

ADDRESSING THE DISPROPORTIONATE ADVERSE HEALTH EFFECTS AMONG BIPOC COMMUNITIES AS A RESULT OF ENVIRONMENTAL RACISM

*Lindsay M. Farbent**

I. INTRODUCTION

Around one in three (31%) of Black Americans, compared to only 9% of their white counterparts, reported personally knowing someone who has died from COVID-19.¹ Black folks are thirty percent more likely to die prematurely from heart disease and twice as likely to die of a stroke as white folks.² Black folks, Indigenous folks, and People of Color are more likely to live in polluted areas than their white counterparts.³ Long-term exposure to pollution can increase your chances of developing respiratory diseases, cardiovascular diseases, and even cancer.⁴

* Lindsay M. Farbent, Juris Doctor Candidate 2022, Roger Williams University School of Law.

¹ Amy Goldstein & Emily Gustin, *Almost One-Third of Black Americans Know Someone Who Died of COVID-19, Survey Shows* (2020), https://www.washingtonpost.com/health/almost-one-third-of-black-americans-know-someone-who-died-of-covid-19-survey-shows/2020/06/25/3ec1d4b2-b563-11ea-aca5-ebb63d27e1ff_story.html.

² National Academies of Sciences, *The State of Health Disparities in the United States*, 57-99 (James N. Weinstein, Amy Geller, Yamrot Negussie & Alina Baciu, eds. 2017).

³ Christopher W. Tessum et al., *PM2.5 Polluters Disproportionately and Systemically Affect People of Color in the United States*, 7 SCI. ADVANCES (2021). Available at <https://doi.org/10.1126/sciadv.abf4491>.

⁴ Meng Wang et al., *Association Between Long-term Exposure to Ambient Air Pollution and Change in Quantitatively Assessed Emphysema and Lung Function*, 322 JAMA 546-566 (2019), <https://pubmed.ncbi.nlm.nih.gov/31408135/>; Shengzhi Sun et al., *Short-term exposure to air pollution and incidence of stroke in the Women's Health Initiative*, 132 ENV'T INT. (2019), <https://pubmed.ncbi.nlm.nih.gov/31382185/>; Cheng-Kuan Lin et al., *A Global Perspective on Coal-fired Power Plants and*

Environmental Racism has contributed to disproportionate adverse health effects among Black folks, Indigenous folks, and People of Color (hereinafter “BIPOC”). This can be shown by examining: the impact of historical residential redlining as it relates to respiratory illnesses; the failure of environmental laws in protecting BIPOC communities; higher rates of trauma, stress, and stress-related illnesses among BIPOC communities; and, structural racism in health care.

This paper will first discuss existing scholarship and background on environmental racism. Next, this paper will discuss historical residential redlining and its lasting impact on BIPOC communities in the United States. After that, this paper reviews existing federal and state environmental laws and addresses the lack of protections for BIPOC communities. Next, this paper examines stress and trauma in BIPOC communities and the link between stress and trauma with the likelihood of developing diseases. The final section of this paper will discuss structural racism in health care, including access to and quality of care. This paper will conclude by briefly discussing possible solutions.

II. BACKGROUND

A. Existing Scholarship

A well-studied fact is the “nexus of concentrated poverty and the spatial isolation of African Americans;” between 1985 and 2000, almost a third of Black children were raised in high-poverty areas.⁵ Studies have even found that high-earning Black families typically live in poorer neighborhoods than middle-class white families.⁶ Moreover, other factors influence the stress and well-being of

Burden of Lung Cancer, 18 ENVTL. HEALTH: A GLOBAL ACCESS SCI. SOURCE, 1, 9 (2019), <https://doi.org/10.1186/s12940-019-0448-8>.

⁵ Robert J. Sampson & Alix S. Winter, *The Racial Ecology of Lead Poisoning: Toxic Inequality in Chicago Neighborhoods, 1995-2013*, DU BOIS REVIEW 1, 2 (2016).

⁶ *Id.*

BIPOC individuals like disproportionate rates of “unemployment, single-parent families, teenage childbearing, violence, incarceration, and high school dropout.”⁷

Researchers have studied the 2009 H1N1 Pandemic and its effect on BIPOC communities in depth. That research found Indigenous folks’ and Alaska Natives’ mortality rates from H1N1 were four times the amount of all other groups combined.⁸ More research on H1N1 found that, in California, Latinx individuals had a mortality rate twice as high as white people.⁹ H1N1 researchers suggest that the disproportionate impact on BIPOC individuals can be explained by an inability to practice social distancing or stay at home during the pandemic due to a lack of paid sick leave and access to healthcare.¹⁰ The disproportionalities are just as prevalent among COVID-19 data as in H1N1 data.

This paper fills a gap in legal research surrounding the factors contributing to pre-existing illness among BIPOC individuals, making them more susceptible to dying from COVID-19. The relevant factors—as discussed in the following sections—have not been thoroughly discussed in regard to COVID-19 mortality.

⁷ *Id.* See also Robert J. Sampson, *Moving and the Neighborhood Glass Ceiling*, SCIENCE 337: 1464-1465 (2012).

⁸ Dennis Andrulis, et al., *H1N1 Influenza Pandemic and Racially and Ethnically Diverse Communities in the United States: Assessing the Evidence of and Charting Opportunities for Advancing Health Equity*, US DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICE OF MINORITY HEALTH 1, 13 (2012).

⁹ Monica Schoch-Spana, et al., *Stigma, Health Disparities, and the 2009 H1N1 Influenza Pandemic: How to Protect Latino Farmworkers in Future Health Emergencies*, BIOSECUR. BIOTERROR. 243-253 (2010).

¹⁰ Sandra Crouse Quinn et al., *Racial Disparities in Exposure, Susceptibility, and Access to Healthcare in the US H1N1 Influenza Pandemic*, AM. J. PUBLIC HEALTH 101, 285-93 (2011), available at: <https://doi.org/10.2105/AJPH.2009.188029>; See also Supriya Kumar, et al., *The Impact of Workplace Policies and Other Social Factors on Self-Reported Influenza-Like Illness Incidence During the 2009 H1N1 Pandemic*, 102 (1) AM. J. PUB. HEALTH 132-140 (2012).

B. Environmental Racism

Those who live in heavily polluted areas suffer from illnesses, including COVID-19, at higher rates than those that are not exposed to dirty air.¹¹ Experts from varying fields have found that Black Americans and other minority, and low-income communities are living in areas with high levels of air pollution, toxic waste, and environmental hazards.¹² This can be explained by Environmental Racism, which is defined as “the process of discriminatory siting, where a policy, practice, or directive has a disproportionate impact on communities based on race.”¹³

Recent trends show that the impact of air pollution on BIPOC communities is getting worse each year. One study in 2014 found “significant disparities in concentrations [of air pollution] for specific socioeconomic groups.”¹⁴ More specifically, air pollution was much higher, thirty-eight percent, for BIPOC communities than for white communities.¹⁵ Another study, in 2018, found that the burden of air pollution on BIPOC communities in the U.S. was twenty-eight percent higher than the overall population as a whole.¹⁶ In particular, the burden of air pollution on Black Americans was

¹¹ Lara P. Clark et al., *National Patterns in Environmental Injustice and Inequality: Outdoor NO₂ Air Pollution in the United States*, 9 PLOS ONE 1, 2 (2014).

¹² See Alejandro Colsa Perez ET AL., *Evolution of the environmental justice movement: activism, formalization and differentiation*, ENVTL. RES. LETTERS (Oct. 13, 2015), <https://iopscience.iop.org/article/10.1088/1748-9326/10/10/105002/pdf> (analyzing environmental impact on minority, low-income communities in United States).

