

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

Jonathan Roberts et al.,

Plaintiffs,

v.

Mary T. Bassett, in her official capacity as Commissioner
for the New York State Department of Health, et al.,

Defendants.

Case No. 1:22-cv-00710-
NGG-RML

**BRIEF OF NATIONAL MEDICAL ASSOCIATION, AMERICAN MEDICAL
ASSOCIATION, MEDICAL SOCIETY OF THE STATE OF NEW YORK, AMERICAN
COLLEGE OF PHYSICIANS, AMERICAN PUBLIC HEALTH ASSOCIATION,
COUNCIL OF MEDICAL SPECIALTY SOCIETIES, 1199SEIU UNITED
HEALTHCARE WORKERS EAST, COMMUNITY SERVICE SOCIETY OF NEW
YORK, HOUSING WORKS, CALLEN-LORDE COMMUNITY HEALTH CENTER,
AND MEDICAL AND HEALTH EQUITY PROFESSIONALS AND ACADEMICS AS
AMICI CURIAE IN OPPOSITION TO PLAINTIFF'S MOTION FOR A PRELIMINARY
INJUNCTION**

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Other Authorities	Page(s)
Anna M. Acosta et al., <i>Racial and Ethnic Disparities in Rates of COVID-19-Associated Hospitalization, Intensive Care Unit Admission, and In-Hospital Death in the United States From March 2020 to February 2021</i> , JAMA Network, Oct. 21, 2021, https://bit.ly/36otGCW	4, 25
Rima A. Afifi et al., ‘Most at risk’ for COVID19? The imperative to expand the definition from biological to social factors for equity, 139 Preventive Med. 106229 (Aug. 2, 2020), https://bit.ly/3oYJPFx	7, 8, 16, 23
Am. Acad. of Fam. Physicians, <i>Institutional Racism in the Health Care System</i> , https://bit.ly/3sctuPs	24
Am. Coll. of Obstetricians & Gynecologists, <i>Practice Advisory: Low-Dose Aspirin Use for the Prevention of Preeclampsia and Related Morbidity and Mortality</i> (Dec. 2021), https://bit.ly/3IZIKom	24
Am. Coll. of Obstetricians and Gynecologists, <i>Importance of Social Determinants of Health and Cultural Awareness in the Delivery of Reproductive Health Care, ACOG Committee Opinion No. 729</i> , 131 Obstetrics & Gynecology e43 (2018), https://bit.ly/3GqzIVc	25
Am. Med. Ass’n, <i>New AMA policy recognizes racism as a public health threat</i> (Nov. 16, 2020), https://bit.ly/3L6mXgy	17, 19, 24
APM Research Lab, <i>The Color of Coronavirus: COVID-19 Deaths by Race and Ethnicity in the U.S.</i> (Mar. 15, 2021), https://bit.ly/3uqm5NU	4
Kamyar Arasteh, <i>Prevalence of Comorbidities and Risks Associated with COVID-19 Among Black and Hispanic Populations in New York City: An Examination of the 2018 New York City Community Health Survey</i> , 8 J. Racial & Ethnic Health Disparities 863 (2021), doi.org/10.1007/s40615-020-00844-1	5
Mary T. Bassett et al., <i>Variation in racial/ethnic disparities in COVID-19 mortality by age in the United States: A cross-sectional study</i> , PLOS Med., Oct. 20, 2020, https://bit.ly/3v1xHYk	2
Laura M. Bogart, <i>Factors Influencing Physicians’ Judgments of Adherence and Treatment Decisions for Patients with HIV Disease</i> , 21 Med. Decision Making 28 (2001), doi.org/10.1177/0272989X0102100104	20
Dayna Bowen Matthew, <i>Just Medicine: A Cure for Racial Inequality in American Healthcare</i> 57 (2015).....	<i>passim</i>

Paula Braveman et al., *What is Health Equity?*, Robert Wood Johnson Found. (May 1, 2017), <https://rwjf.ws/3Gkedjx>7, 10, 15

Savanna L. Carson et al., *COVID-19 Vaccine Decision-making Factors in Racial and Ethnic Minority Communities in Los Angeles, California*, JAMA Network, Sept. 30, 2021, <https://bit.ly/34UzKCB>14

CDC, *Disparities in Hospitalizations*, <https://bit.ly/3ufveJj>6, 7

CDC, *Health Equity Considerations and Racial and Ethnic Minority Groups*, <https://bit.ly/3giQc1z>7, 9, 10

CDC, *People with Certain Medical Conditions*, <https://bit.ly/3IUxx8D>5, 22

CDC, *Pregnancy Mortality Surveillance System*, <https://bit.ly/3ohnWB5>8

CDC, *Prevalence of Both Diagnosed and Undiagnosed Diabetes*, <https://bit.ly/3s3Xiwu>5, 6

CDC, *Risk for COVID-19 Infection, Hospitalization, and Death By Race/Ethnicity*, <https://bit.ly/34P9b1T>4

CDC, *Risk of Severe Illness or Death from COVID-19*, <https://bit.ly/3ghKDAI>5

CDC, *COVID-19 Racial and Ethnic Health Disparities*, <https://bit.ly/3AVhrZv>25

CDC, *Social Determinants of Health: Know What Affects Health*, <https://bit.ly/3IWQXd3>7

Themis Chronopoulos, “*What’s Happened to the People?*” *Gentrification and Racial Segregation in Brooklyn*, 24 J. African-Am. Stud. 549 (2020), <https://bit.ly/3L90D6m>10

Coal. for Homelessness, *Age-Adjusted Mortality Rate for Sheltered Homeless New Yorkers*, <https://bit.ly/3ByrWSU>16

Coal. for Homelessness, *Basic Facts About Homelessness: New York City*, <https://bit.ly/3h1ZBv2>16

COVID Tracking Project, The Atlantic, *The COVID Racial Data Tracker*, <https://bit.ly/3KZDOSk>2

COVID Tracking Project, The Atlantic, *New York: All Race & Ethnicity Data*, <https://bit.ly/3sxag62>5

COVID-19 Health Equity Interactive Dashboard, Emory University, *COVID-19 Outcomes in New York*, <https://covid19.emory.edu/36>3

Ctrs. for Medicare & Medicaid Servs., *Racial and Ethnic Disparities in Diabetes Prevalence, Self-Management, and Health Outcomes among Medicare Beneficiaries* (2017), <https://go.cms.gov/3s2Ettq>.....6

Ankur K. Dalsania et al., *The Relationship Between Social Determinants of Health and Racial Disparities in COVID-19 Mortality*, 9 J. Racial & Ethnic Health Disparities 288 (2021), <https://bit.ly/3h0hqdT>.....16

Division of Criminal Justice Services, *NYS Arrests and Prison Sentences by Race/Ethnicity* (June 2019), <https://on.ny.gov/3GFJmhF>.....15

Amanda Dunker & Elisabeth Ryden Benjamin, *How Structural Inequalities in New York’s Health Care System Exacerbate Health Disparities During the COVID-19 Pandemic: A Call for Equitable Reform*, Cmty. Serv. Soc’y (June 4, 2020), <https://bit.ly/3KZ7JtZ>.....4, 11, 14, 16

Justin M. Feldman & Mary T. Bassett, *Variation in COVID-19 Mortality in the US by Race and Ethnicity and Educational Attainment*, JAMA Network, Nov. 23, 2021, <https://bit.ly/3sirmVs>3

Emma G. Fitzsimmons, *Black and Latino New Yorkers Trail White Residents in Vaccine Rollout*, N.Y. Times (Sept. 29, 2021)12

Equity Indicators, *Narrowing the Gap* (Vol. 16, Feb. 2017), <https://bit.ly/3h2vIzW>.....13

Ethan Geringer-Sameth, *Why Didn’t New York’s Hardest Hit Communities Receive Covid Vaccine Priority?*, Gotham Gazette (Jan. 17, 2021), <https://www.gothamgazette.com/state/10075-why-didnt-new-york-hardest-hit-communities-of-color-covid-vaccine-priority>.....12

Arline T. Geronimus et al., *“Weathering” and Age Patterns of Allostatic Load Scores Among Blacks and Whites in the United States*, 96 Am. J. Pub. Health 826 (May 2006), doi.org/10.2105/AJPH.2004.06074914

Brad Greenwood et al., *Physician-patient racial concordance and disparities in birthing mortality for newborns*, 117 PNAS 21194 (2020), <https://bit.ly/3gkmg5m>.....19

Alexander R. Green et al., *Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients*, 22 Soc’y of Gen. Internal Med. 1231 (2007), <https://bit.ly/3gODyHQ>19

William J. Hall et al., *Implicit Racial/Ethnic Bias Among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review*, 105 Am. J. Pub. Health e60 (2015), <http://doi.org/10.2105/AJPH.2015.302903>.....20, 21

Camara Jules P. Harrell et al., *Multiple Pathways Linking Racism to Health Outcomes*, 8 Du Bois Rev. 143 (2011), <https://bit.ly/3Bw8pCE>9

G.L.A. Harris, *Cultural Competence: Its Promise for Reducing Healthcare Disparities*, 33 J. Health & Hum. Servs. Admin. 2 (2010), <https://bit.ly/3ogbEZK>18

Laura Hawks et al., *COVID-19 in Prisons and Jails in the United States*, 180 JAMA Int’l Med. 1041 (2020) <https://bit.ly/3fqrpZb>16

Shirley A. Hill, *Inequality and African-American Health: How Racial Disparities Create Sickness* 11 (2016) *passim*

Jamie S. Hirsch et al., *Acute kidney injury in patients hospitalized with COVID-19*, 98 Kidney Int’l 209, 210, 211 (2020), <https://bit.ly/3sO3ZTP>6, 7

Kelly M. Hoffman et al., *Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites*, 113 PNAS 4296 (2016), <https://bit.ly/3h1ZRda>18, 19

Laurens Holmes Jr. et al., *Black-White Risk Differentials in COVID-19 (SARS-COV2) Transmission, Mortality and Case Fatality in the United States: Translational Epidemiologic Perspective and Challenges* at 7, 17 Int’l J. Env’t Rsch. & Pub. Health 4322 (2020), doi.org/10.3390/ijerph171243223

Kosuke Inoue et al., *Urinary Stress Hormones, Hypertension, and Cardiovascular Events: The Multi-Ethnic Study of Atherosclerosis*, 78 Hypertension 1640 (2021), <https://bit.ly/3ITeQ5e>10

Inst. of Med., *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* 1 (2003), doi.org/10.17226/102608, 9, 18, 19

Nicholos P. Joseph et al., *Racial and Ethnic Disparities in Disease Severity on Admission Chest Radiographs among Patients Admitted with Confirmed Coronavirus Disease 2019: A Retrospective Cohort Study*, 297 Radiology E303 (2020), <https://bit.ly/3BuxQV6>5

