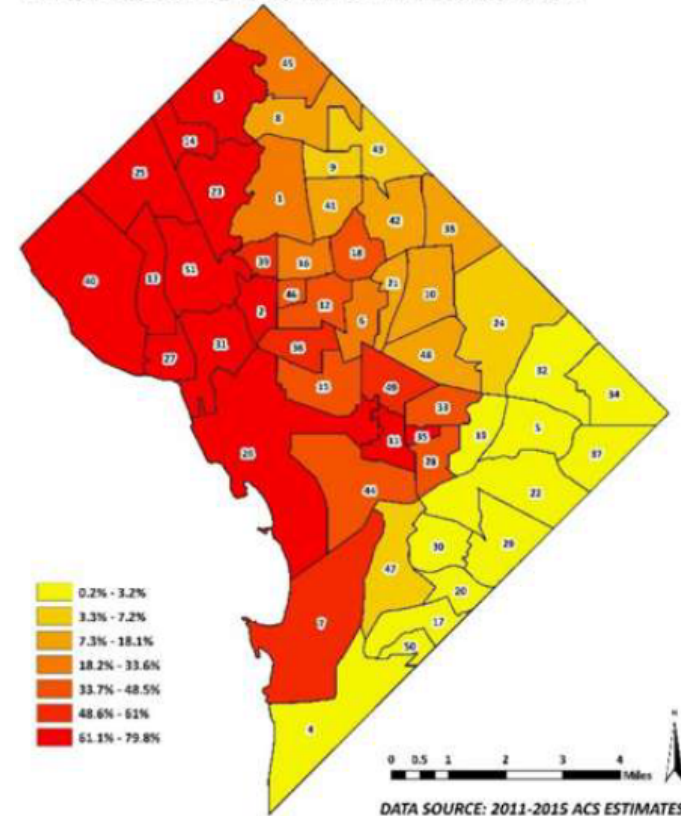
# The Impact of Race

Self Reported Fair or Poor Health  
By Race, 2015 DC BRFS



Statistically Significant

DEMOGRAPHICS  
RACE AND ETHNICITY  
PERCENTAGE OF NON-HISPANIC WHITE POPULATION



# The Impact of Your Zip-Code on Health

Life Expectancy by Ward (2011- 2015)

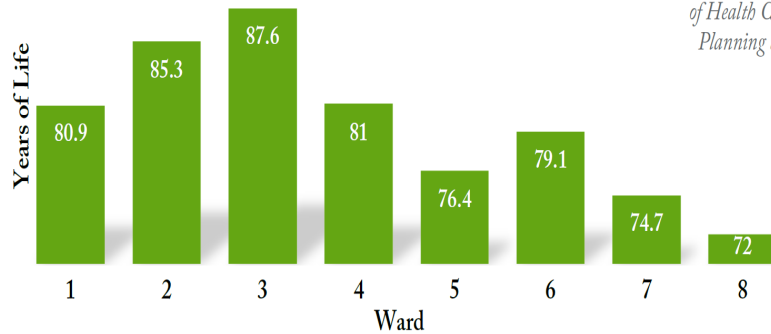


Table 1: DC Department of Health Center for Policy, Planning and Evaluation



[https://issuu.com/ck806/docs/nhs-health\\_disparities\\_in\\_the\\_black\\_community\\_repo](https://issuu.com/ck806/docs/nhs-health_disparities_in_the_black_community_repo)

<https://www.rwjf.org/en/library/infographics/washington-dc-map.html>

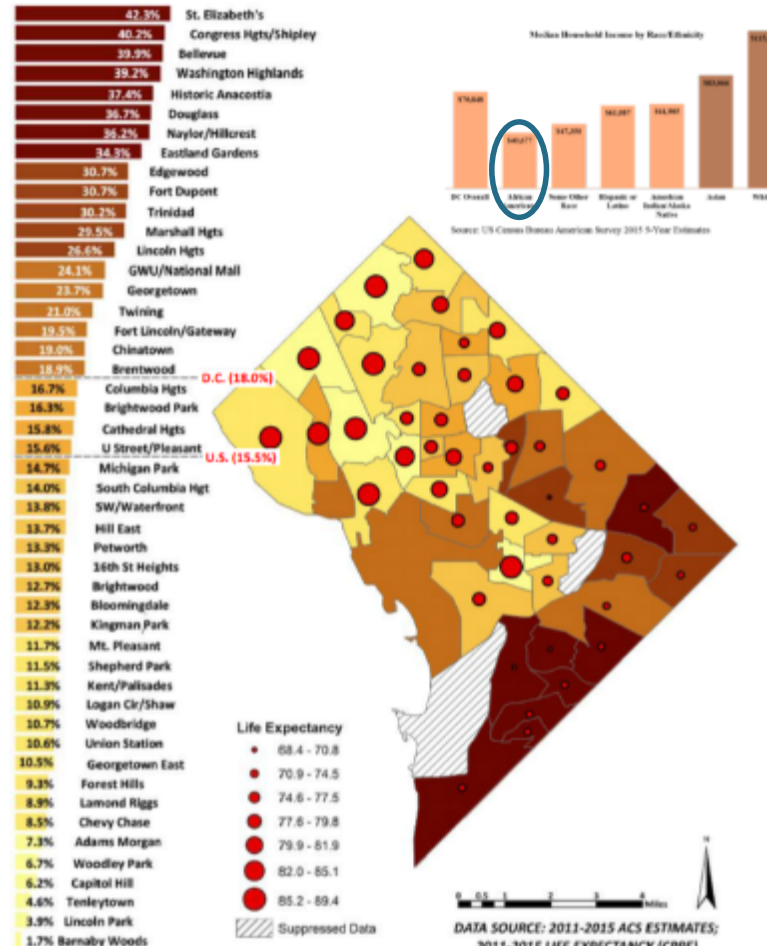


# The Impacts of Poverty

## OPPORTUNITIES FOR HEALTH IN DC by Neighborhood Group

Figure 15: Population in Poverty and Life Expectancy

### PERCENTAGE OF TOTAL POPULATION IN POVERTY



# The role of policy in segregation

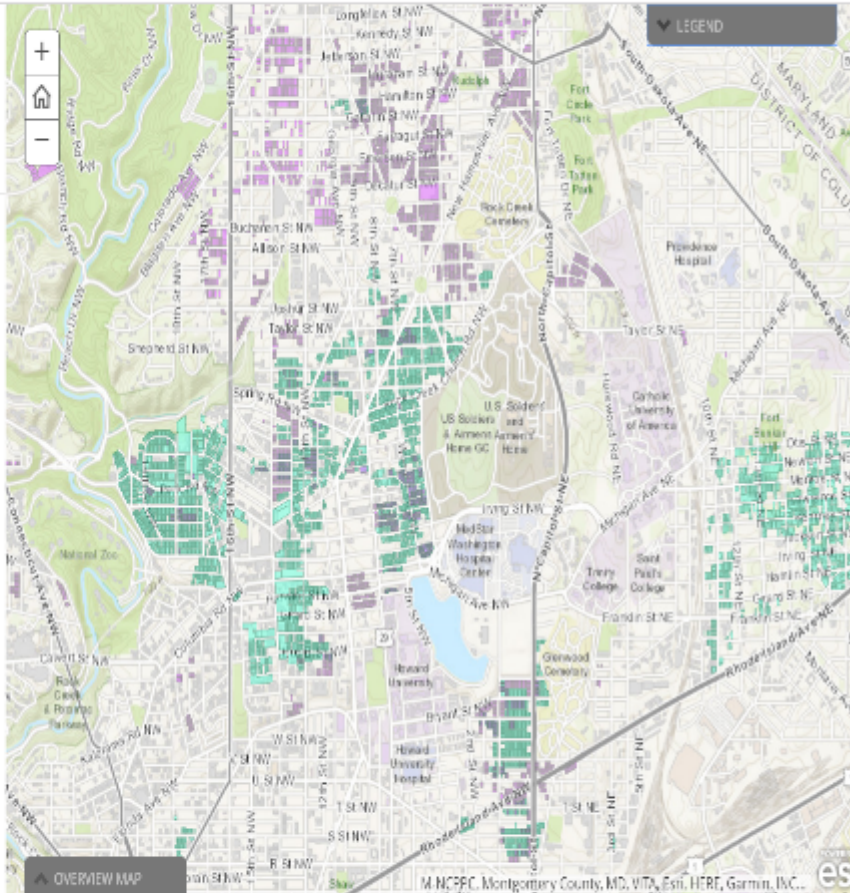
A Story Map by JMT

Mapping Segregation in Washington DC  
Legal Challenges to Racially Restrictive Covenants

As Washington grew in the early 20<sup>th</sup> century, developers commonly sought to shape the character of new neighborhoods by including covenants (agreements) in deeds for the properties they sold. They might require that only single-family houses be constructed or that buildings be a certain distance from the street. They also might prohibit use of the property as a school, factory, or saloon—or prohibit its sale or lease to certain groups, most often African Americans.

Because deeds are legal contracts, homebuyers needed to pay attention to what they were agreeing to. Buyers who ignored a covenant risked being taken to court, and racial covenants deterred African Americans from moving into new neighborhoods. Covenants also targeted other groups, including Jews. In DC this was more common west of Rock Creek Park.

