22-692

United States Court of Appeals

FOR THE SECOND CIRCUIT

WILLIAM A. JACOBSON, on behalf of himself and others similarly situated,
Plaintiff-Appellant,
v.
MARY T. BASSETT, in her official capacity as Acting Commissioner of the New York State Department of Health,
Defendant-Appellee.

On Appeal from the United States District Court
for the Northern District of New York

BRIEF OF NATIONAL MEDICAL ASSOCIATION, AMERICAN MEDICAL ASSOCIATION, MEDICAL SOCIETY OF THE STATE OF NEW YORK, AMERICAN COLLEGE OF PHYSICIANS, AMERICAN PUBLIC HEALTH ASSOCIATION, LAWYERS' COMMITTEE FOR CIVIL RIGHTS UNDER LAW, INFECTIOUS DISEASES SOCIETY OF AMERICA, 1199SEIU UNITED HEALTHCARE WORKERS EAST, COMMUNITY SERVICE SOCIETY OF NEW YORK, HOUSING WORKS, AND MEDICAL AND HEALTH EQUITY PROFESSIONALS AND ACADEMICS AS *AMICI CURIAE* IN SUPPORT OF APPELLEE

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INTERESTS OF *AMICI CURIAE*

Amici are leading medical, health equity, public health, and social science experts as well as organizations with direct experience on the frontlines of the COVID-19 pandemic, including in New York.[1] *Amici* thus have a strong interest in supporting healthcare guidance that is informed by the medical and social science data regarding racial disparities and inequities in healthcare and health outcomes, including with respect to COVID-19. *Amici*'s expertise in health equity issues makes them uniquely suited to presenting this data to the Court.[2]

INTRODUCTION AND SUMMARY OF ARGUMENT

To the extent this Court reaches the merits of Appellants' motion for a preliminary injunction, *Amici* submit this brief to underscore the substantial medical and scientific literature that supports the New York Department of Health's non-binding guidance that medical professionals, in exercising their independent clinical judgment and discretion, consider

[1] Pursuant to Fed. R. App. P. 29(a)(4)(E) and L.R. 29.1(b), *Amici* affirm that no party's counsel authored this brief, neither the parties nor their counsel contributed money intended to fund preparing or submitting this brief, and no person other than *Amici* or their counsel contributed money intended to fund preparing or submitting this brief.

[2] The AMA and MSSNY submit this brief on their own behalf and as representatives of the Litigation Center of the American Medical Association and the State Medical Societies.

a COVID-19 patient's BIPOC race or ethnicity[3] alongside other relevant factors when evaluating the patient's risk of progressing to severe illness.[4] 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 dispute, however, that longstanding systemic health and social factors have led to a disproportionately higher burden of COVID-19, including severe illness and death, among populations marginalized by systems and structures, including BIPOC individuals. These systemic inequities manifest in an increased risk of developing severe COVID-19 symptoms relative to whites that the remaining criteria in the Department's non-binding guidance cannot capture.

ARGUMENT

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

For more than two years, the COVID-19 pandemic has wreaked havoc in communities across the country, upended the lives of countless

[3] As used in this brief, BIPOC (often used to describe Black, Native American, Indigenous, Latinx, Asian American, Pacific Islander American, and people of color) refers to communities of color with races and ethnicities that have been historically marginalized by systems and structures.

[4] JA 49.

families, and killed more than 71,600 New Yorkers.[5] Although the COVID-19 pandemic has taken a toll on all New Yorkers, it has disproportionately impacted marginalized populations.

Marginalized populations have experienced disproportionately high rates of death from COVID-19, particularly when adjusted for age.[6] Based on data collected through March 7, 2021, Black individuals have died from COVID-19 at 1.4 times the rate of white individuals.[7] A 2021 study concluded that "while Asian Americans make up a small proportion of COVID-19 deaths in the USA, they experience significantly higher

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[5] N.Y. State Dep't of Health, *COVID-19 Fatalities Tracker*, on.ny.gov/3HlNh4j (last visited June 28, 2022).

[6] *See* Elisabeth Gawthrop, *The Color of Coronavirus: COVID-19 Deaths by Race and Ethnicity in the U.S.,* APM Rsch. Lab (June 16, 2022), bit.ly/3uqm5NU; 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; *see also* CDC, *Risk for COVID-19 Infection, Hospitalization, and Death by Race/Ethnicity*, https://bit.ly/34P9b1T (last updated June 2, 2022) ("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.").