¹³ Shijuade Kadree, *It's Getting Harder to Breathe: Addressing the Disproportionate Impact of Asthma Among Minority Children Through Environmental Justice Litigation*, 3 S. REGIONAL BLACK L. STUDENTS ASS'N L.J. 38, 39 (2009).

¹⁴ Lara P. Clark et al., *supra*, at 2.

¹⁵ *Id.* at 7.

¹⁶ Ihab Mikati et al., *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status*, 108 AM. J. OF PUB. HEALTH 480 (2018).

fifty-four percent higher than the population in its entirety.¹⁷ One year later in 2019, researchers found that Black Americans' exposure to air pollution was sixty-one percent higher than it was for white people.¹⁸ A recent study found that individuals who have lived in communities with long-term exposure to polluted air are 8% more likely to die from COVID-19.¹⁹

Air pollution is not the only source with a disproportionate impact on BIPOC communities. In 2007, researchers found there were greater "racial and socioeconomic disparities in the location of the nation's commercial hazardous waste facilities" than was previously believed.²⁰ Specifically, researchers found:

Beyond five kilometers of the nation's hazardous waste facilities, the proportion of people of color is only 22.2%. However, at distances between three and five kilometers, the proportion of people of color increases to 35.7%. It increases again to 46.1% between the distances of one and three kilometers and reaches 47.7% within a distance of one kilometer.²¹

Likewise, researchers found that oil refineries are located in BIPOC communities at a disproportionately high rate compared to the rest of the U.S. population.²² Specifically, researchers found that

¹⁷ *Id.* at 482.

¹⁸ Maria Cecilia Pinto de Moura & David Reichmuth, *Inequitable Exposure to Air Pollution from Vehicles in the Northeast and Mid-Atlantic*, UNION OF CONCERNED SCIENTISTS (June 2019), <https://www.ucsusa.org/sites/default/files/attach/2019/06/Inequitable-Exposure-to-Vehicle-Pollution-Northeast-Mid-Atlantic-Region.pdf>.

¹⁹ Xiao Wu et al., *Air Pollution and COVID-19 Mortality in the United States: Strengths and Limitations of an Ecological Regression Analysis*, 6 SCI. ADVANCES, 1, 2 (2020). Available at <https://doi.org/10.1126/sciadv.abd4049>.

²⁰ United Church of Christ Commission for Racial Justice, *Toxic Wastes and Race in the United States*, U.S. NUCLEAR REGULATORY COMM'N (1987), <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf>.

²¹ *Id.* at 43.

²² *Fumes Across the Fence-Line: The Health Impacts of Air Pollution from Oil & Gas Facilities on African American Communities*, CLEAN AIR TASK

over “[one] million [Black] Americans live within a half mile of existing natural gas facilities,” and more than six million Black Americans live in the same county as an oil refinery.²³

Richard Rothstein explains the all-repeating dynamic resulting from the priority to keep white neighborhoods “pristine:”

Decisions to permit toxic waste facilities in African American areas did not intend to intensify slum conditions, although this was the result. The racial aspect of these choices was a desire to avoid the deterioration of white neighborhoods when African American sites were available as alternatives. The welfare of African Americans did not count for much in this policy making. Oftentimes, as in St. Louis, zoning boards made explicit exceptions to their residential neighborhood rules to permit dangerous or polluting industry to locate in African American areas.²⁴

Despite a growing number of studies examining environmental hazards among BIPOC communities, they continue to be exploited as areas to dump toxic waste and create sites for new hazardous facilities, resulting in adverse health effects.

III. HISTORICAL REDLINING

A. Background

BIPOC individuals are more susceptible to contracting illnesses because of residential segregation due to historical redlining. The Federal Housing Administration was created in 1933 to subsidize housing builders so long as the homes were not being sold to Black Americans, a practice we now call “redlining.”²⁵ Redlining can be defined as “the conscious practice of intentional racial steering and denial of credit in real estate transactions fully

FORCE 1, 4 (Nov. 4, 2017), https://www.catf.us/wp-content/uploads/2017/11/CATF_Pub_FumesAcrossTheFenceLine.pdf.

²³ *Id.*

²⁴ Richard Rothstein, *The Color of Law*, 55 (2017).

²⁵ *Id.* at 63.

backed and promoted by the federal government.”²⁶ One expert even described redlining as: “the Rosetta Stone that unlocks an understanding of the spatial organization of most American cities. It ‘most definitely created a template’ that would be built out over generations.”²⁷

The term “Redlining” was coined as a result of the Home Owners Loan Corporation’s (“HOLC”) effort to lift the U.S. out of a recession by categorizing the level of risk for banks giving out real estate loans in the U.S.²⁸ HOLC staff created maps for the lenders to know which areas had high concentrations of Black Americans; these areas were categorized as a high risk, and colored red, so banks could deny them.²⁹ This was common practice throughout the 1930s to 1960s until redlining was banned by the Fair Housing Act of 1968, but the effects of historical redlining remain seen in the modern day.³⁰

Moreover, historical redlining practices have resulted in the current overpopulation of BIPOC individuals in areas that are “less desirable,” “hazardous” and more “climate-vulnerable,” such as flood zones and urban heat islands.³¹ While those areas that were historically deemed “desirable” remain populated by white folks

²⁶ Charles Lee, *Confronting Disproportionate Impacts and Systemic Racism in Environmental Policy*, 51 ENVTL. L. REP. (ELI) 10207, 10220 (2021),

²⁷ *Id.* (quoting a Telephone Interview with Robert Nelson and LaDale Winling (Sept. 25, 2020)).

²⁸ Bev Wilson, *Urban Heat Management and the Legacy of Redlining*, 86 J. OF THE AM. PLANNING ASSOC., 443-457 (2020), <https://doi.org/10.1080/01944363.2020.1759127>

²⁹ *Id.*

³⁰ Daniel Cusick, *Past Racist “Redlining” Practices Increased Climate Burden on Minority Neighborhoods*, E&E News (2020), <https://www.scientificamerican.com/article/past-racist-redlining-practices-increased-climate-burden-on-minority-neighborhoods/>; *see also* 42 U.S.C.A. § 3604 (West).

³¹ AMERICAN PUBLIC HEALTH ASSOCIATION, ADAPTATION IN ACTION, PART II (2018), *available at* https://www.apha.org/-/media/files/pdf/topics/climate/adaptation_in_action_part_2.ashx?la=en&hash=87A791182153A590EE7C5C97AE94EEC2691EFD6E.

with above-average incomes.³² Today, we see the result of disparate siting and land-use patterns is adverse health conditions to those that are nearby.³³

In Richard Rothstein's *The Color of Law: A Forgotten History of How Our Government Segregated America*, Rothstein details how all levels of government during the New Deal era and after, intentionally "created segregation in every metropolitan area of the nation."³⁴ Basically, "[t]oday's residential segregation in the North, South, Midwest, and West is not the unintended consequence of individual choices and of otherwise well-meaning law or regulation but of unhidden public policy."³⁵ Intentional government policy has been and still remains today as the biggest driver in housing choices that impact BIPOC communities.³⁶

B. Urban Heat Island Effect

Extreme heat and high allergy days inequitably impact BIPOC communities.³⁷ Historically redlined areas are now, on average, five degrees hotter than areas that were not redlined.³⁸ Moreover, the difference in summer surface temperature between some redlined and non-redlined areas is as high as twenty degrees.³⁹ This Urban Heat Island Effect can be explained by a lack of tree canopy, proximity to roadways and large buildings, and other

³² Jeremy Hoffman et al., *The Effects of Historical Housing Policies on Resident Exposure to Intra-Urban Heat: A Study of 108 US Urban Areas*, CLIMATE, 1, 3 (2020)

https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1263&context=us_p_fac.