Starting in the 1920s, racially restrictive covenants also began to be imposed in another manner. Neighborhood associations would gather signatures on petitions that put covenants on the properties of each signer, effectively restricting entire blocks. These petitions, which were filed with the Recorder of Deeds as legal contracts, could restrict whole neighborhoods, like Mount Pleasant and



OVERVIEW MAP

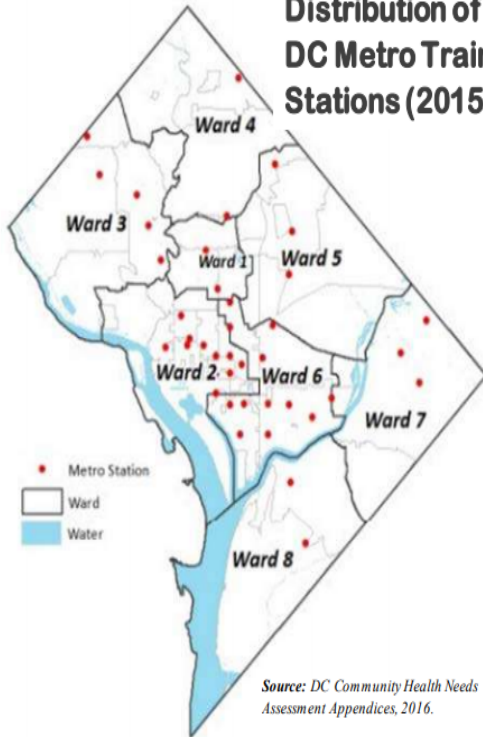
M: NCSPC, Montgomery County, MD, VITA, Esri, HERE, Garmin, IBC, esri

<https://jmt.maps.arcgis.com/apps/MapJournal/index.html?appid=061d0da22587475fb969483653179091>



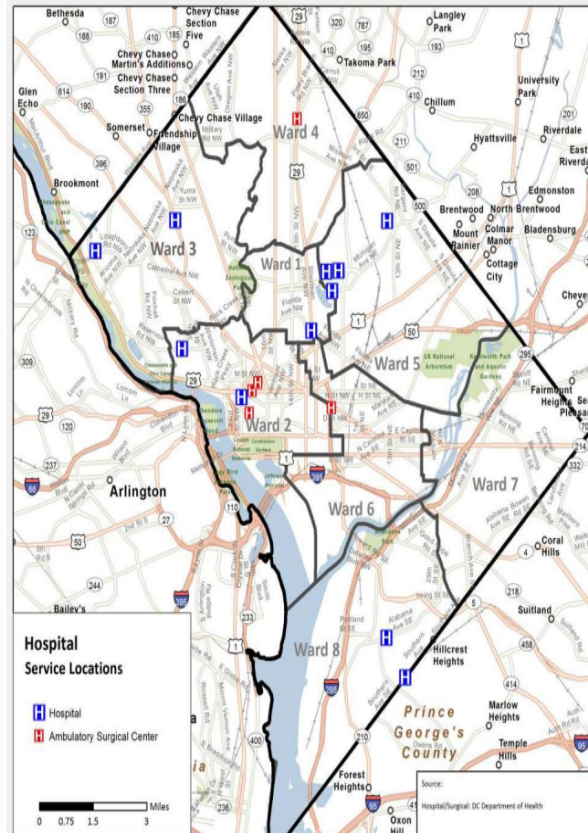
# The Built Environment Impacts Health

**Distribution of DC Metro Train Stations (2015)**



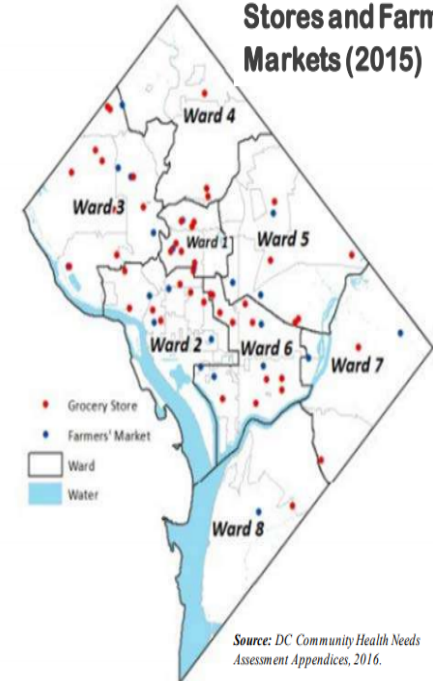
Source: DC Community Health Needs Assessment Appendices, 2016.

**Figure 2: Distribution of DC Hospital and Surgical Services**



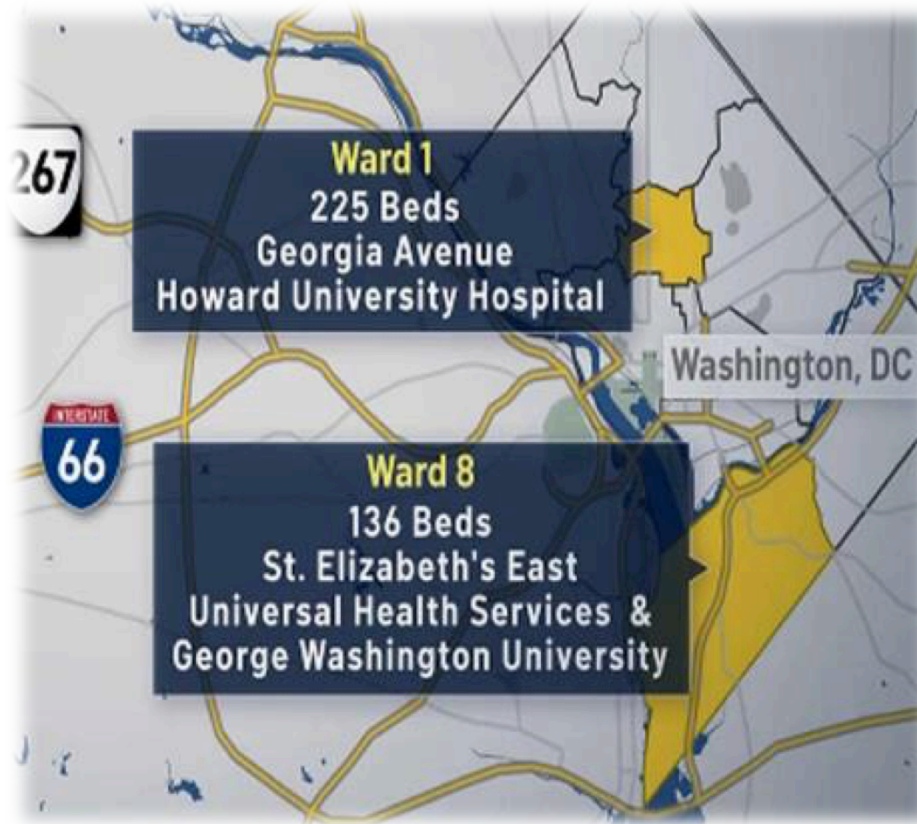
Source: DC Department of Health

**Distribution of Grocery Stores and Farmers' Markets (2015)**



Source: DC Community Health Needs Assessment Appendices, 2016.

# Addressing Health Inequities in DC



# COVID-19 In Minority Populations

- Minorities have increased rates of COVID-19 across the country
- Inequities in the social determinants of health play a role in the unequal morbidity and mortality among minority populations
  - Discrimination
  - Health Care Access and Utilization
  - Occupation
  - Educational, Income, and Wealth Gaps
  - Housing

# Systemic Racism Is a Public Health Crisis: Impact on the Black Community

## What is systemic racism?



### Systemic racism:

the way policies & practices of organizations or systems advantage some populations, while disadvantaging others, creating different outcomes for different racial groups

Among Black Americans, systemic racism has led to long-standing inequities and striking disparities linked to COVID-19.