Akilah Johnson & Nina Martin, *How COVID-19 Hollowed Out a Generation of Young Black Men*, ProPublica (Dec. 22, 2020), <https://bit.ly/3ohfJgc>10, 19

Rafi Kabarriti et al., *Association of Race and Ethnicity With Comorbidities and Survival Among Patients With COVID-19 at an Urban Medical Center in New York*, JAMA Network Open, Sept. 25, 2020, doi.org/10.1001/jamanetworkopen.2020.197955

John Kelly & Stephen Cioffi, *Testing centers in many non-white neighborhoods likely to be more crowded* (July 22, 2020), <https://7ny.tv/3JHf2Ff>12

M. Komaromy et al., *The role of black and Hispanic physicians in providing health care for underserved populations*, 334 *New Eng. J. Med.* 1305 (1996).....11

Lyudmyla Kompaniyets et al., *Body Mass Index and Risk for COVID-19-Related Hospitalization, Intensive Care Unit Admission, Invasive Mechanical Ventilation, and Death - United States, March-December 2020*, 70 *MMWR* 355 (2021), <https://bit.ly/34cIXWG>.....24

Christopher W. Kuzawa & Elizabeth Sweet, *Epigenetics and the embodiment of race: Developmental origins of US racial disparities in cardiovascular health*, 21 *Am. J. of Hum. Biology* 2 (2009), <https://bit.ly/3pkYoDJ>15

Wil Lieberman-Cribbin et al., *Analyzing disparities in COVID-19 testing trends according to risk for COVID-19 severity across New York City*, 21 *BMC Pub. Health* 1717 (2021), <https://bit.ly/3BKU0CZ>12

Wil Lieberman-Cribbin et al., *Disparities in COVID-19 Testing and Positivity in New York City*, 59 *Am. J. Preventive Med.* 326 (2020), doi.org/10.1016/j.amepre.2020.06.00512

Shruti Magesh et al., *Disparities in COVID-19 Outcomes by Race, Ethnicity, and Socioeconomic Status: A Systematic Review and Meta-analysis*, *JAMA Network*, Nov. 11, 2021, <https://bit.ly/3uTFkQk>.....5

Ivy W. Maina et al., *A decade of studying implicit racial/ethnic bias in healthcare providers using the implicit association test*, 199 *Soc. Sci. & Med.* 219 (2018), <https://bit.ly/3rXSGJy>20

Sarah B. Maness et al., *Social Determinants of Health and Health Disparities: COVID-19 Exposures and Mortality Among African American People in the United States*, 136 *Pub. Health Reps.* 18 (2020), <https://bit.ly/3LJyuCP>16

Douglas S. Massey & Mary J. Fischer, *How segregation concentrates poverty*, 23 *Ethnic & Racial Stud.* 670 (2000), <https://bit.ly/3IUxbu3>10

NAACP, *Criminal Justice Fact Sheet*, <https://naacp.org/resources/criminal-justice-fact-sheet>15

Anthony Nardone et al., *Associations between historical residential redlining and current age-adjusted rates of emergency department visits due to asthma across eight cities in California: an ecological study*, 4 *Lancet Planet Health* e24 (2020), <https://bit.ly/3rjYeh1>9

New York City Dep’t of Health & Mental Hygiene, *2021 Health Advisory #39*, at 2, 3 (Dec. 27, 2021), <https://on.nyc.gov/3K9Cmf9>1, 22

nychealth/coronavirus-data, GitHub, <https://bit.ly/35p3k34>4

NYC Health, *COVID-19: Data, Case, Hospitalization, and Death Rates*,
<https://on.nyc.gov/3BHGP5>4

NYC Health, *Health Department Launches Coalition to Confront Racism in
 Medical Algorithms* (Nov. 24, 2021), <https://bit.ly/3uVbFpT>21

N.Y. State Dep’t of Health, *COVID-19 Fatalities Tracker*,
<https://on.ny.gov/3HINh4j>2, 4

N.Y. State Dep’t of Health, *Memorandum Re: COVID-19 Oral Antiviral
 Treatments Authorized and Severe Shortage of Oral Antiviral and Monoclonal
 Antibody Treatment Products* (Dec. 27, 2021)1

N.Y. State Dep’t of Health, *Prioritization of Anti-SARS-CoV-2 Monoclonal
 Antibodies and Oral Antivirals for the Treatment of COVID-19 During Times
 of Resource Limitations* (Dec. 29, 2021) *passim*

Off. Disease Prevention & Health Promotion, *Asthma deaths among adults (per
 million population, 65+ years) By Race/Ethnicity*, <https://bit.ly/3geCooT>8

Gbenga Ogedegbe et al., *Assessment of Racial/Ethnic Disparities in
 Hospitalization and Mortality in Patients With COVID-19 in New York City*,
JAMA Network Open, Dec. 4, 2020, <https://bit.ly/3uRdjZB>5

Kevin B. O’Reilly, *AMA: Racism is a threat to public health*, *Am. Med. Ass’n* (Nov.
 16, 2020), <https://bit.ly/35xEoGE>7

Sharon Otterman & Joseph Goldstein, *More Patients, Fewer Workers: Omicron
 Pushes New York Hospitals to Brink*, *NY Times* (Jan. 7, 2022),
<https://nyti.ms/3HqmMe5>25

Daniel Pan et al., *The impact of ethnicity on clinical outcomes in COVID-19: A
 systematic review*, *EClinicalMedicine*, June 3, 2020, <https://bit.ly/34PffqU>23

Yin Paradies, *A systematic review of empirical research on self-reported racism
 and health*, *35 Int’l J. Epidemiology* 888 (2006), <https://bit.ly/3IX87qS>9, 14

Yin Paradies et al., *Racism as a Determinant of Health: A Systematic Review and
 Meta-Analysis*, *PLOS One*, Sept. 23, 2015,
doi.org/10.1371/journal.pone.013851114

Roengrudee Patanavanich & Stanton A. Glantz, *Smoking is associated with worse
 outcomes of COVID-19 particularly among younger adults: a systematic
 review and meta-analysis*, *BMC Pub. Health*, Aug. 16, 2021,
doi.org/10.1186/s12889-021-11579-x24

Emily E. Petersen et al., *Racial/Ethnic Disparities in Pregnancy-Related Deaths —
 United States, 2007–2016*, *68 MMWR* 762 (2019), <https://bit.ly/3BD2UCs>8

D. Phuong Do & Reanne Frank, *Unequal burdens: assessing the determinants of elevated COVID-19 case and death rates in New York City’s racial/ethnic minority neighbourhoods*, 75 J. Epidemiology & Cmty. Health 321 (2021), <https://bit.ly/3GFw4kU>4

Primary Care Dev. Corp., *To Address COVID-19 Disparities, PCDC Urges New York State to Invest in Primary Care* (June 1, 2020), <https://bit.ly/3s18Sts>.....11

Pub. Health L. Watch, *COVID-19 Policy Playbook: Legal Recommendations for a Safer, More Equitable Future* (Scott Burris et al. eds., 2021), <https://bit.ly/3L0KCz6> *passim*

Fares Qeadan et al., *Racial disparities in COVID-19 outcomes exist despite comparable Elixhauser comorbidity indices between Blacks, Hispanics, Native Americans, and Whites*, Scientific Reports, Apr. 22, 2021, doi.org/10.1038/s41598-021-88308-26

Matthew A. Raifman & Julia R. Raifman, *Disparities in the Population at Risk of Severe Illness From COVID-19 by Race/Ethnicity and Income*, 59 Am. J. Preventive Med. 137 (2020), doi.org/10.1016/j.amepre.2020.04.00323

Mathieu Rees, *Racism in healthcare: What you need to know*, Med. News Today (Sept. 16, 2020), <https://bit.ly/3okjoK6>19

Christopher T. Rentsch et al., *Patterns of COVID-19 testing and mortality by race and ethnicity among United States veterans: A nationwide cohort study*, PLOS Med., Sept. 22, 2020, <https://bit.ly/3giLlgV>17

David Robinson, *Why NY hospital closures, cutbacks made COVID-19 pandemic worse*, Times-Herald Record (Apr. 10, 2020), <https://bit.ly/3snDN1W>.....11

Brian M. Rosenthal et al., *Why Surviving the Virus Might Come Down to Which Hospital Admits You*, The N.Y. Times (July 1, 2020), <https://nyti.ms/3BLmTP>.....11

Rienna G. Russo et al., *COVID-19, Social Determinants of Health, and Opportunities for Preventing Cardiovascular Disease: A Conceptual Framework*, J. Am. Heart Ass’n, Dec. 10, 2021, doi.org/10.1161/JAHA.121.022721.....16

Benjamin Seligman et al., *Social determinants of mortality from COVID-19: A simulation study using NHANES*, PLOS Med., Jan. 11, 2021, <https://bit.ly/3ITbxek>8

Ronald L. Simons et al., *Discrimination, segregation, and chronic inflammation: Testing the weathering explanation for the poor health of Black Americans*, 54 Developmental Psych. 1993 (2018), doi.org/10.1037/dev000051115

Michael W. Sjoding et al., *Racial Bias in Pulse Oximetry Measurement*, 383 New Eng. J. Med. 2477 (2020).....18

Zirui Song et al., *Racial and Ethnic Disparities in Hospitalization Outcomes Among Medicare Beneficiaries During the COVID-19 Pandemic*, JAMA Health Forum, Dec. 23, 2021, doi.org/10.1001/jamahealthforum.2021.42232

Tanya M. Spruill, *Chronic Psychosocial Stress and Hypertension*, 12 Current Hypertension Reps. 10 (2010), https://bit.ly/3oeBBc8.....10

Erin K. Stokes et al., *Coronavirus Disease 2019 Case Surveillance - United States, January 22-May 30, 2020*, 69 MMWR 759 (2020), https://bit.ly/3gVs4Cv5

Jennifer Tsai, *Jordan Crowley Would Be in Line for a Kidney—if He Were Deemed White Enough*, Slate (June 27, 2021), https://bit.ly/3h5sYfG18

U.S. Dep’t of Lab., Women's Bureau, *Median annual earnings by sex, race and Hispanic ethnicity*, https://bit.ly/3rhy5PX13

Michelle van Ryn et al., *The Impact of Racism on Clinician Cognition, Behavior, and Clinical Decision Making*, 8 Du Bois Rev. 199 (2011), doi.org/10.1017/S1742058X1100019121

Nicholas Verdini et al., *Social Determinants of Health Amplify the Association Between Ethnicity and COVID19: A Retrospective-Cohort study*, 9 Int'l J. Med. Students 282 (2022), doi.org/10.5195/ijms.2021.1125.....16, 17