³³ Robert D. Bullard, *The Threat of Environmental Racism*, NATURAL RESOURCES & ENVIRONMENT 23 (1993).

³⁴ Rothstein, *supra*, at 13.

³⁵ *Id.*

³⁶ *Id.*

³⁷ ADAPTATION IN ACTION, PART II, *supra*.

³⁸ Hoffman et al., *supra*.

³⁹ *Id.*

factors.⁴⁰ These landscapes that “are well known to transform solar radiation into heat,” are especially prevalent in BIPOC communities.⁴¹ The large roadways and buildings gain heat during the day, and then the heat is retained and released back into the neighborhoods throughout the evenings.

The result is deadly: extreme heat that can “exacerbate excess mortality and morbidity.”⁴² Extreme heat is actually the number one cause of death in communities with pre-existing health conditions.⁴³ Extreme temperature changes can impact poor air quality, increasing health risks among individuals with respiratory or cardiovascular diseases.⁴⁴ Recent heatwaves have impacted BIPOC communities during this pandemic the worst:

Most at risk of these increases in extreme heat are low-income communities, tribal communities, and communities of color. These are the same groups of people who endure disproportionate levels of environmental pollution from power plants, industrial facilities, diesel trucks, landfills, and pesticides. They are the people who—without equal access to affordable and quality health care—have been hit the hardest by the pandemic.⁴⁵

The large amount of paved surfaces in BIPOC communities can cause varying temperatures, where increasing rents and discriminatory housing policies have already pushed BIPOC neighborhoods farther away from parks and green spaces.⁴⁶

Another factor contributing to extreme heat is the lack of tree canopy and green spaces among BIPOC communities to cool down

⁴⁰ *Id.*

⁴¹ *Id.* at 10.

⁴² *Id.*; ADAPTATION IN ACTION, PART II, *supra*.

⁴³ Hoffman et al., *supra*.

⁴⁴ ADAPTATION IN ACTION, PART II, *supra*.

⁴⁵ Elise Gout & Cathleen Kelly, *Extreme Heat during the COVID-19 Pandemic Amplifies Racial and Economic Inequalities*, Center for American Progress (June 29, 2020)

<https://www.americanprogress.org/issues/green/news/2020/06/29/486959/extreme-heat-covid-19-pandemic-amplifies-racial-economic-inequities/>.

⁴⁶ *Id.*

the neighborhoods. BIPOC neighborhoods are often within urban areas, “where they are less likely to benefit from the natural cooling that vegetation provides.”⁴⁷ At both a national and regional level, one study found a link between a lack of tree canopy and “historically undeserved urban areas.” On the contrary, neighborhoods with higher incomes and white folks have experienced “decades of intentional investment in parks, green spaces, [and] trees” to provide “cooling services.”⁴⁸ BIPOC communities, which often lack cooling services, will continue to face adverse health effects as a result of factors such as extreme heat.

1. Air Quality

Cooling services are not the only advantage of having a tree canopy, it could also help clean the air within BIPOC communities. Recent studies suggest that BIPOC communities are less likely to live in areas with trees and have poorer air quality.⁴⁹

Living close to highways, ports, freight transportation corridors, and industrial areas with more emission sources increase the exposure to air pollution and the risk of health effects. Air quality in BIPOC communities is deteriorating due to proximity to highways, industrial plants, and landfills.⁵⁰ Prolonged exposure to these types of pollutants is associated with significant respiratory and cardiovascular issues, cancer, and asthma. One example of this can be seen in Providence, Rhode Island. The Rhode Island

⁴⁷ *Id.*

⁴⁸ Daniel Cusick, *supra*.

⁴⁹ Hoffman et al., *supra* (citing Kristen Schwarzet al., *Trees Grow on Money: Urban Tree Canopy Cover and Environmental Justice*, PLOS ONE (2015) <https://doi.org/10.1371/journal.pone.0122051>; Anthony Nardone et al., *Historic Redlining and Asthma Exacerbations across Eight Cities of California: A Foray into How Historic Maps Are Associated with Asthma Risk*, AM. J. RESP. CRIT. CARE MED. (2019), https://www.atsjournals.org/doi/10.1164/ajrcm-conference.2019.199.1_MeetingAbstracts.A7054).

⁵⁰ Robert D. Bullard, *supra* at 23; Regina Austin & Michael Schill, *Black, Brown, Poor & Poisoned: Minority Grassroots Environmentalism and the Quest for Eco-Justice*, 1 KAN.J.L. & PUB.POL'Y 69 (1991).

Department of Health (“RI DOH”) has found that pediatric hospitalization rates for asthma are 75% higher in urban neighborhoods like the Port of Providence than in Rhode Island as a whole.⁵¹ In fact, as of 2019, Rhode Island has the ninth-highest rate of asthma in the country – with some of the highest concentrations in the areas surrounding the Port.⁵² The following map shows the clear correlation between particulate matter emitted from diesel vehicles along the Port and the respiratory risks to the surrounding communities. This map provides a clear picture: BIPOC communities face a larger risk of respiratory illness from poor air quality.

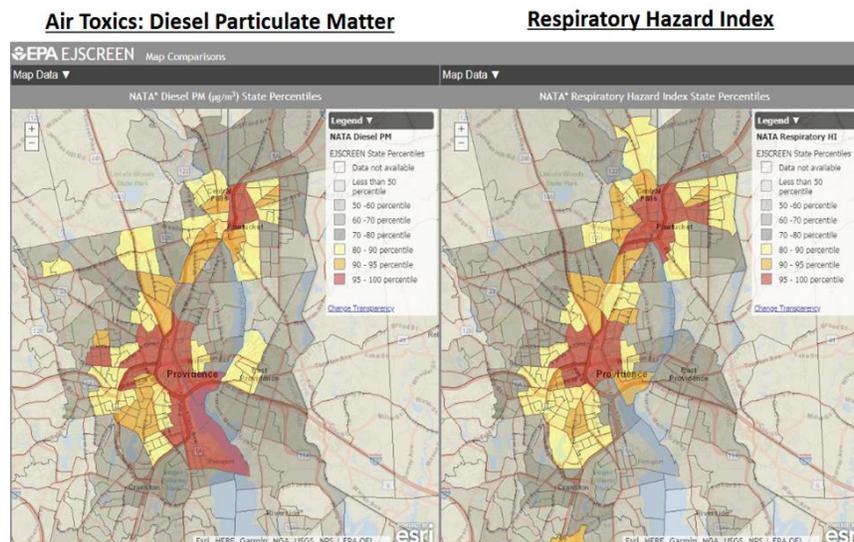


Figure 1 - Presentation on Asthma in Rhode Island: Greater Providence Area, prepared by Julian Drix at RIDOH.

⁵¹ *Rhode Island 2020 Annual Monitoring Network Plan and 5-Year Network Assessment*, STATE OF RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (2020) available at <http://www.dem.ri.gov/programs/air/documents/airnet20d.pdf>.

⁵² Tim Faulkner, *Rhode Island Ranked in Top 10 for Asthma Rate*, ECO RI NEWS (2019), <https://www.ecori.org/pollution-contamination/2019/2/14/rhode-island-ranks-9th-for-asthma-cities-suffer-most>.