## COVID-19 highlights the link between racism and health



Black individuals account for **13%** of the US population



And **22%** of COVID-19 related deaths where race is known

Black people are dying from COVID-19 at a rate **2.4x higher** than White people

## What makes the Black community more at risk for COVID-19?



Higher rates of pre-existing health conditions



Over-represented in frontline & essential worker jobs

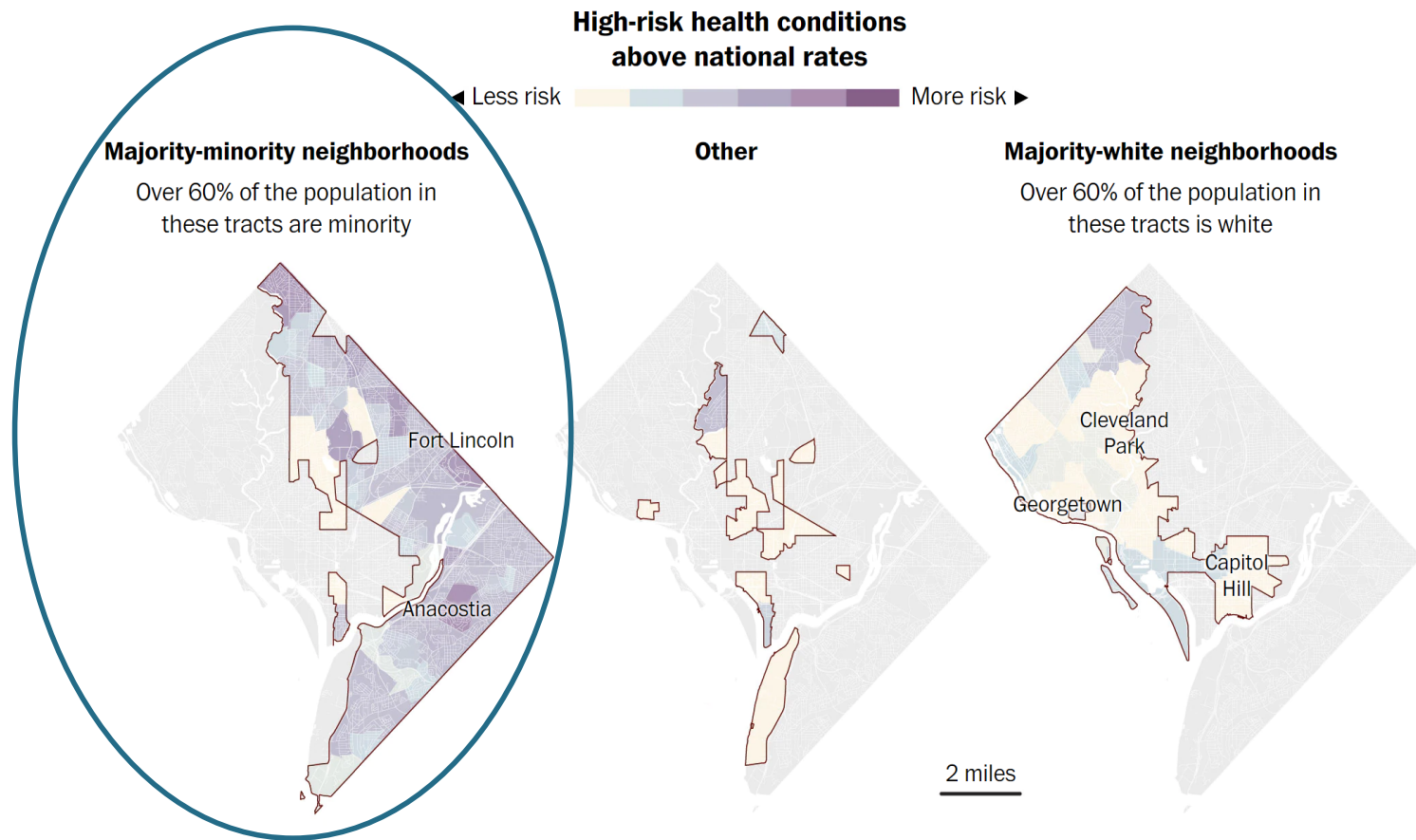


Unequal access to quality health care & insurance coverage

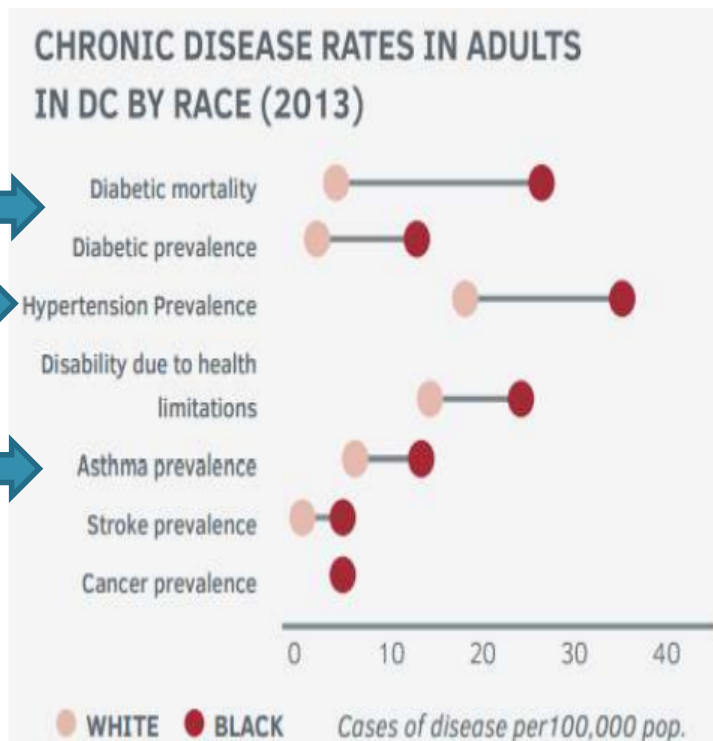


More likely to live in hypersegregated neighborhoods

# Minorities Have Higher Rates of High-Risk Health Conditions



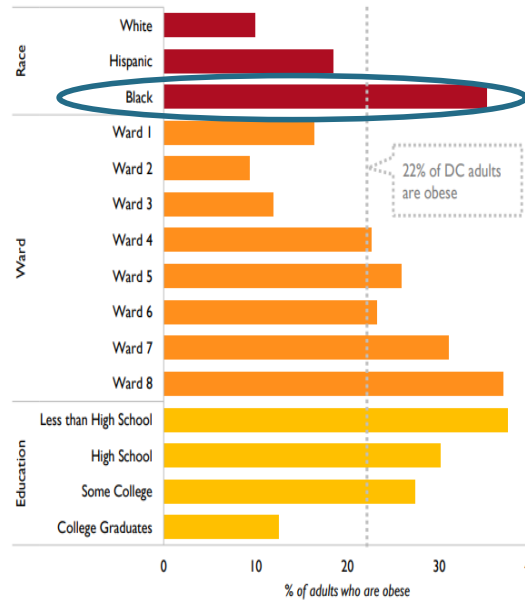
# Chronic Diseases Indicators for Worse COVID-19 Outcomes



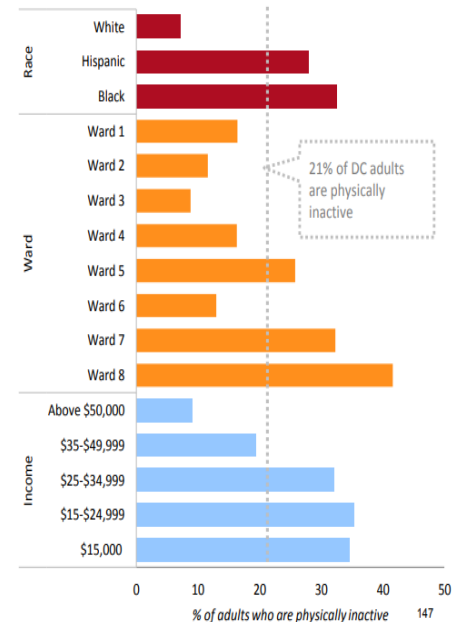
Source: DC Department of Health, DC BRFSS, DC Health Matters.



Adult Obesity by Race, Ward & Education (2014-2015)



Adult Physical Inactivity by Race, Ward & Income (2014)



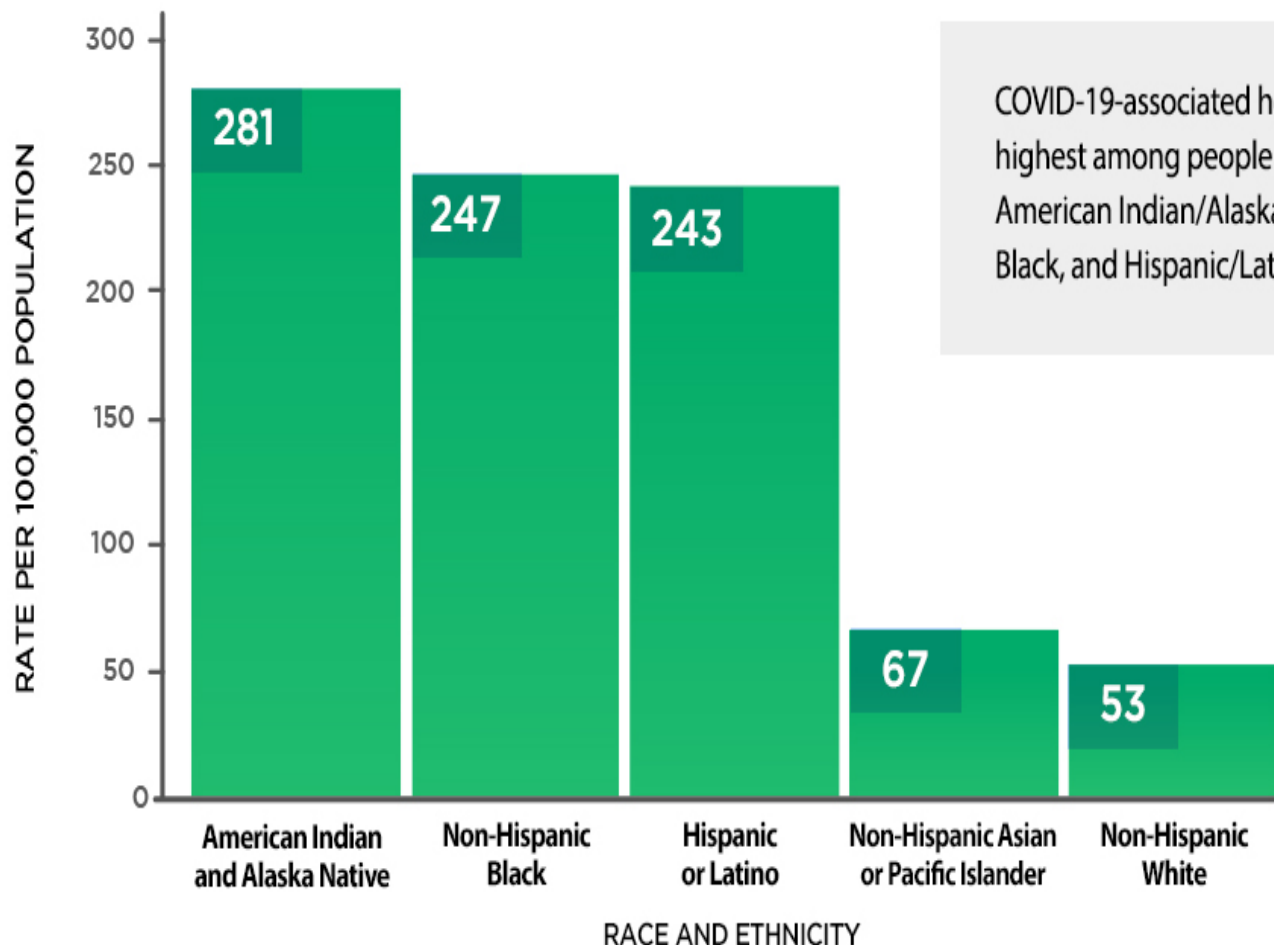
<https://doh.dc.gov/sites/default/files/dc/sites/doh/publication/attachments/Web-Health-Systems-Plan-5-8.pdf>

<https://doh.dc.gov/sites/default/files/dc/sites/doh/publication/attachments/Web-Health-Systems-Plan-5-8.pdf>



# Age-adjusted COVID-19-associated hospitalization rates by race and ethnicity

COVID-NET, MARCH 1 - JULY 18, 2020



COVID-19-associated hospitalization rates are highest among people who are non-Hispanic American Indian/Alaska Native, non-Hispanic Black, and Hispanic/Latino.

[cdc.gov/coronavirus](https://cdc.gov/coronavirus)



Rates are statistically adjusted to account for differences in age distributions within race/ethnicity strata in the COVID-NET catchment area. Rates are based on available race and ethnicity data which is now complete in 94.1% of cases from COVID-NET sites. COVID-19-associated hospitalization rates for American Indian and Alaska Natives may be impacted by recent outbreaks among specific communities within this population and the small number of American Indian and Alaska Native cases included in COVID-NET.