Elizabeth M. Viglianti et al., *Mass Incarceration and Pulmonary Health: Guidance for Clinicians*, 15 Annals Am. Thoracic Soc’y 409 (2018), https://bit.ly/3rvWosf.....16

David R. Williams & Selina A. Mohammed, *Discrimination and racial disparities in health: evidence and needed research*, 32 J. Behav. Med. 2037 (2009), doi.org/10.1007/s10865-008-9185-09

David R. Williams et al., *Racism and Health: Evidence and Needed Research*, 40 Ann. Rev. Pub. Health 105, 108 (2019), doi:10.1146/annurev-publhealth-040218-04375010, 13

Natasha Williams et al., *Assessment of Racial and Ethnic Disparities in Access to COVID-19 Vaccination Sites in Brooklyn, New York*, JAMA Network, June 18, 2021, https://bit.ly/3oDirwt.....12

Jennifer L. Wiltz et al., *Racial and Ethnic Disparities in Receipt of Medications for Treatment of COVID-19 - United States, March 2020-August 2021*, 71 MMRW 96 (2022), https://bit.ly/3scQRal.....13, 21

Olivia Winslow, *Long Island Divided Part 10: Dividing Lines, Visible and Invisible*, *Newsday* (Nov. 17, 2019)10

Matthew Wynia et al., *Collecting and using race, ethnicity and language data in ambulatory settings: A white paper with recommendations from the Commission to End Health Care Disparities*, Comm'n to End Health Care Disparities (2011), <https://bit.ly/3omfD6R>.....6, 18

Brandon W. Yan, *Death Toll of COVID-19 on Asian-Americans: Disparities Revealed*, 36 *J. Gen. Internal Med.* 3545 (2021), doi.org/10.1007/s11606-021-07003-03

Xingyu Zhang et al., *Racial and Ethnic Disparities in Emergency Department Care and Health Outcomes Among Children in the United States*, *Frontiers in Pediatrics*, Dec. 19, 2019, doi.org/10.3389/fped.2019.00525.....19

INTRODUCTION

Amici are leading medical, health equity, and social science experts as well as organizations with direct experience on the frontlines of the COVID-19 pandemic, including in New York. *Amici* submit this brief to underscore the substantial medical and scientific literature that supports the New York Department of Health’s and the New York City Department of Health and Mental Hygiene’s acknowledgment that “longstanding systemic health and social inequities” have contributed to an increased risk of severe illness and death from COVID-19 for people of color.¹ Although race is not an inherent genetic or biological trait and therefore does not *genetically* contribute to a higher risk of medical conditions, there is no serious medical or public health dispute that longstanding systemic health and social factors have led to a disproportionately higher burden of COVID-19, including exposure, infection, severe illness and death, among populations marginalized and minoritized by systems and structures, including Black, Native American, Indigenous, Latinx, Asian American, Pacific Islander American, and people of color (BIPOC individuals).² *Amici* further submit this brief to outline for the Court the existing inequities in access to prevention, care, and treatment for COVID-19 that show that the public interest supports the Departments’ non-binding guidance that medical professionals, in exercising their independent clinical judgment and discretion, consider a COVID-19 patient’s BIPOC race or ethnicity alongside other relevant factors when evaluating a COVID-19 patient’s risk of progressing to

¹ N.Y. State Dep’t of Health, *Prioritization of Anti-SARS-CoV-2 Monoclonal Antibodies and Oral Antivirals for the Treatment of COVID-19 During Times of Resource Limitations*, at 3 (Dec. 29, 2021) [hereinafter *Prioritization Guidance*]; N.Y. State Dep’t of Health, *Memorandum Re: COVID-19 Oral Antiviral Treatments Authorized and Severe Shortage of Oral Antiviral and Monoclonal Antibody Treatment Products*, at 3 (Dec. 27, 2021); New York City Dep’t of Health & Mental Hygiene, *2021 Health Advisory #39*, at 2, 3 (Dec. 27, 2021), <https://on.nyc.gov/3K9Cmf9> [hereinafter *Health Advisory*].

² As used in this brief, BIPOC is meant to refer to populations and individuals with races and ethnicities that have been historically minoritized and marginalized by systems and structures.

severe illness.

ARGUMENT

I. Minoritized populations are at heightened vulnerability to severe illness and death from COVID-19.

For two years, the COVID-19 pandemic has wreaked havoc in communities across the country, upended the lives of countless families, and killed more than 69,000 New Yorkers.³ Although the COVID-19 pandemic has taken a toll on all New Yorkers, it has disproportionately impacted minoritized populations. For example, Latinx populations have experienced higher rates of SARS-CoV-2 infection than white populations, and BIPOC populations have experienced higher rates of severe COVID-19 symptoms, serious illness requiring hospitalization, and death from COVID-19 than whites.

A. Minoritized populations have experienced disproportionately high rates of serious illness and death from COVID-19.

Minoritized populations have experienced disproportionately high rates of death from COVID-19.⁴ Based on data collected through March 7, 2021, Black individuals have died from COVID-19 at 1.4 times the rate of white individuals.⁵ One study found that, among individuals aged 25–54, the *Black and Latinx populations lost nearly 7 times, and the Indigenous population lost nearly 9 times, as many years of life before age 65 from COVID-19 as the white population.*⁶ “[W]hile Asian Americans make up a small proportion of COVID-19 deaths in the USA, they

³ N.Y. State Dep’t of Health, *COVID-19 Fatalities Tracker*, on.ny.gov/3HINh4j (last visited Feb. 28, 2022).

⁴ See, e.g., Zirui Song et al., *Racial and Ethnic Disparities in Hospitalization Outcomes Among Medicare Beneficiaries During the COVID-19 Pandemic*, JAMA Health Forum, Dec. 23, 2021, doi.org/10.1001/jamahealthforum.2021.4223

⁵ COVID Tracking Project, The Atlantic, *The COVID Racial Data Tracker*, <https://bit.ly/3KZDOSk> (last visited Feb. 28, 2022).

⁶ Mary T. Bassett et al., *Variation in racial/ethnic disparities in COVID-19 mortality by age in the United States: A cross-sectional study*, PLOS Med., Oct. 20, 2020, at 10, bit.ly/3v1xHYk.

experience significantly higher excess all-cause mortality (3.1 times higher), case fatality rate (as high as 53% higher), and percentage of deaths attributed to COVID-19 (2.1 times higher) compared to non-Hispanic Whites.”⁷ The disproportionately higher mortality rates for BIPOC people remain even after accounting for differences in level of education.⁸ The inequity is stark:

If all groups had experienced the same mortality rates as college-educated non-Hispanic White individuals, there would have been 48% fewer COVID-19 deaths among adults aged 25 years or older overall, including 71% fewer deaths among racial and ethnic minority populations and 89% fewer deaths among racial and ethnic minority populations aged 25 to 64 years.⁹

In New York State, according to a 2020 study, Black individuals comprised 16% of the population but made up 22% of COVID-19 deaths statewide;¹⁰ Latinx individuals comprised 19% of state residents, but made up 24% of statewide COVID-19 deaths.¹¹ By contrast, whites comprised 55% of New York State’s population, but made up 43% of statewide COVID-19 deaths.¹² According to recent data from New York State, the COVID-19 death rate for whites has been 155 per 100,000, whereas the death rates for Asian American, Black, and Latinx people has been 186, 349, and 269 per 100,000, respectively.¹³ Outside of New York City, the age-adjusted

⁷ Brandon W. Yan, *Death Toll of COVID-19 on Asian-Americans: Disparities Revealed*, 36 J. Gen. Internal Med. 3547, 3545 (Aug. 4, 2021), doi.org/10.1007/s11606-021-07003-0.

⁸ Justin M. Feldman & Mary T. Bassett, *Variation in COVID-19 Mortality in the US by Race and Ethnicity and Educational Attainment*, JAMA Network, Nov. 23, 2021, at 1, bit.ly/3sirmVs.

⁹ *Id.*

¹⁰ Laurens Holmes Jr. et al., *Black–White Risk Differentials in COVID-19 (SARS-COV2) Transmission, Mortality and Case Fatality in the United States: Translational Epidemiologic Perspective and Challenges*, 17 Int’l J. Env’t Rsch. & Pub. Health 4322, 4328 (2020), doi.org/10.3390/ijerph17124322.

¹¹ *Id.*

¹² *Id.*

¹³ COVID-19 Health Equity Interactive Dashboard, Emory University, *COVID-19 Outcomes in New York*, covid19.emory.edu/36 (last visited Feb. 28, 2022). Plaintiffs assert that “the rate of death for white non-Hispanic individuals exceeds the rate for any other group in New York.” Pl. Mem. Of Law at 1; *see also id.* at 12. Yet the data at the URL plaintiffs cite, *see id.* at 1 n.5, 12 n.15, is inconsistent with data at the URL cited in this footnote, as well as with data reported elsewhere. *See, e.g., supra* notes 3, 10–12; *see also infra* note 16. In any case, data that has been adjusted for age most accurately reflects racial disparities in COVID-19 deaths. *See infra* note 16.

death rate “is double or even quadruple for [Black], Latinx, and Asian New Yorkers” relative to white New Yorkers.¹⁴ In fact, after adjusting for age, *New York is the state with the highest COVID-19 mortality rate among its Black residents.*¹⁵ Age-adjusted racial and ethnic disparities in death rates in New York and New York City have persisted throughout the pandemic.¹⁶

Indeed, from the earliest days of the COVID-19 pandemic, minoritized individuals have been disproportionately impacted. In New York City, the initial epicenter of the pandemic, the COVID-19 case rates in majority Black, Latinx, and other communities marginalized by systems and structures was between 24% and 110% higher than those in majority white communities¹⁷ before leveling out, although Latinx communities still experience significantly higher infection rates than whites.¹⁸

More significantly, BIPOC people experience disproportionately higher rates of severe illness from COVID-19.¹⁹ As of March 2021, the COVID-19 hospitalization rate of Asian

¹⁴ Amanda Dunker & Elisabeth Ryden Benjamin, *How Structural Inequalities in New York’s Health Care System Exacerbate Health Disparities During the COVID-19 Pandemic: A Call for Equitable Reform*, Cmty. Serv. Soc’y (June 4, 2020), bit.ly/3KZ7JtZ.

¹⁵ APM Research Lab, *The Color of Coronavirus: COVID-19 Deaths by Race and Ethnicity in the U.S.* (Mar. 15, 2021), bit.ly/3uqm5NU.

¹⁶ See N.Y. State Dep’t of Health, *COVID-19 Fatalities Tracker*, *supra* note 3 (providing link to age-adjusted death rates by race/ethnicity in New York State); [nychealth/coronavirus-data](https://nychealth.org/coronavirus-data), GitHub (last visited Feb. 28, 2022), <https://bit.ly/35p3k34> (displaying age-adjusted hospitalization and death rates by race); see also CDC, *Risk for COVID-19 Infection, Hospitalization, and Death By Race/Ethnicity*, at n.3 (updated Feb. 1, 2022) <https://bit.ly/34P9b1T> (“Adjusting by age is important because risk of infection, hospitalization, and death is different by age, and age distribution differs by racial and ethnic group. If the effect of age is not accounted for, racial and ethnic disparities can be underestimated or overestimated.”).