C. Deteriorating and Inefficient Homes

“People of color are also more likely to be immunocompromised, with a higher proportion of families living in neighborhoods with polluted air and water, and homes with mold, asbestos, lead, and other environmental contaminants – leading to higher rates of heart disease, asthma, and cancer.”⁵³ Exposure to lead, mold, and other contaminants display the systemic reasons that BIPOC individuals are more likely to suffer from autoimmune diseases, respiratory diseases, and suffer from other adverse health effects that make them more vulnerable to contracting COVID-19.⁵⁴ Most of these well-documented factors causing adverse health among BIPOC communities are related to the homes they occupy, whether visible or more subtle.⁵⁵

Lead poisoning continues to be a leading health threat to BIPOC children in the United States as a result of past redlining practices. Researchers have found that “Black children are five times more likely than white children to have lead poisoning.”⁵⁶ Moreover, in 2008, another study found that “[o]ne in seven [B]lack children living in older housing has elevated blood lead levels.”

Exposure to lead and the risk for lead poisoning typically affects the BIPOC community in one of two ways: lead-poisoned water or lead built into the infrastructure. In recent news, Flint, Michigan, and Newark, New Jersey have infamously delivered their residents lead-poisoned water. Lead-poisoned water disproportionately impacts the BIPOC community and, as a result, comes with adverse health effects.⁵⁷ Researchers have found that

⁵³ Madilyn Keaton, *supra*.

⁵⁴ Victoria Finkle et al., *Ensuring Fair Housing During the Covid-19 Pandemic*, J. AFFORDABLE HOUSING & COMMUNITY DEV. L., 179 (2020).

⁵⁵ *Id.*

⁵⁶ Robert D. Bullard et al., *supra* at 376 (2008) (citing Robert D. Bullard et al., *Toxic Wastes and Race at Twenty*, UNITED CHURCH OF CHRIST, 1, 19 (2007)).

⁵⁷ Robert J. Sampson & Alix S. Winter, *supra* (finding that Black children have been shown to be at higher risk of lead exposure than White or Hispanic children).

“lead is a major neurotoxin that impairs cognitive, physical, and behavioral functioning, even at relatively low levels.”

Just as dangerous as lead-poisoned water is lead built into infrastructure as a result of industrial byproducts and old housing stock. For example, in Rhode Island, around 80% of homes were built before 1978 and contain lead-based paint and pipes, the most common source of lead exposure for children.⁵⁸ BIPOC individuals are more likely to live in “deteriorating neighborhoods” because of limited financial resources and other factors, making the risk of lead-exposure high.⁵⁹ Large-scale lead abatement in housing is needed in Rhode Island, and other BIPOC communities to protect children and adults alike from lead poisoning.

Other factors to consider in examining lead poisoning within BIPOC communities include “landlord neglect of private housing conditions and institutional neglect of the indoor environments of daycare centers and schools may contribute to the link between racial segregation and health adversities like lead poisoning.”⁶⁰ Furthermore, one researcher suggests examining neighborhood reinvestment patterns and city infrastructure projects in addressing lead-related disparities.⁶¹ That same researcher was happy to find dramatic declines in lead toxicity in recent years, however, lead poisoning is still a very real problem with deadly consequences faced disproportionately by BIPOC communities.⁶²

Along with deteriorating homes, BIPOC communities lack efficient energy systems in their homes and often have a higher energy burden than white communities. BIPOC communities have always had a disproportionately high energy burden, resulting in a higher risk of utility termination due to “lower median household income, lack of control over heating systems, and living in less

⁵⁸ *Childhood Lead Poisoning*, State of Rhode Island: Department of Health (last accessed July 12, 2021), <https://health.ri.gov/data/childhoodleadpoisoning/>.

⁵⁹ James D. Sargent et al., *Census Tract Analysis of lead Exposure in Rhode Island Children*, 74 ENV'T'L RESEARCH 159-168 (1997).

⁶⁰ Robert J. Sampson & Alix S. Winter, *supra* at 19.

⁶¹ *Id.*

⁶² *Id.* at 20.

energy efficient homes.”⁶³ Studies show that high energy insecurity has severe adverse health effects, including food insecurity and increased likelihood of developing conditions such as: various types of cancer; and, cardiovascular and respiratory illnesses like asthma.⁶⁴ Without increased access to clean and efficient energy, the energy burden faced by BIPOC communities will remain high.

Even if BIPOC communities have access to clean and efficient energy, the current pandemic has made it much harder to afford any energy bill.⁶⁵ Throughout the pandemic, loss of employment became a harsh reality for BIPOC families.⁶⁶ When a family loses income, their energy bills “quickly begin to exceed what families can afford.” “The stay-at-home order complicates this problem by increasing the usage of necessities like energy, heat, and water, leading to much higher energy burdens than normal.”⁶⁷

IV. ENVIRONMENTAL LAWS & LACK OF PROTECTIONS FOR BIPOC COMMUNITIES

A. Background

Gaps in Federal and State environmental laws allow facilities to keep obtaining permits and polluting in BIPOC, primarily low-income, neighborhoods. Most major environmental statute in the U.S. has a similar purpose, “to restore, maintain, and protect the quality and integrity of the nation’s natural resources so as to promote the public health and welfare.”⁶⁸ However, until

⁶³ Madilyn Keaton, Regional Housing Legal Services, *Who Pays The Most? Covid-10, Utility Accessibility, And Race* (May 21, 2020), <https://www.rhls.org/2020/05/who-pays-the-most-covid-19-utility-accessibility-and-race>.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ Robert M. Frye, *Environmental Injustice: The Failure of American Civil Rights and Environmental Law to Provide Equal Protection from Pollution*, 3 DICK. J. ENVTL. L. & POL'Y 53, 66 (1993).

recently, no major environmental statute addresses the disproportionate burden faced by BIPOC and low-income communities when it comes to environmental pollution, waste, and contamination. Professor Richard Lazarus explains it well, “environmental justice does not find much formal expression in environmental law.”⁶⁹

A lack of “regulatory options on environmental justice also poses a challenge for regulators looking for more than just a ‘participatory process’ on how to incorporate justice into things like permits.”⁷⁰ One possible solution is explained by EPA Administrator Michael Regan, “a combination of the federal government, state governments, local elected officials, our tribal governments, nonprofits, thinking creatively about using all the tools in our toolbox,” is needed to address environmental injustice.⁷¹

B. Federal Environmental Laws

The siting process of hazardous waste sites has been the focus of many environmental justice scholars in recent years. The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 in response to the hazardous waste crisis. The statute allows the EPA to regulate hazardous waste, treatment, storage, and disposal facilities “as may be necessary to protect human health and the environment.”⁷²

RCRA created “a system for identifying and listing hazardous wastes, and a comprehensive “cradle-to-grave regulatory tracking system for the generation, transportation, storage, treatment, and disposal of such wastes.”⁷³ Further, RCRA created

⁶⁹ Benjamin F. Wilson, *It's Not "Just" Zoning: Environmental Justice and Land Use*, 49 URB. LAW. 717 (2017) (quoting Richard Lazarus, *Environmental Racism! That's What It Is*, 2000 U. ILL. L. REV. 255, 258 (2000)).

⁷⁰ Jennifer Hijazi, *Air Office Lead Pressed for Answers on Diesel and Justice Rules*, BLOOMBERG LAW (July 21, 2021).