[https://www.kff.org/disparities-policy/issue-brief/racial-disparities-covid-19-key-findings-available-data-analysis/?](https://www.kff.org/disparities-policy/issue-brief/racial-disparities-covid-19-key-findings-available-data-analysis/?utm_campaign=KFF-2020-The-Latest&utm_medium=email&_hsmi=93555646&_hsenc=p2ANqtz-8ide6i3iNjdAMiAxP9P29ECikbcPaPkZjdlgOHJvzFzcsfLD6Zsgj6yxtqQS59cNaZ7W69hCnFRACcN9r1CaB86WRw5A&utm_content=93555646&utm_source=hs_email)

[utm\\_campaign=KFF-2020-The-](https://www.kff.org/disparities-policy/issue-brief/racial-disparities-covid-19-key-findings-available-data-analysis/?utm_campaign=KFF-2020-The-Latest&utm_medium=email&_hsmi=93555646&_hsenc=p2ANqtz-8ide6i3iNjdAMiAxP9P29ECikbcPaPkZjdlgOHJvzFzcsfLD6Zsgj6yxtqQS59cNaZ7W69hCnFRACcN9r1CaB86WRw5A&utm_content=93555646&utm_source=hs_email)

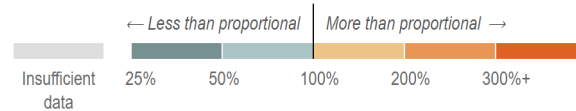
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[QS59cNaZ7W69hCnFRACcN9r1CaB86WRw5A&utm\\_content=93555646&utm\\_source=hs\\_email](https://www.kff.org/disparities-policy/issue-brief/racial-disparities-covid-19-key-findings-available-data-analysis/?utm_campaign=KFF-2020-The-Latest&utm_medium=email&_hsmi=93555646&_hsenc=p2ANqtz-8ide6i3iNjdAMiAxP9P29ECikbcPaPkZjdlgOHJvzFzcsfLD6Zsgj6yxtqQS59cNaZ7W69hCnFRACcN9r1CaB86WRw5A&utm_content=93555646&utm_source=hs_email)

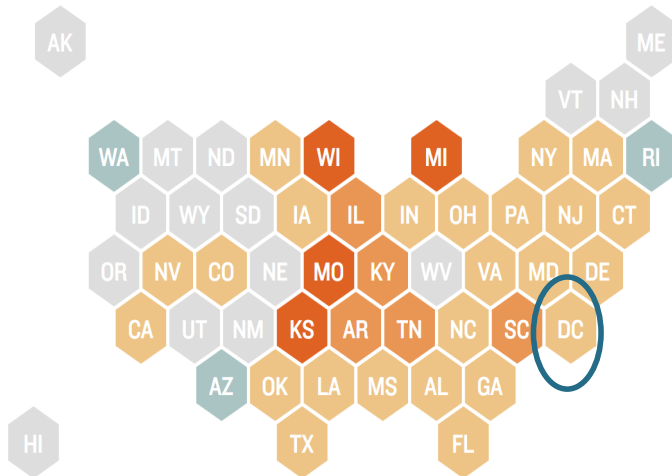
# Deaths and Cases Disproportionately Affect African Americans

Deaths and Cases Disproportionately Affect African Americans In Most States

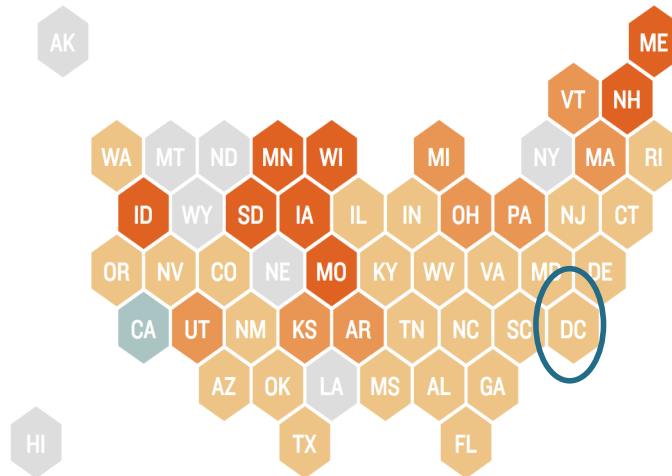
PERCENTAGE DIFFERENCE IN SHARE OF DEATHS/CASES, COMPARED WITH AFRICAN AMERICANS' SHARE OF THE POPULATION



DEATHS



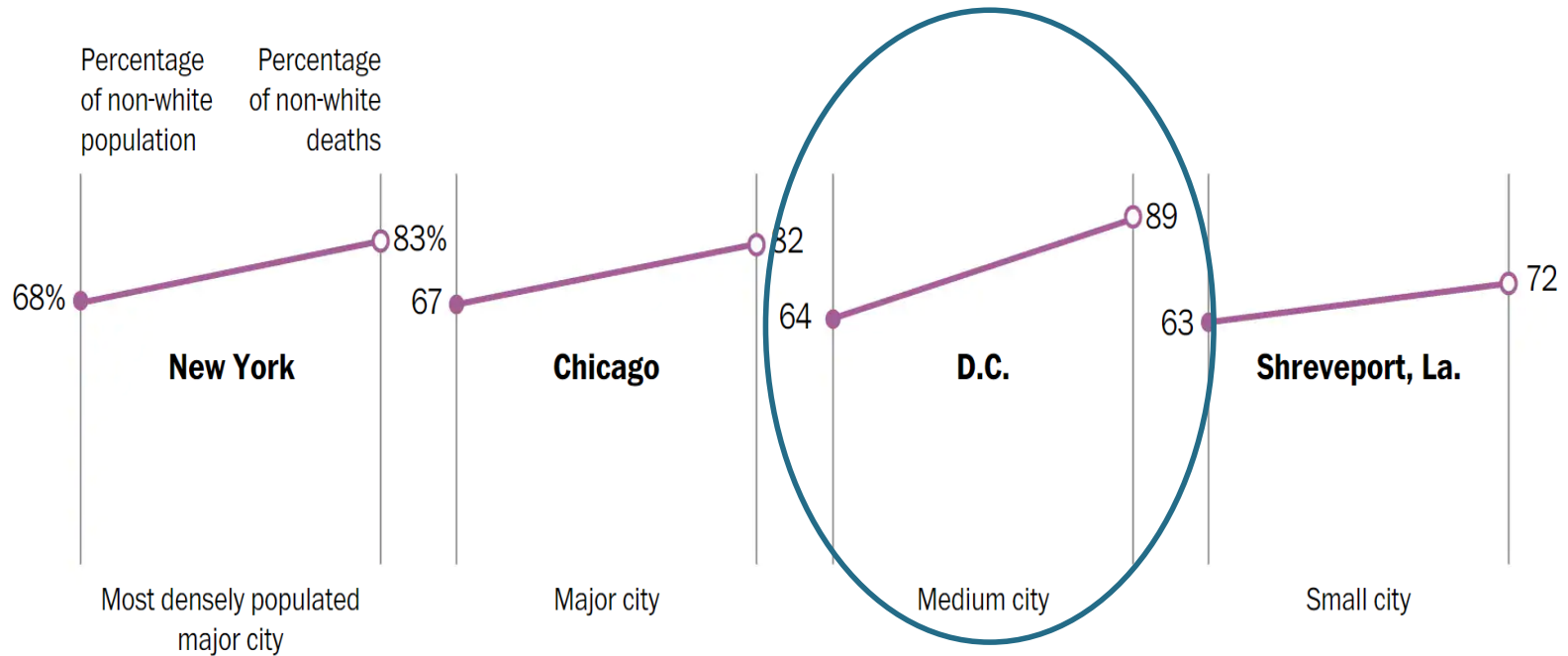
CASES





# A Disproportionate Distribution of Death

Percentage of nonwhite population compared to deaths

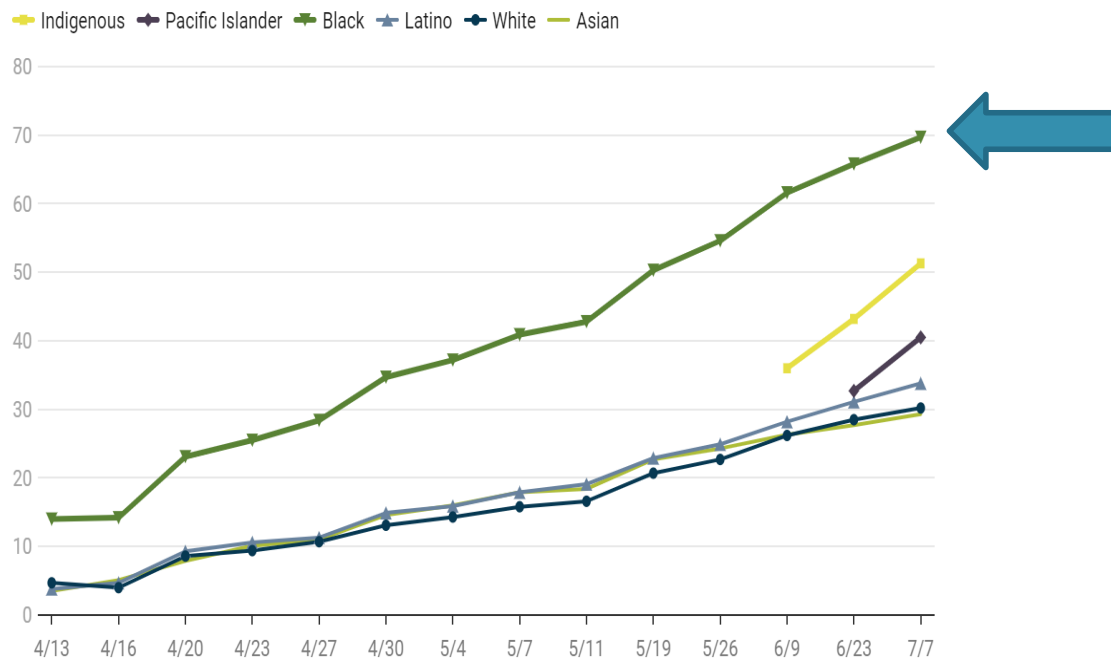


Data as of May 18

# A Pandemic In A Pandemic

## Black Americans hit the hardest

This chart from the APM Research Lab's [Color of Coronavirus project](#) shows nationwide Covid-19 mortality rates per 100,000 people of different races and ethnicities between April 13 and July 7.



Note: Dates are not consistently scaled, but reflect data collection intervals for our Color of Coronavirus project.