¹⁷ D. Phuong Do & Reanne Frank, *Unequal burdens: assessing the determinants of elevated COVID-19 case and death rates in New York City’s racial/ethnic minority neighbourhoods*, 75 J. Epidemiology & Cmty. Health 321, 323 (Mar. 10, 2021), bit.ly/3GFw4kU.

¹⁸ NYC Health, *COVID-19: Data, Case, Hospitalization, and Death Rates*, <https://on.nyc.gov/3BHGPT5> (last visited Feb. 28, 2022).

¹⁹ See, e.g., Anna M. Acosta et al., *Racial and Ethnic Disparities in Rates of COVID-19–Associated Hospitalization, Intensive Care Unit Admission, and In-Hospital Death in the United States From March 2020 to February 2021*, JAMA Network, Oct. 21, 2021, bit.ly/36otGCW.

Americans, Latinx, and Black New Yorkers was 2.5, 3.8, and 4.2 times that of white New Yorkers, respectively.²⁰ One study found BIPOC people experience higher rates of COVID-19 disease severity upon admission to a hospital compared with whites, which increases the likelihood of needing intubation or ICU care, and death.²¹

B. Minoritized populations have disproportionately higher rates and severity of medical conditions that increase the risk of developing severe COVID-19 symptoms.

Heart disease and diabetes are two of the most common underlying medical conditions that the U.S. Centers for Disease Control and Prevention (CDC) has recognized place patients with COVID-19 at increased risk for severe illness or death,²² and these diseases disproportionately affect BIPOC individuals, including in New York.²³ BIPOC people also experience higher rates

²⁰ See COVID Tracking Project, *The Atlantic, New York: All Race & Ethnicity Data*, bit.ly/3sxag62 (last visited Feb. 28, 2022). Two studies found that the Black COVID-19 patients did not experience worse outcomes from COVID-19 than white patients. See Gbenga Ogedegbe et al., *Assessment of Racial/Ethnic Disparities in Hospitalization and Mortality in Patients With COVID-19 in New York City*, *JAMA Network Open*, Dec. 4, 2020, at 2, bit.ly/3uRdjZB; Rafi Kabarriti et al., *Association of Race and Ethnicity With Comorbidities and Survival Among Patients With COVID-19 at an Urban Medical Center in New York*, *JAMA Network Open*, Sept. 25, 2020, doi.org/10.1001/jamanetworkopen.2020.19795. These studies were limited to individual hospitals; recognized the disparate hospitalization and mortality rates for Black COVID-19 patients in other studies; and proposed explanations for their unexpected results.

²¹ CDC, *Risk of Severe Illness or Death from COVID-19*, bit.ly/3ghKDAI (updated Dec. 10, 2020); see also Nicholas P. Joseph et al., *Racial and Ethnic Disparities in Disease Severity on Admission Chest Radiographs among Patients Admitted with Confirmed Coronavirus Disease 2019: A Retrospective Cohort Study*, 297 *Radiology* E303 (2020), bit.ly/3BuxQV6; Shruti Magesh et al., *Disparities in COVID-19 Outcomes by Race, Ethnicity, and Socioeconomic Status: A Systematic Review and Meta-analysis*, *JAMA Network*, Nov. 11, 2021, bit.ly/3uTFkQk.

²² See CDC, *People with Certain Medical Conditions*, bit.ly/3IUxx8D (updated Feb. 25, 2022); Erin K. Stokes et al., *Coronavirus Disease 2019 Case Surveillance - United States, January 22-May 30, 2020*, 69 *MMWR* 759 (2020), <https://bit.ly/3gVs4Cv>.

²³ CDC, *Prevalence of Both Diagnosed and Undiagnosed Diabetes*, bit.ly/3s3Xiwu (last reviewed Dec. 29, 2021); Gbenga Ogedegbe et al., *supra* note 20; Kamyar Arasteh, *Prevalence of Comorbidities and Risks Associated with COVID-19 Among Black and Hispanic Populations in New York City: An Examination of the 2018 New York City Community Health Survey*, 8 *J. Racial & Ethnic Health Disparities* 863–69 (2021), doi.org/10.1007/s40615-020-00844-1; Pub. Health L. Watch, *COVID-19 Policy Playbook: Legal Recommendations for a Safer, More Equitable Future*, at 12 (Scott Burris et al. eds., 2021), bit.ly/3L0KCz6 [hereinafter COVID-19 Policy Playbook].

of undiagnosed medical conditions (including diabetes),²⁴ thus increasing the likelihood of having a risk factor that goes undetected. And among people diagnosed with medical conditions such as diabetes or heart disease, BIPOC people experience higher rates of more severe cases, disease-related complications, and premature death from those diseases, than their white counterparts.²⁵ Consistent with this evidence, a study found that “racial disparities in COVID-19 outcomes exist despite comparable ECIs [comorbidities] among” patients.²⁶ The researchers calculated that Black patients in the sample had 1.72 times the odds of invasive ventilator dependence than white patients, and Indigenous patients had 2.06 times the odds of death than white patients.²⁷

C. Black and Latinx people have disproportionately higher rates of certain COVID-19-related complications.

Studies have found that Black and Latinx people experience higher rates of certain serious COVID-19 related complications than white individuals. For example, according to one study of several hospitals in and around New York City, 37% of patients hospitalized for COVID-19 develop acute kidney injury, which significantly increases the likelihood of death.²⁸ The study further found that Black patients were more likely than white patients to develop acute kidney

²⁴ See CDC, *Prevalence of Both Diagnosed and Undiagnosed Diabetes*, *supra* note 23.

²⁵ See Shirley A. Hill, *Inequality and African-American Health: How Racial Disparities Create Sickness* 11, 60 (2016) [hereinafter *Inequality and African-American Health*]; Dayna Bowen Matthew, *Just Medicine: A Cure for Racial Inequality in American Healthcare* 57 (2015) [hereinafter *Just Medicine*]; Matthew Wynia et al., *Collecting and using race, ethnicity and language data in ambulatory settings: A white paper with recommendations from the Commission to End Health Care Disparities*, Comm’n to End Health Care Disparities, at 6–7 (2011), bit.ly/3omfD6R; Ctrs. for Medicare & Medicaid Servs. (CMS), *Racial and Ethnic Disparities in Diabetes Prevalence, Self-Management, and Health Outcomes among Medicare Beneficiaries*, at 1–2, 9–11 (2017), go.cms.gov/3s2Ettq.

²⁶ Fares Qeadan et al., *Racial disparities in COVID-19 outcomes exist despite comparable Elixhauser comorbidity indices between Blacks, Hispanics, Native Americans, and Whites*, *Scientific Reports*, Apr. 22, 2021, at 6, doi.org/10.1038/s41598-021-88308-2.

²⁷ *Id.*

²⁸ CDC, *Disparities in Hospitalizations*, bit.ly/3ufveJj (last updated Feb. 16, 2022); Jamie S. Hirsch et al., *Acute kidney injury in patients hospitalized with COVID-19*, 98 *Kidney Int* 209, 210, 211 (2020), bit.ly/3sO3ZTP.

injury.²⁹ Similarly, studies conducted in both New York City and New York State found that more than 70% of all reported cases of multisystem inflammatory syndrome in children—“a rare but severe condition that occurs approximately 2–4 weeks after the onset of COVID-19 in children and adolescents”—have occurred among Black or Latinx children.³⁰

II. The higher rates of severe symptoms and death from COVID-19 experienced by minoritized people are tied to systemic racism and bias, and are not accounted for by other observable risk factors.

Extensive literature provides two well-supported explanations for the racial and ethnic inequities in COVID-19 case severity and mortality. First, the legacy of this country’s long history of racist policies—such as segregation and persistent inequities in housing, employment, access to healthcare, health care, and other life opportunities—has led to adverse health outcomes for racial and ethnic groups historically marginalized by systems and structures.³¹ Social factors, known as “social determinants of health,” and systemic factors such as exposure to racism, are both “social drivers of health,” which establish that societal conditions can—and do—affect an individual’s health risk.³² Second, racism and implicit bias within the medical system has resulted in lower quality healthcare for BIPOC individuals.³³ Crucially, these systemic inequities manifest in an increased risk of developing severe COVID-19 symptoms relative to whites—a risk that is not captured by other immediately observable information such as age, vaccination status, and

²⁹ Jamie S. Hirsch et al., *supra* note 28, at 213.

³⁰ CDC, *Disparities in Hospitalizations*, *supra* note 28.

³¹ See, e.g., CDC, *Health Equity Considerations and Racial and Ethnic Minority Groups*, [bit.ly/3giQc1z](https://www.cdc.gov/health-equity/considerations-and-racial-and-ethnic-minority-groups/) (last updated Jan. 25, 2022); Paula Braveman et al., *What is Health Equity?*, Robert Wood Johnson Found. (May 1, 2017), [rwjf.ws/3Gkedjx](https://www.rwjf.org/en/about-us/newsroom-and-events/newsroom/2017/05/what-is-health-equity/); Rima A. Afifi et al., ‘Most at risk’ for COVID19? The imperative to expand the definition from biological to social factors for equity, 139 *Preventive Med.* 106229 (2020), [bit.ly/3oYJPFx](https://doi.org/10.1016/j.ypmed.2020.106229).

³² See CDC, *Social Determinants of Health: Know What Affects Health*, [bit.ly/3IWQXd3](https://www.cdc.gov/socialdeterminants/) (last reviewed Sept. 30, 2021).

³³ See Kevin B. O’Reilly, *AMA: Racism is a threat to public health*, *Am. Med. Ass’n (AMA)* (Nov. 16, 2020), [bit.ly/35xEoGE](https://www.ama-assn.org/practice-management/racism).

presence of underlying medical conditions.³⁴

A. Social drivers of health caused the COVID-19 pandemic to disproportionately harm minoritized populations.

The COVID-19 pandemic’s disparate impact is neither novel nor a coincidence. Racial and ethnic disparities in health outcomes are well documented. For example, Black individuals “are three times as likely as whites to develop cardiovascular disease and are twice as likely to die from it.”³⁵ In 2017, the rate of asthma deaths among adults aged 65 and older was significantly higher for Black Americans, Asian Americans, and Pacific Islander Americans than for whites.³⁶ And Black women are nearly three times as likely as white women to die from pregnancy-related complications.³⁷ Inequities in health outcomes persist “even when access-related factors, such as patients’ insurance status and income, are controlled.”³⁸ To illustrate, a study found that “[t]he PRMR [pregnancy-related mortality ratio] among black women with a completed college education or higher was 1.6 times that of white women with less than a high school diploma.”³⁹ It is crucial to note that “these disparities do not arise from bad individual choices or biological differences between races but the social factors that shape people’s lives every day We as a

³⁴ See Rima A. Afifi et al., *supra* note 31, at 2 (“Fundamental social causes of disease mobilize pathways to morbidity and mortality that . . . exacerbate consequences of COVID19”); Benjamin Seligman et al., *Social determinants of mortality from COVID-19: A simulation study using NHANES*, PLOS Med., Jan. 11, 2021, bit.ly/3ITbxek; see also *infra* note 85.