[7] COVID Tracking Project, Atlantic, *The COVID Racial Data Tracker*, https://bit.ly/3KZDOSk (last visited June 22, 2022); *see also* 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.

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."[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

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

[9] 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.

[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.*

statewide COVID-19 deaths.[12]

Racial and ethnic disparities in age-adjusted death rates in New York and New York City have yet to flatten out; as of June 28, 2022, the age-adjusted death rate from COVID-19 of Black New Yorkers is more than double that of white New Yorkers.[13] Even though the national crude (non-age-adjusted) death rate of white COVID-19 patients has recently been higher than that of people of color,[14] there are current disparities in age-adjusted death rates, and data still show disparities in both crude and age-adjusted death rates when measured from the beginning of the pandemic.[15]

BIPOC people also experience disproportionately higher rates of

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[12] *Id.*

[13] *See* N.Y. State Dep't of Health, *COVID-19 Fatalities Tracker*, *supra* note 5 (providing link to age-adjusted death rates by race/ethnicity in New York State); *see also nychealth / coronavirus-data*, GitHub (last visited June 28, 2022), https://bit.ly/35p3k34 (displaying age-adjusted hospitalization and death rates by race).

[14] *See* David Leonhardt, *Covid and Race*, N.Y. Times (June 9, 2022), https://nyti.ms/3zwhb4B.

[15] *See* CDC WONDER, *Provisional Mortality Statistics*, https://wonder.cdc.gov/mcd-icd10-provisional.html (last visited June 14, 2022) (requesting crude and age-adjusted death rates from COVID-19, grouped by race or "Hispanic Origin"); *see also* Katelyn Jetelina, *The Morning Today Is…Wrong*, Your Local Epidemiologist (June 9, 2022), https://bit.ly/3NU6PQm.

severe illness from COVID-19.[16] As of March 2021, the COVID-19 hospitalization rate of Asian Americans, Latinx, and Black New Yorkers was 2.5, 3.8, and 4.2 times that of white New Yorkers, respectively.[17] Black and Latinx residents of New York City continued to experience disproportionately higher hospitalization rates than whites during the omicron wave.[18] 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

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[16] *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.

[17] *See* COVID Tracking Project, Atlantic, *New York: All Race & Ethnicity Data*, bit.ly/3sxag62 (last visited June 22, 2022). Two studies found that 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. But these studies were limited to individual hospitals, recognized the disparate hospitalization and mortality rates for Black COVID-19 patients in other studies, and proposed alternative explanations for their unexpected results.

[18] NYC Health, *Racial Inequities in COVID-19 Hospitalizations During the Omicron Wave in NYC* 9 (Mar. 2, 2022), https://on.nyc.gov/392nthP.

care, and death.[19]

Communities of color in New York have disproportionately higher rates and severity of conditions such as heart disease and diabetes,[20] which are two of the most common underlying medical conditions that place patients with COVID-19 at increased risk for severe illness or death.[21] Communities of color also experience higher rates of undiagnosed medical conditions (including diabetes),[22] 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, people of color experience higher rates of more severe cases, disease-related complications, and premature death from those diseases,

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[19] CDC, *Risk of Severe Illness or Death from COVID-19*, bit.ly/3ghKDAI (last updated Dec. 10, 2020).

[20] Gbenga Ogedegbe et al., *supra* note 17, at 5; 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, 866 (2021), doi.org/10.1007/s40615-020-00844-1; CDC, *Prevalence of Both Diagnosed and Undiagnosed Diabetes*, bit.ly/3s3Xiwu (last visited Dec. 29, 2021).

[21] *See* CDC, *People with Certain Medical Conditions*, bit.ly/3IUxx8D (last updated May 2, 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.

[22] *See* CDC, *Prevalence of Both Diagnosed and Undiagnosed Diabetes*, *supra* note 20.

than their white counterparts.[23]

Consistent with this evidence, a study found that "racial disparities in COVID-19 outcomes exist despite comparable ECIs [comorbidities] among" patients.[24] 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.[25] Another recent study found that, compared with white patients with cancer and COVID-19, Black patients with cancer and COVID-19 "experienced significantly higher COVID-19 severity."[26] Studies have also found that Black and Latinx people experience higher rates of certain serious COVID-19 related complications than white

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[23] *See* Shirley A. Hill, *Inequality and African-American Health: How Racial Disparities Create Sickness* 11, 60 (2016); Dayna Bowen Matthew, *Just Medicine: A Cure for Racial Inequality in American Healthcare* 57 (2015); Ctrs. for Medicare & Medicaid Servs. (CMS), *Racial and Ethnic Disparities in Diabetes Prevalence, Self-Management, and Health Outcomes Among Medicare Beneficiaries* (2017), at 1–2, 9–11, go.cms.gov/3s2Ettq.