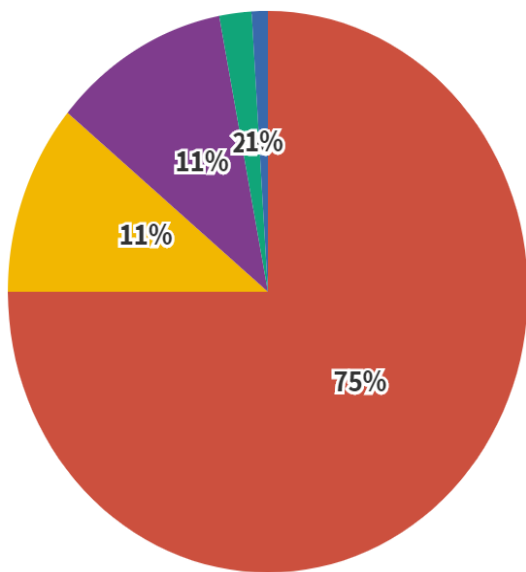
Source: [APM Research Lab](#) • [Get the data](#) • Created with [Datawrapper](#)

# COVID's Impact

## Coronavirus Deaths By Race

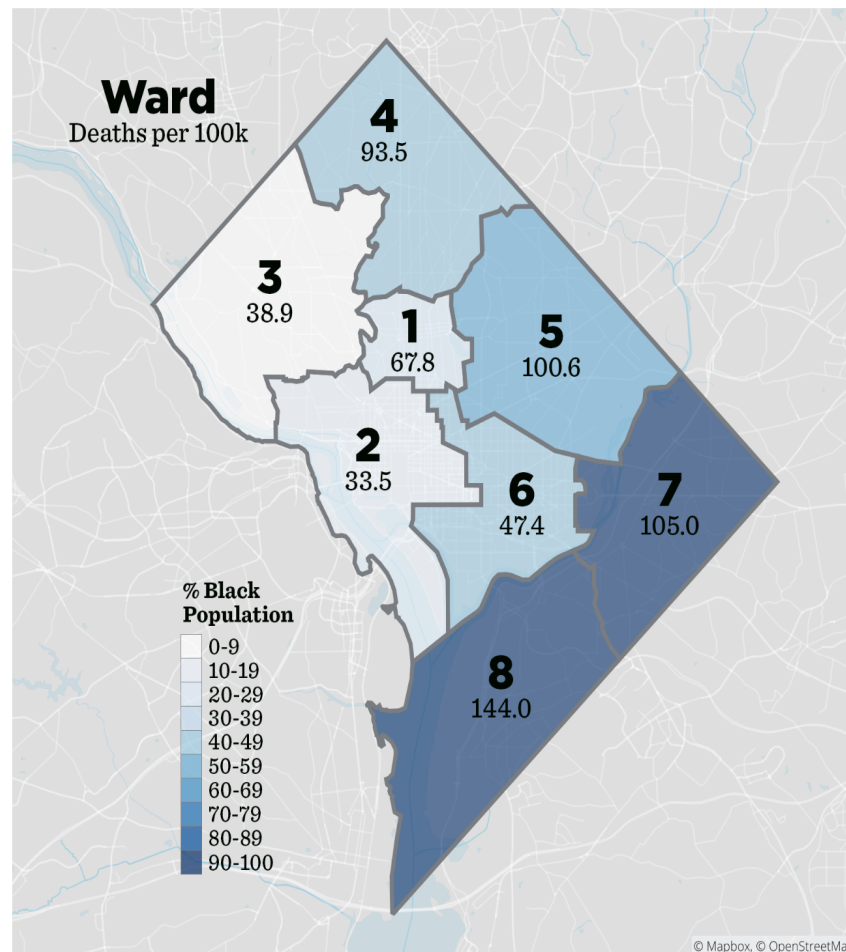
District of Columbia

Black White Hispanic Asian Other



Source: DC Dept of Health

 A Flourish chart

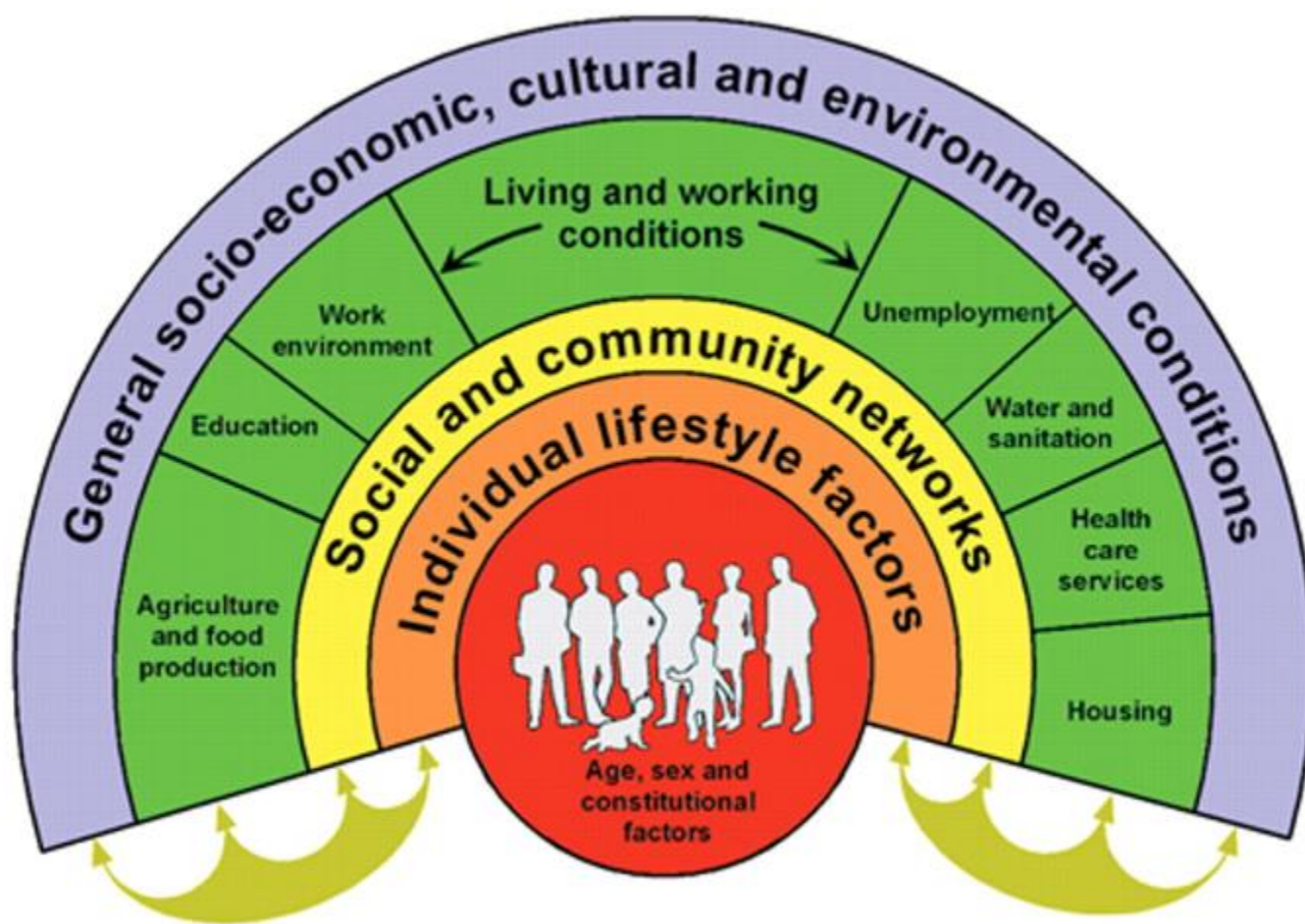


SOURCES: [District of Columbia coronavirus data](#) and [DC Health Matters](#).

<https://wjla.com/news/local/dc-leads-the-nation-in-covid-19-black-death-disparity>

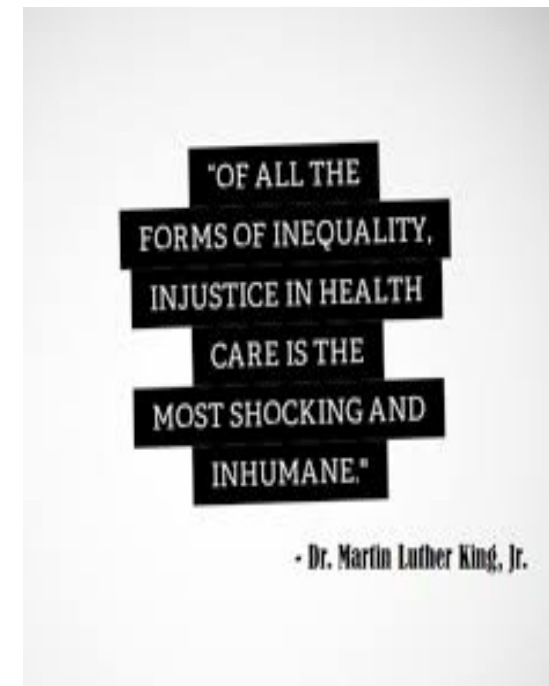
<https://www.apmreports.org/story/2020/07/15/washington-dc-response-to-coronavirus>

# The Social Determinants of Health



# Summary

- Health is impacted by the social, structural, and environmental factors along with behavioral choices and clinical care
- Health inequities and disparities are preventable and modifiable if we address the issues at multiple levels
- Health inequities increase the risk of death by COVID-19 among minorities, especially in Washington, D.C.



<https://quotesgram.com/quotes-about-inequality-and-justice>

# References

- 1. Systemic Racism Is a Public Health Crisis. Nihcm.org. <https://www.nihcm.org/categories/systemic-racism-is-a-public-health-crisis>. Published 2020. Accessed August 19, 2020.
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- 3. Godoy M, Wood D. NPR Choice page. Npr.org. <https://www.npr.org/sections/health-shots/2020/05/30/865413079/what-do-coronavirus-racial-disparities-look-like-state-by-state>. Published 2020. Accessed August 19, 2020.
- 4. Williams A, Blanco A. How the coronavirus exposed health disparities in communities of color. The Washington Post. <https://www.washingtonpost.com/graphics/2020/investigations/coronavirus-race-data-map/>. Published 2020. Accessed August 19, 2020.
- 5. District of Columbia Health Systems Plan. Doh.dc.gov. <https://doh.dc.gov/sites/default/files/dc/sites/doh/publication/attachments/Web-Health-Systems-Plan-5-8.pdf>. Published 2020. Accessed August 19, 2020.
- 6. King C, Coonan P. Health Disparities in the Black Community: An Imperative for Racial Equity in the DC. Issuu. [https://issuu.com/ck806/docs/nhs-health\\_disparities\\_in\\_the\\_black\\_community\\_repo](https://issuu.com/ck806/docs/nhs-health_disparities_in_the_black_community_repo). Published 2020. Accessed August 19, 2020.
- 7. Health Equity Report for the District of Columbia 2018 | doh. Dchealth.dc.gov. <https://dchealth.dc.gov/publication/health-equity-report-district-columbia-2018>. Published 2020. Accessed August 19, 2020.