⁷¹ Stephen Lee & Jennifer A. Dlouhy, *Effects of Cumulative Pollution in EPA's Crosshairs, Regan Says*, BLOOMBERG LAW (July 14, 2021).

⁷² 42 U.S.C.A. § 6924(a) (West).

⁷³ Robert M. Frye, *supra* at 66.

specific requirements for the disposal of hazardous waste, but only created basic principles regarding the siting of hazardous waste facilities.⁷⁴ Under RCRA, the individual states have the authority to develop their own siting requirements for hazardous waste disposal facilities.⁷⁵ RCRA in its efforts to fix environmental risks, has perhaps, added to the environmental injustice faced by BIPOC communities by giving states this authority.

The Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter “CERCLA”) also governs hazardous waste sites.⁷⁶ CERCLA was enacted primarily to clean up past hazardous waste sites. CERCLA imposes liability on the owners and operators of abandoned hazardous waste sites and establishes a “superfund” to financially support the cleanup efforts.⁷⁷

Historically, the EPA was biased in the cleanup and remediation of contaminated Superfund sites.⁷⁸ Higher-income and white neighborhoods had faster cleanups than BIPOC communities.⁷⁹ In fact, it took twenty percent longer for an abandoned toxic waste site in a BIPOC or low-income community to be placed on the National Priorities list. Moreover, studies found “it t[ook] an average of 10.4 years to begin the cleanup in [BIPOC communities], compared to 9.9 years in white areas.”⁸⁰

More than just hazardous waste sites are governed by federal environmental laws; air pollution facilities and incinerators are also regulated by federally mandated standards. The Clean Air Act (“CAA”) requires the EPA to create national ambient air quality standards. These standards “allow an adequate margin of safety,

⁷⁴ RCRA § 3004, 42 U.S.C. § 6924 (1984).

⁷⁵ Rachel D. Godsil, Note, *Remedying Environmental Racism*, 90 MICH.L.REV. 394, 401 (1991).

⁷⁶ 42 U.S.C.A. §§ 9601 et seq. (West).

⁷⁷ 42 U.S.C.A. § 9607 (West); 26 U.S.C.A. § 9507 (West).

⁷⁸ Marianne Lavelle & Marcia Coyle, *Unequal Protection: The Racial Divide in Environmental Law*, THE NATIONAL LAW JOURNAL, (Sept. 21, 1992), at S1.

⁷⁹ *Id.*

⁸⁰ *Id.* at S6.

[and] are requisite to protect the public health.”⁸¹ States are then tasked with developing their own implementation plans to meet the standards laid out in the CAA.⁸² Moreover, the states are required to include a permitting process for all major industrial sources.⁸³ The permitting process must include public notice and a period for public comment.⁸⁴ The public participation requirement is one step toward ensuring BIPOC communities have access to decision making, and ultimately, in achieving environmental justice.

Another avenue allowing for public participation in siting decisions comes from the National Environmental Policy Act (“NEPA”).⁸⁵ Federal agencies are required to prepare Environmental Impact Statements (“EIS”) for “major Federal actions” that have a significant impact on the environment.⁸⁶ NEPA includes private activities that are “approved by permit.”⁸⁷ Federal agencies must invite comments and respond to them while drafting an EIS.⁸⁸ Parties can bring lawsuits to challenge an EIS, which in turn, would delay or even cancel a proposed project.⁸⁹

Overall, federal law acts as a minimum standard for undesirable land uses, but is not commonly directly involved in the siting decision. However, the public participation requirements embedded amongst federal environmental laws may be a helpful tool for environmental justice advocates alike.

C. State Environmental Regulations

State regulation of environmental projects is important in ensuring BIPOC communities do not face environmental injustices

⁸¹ 42 U.S.C.A. §§ 7401 et seq. (West); 42 U.S.C.A. § 7409(b) (West).

⁸² 42 U.S.C.A. § 7410 (West).

⁸³ 42 U.S.C.A. § 7661 (West).

⁸⁴ 42 U.S.C.A. § 7661a(B)(6) (West).

⁸⁵ 42 U.S.C.A. § 4321 (West).

⁸⁶ 42 U.S.C.A. § 4332(C) (West).

⁸⁷ 40 C.F.R. § 1508.1.

⁸⁸ 40 C.F.R. § 1503.1; 40 C.F.R. § 1503.4.

⁸⁹ See Tom Turner, *The Legal Eagles*, AMICUS J. 25 (1988) (detailing projects that were abandoned as a result of NEPA lawsuits).

and adverse health effects. States have the authority in implementing the Clean Air Act, which governs air polluting facilities.⁹⁰ Some states have adopted their own “state mini-NEPA” modeled on the National NEPA to allow for public comment on proposed environmental projects.

One state that has enacted protections for BIPOC communities is Massachusetts; Massachusetts enacted its own environmental impact assessment statute, the Massachusetts Environmental Policy Act (“MEPA”).⁹¹ MEPA requires any person applying to a state agency, for a permit or financial assistance on a project, to give notice to the secretary of environmental affairs (“secretary”) on the nature of the project.⁹² The secretary then decides if an environmental impact report (“EIR”) is required; if an EIR is required the party must report all foreseeable environmental impacts and both short-term and long-term unavoidable effects.⁹³ As of June 24, 2021, MEPA has been amended to include more protections for “environmental justice populations”.⁹⁴ If a proposed project affects, or is sited near an environmental justice population, MEPA requires heightened public participation:

- 1.) Making public notices, environmental notification forms, environmental impact reports, and other key documents related to the secretary’s review and decisions of a project review available in English and any other language spoken by a significant number of the affected environmental justice population;
- 2.) Providing translation services at public meetings for a significant portion of an affected environmental justice population that lacks English proficiency in the project’s designated geographic area;
- 3.) Requiring public meetings be held in accessible locations that are near public transportation;

⁹⁰ 42 U.S.C.A. § 7410 (West).

⁹¹ See MASS. GEN. LAWS ANN. 30 § § 61 – 62J (West 2021).

⁹² MASS. GEN. LAWS ANN. 30 § 62 – I (West 2021).

⁹³ MASS. GEN. LAWS ANN. 30 § 62B (West 2021).

⁹⁴ MASS. GEN. LAWS ANN. 30 § 62J (West 2021).

- 4.) Providing appropriate information about the project review procedure for the proposed project; and
- 5.) Where feasible, establishing a local repository for project review documents, notices, and decisions.⁹⁵

Other states should look to MEPA as a model to enact legislation to protect BIPOC communities from environmental injustices.

State-level environmental justice laws come in all shapes and sizes; ranging from public participation and education focused, to buffer zones and land use models.⁹⁶

North Carolina allows for “socioeconomic and demographic data” to be examined prior to the approval of solid waste facility permits.⁹⁷ Florida requires notification to all towns located within three miles of a proposed hazardous waste facility.⁹⁸ The same Florida law, adds additional requirements including notification that must be published in a local newspaper, and also creates a strict timeline of notifying the public within thirty days of the project being proposed.⁹⁹ Arkansas prohibits the concentration of facilities by creating a presumption against locating sites within twelve miles of each other.¹⁰⁰ Connecticut has established laws to regulate power-generating plants and transmission lines to protect the environment and ecology of the state.¹⁰¹

BIPOC communities are rarely thought of in the siting process and are often left out of the regulations surrounding siting, however, there is hope for the future, as more and more states are adding environmental justice as a consideration.

⁹⁵ *Id.*

⁹⁶ UNIV. OF CAL. HASTINGS COLLEGE OF THE LAW, *Environmental Justice for All: A Fifty State Survey of Legislation, Policies and Cases* (2010).