³⁵ *Just Medicine*, *supra* note 25, at 57; see also *Inequality and African-American Health*, *supra* note 25, at 11.

³⁶ Off. Disease Prevention & Health Promotion, *Asthma deaths among adults (per million population, 65+ years) By Race/Ethnicity*, <https://bit.ly/3geCooT> (last updated Feb. 6, 2022).

³⁷ CDC, *Pregnancy Mortality Surveillance System*, bit.ly/3ohnWB5 (last reviewed Nov. 25, 2020).

³⁸ Inst. of Med., *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care 1* (2003), doi.org/10.17226/10260 [hereinafter *Unequal Treatment*]; see also *Inequality and African-American Health*, *supra* note 25, at 22.

³⁹ Emily E. Petersen et al., *Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016*, 68 MMWR 762, 763 (2019), <https://bit.ly/3BD2UCs>.

society have created them.”⁴⁰

Numerous social drivers of health have historically prevented people of color, and Black individuals in particular, from having the same opportunities to attain good physical health as white individuals.⁴¹ Inequitable living, working, and other life conditions can negatively impact an individual’s health in obvious ways. Living in heavily polluted areas may worsen one’s asthma, for example.⁴²

Across all social drivers of health, however, stress is a primary pathway for disparate health outcomes. Racism, discrimination, and inequitable living circumstances can cause chronic stress, which is linked to a wide array of poor health outcomes through various psychophysiological pathways.⁴³ Chronic stress “degrades physiological systems,” resulting in “greater susceptibility to pathogens” and decreased “effectiveness of the immune system and resistance to infections, leading to serious illnesses.”⁴⁴ Researchers “have documented a direct link between social stress

⁴⁰ COVID-19 Policy Playbook, *supra* note 23, at 7; *see also* Yin Paradies, *A systematic review of empirical research on self-reported racism and health*, 35 *Int’l J. Epidemiology* 888, 888 (2006), [bit.ly/3IX87qS](https://doi.org/10.1093/ije/dyl319) (“The manifestations of racism vary considerably across time and place but in general ensue from societal systems that produce an unequal distribution of power (and hence resources) in societies based on the notion of ‘race’, where race is a social rather than a biological construct related to the notion of essentialized innate phenotypical, ancestral, and/or cultural difference.”); *Unequal Treatment*, *supra* note 38, at 1 (“The sources of these disparities are complex, are rooted in historic and contemporary inequities, and involve many participants at several levels . . .”).

⁴¹ CDC, *Health Equity Considerations and Racial and Ethnic Minority*, *supra* note 31.

⁴² Anthony Nardone et al., *Associations between historical residential redlining and current age-adjusted rates of emergency department visits due to asthma across eight cities in California: an ecological study*, 4 *Lancet Planet Health* e24, e28 (2020), [bit.ly/3rjYeh1](https://doi.org/10.1016/S2468-2667(20)30011-1).

⁴³ David R. Williams & Selina A. Mohammed, *Discrimination and racial disparities in health: evidence and needed research*, 32 *J. Behav. Med.* 20, 37 (2009), doi.org/10.1007/s10865-008-9185-0; Camara Jules P. Harrell et al., *Multiple Pathways Linking Racism to Health Outcomes*, 8 *Du Bois Rev.* 143, 143 (2011), [bit.ly/3Bw8pCE](https://doi.org/10.1007/s11285-011-9143-1); *Inequality and African-American Health*, *supra* note 25, at 5.

⁴⁴ *Inequality and African-American Health*, *supra* note 25, at 74.

and sickness, with stressful life events predicting illnesses as serious as heart disease.”⁴⁵ Researchers have similarly documented an association between chronic stress and elevated blood pressure.⁴⁶

i. Racially segregated communities as a social driver of health.

Living in a racially segregated community is a prime example of a negative social determinant of health. Poverty is concentrated in racially segregated areas,⁴⁷ and poverty is linked to adverse health outcomes. Children who live in poverty are “two to four times more likely to have a disease than children who do not.”⁴⁸ Housing in segregated communities is disproportionately poorer quality and more crowded.⁴⁹ Racially segregated neighborhoods also have lower quality schools, another factor linked to adverse health outcomes.⁵⁰ Segregation has also been linked to later-stage diagnosis of cancers and lower cancer survival rates.⁵¹ New York City is one of the most racially segregated metropolitan areas in the country. Most of Long Island’s Black residents live in just 11 of the island’s 291 communities.⁵² And almost 90% of Brooklyn’s Black residents live in segregated neighborhoods.⁵³ As discussed further below, access to

⁴⁵ *Id.* at 16.

⁴⁶ See, e.g., Kosuke Inoue et al., *Urinary Stress Hormones, Hypertension, and Cardiovascular Events: The Multi-Ethnic Study of Atherosclerosis*, 78 *Hypertension* 1640 (2021), [bit.ly/3ITeQ5e](https://doi.org/10.1161/HYPERTENSION.1211.000); Tanya M. Spruill, *Chronic Psychosocial Stress and Hypertension*, 12 *Current Hypertension Reps.* 10 (2010), [bit.ly/3oeBBc8](https://doi.org/10.1007/s12020-010-9000-0); Akilah Johnson & Nina Martin, *How COVID-19 Hollowed Out a Generation of Young Black Men*, ProPublica (Dec. 22, 2020), [bit.ly/3ohfJgc](https://www.propublica.org/article/how-covid-19-hollowed-out-a-generation-of-young-black-men).

⁴⁷ Douglas S. Massey & Mary J. Fischer, *How segregation concentrates poverty*, 23 *Ethnic & Racial Stud.* 670, 671 (2000), [bit.ly/3IUXbu3](https://doi.org/10.1215/00141801-2000-003).

⁴⁸ *Inequality and African-American Health*, *supra* note 25, at 159.

⁴⁹ *Id.*; CDC, *Health Equity Considerations and Racial and Ethnic Minority Groups*, *supra* note 31.

⁵⁰ Paula Braveman et al., *supra* note 31, at 5.

⁵¹ David R. Williams et al., *Racism and Health: Evidence and Needed Research*, 40 *Ann. Rev. Pub. Health* 105, 108 (2019), [doi:10.1146/annurev-publhealth-040218-043750](https://doi.org/10.1146/annurev-publhealth-040218-043750).

⁵² Olivia Winslow, *Long Island Divided Part 10: Dividing Lines, Visible and Invisible*, *Newsday* (Nov. 17, 2019), [bit.ly/34ug7AG](https://www.newsday.com/long-island-divided-part-10-dividing-lines-visible-and-invisible-1.1034748).

⁵³ Themis Chronopoulos, “*What’s Happened to the People?*” *Gentrification and Racial Segregation in Brooklyn*, 24 *J. African-Am. Stud.* 549, 570 (2020), [bit.ly/3L90D6m](https://doi.org/10.1215/00141801-2020-003).

healthcare services is also restricted in racially segregated neighborhoods.

ii. Access to healthcare as a social driver of health.

Communities of color experience disproportionately low access to healthcare services compared to white Americans. One study found that “[c]ommunities with high proportions of [B]lack and Hispanic residents were four times as likely as others to have a shortage of physicians, regardless of community income.”⁵⁴ In New York, numerous policies over the past several decades have resulted in underfunded and under-resourced hospital systems in communities of color.⁵⁵ For example, when the state “cut thousands of hospital beds” in 2016, a disproportionate number were in communities that served people of color and underinsured individuals, exacerbating the COVID-19 pandemic’s impact on those communities.⁵⁶ “Many of the same neighborhoods with high rates of COVID-19 infections and poor primary care access are low-income neighborhoods of color and experience higher rates of chronic diseases that are best managed by primary care providers.”⁵⁷ According to data from 36 hospitals in New York, “patients at some community hospitals were three times more likely to die as patients at medical centers in the wealthiest parts of the city,” due to vast disparities in available treatments, staffing levels, and supplies.⁵⁸

Although BIPOC communities in New York have experienced disproportionately high rates of severe illness and death from COVID-19 from the earliest days of the pandemic, those

⁵⁴ M. Komaromy et al., *The role of black and Hispanic physicians in providing health care for underserved populations*, 334 *New Eng. J. Med.* 1305, 1305 (1996), [bit.ly/3Lf13Im](https://doi.org/10.1056/NEJM199607133341305).

⁵⁵ Amanda Dunker & Elisabeth Ryden Benjamin, *supra* note 14.

⁵⁶ David Robinson, *Why NY hospital closures, cutbacks made COVID-19 pandemic worse*, *Times-Herald Record* (Apr. 10, 2020), [bit.ly/3snDN1W](https://www.timesheraldrecord.com/story/news/2020/04/10/ny-hospital-closures-cutbacks-made-covid-19-pandemic-worse/3241117002/).

⁵⁷ Primary Care Dev. Corp., *To Address COVID-19 Disparities, PCDC Urges New York State to Invest in Primary Care* (June 1, 2020), [bit.ly/3s18SSts](https://www.pcdc.org/newsroom/to-address-covid-19-disparities-pcdc-urges-new-york-state-to-invest-in-primary-care/).

⁵⁸ Brian M. Rosenthal et al., *Why Surviving the Virus Might Come Down to Which Hospital Admits You*, *The N.Y. Times* (July 1, 2020), <https://nyti.ms/3BLmTPr> (updated Sept. 22, 2021).

communities “were not included in vaccine priority plans crafted by the state and city.”⁵⁹ For example, a study showed that “early COVID-19 vaccination efforts in NYC [were] focused primarily in White, middle-to-upper class neighborhoods, with the greatest access occurring in those areas.”⁶⁰ The vaccine rollout in New York City was “plagued by stark racial disparities, with Black and Latino residents receiving far fewer doses than white residents.”⁶¹ Gaps in New York City’s COVID-19 response policy resulted in inadequate access to COVID-19 testing to communities of color.⁶² A September 2021 study in New York City observed that “racial disparities in access to [COVID-19] testing remain as of today, despite the need for testing in communities that experience a large number of essential workers living in crowded realities.”⁶³

Treatment options may also be limited in racially segregated communities. Despite experiencing higher rates of severe illness and death from COVID-19, BIPOC patients have been less likely than white patients to receive monoclonal antibody therapies (mAb). A recent large-scale study that included several healthcare facilities in New York found that Latinx, Black, Asian American, and other patients of color received mAb 58%, 22%, 48%, and 47% less often,

⁵⁹ Ethan Geringer-Sameth, *Why Didn’t New York’s Hardest Hit Communities Receive Covid Vaccine Priority?*, Gotham Gazette (Jan. 17, 2021), www.gothamgazette.com/state/10075-why-didnt-new-york-hardest-hit-communities-of-color-covid-vaccine-priority.