# COVID-19 PATHOPHYSIOLOGY

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Titilayo Akinmusuru, PT, DPT

Cherise Lathan, PT, DPT, NCS, CBIS

# Objectives

By the end of this discussion, the learner will be able to

- Describe the pathophysiology of COVID-19.
- Identify key receptor that causes multi system involvement.
- Describe the sequelae of pathophysiological events in the following systems:
  - Cardiac
  - Respiratory
  - Musculoskeletal
  - Neurologic
- Identify risk stratification labs which are used in the differential diagnosis of COVID-19.
- Discuss genetic factors, physiologic predisposition, and cultural anthropology known in Black people:
  - Hypertension



# Objectives Continued

- Hyperlipidemia
- Diet - food choices, food deserts
- Smoking, contributing to chronic lung conditions
  - COPD
  - Asthma
- BMI and obesity
- Predisposition for inflammatory response
- Lifestyle - sedentary, Frontline workers
- Risk of stroke
- Hormonal contraceptives
- Discuss how co-morbidities impact the course and severity of the disease
- Describe how physical therapists can effect and advocate for the decreased transmission and infection of COVID-19 in the Black community

# COVID-19: WHAT DO WE KNOW

- *Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)* is a new virus that emerged in 2019, causing the *coronavirus disease of 2019 (COVID-19)*.
- Estimated incubation period is up to 14 days from time of exposure
- Median incubation period of 4-5 days (latency period)
- The *angiotensin-converting enzyme 2 (ACE-2)* is the binding site for SARS-CoV-2.
- **ACE-2** is an enzyme attached to the membranes of cells in the lungs, arteries, heart, kidney, and intestines.
- ACE-2 mRNA also found in brain matter.
- Within the Renin-Angiotensin-Aldosterone system, the ACE-2 receptor processes 2 types of the protein **angiotensin**, in order to keep blood pressure stable and control inflammatory processes, among other bodily functions.
- SARS-CoV-2 can bind onto the ACE2 receptor to enter the cell, replicate within the cell, and cause dysfunction throughout the body.

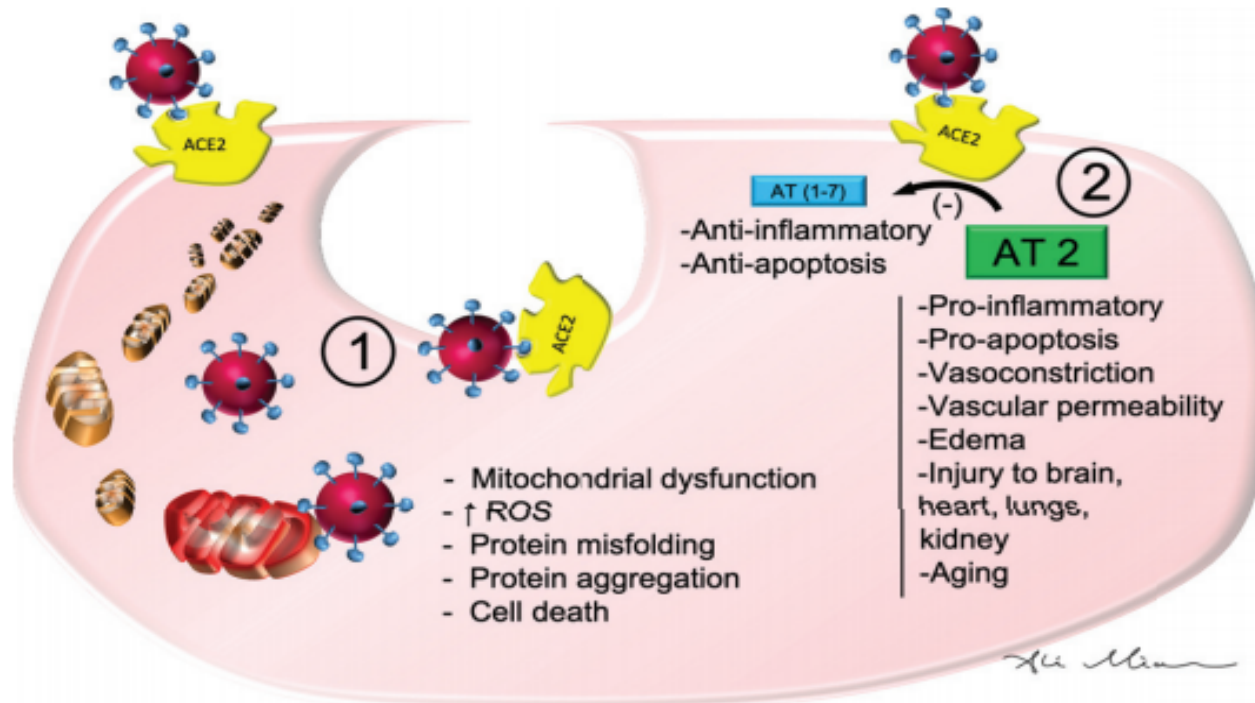
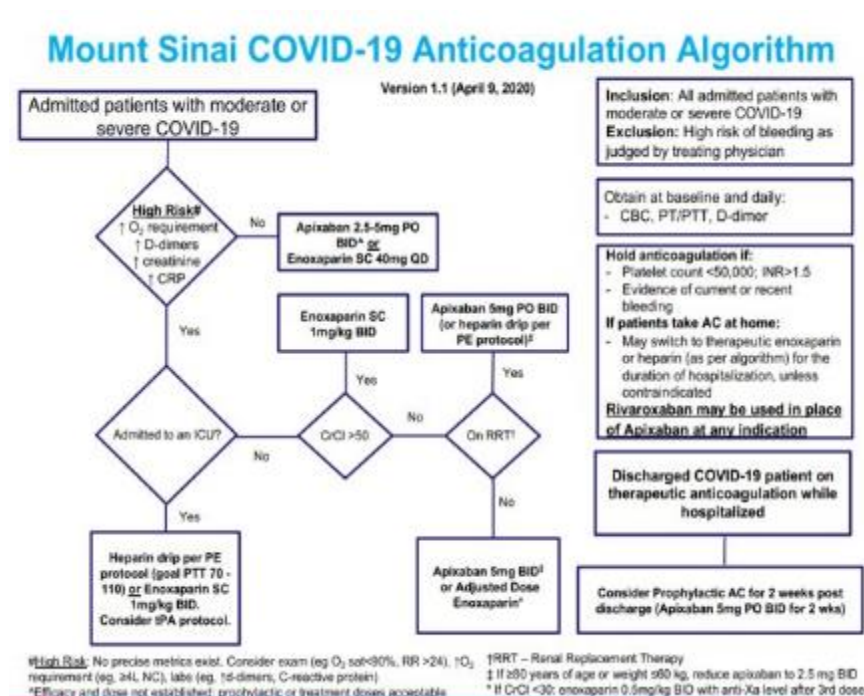


Fig. 1. SARS-Cov2: Cellular mechanism of action. SARS-Cov2 binds ACE2 to enter epithelial cells of blood vessels and cells in multiple other organs. 1) Once internalized, it can cause damage to mitochondria and lysosomes which in turn may result in increased reactive oxygen species (ROS), protein misfolding, protein aggregation, and cell death. 2) By binding to ACE2, SARS-Cov2 also downregulates and inhibits the metabolic conversion of Angiotensin 2 (AT2) to AT(1-7). The resulting higher levels of AT2 is associated with pro-inflammatory markers, vasoconstriction, vascular permeability and edema, vascular injury to cells in the lungs, brain, heart, and kidneys as well as processes involved in pro-apoptosis and aging.

# COVID AND PE/DVT

- COVID-19 pathophysiology associated with respiratory disease is consistent with pulmonary vascular thromboemboli with increased dead space ventilation
- In COVID-19 pneumonia, the thrombi may play a direct and significant role in gas exchange abnormalities and in multisystem organ dysfunction
- SARS-CoV-2 appears to be causing pathophysiological derangements: pulmonary thrombi, pulmonary infarcts, and microthrombi in other organs leading to increased incidence of sudden CVA in adults in their 30s and 40s



# COVID RELATED SYSTEMIC INVOLVEMENT

- Cardiovascular Manifestations
  - Myocarditis, arrhythmias, myocardial infarction, generalized hypercoagulability
- Nervous System Manifestations
  - **Central:** Dizziness, headache, acute cerebrovascular disease, ataxia, seizures, impaired consciousness, cognitive dysfunction/ mental health
  - **Peripheral:** Impairments of the senses (taste, smell, vision), nerve pain.
- Skeletal muscle impairments
  - Generalized muscle weakness and wasting
  - Guillain-Barre syndrome

# NEUROLOGIC MANIFESTATIONS: DIRECT AND INDIRECT MECHANISMS

Some coronaviruses have been demonstrated able to spread via a synapse-connected route to the medullary cardiorespiratory center from the mechanoreceptors and chemoreceptors in the lung and lower respiratory airways.