[24] Fares Qeadan et al., *Racial Disparities in COVID-19 Outcomes Exist Despite Comparable Elixhauser Comorbidity Indices between Blacks, Hispanics, Native Americans, and Whites*, Sci. Reports, Apr. 22, 2021, at 6, doi.org/10.1038/s41598-021-88308-2.

[25] *Id.*

[26] Julie Fu et al., *Racial Disparities in COVID-19 Outcomes Among Black and White Patients With Cancer*, JAMA Network, Mar. 28, 2022, at 9, doi.org/10.1001/jamanetworkopen.2022.4304.

individuals.[27]

II. The higher rates of severe symptoms and death from COVID-19 experienced by marginalized 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, and other life opportunities—has led to adverse health outcomes for racial and ethnic groups historically marginalized by systems and structures.[28] "Social drivers of health" establish that societal conditions can—and do—affect an individual's health risk.[29] Second,

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[27] CDC, *Disparities in Hospitalizations*, bit.ly/3ufveJj (last updated May 23, 2022); Jamie S. Hirsch et al., *Acute Kidney Injury in Patients Hospitalized with COVID-19*, 98 Kidney Int'l 209, 210, 211 (2020), bit.ly/3sO3ZTP.

[28] *See, e.g.*, CDC, *Health Equity Considerations and Racial and Ethnic Minority Groups*, bit.ly/3giQc1z (last updated Jan. 25, 2022); Paula Braveman et al., *What is Health Equity?*, Robert Wood Johnson Found. (May 1, 2017), rwjf.ws/3Gkedjx; 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.

[29] *See* CDC, *Social Determinants of Health: Know What Affects Health*, bit.ly/3IWQXd3 (last updated Sept. 30, 2021).

racism and implicit bias within the medical system has resulted in lower quality healthcare for BIPOC individuals.[30] 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 presence of underlying medical conditions.[31]

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

The COVID-19 pandemic's disparate impact is neither novel nor a coincidence. Racial and ethnic disparities in health outcomes are well documented, and persist "even when access-related factors, such as patients' insurance status and income, are controlled."[32] It is crucial to note that "these disparities do not arise from bad individual choices or

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[30] *See* Kevin B. O'Reilly, *AMA: Racism Is a Threat to Public Health*, Am. Med. Ass'n (Nov. 16, 2020), bit.ly/35xEoGE.

[31] *See* Rima A. Afifi et al., *supra* note 28, 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 88.

[32] 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* Hill, *supra* note 23, at 22.

biological differences between races but the social factors that shape people's lives every day . . . . We as a society have created them."[33]

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.[34] Inequitable life conditions can negatively impact an individual's health in obvious ways. Living in heavily polluted areas may worsen one's asthma, for example. 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

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[33] Patricia Williams, Pub. Health L. Watch, *COVID-19 Policy Playbook: Legal Recommendations for a Safer, More Equitable Future* 7 (Scott Burris et al. eds., 2021), bit.ly/3L0KCz6 [hereinafter COVID-19 Policy Playbook]; *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 ("The manifestations of racism . . . 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.").

[34] CDC, *Health Equity Considerations and Racial and Ethnic Minority Groups*, *supra* note 28.

various psychophysiological pathways.[35] 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."[36] Researchers "have documented a direct link between social stress and sickness, with stressful life events predicting illnesses as serious as heart disease."[37]

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,[38] 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."[39] Housing in segregated communities

[35] 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; Hill, *supra* note 23, at 5.
[36] Hill, *supra* note 23, at 74.
[37] *Id.* at 16.
[38] Douglas S. Massey & Mary J. Fischer, *How Segregation Concentrates Poverty*, 23 Ethnic & Racial Stud. 670, 671 (2000), bit.ly/3IUXbu3.
[39] Hill, *supra* note 23, at 159.

is disproportionately poorer quality and more crowded.[40] Racially segregated neighborhoods also have lower quality schools, another factor linked to adverse health outcomes.[41] Segregation has also been linked to later-stage diagnosis of cancers and lower cancer survival rates.[42] 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.[43] And almost 90% of Brooklyn's Black residents live in segregated neighborhoods.[44] People of color are also disproportionately represented in incarcerated and homeless populations,[45] which have been disproportionately impacted by COVID-