⁹⁷ N.C. Gen. Stat. Ann. § 160A-325 (West).

⁹⁸ FLA. STAT. ANN. § 403.723(3) (2021)(West).

⁹⁹ *Id.*

¹⁰⁰ ARK. CODE ANN. § 8-6-1504 (West 2021).

¹⁰¹ CONN. STAT. ANN § 16-50g – 50zz (West 2021).

V. STRESS AND TRAUMA

A. Stress

Many factors, such as exposure to dying loved ones and caregiving, are high stressors among BIPOC communities. Studies have found that “[b]ereavement . . . ha[s] been predictive of all-cause mortality and heart disease.”¹⁰² Further, those in caregiving roles experience extreme stress which might increase their likelihood of mortality.¹⁰³ BIPOC adults have greater exposure than their younger cohorts to “stressors related to acculturative stress, spousal and family caregiving, and raising grandchildren.”¹⁰⁴

Economic difficulties among BIPOC communities, such as low wages, high unemployment rates, food and housing insecurity, result in high levels of stress. Researchers have found that pre-COVID-19 economic disparities along with pre-existing health conditions have contributed to higher COVID-19 mortality rates for Black Americans.¹⁰⁵

Occupational strain is much higher among BIPOC individuals, as they disproportionately have hazardous jobs.¹⁰⁶ Hazardous jobs include jobs with extreme noise, exposure to extreme heat, and exposure to toxic chemicals—all of which can lead to adverse health conditions.¹⁰⁷ In fact, these jobs,

¹⁰² NATIONAL RESEARCH COUNCIL, *Understanding Racial and Ethnic Differences in Health in Late Life: A Research Agenda*, 1, 82-85 (Roldolfo A. Bulatao & Norman B. Anderson, eds. 2004).

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ Joseph A. Benitez et al., *Racial and Ethnic Disparities in COVID-19: Evidence from Six Large Cities*, NAT'L. BUREAU OF ECO. RESEARCH (2020), available at <https://ssrn.com/abstract=3661084>.

¹⁰⁶ Kaori Fujishiro, *Explaining Racial/Ethnic Differences in All-Cause Mortality in the Multi-Ethnic Study of Atherosclerosis (MESA): Substantive Complexity and Hazardous Working Conditions as Mediating Factors*, 3 SSM POPULATION HEALTH 497-505 (2017). Available at <https://doi.org/10.1016/j.ssmph.2017.05.010>.

¹⁰⁷ *Id.*

disproportionately held by BIPOC individuals, have been found to result in higher mortality rates than those who hold less hazardous jobs.¹⁰⁸ Moreover, studies have found that the complexity of one's job can impact mortality rates. Black Americans disproportionately hold routine tasked jobs, "such as service, production, transportation, and material-handling."¹⁰⁹ Those studies suggest adding complexity (decision-making, problem-solving, and creativity) to the jobs handled by Black Americans in an attempt to combat mortality rates.¹¹⁰

Apart from hazardous jobs, BIPOC individuals disproportionately hold 'essential jobs.' The Centers for Disease Control and Prevention ("CDC") found that Black Americans account for 30% of all nurses and Latinos account for 53% of all agricultural workers, both of these jobs deemed 'essential' throughout the COVID-19 pandemic.¹¹¹

As a result, many BIPOC individuals were unable to stay at home and practice social distancing, at least in part, because they were working 'essential jobs' that require human interaction, increasing the BIPOC communities' exposure to COVID-19 and in turn, mortality rate.¹¹² Even if BIPOC individuals could stay home, their exposure to COVID-19 does not stop there; another study found that Black Americans were more than twice as likely as white Americans to live in homes with healthcare workers.¹¹³

B. Trauma

BIPOC individuals face adverse health outcomes as a result of trauma. Discrimination toward the BIPOC community creates

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ THE CENTERS FOR DISEASE CONTROL AND PREVENTION, Introduction to COVID-19 Racial and Ethnic Health Disparities, <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/index.html> (Accessed July 13, 2021).

¹¹² *Id.*

¹¹³ *Id.*

stress and trauma, leading to physical and mental illnesses. Studies have found that perceived discrimination is linked to an increased risk of mortality in older adults.¹¹⁴ Regardless of age, “[r]esearch has found a link between racism and psychological distress, anxiety, post-traumatic stress disorder and depression among Black people.”¹¹⁵ Furthermore, during the pandemic, hate crimes and discrimination against Asian and Pacific Islanders have dramatically increased.¹¹⁶ COVID-19 “has exacerbated . . . discrimination . . . in society generally, sometimes with violent consequences.”¹¹⁷

Living with a violent police force has adverse health effects on the bodies of BIPOC individuals.

When faced with a threat, the body produces hormones and other signals that turn on the systems that are necessary for survival in the short term. These changes include accelerated heart rate and increased respiratory rate. But when the threat becomes reoccurring and persistent—as is the case with police brutality—the survival process becomes dangerous and causes rapid wear and tear on body organs and elevated allostatic load.¹¹⁸

The deterioration of organs and an increased amount of allostatic load occurs at a higher frequency among BIPOC communities and can lead to health conditions such as diabetes, stroke, ulcers, autoimmune diseases, and even death.¹¹⁹ Moreover, “the wear and tear associated with life in under-resourced and violent neighborhoods to which African Americans are disproportionately exposed are hypothesized to translate into elevated rates of physical

¹¹⁴ Lisa L. Barnes et al., *Perceived Discrimination and Mortality in a Population-Based Study of Older Adults*, 98 AM. J. PUBLIC HEALTH, 1241-1247 (2008). Available at <https://doi.org/10.2105/AJPH.2007.114397>.

¹¹⁵ Cordilia James & Andrea Petersen, *Racism's Mental Health Impact*, WALL STREET J., July 21, 2020, at A9.

¹¹⁶ Victoria Finkle et al., *supra*.

¹¹⁷ *Id.*

¹¹⁸ Sirry Alang et al., *Police Brutality and Black Health: Setting the Agenda for Public Health Scholars*, 107 AM. J. OF PUBLIC HEALTH, 662-665 (2017). Available at <https://doi.org/10.2105/AJPH.2017.303691>.

¹¹⁹ *Id.*

and mental health problems, deficits in cognitive skill development, and disrupted capacity for learning.”¹²⁰

Trauma can even exist within the healthcare BIPOC individuals receive due to poor treatment on the part of providers. Research shows that “69 percent of medical students surveyed exhibited implicit preferences for white people” and “other studies have found that physicians tend to rate [Black] patients more negatively than whites on a number of registers, including intelligence, compliance, and propensity to engage in high-risk health behaviors.”¹²¹ Black patients may experience trauma from dealing with the racist beliefs of their healthcare provider, which can result in: a delay in seeking medical attention; an interruption in the continuity of care; nonadherence; mistrust and avoidance of the medical industry; and poor health.¹²²

C. Stress and Trauma: Risk Factors for Pre-Existing Health Conditions Linked with COVID-19

As discussed in the previous sections, BIPOC individuals experience higher levels of stress and trauma than white individuals. Exposure to high-stress environments and traumatic experiences can lead to cardiovascular disease, diabetes, high blood pressure, and other illnesses. The biology behind this can be explained as follows:

A stressful environment produces epigenetic modifications to the receptors for stress hormones, which then cause the body's stress system to overheat and retain a high level of stress hormones in the body. Over time, the large amount of stress hormones in the body causes internal organs to become too sensitive and creates a risk for diabetes, obesity, heart disease, and other metabolic diseases.¹²³

¹²⁰ Robert J. Sampson & Alix S. Winter, *supra*.