- **Direct:** ACE-2 receptor binding increases hyperemia and edema
  - the latency period (4-5 days) may be enough for the virus to enter and destroy medullary neurons
  - increasing evidence shows that Covid-19 may first invade peripheral nerve terminals, and then gain access to the CNS via a synapse-connected route. The trans-synaptic transfer has been well documented for other Coronaviruses
- **Indirect:** Retrograde neuronal route mechanism
  - Inflammatory biomarkers: D-dimer, lymphocytes, CK, LDH

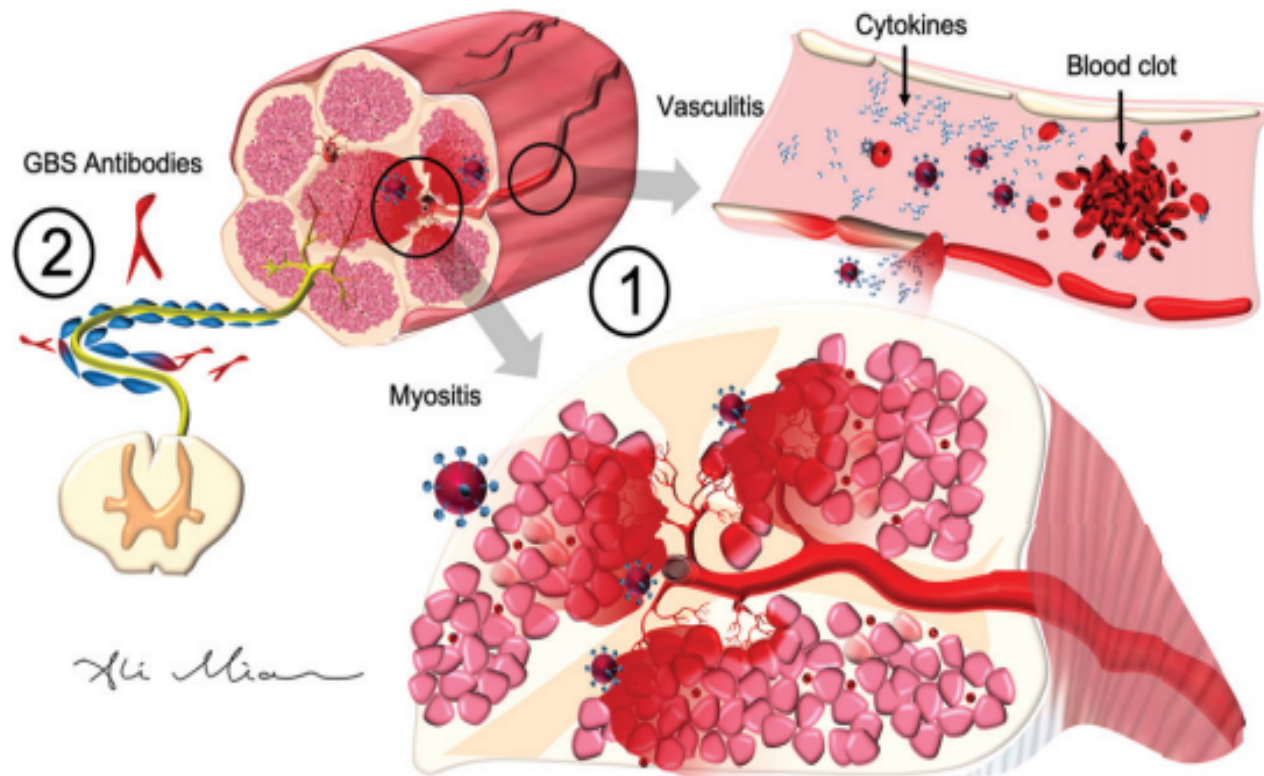
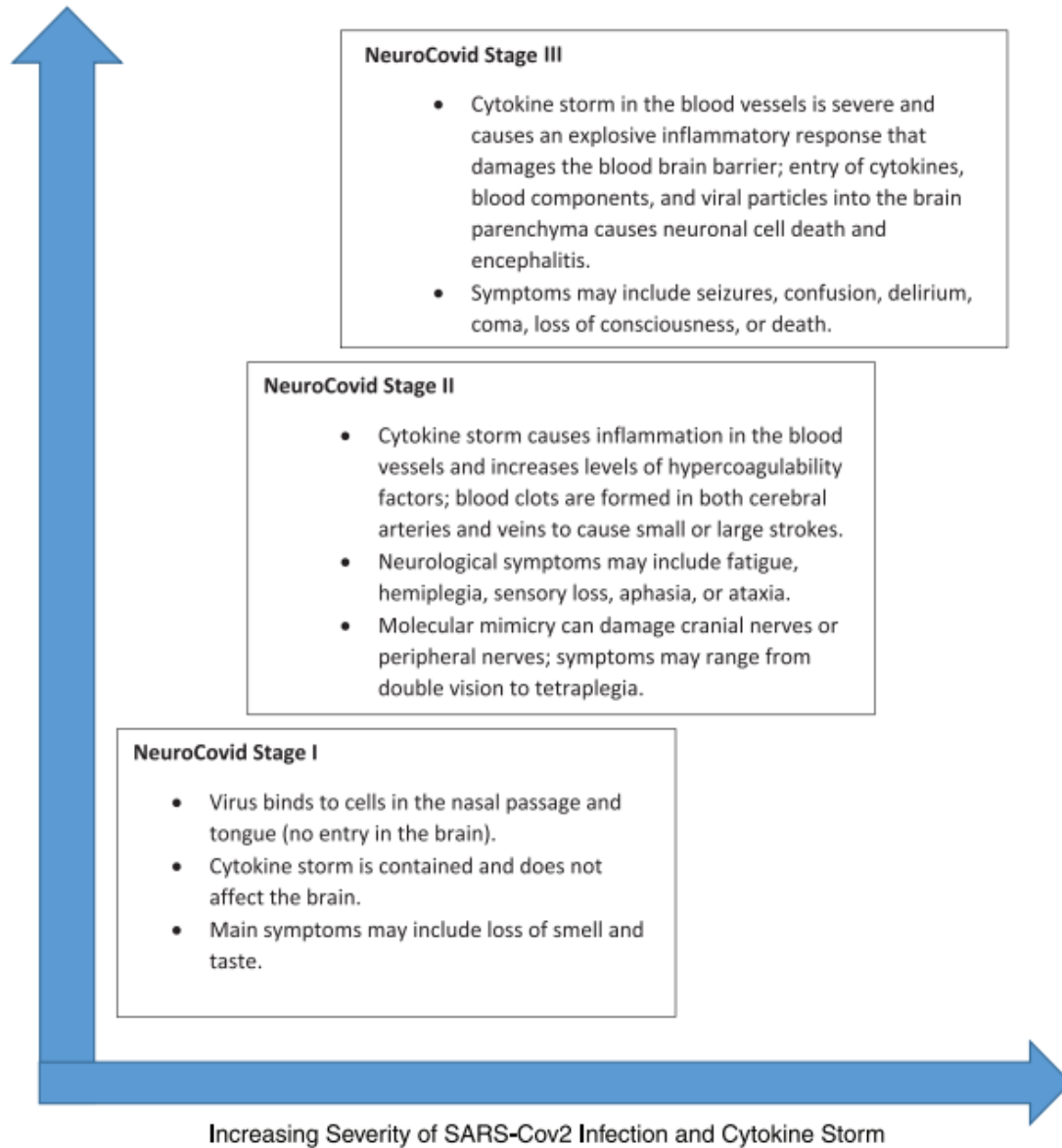


Fig. 3. SARS-Cov2: Pathophysiology of action in peripheral nerves and muscle. 1) SARS-Cov2 activation of cytokines causes inflammatory injury to epithelial cells in the blood vessels (vasculitis) and muscles cells (myositis). In cardiac arteries and muscles (not shown), cytokine storm, triggered by SARS-Cov2, can result in hypercoagulopathy and formation of blood clots (myocardial infarction) or endocarditis. 2) SARS-Cov2 can trigger the formation of autoantibodies (such as GD1a) which react with antigens on axons and myelin cells to cause Guillain-Barre syndrome (GBS).





# Respiratory Manifestation: ARDS vs COVID+ARDS

## ARDS

- Acute onset <1 week
- Bilateral diffuse opacities (CT/CXR)
- Not explained by cardiac failure or fluid overload
- hypoxia and high PEEP
- Lung tissue is able to be recruited and responsive to changes in PEEP

## COVID+ARDS

- Acute onset ~1 week
- Multisystemic involvement/ symptoms
- Low V/Q: areas that re-ventilated and not perfused referred to as *alveolar dead space*
- Cardiac Failure and/or fluid overload *is possible*
- Limited PEEP response
- Response to limited PEEP and prone position due to redistribution of perfusion

# Differential Diagnosis

## LABS

APR 02 03:17

L 130 | 99 | H 42 /  
H 148

4.3 | 22 | H 2.67 \

APR 02 03:17

\ L 7.1 /  
C 71.4 ----- 267  
/ L 23.1 \

pH Art: 7.21 Low (04/02/20 05:31:00)  
pCO2 Art: 58 mmHg High (04/02/20 05:31:00)  
pO2 Art: 127 mmHg High (04/02/20 05:31:00)  
HCO3 Art: 23.2 mmol/L (04/02/20 05:31:00)  
Base Ex/Def Art: -4.5 mmol/L Low (04/02/20 05:31:00)  
O2 Sat Meas Art: 98.4 % (04/02/20 05:31:00)No qualifying data available.

ESR >85  
CRP 121  
LDH 690  
Ferritin 1307  
D-dimer - 18  
Troponin - n/a  
CK 1807

Lymphopenia: No

## What are we looking at?

- General CBC/Labs
- “Risk Stratification Labs”
- Arterial Blood Gases

## Resources

- Entity specific guidelines and policies
- APTA Lab Value Resources

## Where to Look?

- Physician Progress Notes

# Risk Stratification Labs

**LABS**  
APR 02 03:17

L 130		99		H 42	/	H 148
4.3		22		H 2.67	\	

APR 02 03:17

\	L 7.1	/	
C 71.4	-----	267	
/	L 23.1	\	

pH Art: 7.21 Low (04/02/20 05:31:00)  
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CRP 121
LDH 690
Ferritin 1307
D-dimer - 18
Troponin - n/a
CK 1807

Lymphopenia: No

## Erythrocyte Sedimentation Rate (ESR)

- Erythrocyte sedimentation rate (ESR) is a non-specific measure of **inflammation** based on coagulation rates

## C-reactive protein (CRP)

- CRP is a protein found in the blood, whose rise in response to **inflammation**.

## Lactate Dehydrogenase (LDH)

- LDH level is an indication of **lung damage** or **inflammation**

## Ferritin

- Ferritin binds and stores iron, preventing iron deficiency (anemia) and iron overload (hemochromatosis).

## D-dimer

- D-dimer is released in the blood during fibrinolysis and it is used to diagnose pulmonary embolism and deep vein thrombosis, **pathological coagulation**.