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[40] *Id.*; CDC, *Health Equity Considerations and Racial and Ethnic Minority Groups*, *supra* note 28.
[41] Paula Braveman et al., *supra* note 28, at 5.
[42] David R. Williams et al., *Racism and Health: Evidence and Needed Research*, 40 Ann. Rev. Pub. Health 105, 108 (2019), https://bit.ly/3zSZUCP.
[43] Olivia Winslow, *Long Island Divided Part 10: Dividing Lines, Visible and Invisible*, Newsday (Nov. 17, 2019), bit.ly/34ug7AG.
[44] Themis Chronopoulos, *"What's Happened to the People?" Gentrification and Racial Segregation in Brooklyn*, 24 J. African-Am. Studs. 549, 570 (2020), bit.ly/3L90D6m.
[45] N.Y. State Div. of Crim. Just. Servs., *NYS Adult Arrests and Prison Sentences by Race/Ethnicity in 2020* (Oct. 20, 2021), https://on.ny.gov/3xK6GYU (showing that in New York, Black individuals are imprisoned at a rate that is over three times their percentage of the state's population); Coal. for Homelessness, *Basic Facts*

19.[46]

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

Communities of color also experience disproportionately low access to healthcare services compared to white Americans. In New York, numerous policies over the past several decades have resulted in underfunded and under-resourced hospital systems in communities of color.[47] 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.[48] "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

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About Homelessness: New York City, https://bit.ly/3h1ZBv2 (last updated May 2022).

[46] Hill, *supra* note 23, at 112 (imprisoned people are exposed to more infectious diseases and to significant stress); Coal. for Homelessness, *Age-Adjusted Mortality Rate for Sheltered Homeless New Yorkers*, https://bit.ly/3ByrWSU (last visited June 22, 2022).

[47] 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.

[48] David Robinson, *Why NY Hospital Closures, Cutbacks Made COVID-19 Pandemic Worse*, Times Herald-Record (Apr. 10, 2020), bit.ly/3snDN1W.

rates of chronic diseases that are best managed by primary care providers."[49] 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.[50]

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, "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."[51] The vaccine rollout in New York City was "plagued by stark racial disparities, with Black and Latino residents receiving far fewer doses than white

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[49] Primary Care Dev. Corp., *To Address COVID-19 Disparities, PCDC Urges New York State to Invest in Primary Care* (June 1, 2020), bit.ly/3s18Sts.

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

[51] 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.

residents."[52] Gaps in New York City's COVID-19 response policy resulted in inadequate access to COVID-19 testing to communities of color.[53] 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."[54]

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 large-scale study that included several healthcare facilities in New York found that Latinx, Black, Asian American, and other patients of color received mAb

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[52] Emma G. Fitzsimmons, *Black and Latino New Yorkers Trail White Residents in Vaccine Rollout*, N.Y. Times (Jan. 31, 2021), nyti.ms/34JRD7m (updated Sept. 29, 2021).

[53] John Kelly & Stephen Cioffi, *Testing Centers in Many Non-White Neighborhoods Likely to Be More Crowded*, abc7NY (July 22, 2020), 7ny.tv/3JHf2Ff.

[54] 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.

58%, 22%, 48%, and 47% less often, respectively, than white patients.[55] 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."[56] The racial disparity in mAb treatment was documented again in April 2022.[57] The CDC identified several access-related and systemic factors as potential explanations for the documented racial and ethnic inequities in COVID-19 mAb treatment.[58]

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 marginalized groups have disproportionately lower-paying jobs, leaving

[55] 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.
[56] *Id.* at 100.
[57] En-Ling Wu et al., *Disparities in COVID-19 Monoclonal Antibody Delivery: A Retrospective Cohort Study*, J. Gen. Internal Med., Apr. 25, 2022, doi.org/10.1007/s11606-022-07603-4.
[58] Jennifer L. Wiltz, *supra* note 55, at 99.

them with less money to spend on healthcare.[59] They are also more likely to work in jobs that cannot be done remotely from home, such as healthcare, service, and retail occupations, and to have longer commute times on public transportation, increasing their exposure to infectious diseases like COVID-19.[60]