¹²¹ Kimani Paul-Emile, *Patients' Racial Preferences and the Medical Culture of Accommodation*, 60 UCLA L. REV. 462, 493 (2012).

¹²² Janice Sabin, et al., *Physicians' Implicit and Explicit Attitudes About Race by MD Race, Ethnicity, and Gender*, 20 J. HEALTHCARE POOR UNDERSERVED 896, 907 (2009).

¹²³ Lucy A. Jewel, *The Biology of Inequality*, 95 DENV. L. REV. 609, 623–24 (2018).

Moreover, Stress and trauma affect both children and adults alike. BIPOC children who experience trauma are more likely to have negative outcomes in adulthood than if they had not experienced trauma. Researchers have found a link between childhood trauma and an increased risk of heart disease, obesity, diabetes, depression, and early death.¹²⁴ Thus, BIPOC individuals' exposure to stressful environments results in adverse health effects.

VI. STRUCTURAL RACISM IN HEALTH CARE

A. Access to Healthcare

BIPOC communities in the U.S. are often unable to access health care services. Immigrant agricultural workers, who are exposed to extreme weather all day, often forego healthcare because they do not have health insurance and cannot afford treatment otherwise.¹²⁵ Moreover, other undocumented immigrants in the U.S., do not have access to healthcare under the Affordable Care Act.¹²⁶ Punitive immigration policies, such as an increased presence of Immigration and Customs Enforcement (“ICE”) officers, have become a barrier to healthcare services for immigrants, documented or not.¹²⁷ The government and employers save money by not providing workers

¹²⁴ CENTERS FOR DISEASE CONTROL AND PREVENTION, *About the CDC-Kaiser ACE study: Major findings* (2016), <https://www.cdc.gov/violenceprevention/acestudy/about.html>; *see also* HARVARD UNIVERSITY, *ACEs and Toxic Stress: Frequently Asked Questions*, <https://developingchild.harvard.edu/resources/aces-and-toxic-stress-frequently-asked-questions/>.

¹²⁵ Monica Schoch-Spana, et al., *Stigma, Health Disparities, and the 2009 H1N1 Influenza Pandemic: How to Protect Latino Farmworkers in Future Health Emergencies*, 8(3) BIOSECURITY BIOTERROR. 243-253 (2010).

¹²⁶ *See* Medha D. Makhlouf, *Health Justice for Immigrants*, 4 U. PA. J.L. PUB. AFF. 235, (2019).

¹²⁷ Wendy E. Parmet, *In the Age Of Coronavirus, Restrictive Immigration Policies Pose a Serious Public Health Threat*, HEALTH AFF., <https://www.healthaffairs.org/doi/10.1377/hblog20200418.472211/full/> (accessed Apr. 18, 2020); Monica Schoch-Spana, et al., *supra*.

with health insurance, but immigrants are harmed because they have limited access to healthcare. These disparities in access to healthcare continue to exist throughout the COVID-19 pandemic.

The CARES Act may provide Medicaid coverage for COVID-19 testing, but it has not addressed disparities among BIPOC individuals' access to healthcare.¹²⁸ The relevant provisions of the CARES Act fail to protect most essential workers, many of whom are Black and Brown folks. Moreover, BIPOC individuals often lack access to COVID-19 testing sites. St. Louis is a great example of a city where Black folks are dying disproportionately from COVID-19 due to a lack of healthcare. Throughout April of 2020, all but three COVID-19 deaths in St. Louis were Black Americans.¹²⁹ The zip codes with the most COVID-19 cases in St. Louis (63109 and 63116) do not have a public testing site within them.¹³⁰ Moreover, St. Louis went from having eighteen hospitals in predominantly Black neighborhoods in the 1970s to only one in 2010.¹³¹ Due to the past hospital closures, St. Louis only has one hospital in a primarily Black neighborhood for those with COVID-19 to seek treatment.¹³²

Black Americans have reported seeking testing and treatment for COVID-19, to only be turned away.¹³³ The worst part is, that some of those who were turned away ended up dying.¹³⁴

¹²⁸ PUB. LAW. NO. 116-138, Tit. III (2)(b) § 3211 (b) 236 (2020) 4.

¹²⁹ Paulina Cachero, *All but 3 people who died from COVID-19 in St. Louis, Missouri, were black*, *Business Insider*, <https://www.businessinsider.com/all-but-three-people-who-died-from-covid-19-in-st-louis-were-black-2020-4> (Apr. 12, 2020).

¹³⁰ CITY OF ST. LOUIS DEPARTMENT OF HEALTH, COVID-19 Public Testing Locations, <https://www.stlouis-mo.gov/covid-19/data/test-locations.cfm> (accessed July 1, 2021).

¹³¹ Alan Sager & Deborah Socolar, *Closing Hospitals in New York State won't Save Money but will Harm Access To Care*, 30 (2006), [http://dcc2.bumc.bu.edu/hs/Sager Hospital Closings Short Report 20Nov06.pdf](http://dcc2.bumc.bu.edu/hs/Sager%20Hospital%20Closings%20Short%20Report%20Nov06.pdf).

¹³² *Id.* at 30-31.

¹³³ Jasmin Barmore, *5-year-old with rare complication becomes first Michigan child to die of COVID-19*, *THE DETROIT NEWS* (Apr. 20, 2020).

¹³⁴ See Shamar Walters & David K. Li, *New York City Teacher Dies From Covid-19 After She Was Denied Tests, Family Says*, *NBC NEWS* (Apr. 29,

B. Quality of Care

If Black Americans are able to access healthcare, they receive a poorer quality of care than white people. One study found that even when treated for the same illnesses, Black American Medicare patients received worse quality of care than White patients.¹³⁵ That study found that only thirty-two percent of Black pneumonia patients received treatment within six hours of admission, compared to fifty-three percent of white patients receiving treatment in that time span.¹³⁶ Other studies show that low mortality rates are associated with prompt healthcare treatment, yet treatment is often withheld from elderly Black patients for extended periods of time.¹³⁷ Because the U.S. Department of Health and Human Services does not apply Title VI to healthcare providers, doctors are able to limit Black Americans' access to adequate healthcare based on their own racist beliefs or biases. This inequitably benefits white patients and leaves Black Americans without quality healthcare.

Researchers are arguing that the specific hospital a patient gets admitted to may impact their likelihood of death.¹³⁸

2020); *See also* *Detroit Man With Virus Symptoms Dies After 3 ERs Turn Him Away, Family Says: "He Was Begging For His Life"*, CBS NEWS, <https://www.cbsnews.com/news/coronavirus-detroit-man-dead-turned-away-from-er/> (Apr. 22, 2020).

¹³⁵ John Z. Ayanian et al., *Quality of Care by Race and Gender for Congestive Heart Failure and Pneumonia*, 37 MED. CARE 1260, 1265 (1999).

¹³⁶ *Id.*

¹³⁷ *Id.*; *see also* Manreet Kanwar et al., *Misdiagnosis of Community-Acquired Pneumonia and Inappropriate Utilization of Antibiotics: Side Effects of the 4-h Antibiotic Administration Rule*, 131 CHEST 1865, 1865 (2007) (discussing the association between timely antibiotic therapy and improved health outcomes in patients with community-acquired pneumonia); Mark L. Metersky et al., *Predicting Bacteremia in Patients with Community-Acquired Pneumonia*, 169 AM. J. RESPIR. CRIT. CARE MED. 342, 342 (2004) (“[P]erformance of blood cultures on Medicare patients hospitalized with pneumonia has been associated with a lower mortality rate”).