## Troponin

- Results help diagnose several different heart disorders and **heart muscle damage**, like myocardial infarction.

## Creatine Kinase (CK)

- CK is an enzyme found in the heart, brain, skeletal muscle, and other tissues. Increased amounts of CK are released into the blood when there is **muscle damage**.

# “UP-TRENDING” OR “DOWN-TRENDING”

## Worsening Presentation With COVID:

### Coagulation

- ↑ D-dimer **OR** ↑ ESR
- ↑ lactate dehydrogenase (LDH)

### Special Chemistry

- ↑ ferritin
- Cardiac Testing
- ↑ C-reactive protein (CRP)
- ↑ troponin

### General Chemistry

- ↑ Creatinine Kinase (CK)
- ↑ white blood cell count  
OR ↓ lymphocyte count
- ↓ albumin
- ↑ liver enzymes:
  - Alanine aminotransferase (ALT)
  - Aspartate aminotransferase (AST)
- ↑ procalcitonin (PCT)

# Genetic Factors, Physiologic Predisposition, And Cultural Anthropology Known In Black People

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- Hypertension
  - Relevant with ACE 2 inhibiting medications
  - Cost of medications
  - Access to healthcare

- Diet
  - Food choices
  - Access to healthy options; food deserts (Only 4 grocery stores in total in Ward 7 and 8)\*
  - Hyperlipidemia
- BMI and obesity
- Lifestyle — sedentary, Frontline workers



- Respiratory
  - Smoking, contributing to chronic lung conditions (COPD, Asthma, etc.)
  - Challenged lung health integrity at baseline
  - Air quality in urban vs. rural settings

- Increased risk of stroke
- Predisposition for inflammatory response
- Hormonal contraceptives
  - Increased risk of coagulopathies

# HOW CO-MORBIDITIES IMPACT THE COURSE AND SEVERITY OF THE DISEASE

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- Baseline impairments in systemic function (related to co-morbidities) put the patient at a physiological disadvantage with (immune response)
  - Renal dysfunction
  - Cardiovascular dysfunction
  - Metabolic/endocrine dysfunction

# How Physical Therapists Can Effect And Advocate For The Decreased Transmission And Infection Of COVID-19 In The Black Community

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- Differential diagnosis and screening with respect to unique morphology
  - Early access to medical care
  - BMI and  $\text{VO}_2$  max
  - Body fat %
  - Q-angles
  - Hip-to-waist ratio

- General screening questions
  - Lifestyle
  - Stressors
- Understanding cultural barriers to seeking health care
  - Access to medical providers
    - Health in Her Hue
    - Mocha Docs
  - Historical mistrust



- Recognizing the balance between recovery, compensation, and prevention.
  - Recovery:
    - Avoiding aerobic activity
    - Education to minimize activities that require large muscle bulk movement
  - Compensation:
    - Energy conservation, NOT sedentary
  - Prevention:
    - Accessing community resources for mitigation of co-morbidities and secondary impairments

# COVID-19 & The Acute Care Experience

Recovery is not a linear process



- March & April 2020
  - Endurance/Aerobic Training
  - Periodization of their ex/functional training
  - Poor patient outcomes
    - Increased length of stay
    - Reintubation/increased O2 demand
    - Uptriage to ICU
- May-Present
  - Anaerobic Training
  - Energy Conservation & promoting recovery between trials/sessions
  - Monitoring outcomes for clinically significant improvements & good predictive validity of discharge:
    - MRC Sum Score (strength)
    - FSS-ICU (functional measure)

- Long-term affects of COVID are unknown.
- Black therapists are able to empathize, interpret and re-present healthcare information to patients in a way that is specific to lifestyle and function.
  - Adherence to CDC guidelines regarding community spread:
    - Places of worship
    - Social gatherings, celebrations, and activities (ie, cookouts)

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# COVID 19: PHYSICAL THERAPY AND HISTORICAL IMPLICATIONS

JOHNETTE L. MEADOWS, PT, MS

# AFRICAN AMERICAN OR BLACK POPULATI ON

- Black or African American Alone
  - United States: 14+%  
(approximately 44,000,000) (2019)
  - Washington, DC: 46.5%  
(approximately 300,000)
    - African Americans are no longer  
the majority of the population




# SYSTEMIC RACISM

- HISTORY OF DISCRIMINATION IN HEALTH CARE AND RESEARCH
  - Black people were used unwittingly in early 20th-century medical experiments.
    - TUSKEGEE STUDY
  - American history provides another famous example of experimentation without consent.
    - HENRIETTA LACKS SUPER CELLS
      - They were cultured on a mass scale, becoming known as the “HeLa” cell line. These “immortal” cells were critical to medical breakthroughs.
  - Digital Discrimination
    - In 2019, an algorithm that helps manage healthcare for 200 million people in the US was found to systematically discriminate against Black people. According to research published in the journal Science, people who self-identified as Black were given lower risk scores by the computer than white counterparts, leading to fewer referrals for medical care.



# SYSTEMIC RACISM (CON'T)


- NEIGHBORHOODS WITH GREATER POLLUTION, FEWER FACILITIES; LACK OF CHOICE FOR HEALTHIER FOODS
- IMPLICIT BIAS IN HEALTH CARE
- DISPARITIES IN TREATMENT FOR COVID-19-”RACISM, NOT RACE”
- HIGHER DEATH RATES
  - MORE PEOPLE OF COLOR ARE “ESSENTIAL WORKERS” AND DON’T HAVE A CHOICE TO WORK
  - HEALTH DISPARITIES INCLUDING MORE HEART DISEASE, DIABETES AND HYPERTENSION WHICH EXACERBATES COVID-19
  - LACK OF INSURANCE OR UNDERINSURED



# PHYSICAL THERAPY AND HEALTH EQUITY

- IMPERATIVE THAT PTS/PTAS/STUDENTS UNDERSTAND THE IMPACT OF HEALTH INEQUITY AND DISPARITIES
- WORK TO ALLEVIATE THE IMPACT OF HEALTH DISPARITIES/INEQUITY
  - ARTHRITIS, DIABETES, HYPERTENSION, AND OTHER HEALTH ISSUES PREVALENT IN COMMUNITIES OF COLOR
  - TREAT THE ENTIRE PATIENT/CLIENT, INCLUDING ROOT CAUSES
  - WORK WITH THE PATIENT/CLIENT TO DEVELOP GOALS THAT FIT WHERE PEOPLE LIVE
  - DEVELOP MORE INFORMATION ON PREVENTION AND SHARE WITH ALL COMMUNITIES
  - TEACH IN EDUCATION PROGRAMS

# APTA STUDENT/ FACULTY STATISTICS FOR AFRICAN AMERICANS

- PT STUDENT ENROLLMENT
    - 2018-19: 3.4% (OUT OF ~34,000)
    - 2019-20: 3.8% (OUT OF ~34,000)
  - PTA STUDENT ENROLLMENT
    - 2018-19: 6% (OUT OF ~12,900)
    - 2019-20: 6.2% (OUT OF ~12,500)
  - PT STUDENT GRADUATION
    - 2019: 3.3% (OUT OF ~10,500)
  - PTA STUDENT GRADUATION
    - 2019: 5.9% (OUT OF ~6,700)
  - PT FACULTY
    - 70 CORE
    - 6 PROGRAM DIRECTORS
    - 63 ASSOCIATED
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# APTA MINORITY INITIATIVES HISTORY

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MINORITY MEMBER INITIATIVES  
INITIALLY DONE BY ASSISTANT IN  
OFFICE OF EXECUTIVE DIRECTOR

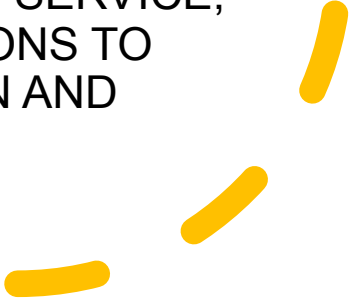


DEPARTMENT OF MINORITY  
AFFAIRS CREATED IN 1988 WITH  
DEDICATED STAFF AND BUDGET



WORKED WITH APTA STAFF,  
LEADERSHIP, AND COMMITTEE ON  
CULTURAL COMPETENCE TO  
DEVELOP INITIATIVES FOR  
INCREASING DIVERSITY IN  
ASSOCIATION AND PROFESSION

# HISTORY (CON'T)

- SELECT DEPARTMENT ACTIVITIES
    - PRESENTATIONS AT APTA COMPONENTS AND EDUCATION PROGRAMS
    - WORK WITH GOVERNMENT AND LOCAL AGENCIES
    - DEVELOP SPECIFIC COMPONENT GROUPS TO CONCENTRATE ON DIVERSITY
    - PRESENTATIONS TO SECONDARY SCHOOLS TO IMPROVE KNOWLEDGE OF PT
    - EXHIBIT AT MINORITY, HEALTH, SERVICE, AND EDUCATION ORGANIZATIONS TO DISCUSS PT AS A PROFESSION AND PRIMARY HEALTH SERVICE
- 

# HISTORY (CON'T)



DATA BASE OF MINORITY MEMBERS TO PARTICIPATE IN APTA ACTIVITIES



MENTORING INFORMATION/LIST FOR MINORITY STUDENTS



INFORMATION/LIST FOR APPOINTED/ VOLUNTEER GROUPS



FOCUS GROUPS ON HEALTH DISPARITIES



PRESENTATIONS AT APTA MEETINGS (CSM, NEXT)



NOW EMPHASIS ON DIVERSITY, EQUITY AND INCLUSION

# THANK YOU!

## COVID-19 PANEL

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Addressing Health Disparities in the Black  
Community



Hosted by HEART (Health Equity &  
Anti-Racism Team) of APTA DC

# Additional Resources

- [Systemic Racism](#)
- [Racism in Covid 19](#)
- [History of Racism in US Health Care](#)
- [Why Racism not Race is a Factor in Dying of Covid 19](#)
- [Structural Racism, Social Risk Factors, and Covid-19](#)
- [Health Equity Considerations and Racial and Ethnic Minority Groups](#)
  
- [When Your Race is a Co-Morbidity in Covid 19](#)
- [Health Disparities as COVID-19 Spreads: What the PT Profession Can Do](#)
- [Message From President Dunn on Racism and Systemic Inequality in America](#)
- [APTA Resources](#)