⁶⁰ Natasha Williams et al., *Assessment of Racial and Ethnic Disparities in Access to COVID-19 Vaccination Sites in Brooklyn, New York*, JAMA Network, June 18, 2021, at 3, bit.ly/3oDirwt.

⁶¹ Emma G. Fitzsimmons, *Black and Latino New Yorkers Trail White Residents in Vaccine Rollout*, N.Y. Times (Sept. 29, 2021), nyti.ms/34JRD7m.

⁶² Wil Lieberman-Cribbin et al., *Disparities in COVID-19 Testing and Positivity in New York City*, 59 Am. J. Preventive Med. 326 (2020), doi.org/10.1016/j.amepre.2020.06.005; John Kelly & Stephen Cioffi, *Testing centers in many non-white neighborhoods likely to be more crowded*, abc7NY (July 22, 2020), 7ny.tv/3JHf2Ff.

⁶³ Wil Lieberman-Cribbin et al., *Analyzing disparities in COVID-19 testing trends according to risk for COVID-19 severity across New York City*, 21 BMC Pub. Health 1717, at 5 (2021), bit.ly/3BKU0CZ.

respectively, than white patients.⁶⁴ The study concluded that, “as a consequence of [BIPOC people’s] higher prevalence of preexisting conditions,” the mAb treatment inequity “amplif[ies] the increased risk for severe COVID-19–associated outcomes, including death among these groups.”⁶⁵ The CDC identified several access-related factors as potential explanations for the documented racial and ethnic inequities in COVID-19 mAb treatment, including “systemic factors such as limited access to testing and care because of availability constraints, inadequate insurance coverage, and transportation challenges; lack of a primary care provider to recommend treatment; variations in treatment supply and distribution; potential biases in prescribing practices; and limited penetration of messaging in some communities about mAb availability and effectiveness to prevent disease progression.”⁶⁶

iii. Working conditions as a social driver of health.

Racial and ethnic inequities in employment opportunities lead to adverse health outcomes for several reasons. Overall, individuals in minoritized groups have disproportionately lower-paying jobs, leaving them with less money to spend on healthcare.⁶⁷ They are also more likely to work in jobs that cannot be done remotely from home, such as health care, service and retail occupations, and to have longer commute times on public transportation, increasing their exposure to infectious diseases like COVID-19.⁶⁸

⁶⁴ Jennifer L. Wiltz et al., *Racial and Ethnic Disparities in Receipt of Medications for Treatment of COVID-19 — United States, March 2020–August 2021*, 71 MMRW 96, 96 (2022), bit.ly/3scQRal.

⁶⁵ *Id.* at 100.

⁶⁶ Jennifer L. Wiltz, *supra* note 64, at 99.

⁶⁷ U.S. Dep’t of Lab., Women’s Bureau, *Median annual earnings by sex, race and Hispanic ethnicity*, bit.ly/3rhy5PX (last visited Feb. 28, 2022); *see also* David R. Williams, *Racism and Health*, *supra* note 51, at 4 (“In 2016, for every dollar of income that white households received, Hispanics earned 73 cents and blacks earned 61 cents.”).

⁶⁸ COVID-19 Policy Playbook, *supra* note 23, at 12; Equity Indicators, *Narrowing the Gap* (Vol. 16, Feb. 2017), <https://bit.ly/3h2vlzW>.

BIPOC individuals are also less likely to hold jobs that provide health insurance, and are therefore “significantly more likely to be underinsured than the white population.”⁶⁹ Many New Yorkers lost their health coverage during the pandemic, but “African Americans in New York City reported losing health insurance twice as often,” and “Latinx New Yorkers reported losing health insurance nearly four times as often,” as white New Yorkers.⁷⁰ Researchers have cited social determinants of health, including lack of paid time off and lack of insurance, as barriers to COVID-19 vaccine access and accommodations.⁷¹

iv. Exposure to racism as a social driver of health.

Exposure to racial and ethnic discrimination in daily life is a significant social driver of health. Extensive research has documented that racism itself negatively impacts health over time through a process called weathering.⁷² A review of 138 empirical studies on the health effects of racism showed a clear link between racism and ill health for oppressed racial groups, even after adjustment for confounding factors.⁷³ Another meta-analysis of 293 studies concluded that “racism is significantly related to poorer health.”⁷⁴ In a 2011 study, more than 90% of Black individuals reported having experienced racial discrimination.⁷⁵ Racial discrimination can cause chronic stress, which, as noted, is linked to a wide array of poor health outcomes. A study found that

⁶⁹ COVID-19 Policy Playbook, *supra* note 23, at 90.

⁷⁰ Amanda Dunker & Elisabeth Ryden Benjamin, *supra* note 14.

⁷¹ Savanna L. Carson et al., *COVID-19 Vaccine Decision-making Factors in Racial and Ethnic Minority Communities in Los Angeles, California*, JAMA Network, Sept. 30, 2021, bit.ly/34UzKCB.

⁷² See Arline T. Geronimus et al., “Weathering” and Age Patterns of Allostatic Load Scores Among Blacks and Whites in the United States, 96 Am. J. Pub. Health 826 (2006), doi.org/10.2105/AJPH.2004.060749.

⁷³ Paradies, *A systemic review*, *supra* note 40, at 895.

⁷⁴ Yin Paradies et al., *Racism as a Determinant of Health: A Systematic Review and Meta-Analysis*, PLOS One, Sept. 23, 2015, at 24, doi.org/10.1371/journal.pone.0138511.

⁷⁵ *Inequality and African-American Health*, *supra* note 25, at 16.

exposure to discrimination and segregation during juvenile years predicts adult inflammation by age 28, and that the effect was “considerably more robust than that of traditional health risk factors such as diet, exercise, smoking, and low [socioeconomic status].”⁷⁶ Racial discrimination need not be intended: “[e]vidence has revealed that unconscious bias in interpersonal interactions is strong, widespread and deeply rooted, and could potentially take a heavy toll on health.”⁷⁷

v. *Incarceration and homelessness as social drivers of health.*

Incarceration and homelessness are two additional social determinants of health that disproportionately impact people of color. Black individuals have higher rates of incarceration than white individuals who commit the same offense.⁷⁸ In New York, Black individuals are imprisoned at a rate that is over three times their percentage of the state’s population.⁷⁹ Imprisoned people are exposed to more infectious diseases and to significant stress, yet prisons rarely “provide much beyond the most basic medical care.”⁸⁰ The increased likelihood of having disease while imprisoned does not end upon release; a history of incarceration also “strongly increases the

⁷⁶ Ronald L. Simons et al., *Discrimination, segregation, and chronic inflammation: Testing the weathering explanation for the poor health of Black Americans*, 54 *Developmental Psych.* 1993, 1994 (2018), doi.org/10.1037/dev0000511; see also Christopher W. Kuzawa & Elizabeth Sweet, *Epigenetics and the embodiment of race: Developmental origins of US racial disparities in cardiovascular health*, 21 *Am. J. of Hum. Biology* 2, 2 (2009), bit.ly/3pkYoDJ (“[E]nvironmentally responsive phenotypic plasticity, in combination with . . . acute and chronic effects of social-environmental exposures,” better explains the “persistence of [cardiovascular disease] disparities between members of socially imposed racial categories” than does genetics.).

⁷⁷ Paula Braveman et al., *supra* note 31, at 5.

⁷⁸ See, e.g., NAACP, *Criminal Justice Fact Sheet*, naacp.org/resources/criminal-justice-fact-sheet (last visited Feb. 28, 2022) (“5% of illicit drug users are African American, yet African Americans represent 29% of those arrested and 33% of those incarcerated for drug offenses.”).

⁷⁹ Division of Criminal Justice Services, *NYS Arrests and Prison Sentences by Race/Ethnicity* (June 2019), on.ny.gov/3GFJmhF.

⁸⁰ *Inequality and African-American Health*, *supra* note 25, at 112.

chances of severe health limitations after release.”⁸¹ Prisons have been epicenters of COVID-19 outbreaks since the beginning of the pandemic.⁸² Additionally, people experiencing homelessness in New York experienced higher rates of death from COVID-19 in both congregate shelter and unsheltered settings.⁸³ Minoritized people are disproportionately represented among homeless populations.⁸⁴

- vi. *Social drivers of health have led to disproportionately high rates of serious illness and death from COVID-19 for BIPOC people.*

Researchers have repeatedly concluded that social determinants of health contribute to BIPOC peoples’ disproportionate rates of severe illness and death from COVID-19, across the country and in New York.⁸⁵ An individual’s job opportunities and work conditions, access to

⁸¹ *Id.*; see also Elizabeth M. Viglianti et al., *Mass Incarceration and Pulmonary Health: Guidance for Clinicians*, 15 *Annals Am. Thoracic Soc’y* 409, 409–12 (2018), bit.ly/3rvWosf (identifying lung-related conditions that disproportionately affect incarcerated persons).

⁸² See, e.g., Laura Hawks et al., *COVID-19 in Prisons and Jails in the United States*, 180 *JAMA Int’l Med.* 1041, 1041 (2020), bit.ly/3fqrzB.

⁸³ Coal. for Homelessness, *Age-Adjusted Mortality Rate for Sheltered Homeless New Yorkers*, <https://bit.ly/3ByrWSU> (last visited Feb. 28, 2022).

⁸⁴ Coal. for Homelessness, *Basic Facts About Homelessness: New York City*, <https://bit.ly/3h1ZBv2> (last updated Feb. 2022).