BIPOC individuals are also less likely to hold jobs that provide health insurance, and are "significantly more likely to be underinsured than the white population."[61] "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.[62] Researchers have cited social determinants of health, including lack of paid time off and lack of insurance, as barriers

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[59] U.S. Dep't of Lab., Women's Bureau, *Median Annual Earnings by Sex, Race and Hispanic Ethnicity*, bit.ly/3rhy5PX (last visited June 22, 2022); *see also* David R. Williams, *Racism and Health*, *supra* note 42, at 4 ("In 2016, for every dollar of income that white households received, Hispanics earned 73 cents and blacks earned 61 cents.").
[60] COVID-19 Policy Playbook, *supra* note 33, at 12; Equality Indicators, *Narrowing the Gap, Vol. 16* (Feb. 2017), https://bit.ly/3h2vlzW.
[61] COVID-19 Policy Playbook, *supra* note 33, at 90.
[62] Amanda Dunker & Elisabeth Ryden Benjamin, *supra* note 47.

to COVID-19 vaccine access and accommodations.[63]

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.[64] 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.[65] In a 2011 study, more than 90% of Black individuals reported having experienced racial discrimination.[66] Racial discrimination can cause chronic stress, which, as noted, is linked to a wide array of poor health outcomes. A study found that 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

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[63] 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.
[64] *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.
[65] Paradies, *A Systemic Review*, *supra* note 33, at 895.
[66] Hill, *supra* note 23, at 16.

factors such as diet, exercise, smoking, and low [socioeconomic status]."[67] 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."[68] Consistent with this evidence, New York City last year recognized that racism is a "public health crisis."[69]

v. *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

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[67] 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. 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.).

[68] Paula Braveman et al., *supra* note 28, at 5.

[69] NBC N.Y., *NYC Board of Health Declares Racism a Public Health Crisis* (Oct. 18, 2021), https://bit.ly/3tDi4on (updated Oct. 19, 2021).

illness and death from COVID-19, across the country and in New York.[70] An individual's work conditions, access to 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.[71] 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

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[70] *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; 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 (2021), doi.org/10.5195/ijms.2021.1125; 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; Rima A. Afifi et al., *supra* note 28; 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.

[71] *See, e.g.*, Lawyers' Comm. for Civ. Rts. Under Law, *Hidden in Plain Sight* 17 (June 2022), https://bit.ly/3OChCPo; Nicholas Verdini et al., *supra* note 70, at 284.

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."[72] The same is true of other marginalized populations.[73]

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.[74]

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

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[72] COVID-19 Policy Playbook, *supra* note 33, at 13.
[73] *See id.* at 11–13.
[74] *See* Press Release, AMA, *New AMA Policy Recognizes Racism As a Public Health Threat* (Nov. 16, 2020), bit.ly/3L6mXgy.

expression are taken into account."[75] 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 and other patients of color are less likely than whites to receive preventive care and routine medical procedures.[76]
- Black patients are treated less for pain than white patients.[77]
- Patients of color 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.[78]
- Race-based kidney function adjustments based on false ideas about differences in muscle mass have denied Black people

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[75] *Unequal Treatment*, *supra* note 32, at 2–3; *see also* Matthew, *supra* note 23, at 35.

[76] *Unequal Treatment*, *supra* note 32, at 123; 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 6 (2011), https://bit.ly/3omfD6R; Matthew, *supra* note 23, at 1.

[77] 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; Matthew, *supra* note 23, at 61, 95.

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

access to dialysis and transplants.[79]

- Doctors are almost twice as likely to refer white patients to a specialist than they are to refer Black patients.[80]
- 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."[81]

Extensive research shows that healthcare inequities are due not to intrinsic clinical factors, but to exposure to racism within the medical system.[82] 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."[83] 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

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[79] 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.
[80] Hill, *supra* note 23, at 91.
[81] Matthew, *supra* note 23, at 57–58.
[82] *See, e.g.*, Press Release, AMA, *supra* note 74; Mathieu Rees, *Racism in Healthcare: What You Need to Know*, Med. News Today (Sept. 16, 2020), bit.ly/3okjoK6.
[83] Kelly M. Hoffman, *supra* note 77, at 4299.