¹³⁸ David A Asch et al., *Patient and Hospital Factors Associated with Differences in Mortality Rates Among Black and White US Medicare*

Specifically, a study found that Black patients with COVID-19 were more likely to “[die] or be discharge[d] to hospice than white patients . . . those differences were explained by differences in the hospitals to which Black and White patients were admitted.”¹³⁹

VII. LEGAL SOLUTIONS

Without legal protections and public health plans, BIPOC communities are more exposed, susceptible, and more likely to suffer and die from pandemics. We have seen this truth during the 1918 flu, H1N1, and now, COVID-19.¹⁴⁰ The U.S. must take steps to provide protections for BIPOC communities that address their specific needs. In the subsequent section, we discuss some areas to be prioritized to address structural racism¹⁴¹ and ensure the same inequities do not exist during another pandemic.

A. Addressing Structural Racism

Our government has the ability to implement both short-term and long-term solutions to address structural racism.

Some states provided workers with extra compensation during the COVID-19 pandemic. In California, undocumented immigrants affected by COVID-19 were provided financial support. In Arkansas, the governor was able to use some CARES Act funding to support direct care workers.¹⁴² In New Hampshire, direct care

Beneficiaries Hospitalized with COVID-19 Infection, JAMA NETWORK OPEN (2021), <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2781182>.

¹³⁹ *Id.*

¹⁴⁰ Dennis Andrulis, *supra*.

¹⁴¹ Ruqaiyah Yearby, *Structural Racism and Health Disparities: Moving Beyond the Social Determinants of Health to Achieve Racial Equity*, J. LAW MED. ETHICS (2020). (*Structural racism* operates at a societal level in regard to the way laws are written and enforced, which advantages the minority group and disadvantages BIPOC communities.)

¹⁴² Elisha Morrison, *CMS approves some healthcare worker bonuses*, BENTON COURIER, <https://www.bentoncourier.com/covid-19/cms-approves-some->

workers and other healthcare employees were able to receive CARES Act funding compensation as well.¹⁴³ These efforts are something, but not enough for a long-term solution.

It might be time for the U.S. to consider a universal basic income.¹⁴⁴ Providing those workers deemed essential with a basic income and paid sick leave would result in less exposure to COVID-19, and essentially, less deaths. Those with low incomes, primarily BIPOC individuals, could afford to stay home when they are sick. The hospitalization and mortality rate from COVID-19 would have drastically decreased throughout BIPOC communities if they could have stayed home. The concepts of universal basic income and paid sick leave do not only exist in Canada. In 1976, Alaska implemented the Alaska Permanent Fund to address poverty by sending dividends to every Alaskan resident.¹⁴⁵ The dividends had no effect on full-time employment in Alaska.

The U.S. should have learned from the H1N1 pandemic and implemented universal paid sick leave. Researchers studying H1N1 found that the best way to prevent racial disparities in H1N1 deaths would have been to provide low-income workers with paid sick leave.¹⁴⁶ In particular, the researchers suggest “paid sick-leave legislation that enables low-income and private-sector workers to adhere to social-distancing recommendations even when they lack paid sick leave.”¹⁴⁷ All workers in the U.S. should have paid sick

healthcare-worker-bonuses/article_3946adc8-800c-11ea-944a-1b151690787e.html (Apr. 16, 2020).

¹⁴³ Mia Summerson, *NH moves to boost pay for long-term care workers*, SENTINEL SOURCE, https://www.sentinelsource.com/news/local/nh-moves-to-boost-pay-for-long-term-care-workers/article_78db684f-a0a6-5eaf-bf0d-29caae8811b4.html (Apr. 14, 2020).

¹⁴⁴ Kimberly Amandeo, *Universal Basic Income, Pros and Cons With Examples*, THE BALANCE, <https://www.thebalance.com/universal-basic-income-4160668> (accessed July 1, 2021).

¹⁴⁵ Michael Coren, *When you give Alaskans a universal basic income, they still keep working*, QUARTZ, <https://qz.com/1205591/a-universal-basic-income-experiment-in-alaska-shows-employment-didnt-drop/> (Feb. 13, 2018).

¹⁴⁶ Sandra Crouse Quinn et al., *supra* at 287.

¹⁴⁷ *Id.*, at 292.

leave and a basic income to ensure the ability to survive during pandemics.

To address structural racism in housing and mitigate the effects of historical redlining, legislation needs to be enacted to address housing violations that impact people's health. These violations include the inability to access: clean running water; plumbing with hot and cold water; a working toilet, shower, or bath; a stove or oven, and a refrigerator.¹⁴⁸ Both state and local governments need to address these housing violations by enacting legislation to ensure all housing is adequate. In addition, legislation that addresses access to clean drinking water is necessary for preventing the spread and susceptibility to disease.¹⁴⁹

B. Public Health Mitigation of Health Inequities

The U.S. failed to properly prepare for a pandemic and, as a result, failed to protect BIPOC communities. Researchers have “long predicted that existing inequities would worsen [in] a pandemic.”¹⁵⁰ If proper planning measures had been carried out, it's likely to have decreased the inequities we described above from COVID-19. Some possible recommendations that could have helped decrease the spread of COVID-19:

Detailed racial and ethnic reporting related to virus hospitalization and deaths; and “targeted, culturally appropriate risk communication, using trusted spokespersons and channels” to engage “both national and local organizations that represent minority populations . . . to get the message to at-risk groups.”¹⁵¹

¹⁴⁸ Ruqaiyah Yearby & Seema Mohapatra, *Law, Structural Racism, and the Covid-19 Pandemic*, 7 J. L. & BIOSCIENCES 1, 17 (2020).

¹⁴⁹ *Id.* at 17.

¹⁵⁰ *Id.* at 18. (Citing Philip Blumenshine et al., *Pandemic Influenza Planning in the United States from a Health Disparities Perspective*, 14(5) EMERG. INFECT. DIS. 709, 715 (2008), <https://doi.org/10.3201/eid1405.071301>.)

¹⁵¹ *Id.*

The U.S. failed to adequately develop a public health action plan on how to use the COVID-19 data collected to address the disparities amongst BIPOC communities. Furthermore, healthcare workers need the proper training to ensure “they recognize higher-risk individuals and aggressively deliver adequate care to them.”¹⁵² A “lack of trust” from Black patients is not reflective of a poor healthcare system; instead, it’s “a lack of trustworthiness” by the healthcare system and greater medical industry.

The foregoing list of possible solutions is not all-encompassing, but rather suggestions to encourage engagement with past research on pandemics and racism. Although the COVID-19 pandemic’s effects have been felt on a much greater scale than H1N1, the recommended public health plans are even more important to mitigate current racial disparities.

VIII. CONCLUSION

Environmental Racism has contributed to disproportionate adverse health effects among the BIPOC community. This can be shown by examining: the impact of historical residential redlining as it relates to respiratory illnesses; the failure of environmental laws in protecting BIPOC communities; higher rates of trauma, stress, and stress-related illnesses among BIPOC communities; and, structural racism in health care.

The COVID-19 crisis is hopefully, on its way out, but there will be future pandemics that disproportionately impact BIPOC communities unless large-scale change comes from our legislators, politicians, lawyers, and environmentalists. Moreover, Environmental advocates should continue to fight for environmental justice and reform that includes explicit protections for BIPOC communities.

¹⁵² *Id.*