⁸⁵ See, e.g., Ankur K. Dalsania et al., *The Relationship Between Social Determinants of Health and Racial Disparities in COVID-19 Mortality*, 9 *J. Racial & Ethnic Health Disparities* 288, 294 (2021), bit.ly/3h0hqdT (“Consistent with historical health inequities for Black Americans, our analysis demonstrates that SDH have contributed to the disproportionate impact of the COVID-19 pandemic on Black Americans.”); Nicholas Verdini et al., *Social Determinants of Health Amplify the Association Between Ethnicity and COVID19: A Retrospective-Cohort study*, 9 *Int’l J. Med. Students* 282, 282 (2022), doi.org/10.5195/ijms.2021.1125 (“Ethnicity had a significant impact on COVID-19 status in our population, where the effect of ethnicity on COVID-19 status was amplified for those with SDOH risk factors.”); Sarah B. Maness et al., *Social Determinants of Health and Health Disparities: COVID-19 Exposures and Mortality Among African American People in the United States*, 136 *Pub. Health Reps.* 18, 18 (2020), bit.ly/3LJyuCP (“SDH [Social determinants of health] underlie health disparities that increase the potential for exposure to, and higher death rates from, COVID-19 among African American people across the United States.”); Amanda Dunker & Elisabeth Ryden Benjamin, *supra* note 14; Rima A. Afifi et al., *supra* note 31; Rienna G. Russo et al., *COVID-19, Social Determinants of Health, and Opportunities for Preventing Cardiovascular Disease: A Conceptual Framework*, *J. Am. Heart Ass’n*, Dec. 10,

healthcare, exposure to racism, and segregated living conditions often go hand in hand, leading to a cumulative increase in risk of severe illness or death from COVID-19 associated with a person's BIPOC race or ethnicity.⁸⁶ For an individual, inequitable social determinants of health may manifest, for instance, in high blood pressure, increased inflammation, and earlier onset of, and more severe forms of, medical conditions such as heart disease, thereby compounding the risk of getting severely ill or dying from COVID-19 in a way that is not captured by consideration of the presence of heart disease alone. At bottom, “conditions of marginalization led, before COVID-19, to higher morbidity and mortality among Black Americans, which then resulted in a higher burden of underlying vulnerability to COVID-19, manifesting in disproportionate disease severity and death.”⁸⁷ The same is true of other minoritized populations.⁸⁸

B. BIPOC individuals receive lower quality healthcare and reduced access to treatments than whites due to medical racism and bias.

Racism against BIPOC individuals within the healthcare system also results in adverse health outcomes and makes race and ethnicity itself, as a proxy for racism, worth consideration, along with other relevant factors, by medical professionals exercising independent judgment to determine the appropriate COVID-19 treatment.⁸⁹

Healthcare disparities are “differences in treatment experienced in the quality of healthcare

2021, doi.org/10.1161/JAHA.121.022721; see also Christopher T. Rentsch et al., *Patterns of COVID-19 testing and mortality by race and ethnicity among United States veterans: A nationwide cohort study*, PLOS Med., Sept. 22, 2020, at 1, 13, bit.ly/3giLlgV.

⁸⁶ See, e.g., Nicholas Verdini et al., *supra* note 85, at 284 (“The Hispanic population has been shown to experience discrimination, inadequate healthcare access and utilization, inequities in education access, wealth gaps, and increased congested housing, all of which increase the risk of contracting COVID-19.”).

⁸⁷ COVID-19 Policy Playbook, *supra* note 23, at 13.

⁸⁸ See *id.* at 11–13.

⁸⁹ See Press Release by AMA, *New AMA policy recognizes racism as a public health threat* (Nov. 16, 2020), bit.ly/3L6mXgy.

received by racial and/or ethnic minorities even when access to care is equal.”⁹⁰ Numerous studies show that BIPOC patients receive lower quality treatment by healthcare providers, “even when variations in such factors as insurance status, income, age, co-morbid conditions, and symptom expression are taken into account.”⁹¹ The research links these racial and ethnic differences in treatment to adverse health outcomes for BIPOC individuals. The following sample of racial and ethnic healthcare inequities illustrates their severity:

- Black patients and other minoritized patients are less likely than whites to receive preventive care and routine medical procedures.⁹²
- Black patients are treated less for pain than white patients.⁹³ For example, “sickle-cell patients who are in severe pain waited longer in emergency rooms to get pain medication than white patients with a similar painful disease (for example, renal colic).”⁹⁴
- Minoritized patients are sometimes denied care due to racially biased algorithms. For example, due to racial biases in pulse oximeter technology, Black patients have nearly three times the frequency of undetected low oxygen levels than white patients, which can negatively impact Black patients’ treatment for COVID-19.⁹⁵
- Black patients are less likely than white patients to receive kidney transplants.⁹⁶ Race-based kidney function adjustments based on false ideas about differences in muscle mass have denied Black people access to dialysis and transplants.⁹⁷
- Doctors are almost twice as likely to refer white patients to a specialist than they

⁹⁰ G.L.A. Harris, *Cultural Competence: Its Promise for Reducing Healthcare Disparities*, 33 J. Health & Hum. Servs. Admin. 2, 4 (2010), bit.ly/3ogbEzK.

⁹¹ *Unequal Treatment*, *supra* note 38, at 2–3; *see also Just Medicine*, *supra* note 25, at 35.

⁹² *Unequal Treatment*, *supra* note 38, at 123; Matthew Wynia et al., *supra* note 25, at 6; *Just Medicine*, *supra* note 25, at 1.

⁹³ Kelly M. Hoffman et al., *Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites*, 113 PNAS 4296, 4296 (2016), bit.ly/3h1ZRda; *Just Medicine*, *supra* note 25, at 61.

⁹⁴ *Inequality and African-American Health*, *supra* note 25, at 95.

⁹⁵ Michael W. Sjoding et al., *Racial Bias in Pulse Oximetry Measurement*, 383 New Eng. J. Med. 2477 (2020), doi.org/10.1056/NEJMc2029240.

⁹⁶ *Id.* at 90.

⁹⁷ Jennifer Tsai, *Jordan Crowley Would Be in Line for a Kidney—if He Were Deemed White Enough*, Slate (June 27, 2021), <https://bit.ly/3h5sYfG>.

are to refer Black patients.⁹⁸

- Black and Latinx individuals are less likely to receive appropriate cardiac medication or to undergo cardiac bypass surgery than whites.⁹⁹ Although Black individuals are three times as likely to develop cardiovascular disease than whites, and twice as likely to die from it, they are more likely than whites “to receive older conservative coronary treatments than newer or more expensive therapies . . . [which are] more readily available to whites.”¹⁰⁰

Extensive research shows that healthcare inequities are due not to intrinsic clinical factors, but to exposure to racism within the medical system.¹⁰¹ One recent study found, for example, that “many white medical students and residents”—73% of the study sample—“hold beliefs about biological differences between blacks and whites, many of which are false and fantastical in nature, and that these false beliefs are related to racial bias in pain perception.”¹⁰² Another study found that among children who visited emergency departments, Black and Latinx children were less likely to “have their care needs classified as immediate/emergent” and “experienced significantly longer wait times and overall visits as compared to whites.”¹⁰³ The researchers concluded the “difference could not be fully explained by possible confounding factors available in the dataset, such as demographic, socioeconomic, or clinical variables.”¹⁰⁴ Additionally, “Black newborns have significantly lower mortality if they’re cared for by Black doctors rather than white ones.”¹⁰⁵ Another study of 495 largely white, male physicians found that they were less likely to prescribe

⁹⁸ *Id.* at 91.

⁹⁹ *Unequal Treatment*, *supra* note 38, at 2–3.

¹⁰⁰ *Just Medicine*, *supra* note 25, at 57–58.

¹⁰¹ *See, e.g.*, Press Release by AMA, *supra* note 89; Mathieu Rees, *Racism in healthcare: What you need to know*, Med. News Today (Sept. 16, 2020), bit.ly/3okjoK6.

¹⁰² Kelly M. Hoffman, *supra* note 93, at 4299.

¹⁰³ Xingyu Zhang et al., *Racial and Ethnic Disparities in Emergency Department Care and Health Outcomes Among Children in the United States*, *Frontiers in Pediatrics*, Dec. 19, 2019, at 1, doi.org/10.3389/fped.2019.00525.

¹⁰⁴ *Id.* at 5.

¹⁰⁵ Akilah Johnson & Nina Martin, *supra* note 46; *see also* Brad Greenwood et al., *Physician-patient racial concordance and disparities in birthing mortality for newborns*, 117 *PNAS* 21194, 21194 (2020), bit.ly/3gkmg5m.

an aggressive HIV treatment to Black men than white men due to negative racial bias.¹⁰⁶

In 2007, researchers produced “the first evidence of unconscious (implicit) race bias among physicians, its dissociation from conscious (explicit) bias, and its predictive validity.”¹⁰⁷ The researchers concluded that physicians’ implicit bias contributed to racial and ethnic disparities in the use of medical procedures such as thrombolysis for myocardial infarction.¹⁰⁸ The study also showed that as physicians’ IAT (implicit bias) scores increased, their likelihood of treating Black patients with thrombolysis decreased. A 2015 systematic review of 15 studies measuring implicit bias and health outcomes confirmed that healthcare professionals hold the same level of implicit bias against Black, Latinx, and dark-skinned people as the general population, and that “implicit bias was significantly related to patient–provider interactions, treatment decisions, treatment adherence, and patient health outcomes.”¹⁰⁹ A 2017 systematic review of 37 studies confirmed the substantial evidence of “pro-White or light-skin/anti-Black, Hispanic, American Indian or dark-skin bias among a variety of [healthcare professionals] across multiple levels of training and disciplines.”¹¹⁰

Research has shown that a person can “hold strongly negative implicit biases” even where they express no explicit bias and believe themselves to be race-neutral.¹¹¹ Studies show that

¹⁰⁶ *Just Medicine*, *supra* note 25, at 132; *see also* Laura M. Bogart, *Factors Influencing Physicians’ Judgments of Adherence and Treatment Decisions for Patients with HIV Disease*, 21 *Med. Decision Making* 28, 34 (2001), doi.org/10.1177/0272989X0102100104.

¹⁰⁷ Alexander R. Green et al., *Implicit Bias among Physicians and its Prediction of Thrombolysis Decisions for Black and White Patients*, 22 *Soc’y of Gen. Internal Med.* 1231, 1231 (2007), bit.ly/3gODyHQ.

¹⁰⁸ *Id.*

¹⁰⁹ William J. Hall et al., *Implicit Racial/Ethnic Bias Among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review*, 105 *Am. J. Pub. Health* e60, e60 (2015), http://doi.org/10.2105/AJPH.2015.302903.

¹¹⁰ Ivy W. Maina et al., *A decade of studying implicit racial/ethnic bias in healthcare providers using the implicit association test*, 199 *Soc. Sci. & Med.* 219, 219 (2018), bit.ly/3rXSGJy.