"experienced significantly longer wait times and overall visits as compared to whites."[84] 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."[85] Additionally, "Black newborns have significantly lower mortality if they're cared for by Black doctors rather than white ones."[86]

Since 2007, researchers have had evidence that physicians' implicit bias contributes to racial and ethnic disparities in the use of medical procedures.[87] A study showed that as physicians' IAT (implicit bias) scores increased, their likelihood of treating Black patients with thrombolysis decreased.[88] A 2015 systematic review of 15 studies

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[84] 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.
[85] *Id.* at 5.
[86] Akilah Johnson & Nina Martin, *How COVID-19 Hollowed Out a Generation of Young Black Men*, ProPublica (Dec. 22, 2020), https://bit.ly/3ohfJgc; *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.
[87] 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.
[88] *Id.*

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."[89] 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."[90]

Studies show that implicit bias influences behavior more directly than conscious bias does.[91] Most healthcare professionals, like most whites, "are low in explicit and high in implicit" bias.[92] In other words, many healthcare professionals unconsciously hold negative biases

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[89] 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.
[90] 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.
[91] Matthew, *supra* note 23, at 39.
[92] 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.

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. 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.[93]

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

Contrary to Appellant's assertions, *see* Appellant's Br. 25–26, as discussed above, a 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. 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

[93] Jennifer L. Wiltz, *supra* note 55, at 99.

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'.[94] 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.[95] 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

[94] See *supra* notes 21–25, 70, 72, 82.

[95] *See* JA 49 (hyperlinking risk factors to CDC web page listing risk factors); CDC, *People with Certain Medical Conditions*, *supra* note 21 (listing "heart conditions such as heart failure" as a medical condition that increases a person's risk of getting severely ill from COVID-19).

individual's increased risk of developing heart failure,[96] 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.[97] "Expanding the definition of 'most at risk' [for COVID-19] to include social factors is critical to implementing equitable interventions and saving lives."[98]

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

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[96] 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.

[97] *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.

[98] Rima A. Afifi et al., *supra* note 28, at 1.

it as one of the risk factors for severe illness[99]—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 increased prevalence is similar to the increase in risk of patients with obesity and patients with a history of smoking,[100] two other risk factors under the Prioritization Guidance.

Because racism and implicit racial and ethnic biases are known to

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[99] JA 50. 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.*

[100] *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.

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."[101] 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.[102] 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 inappropriately influence healthcare professionals' prioritization decisions. Incorporating equity into "scarce resource allocation protocols," as the Prioritization Guidance does, also accords

[101] Press Release, AMA, *supra* note 74; *see also* Am. Acad. Fam. Physicians, *Institutional Racism in the Health Care System*, https://bit.ly/3sctuPs (last visited June 22, 2022); *see also* William J. Hall et al., *supra* note 89, at e60.
[102] Matthew, *supra* note 23, at 66–67, 165, 167.

with researchers' and CDC's recommendations,[103] and medical professional organizations' principles of patient-centered care.[104] 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.[105]

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

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[103] COVID-19 Policy Playbook, *supra* note 33, at 162; *see, e.g.*, *id.*; Anna M. Acosta, *supra* note 16; CDC, *COVID-19 Racial and Ethnic Health Disparities*, https://bit.ly/3AVhrZv (last updated Dec. 10, 2020).

[104] *See, e.g.*, Am. Coll. of Obstetricians & 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/3GqzlVc.

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

risk of severe illness from COVID-19 that BIPOC individuals face will their assigned risk group accurately reflect their level of risk.

CONCLUSION

For the reasons stated above and in Appellee's brief, *Amici* urge this Court to affirm the district court's decision.

Respectfully submitted,

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APPENDIX

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4. American College of Physicians
5. American Public Health Association
6. Lawyers' Committee for Civil Rights Under Law
7. Infectious Diseases Society of America
8. 1199SEIU United Healthcare Workers East
9. Community Service Society of New York
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14. Dr. Oni Blackstock, MD, MHS, Founder and Executive Director, Health Justice

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CERTIFICATE OF COMPLIANCE

This document complies with the type-volume limitation of Fed. R. App. P. 29 and L.R. 29.1, because excluding the parts of the document exempted by Fed. R. App. P. 32(f), this document contains 6986 words.

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Dated: June 28, 2022.

/s/ Rachel L. Fried

CERTIFICATE OF CONFERENCE

I hereby certify under Fed. R. App. P. 29(a)(2) that on June 24, 2022, I contacted counsel for Appellant and Appellee by electronic mail and that Appellant stated he does not oppose, and Appellee stated she consents to, the filing of the brief of *Amici curiae*.

/s/ Rachel L. Fried

Date: June 28, 2022

CERTIFICATE OF SERVICE

I hereby certify that on June 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: June 28, 2022