¹¹¹ *Just Medicine*, *supra* note 25, at 46.

implicit bias influences behavior more directly than conscious bias does.¹¹² The evidence reveals that “implicit race biases are as prevalent among professionals in the health care industry as they are among the American public generally.”¹¹³ Most healthcare professionals, like most whites, “are low in explicit and high in implicit” bias.¹¹⁴ In other words, many healthcare professionals unconsciously hold negative biases against BIPOC groups, and these negative biases may cause them to provide—entirely unintentionally—a lower quality of care to their BIPOC patients than they might provide to similarly situated white patients. Research has shown that strategies based on ignoring group differences do not eliminate bias, whereas making healthcare professionals aware of their own biases and stereotypes does.¹¹⁵ Researchers have concluded that “[i]nterventions targeting implicit attitudes among health care professionals are needed.”¹¹⁶

Consistent with this evidence, the CDC has identified “potential biases in prescribing practices” as one reason for the observed racial and ethnic disparity in mAb treatment.¹¹⁷ The New York City Health Department has recognized that “race norming . . . often negatively impacts the treatment and care for persons of color.”¹¹⁸ Racism or implicit bias may therefore influence physicians’ decisions about which patients should receive potentially life-saving treatments.

III. Because social inequities and racism exacerbate COVID-19 morbidity and mortality in minoritized populations, considering a patient’s BIPOC race or ethnicity in evaluating their risk of severe progression is justified.

Contrary to the plaintiff’s assertions, *see* Pl. Memorandum at 12, as discussed above, a

¹¹² *Id.* at 39.

¹¹³ *Id.* at 41.

¹¹⁴ Michelle van Ryn et al., *The Impact of Racism on Clinician Cognition, Behavior, and Clinical Decision Making*, 8 Du Bois Rev. 199, 204 (2011), doi.org/10.1017/S1742058X11000191.

¹¹⁵ *Just Medicine*, *supra* note 25, at 66–67, 165, 167.

¹¹⁶ William J. Hall et al., *supra* note 109, at e60.

¹¹⁷ Jennifer L. Wiltz, *supra* note 64, at 99.

¹¹⁸ NYC Health, *Health Department Launches Coalition to Confront Racism in Medical Algorithms* (Nov. 24, 2021), bit.ly/3uVbFpT.

wealth of evidence supports the Prioritization Guidance's and the Health Advisory's recommendation that healthcare providers in exercising their own clinical judgment consider a COVID-19 patient's BIPOC race or ethnicity in evaluating risk of progressing to severe symptoms.¹¹⁹ Although race is a social construct and not an inherent biologic or genetic trait, as discussed above, BIPOC people experience higher rates of severe COVID-19 symptoms, hospitalizations, and death from COVID-19 than white people as a result of myriad factors, including social drivers of health. Moreover, research shows that, among people who have medical conditions such as heart disease and diabetes—two of the most common underlying medical conditions among COVID-19 patients—BIPOC individuals' conditions tend to be less well-treated, deadlier, and more severe than white individuals'.¹²⁰ BIPOC COVID-19 patients thus are at an increased risk of developing severe symptoms that the Prioritization Guidance's remaining risk factors, such as age and presence of underlying medical conditions alone, do not account for.

To illustrate, suppose a Black individual with heart disease and high blood pressure is eligible for one or more of the COVID-19 treatments during a time of low supply. The Prioritization Guidance suggests a healthcare provider consider the patient's heart disease as a risk factor.¹²¹ But this consideration alone does not capture the likelihood that the Black individual's heart condition manifested earlier, and is more severe than, a white individual's of the same age with the same condition. Nor does this consideration alone account for the Black individual's

¹¹⁹ See Prioritization Guidance, *supra* note 1, at 3; Health Advisory, *supra* note 1, at 3.

¹²⁰ See *supra* notes 23–27, 85, 87, 100.

¹²¹ See Prioritization Guidance, *supra* note 1, at 2 (hyperlinking risk factors to CDC web page listing risk factors); CDC, *People with Certain Medical Conditions*, *supra* note 22 (listing “heart conditions such as heart failure” as a medical condition that increases a person's risk of getting severely ill from COVID-19).

increased risk of developing heart failure,¹²² increased risk of inflammation, or any of the other increased risks associated with their race that do not apply to a similarly situated white COVID-19 patient. Given these risks and the increased rates of severe illness and death from COVID-19 associated with BIPOC race or ethnicity, it is appropriate for healthcare professionals to take that information into account, along with other relevant factors in their clinical judgment, when evaluating a COVID-19 patient’s risk of progressing to severe illness, including for resource allocation purposes.¹²³ “Expanding the definition of ‘most at risk’ [for COVID-19] to include social factors is critical to implementing equitable interventions and saving lives.”¹²⁴

The mechanism by which the Prioritization Guidance recommends healthcare professionals consider, using their clinical judgment and discretion, a COVID-19 patient’s BIPOC race or ethnicity—by including it as one of the risk factors for severe illness¹²⁵—is justified by both the strong correlation between BIPOC race or ethnicity and increased rates of severe illness from COVID-19 as well as the potential influence of racism or implicit bias within the medical system. In New York, Black persons experience at least twice the rate of death from COVID-19 and at least four times the rate of hospitalization from COVID-19 than white persons. This

¹²² Daniel Pan et al., *The impact of ethnicity on clinical outcomes in COVID-19: A systematic review*, EClinicalMedicine, June 3, 2020, at 6, bit.ly/34PffqU.

¹²³ See Matthew A. Raifman & Julia R. Raifman, *Disparities in the Population at Risk of Severe Illness From COVID-19 by Race/Ethnicity and Income*, 59 Am. J. Preventive Med. 137, 137 (2020), doi.org/10.1016/j.amepre.2020.04.003.

¹²⁴ Rima A. Afifi et al., *supra* note 31, at 1.

¹²⁵ Prioritization Guidance, *supra* note 1, at 3. By its terms, the Prioritization Guidance notes that “Non-white race or Hispanic/Latino ethnicity should be considered a risk factor.” This brief provides the court with the current evidence regarding the disproportionately high prevalence and severity of COVID-19 cases among BIPOC and Latinx people. It should not be read as suggesting that race in and of itself is a genetic or biologic factor that causes medical risk; rather, as the Prioritization Guidance itself acknowledges, it is “longstanding systemic health and social inequities [that] have contributed” to increased prevalence of severe illness and death. *Id.* at 3. There are also other ways that may be effective to consider or describe the social consequences of race and ethnicity.

increased prevalence is similar to the increase in risk of patients with obesity and patients with a history of smoking,¹²⁶ two other risk factors under the Prioritization Guidance. Medical practitioners may consider a patient's race or ethnicity, along with other social determinants of health, in making treatment decisions where justified by the evidence. For example, the American College of Obstetricians and Gynecologists and the Society for Maternal-Fetal Medicine's recommendations regarding low-dose aspirin prophylaxis for the prevention of preeclampsia consider "Black race (as a proxy for underlying racism)" a risk factor.¹²⁷ However, it is important to reiterate that race is a social construct, rather than an inherent biological trait, and when race is described as a risk factor, it is more likely to be a proxy for influences including structural racism than a proxy for genetics.

Because racism and implicit racial and ethnic biases are known to inform medical care, thereby contributing to healthcare disparities and inequities, medical professional associations such as the American Medical Association have called for "acknowledging the harm caused by racism and unconscious bias within medical research and health care" and "identifying tactics to counter racism and mitigate its health effects."¹²⁸ By suggesting that healthcare professionals take a COVID-19 patient's race or ethnicity into account, the Prioritization Guidance can help counteract racism and negative implicit biases against people of color that might otherwise

¹²⁶ See Lyudmyla Kompaniyets et al., *Body Mass Index and Risk for COVID-19–Related Hospitalization, Intensive Care Unit Admission, Invasive Mechanical Ventilation, and Death — United States, March–December 2020*, 70 *MMWR* 355 (2021), bit.ly/34cIXWG; Roengrudee Patanavanich & Stanton A. Glantz, *Smoking is associated with worse outcomes of COVID-19 particularly among younger adults: a systematic review and meta-analysis*, *BMC Pub. Health*, Aug. 16, 2021, doi.org/10.1186/s12889-021-11579-x.

¹²⁷ Am. Coll. of Obstetricians & Gynecologists, *Practice Advisory: Low-Dose Aspirin Use for the Prevention of Preeclampsia and Related Morbidity and Mortality* (Dec. 2021), bit.ly/3IZIKom.

¹²⁸ Press Release by AMA, *supra* note 89; see also Am. Acad. of Fam. Physicians, *Institutional Racism in the Health Care System*, <https://bit.ly/3sctuPs> (last visited Feb. 28, 2022).

inappropriately influence healthcare professionals’ prioritization decisions. Incorporating equity into “scarce resource allocation protocols,” as the Prioritization Guidance does, also accords with researchers’ and CDC’s recommendations,¹²⁹ and medical professional organizations’ principles of patient-centered care.¹³⁰ COVID-19’s disproportionate impact on BIPOC individuals is an issue of public health. Allocating treatment to those known to have the most adverse outcomes will alleviate the crisis of hospital overcrowding and demands on our healthcare system.¹³¹

Indeed, if medical professionals fail to consider BIPOC individuals’ increased risk of getting severely ill or dying from COVID-19, along with other relevant factors, in prioritizing COVID-19 treatments during times of low supply, that would likely result in BIPOC COVID-19 patients continuing to get severely ill and to die from COVID-19 at disproportionately higher rates relative to white patients; in effect, their risk would be underappreciated. Only by accounting for the increased risk of severe illness from COVID-19 that BIPOC individuals face will their assigned risk group accurately reflect their level of risk.¹³²

CONCLUSION

For the reasons stated above and in Defendants’ filings, *Amici* urge this Court to deny Plaintiffs’ motion for a preliminary injunction.

¹²⁹ COVID-19 Policy Playbook, *supra* note 23, at 162; *see, e.g., id.*; Anna M. Acosta, *supra* note 19; CDC, *COVID-19 Racial and Ethnic Health Disparities*, <https://bit.ly/3AVhrZv> (updated Dec. 10, 2020).

¹³⁰ *See, e.g.,* Am. Coll. of Obstetricians and Gynecologists, *Importance of Social Determinants of Health and Cultural Awareness in the Delivery of Reproductive Health Care*, *ACOG Committee Opinion No. 729*, 131 *Obstetrics & Gynecology* e43, e44 (2018), bit.ly/3GqzIVc (“A patient-centered approach to care recognizes the role of . . . historical and contemporary forces in clinical encounters.”).

¹³¹ *See* Sharon Otterman & Joseph Goldstein, *More Patients, Fewer Workers: Omicron Pushes New York Hospitals to Brink*, *NY Times* (Jan. 7, 2022), nyti.ms/3HqmMe5.

¹³² *See also* Anna M. Acosta, *supra* note 19, at 2 (“Equitable access to COVID-19 preventive measures, including vaccination, is needed to minimize the gap in racial and ethnic disparities of severe COVID-19.”).

Respectfully submitted,

s/ Rachel L. Fried

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CERTIFICATE OF SERVICE

I hereby certify that on February 28, 2022, a true and accurate copy of the foregoing motion was electronically filed with the Court using the CM/ECF system. Service on counsel for all parties will be accomplished through the Court's electronic filing system.

/s/ Rachel L. Fried

Date: February 28, 2022