COVID-19 and Communities of Color: Understanding the Impact of Racism on Public Health

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Abstract
As the COVID-19 pandemic spread across the U.S., communities of color shared an uneven burden of the disease. The ability to understand from a public health perspective, the increase and devastating health effects and morbidity consequences due to COVID-19 is alarming, but not unexpected based upon structural racism. In light of the recent declarations of racism as a public health crisis, the push to address the situations that COVID-19 has brought to bear is an imperative. This article defines the levels of racism that exist, distinguishing between intrapersonal, interpersonal, institutional, and structural racism. Redlining in terms of the provision of home loans is used as an example of structural racism and its impact on COVID-19 and communities of color, even here in Nevada. With this understanding, the article closes with potential solutions in the areas of policy, health care and COVID-19, public health, as well as future research opportunities. While the solutions are not all encompassing, it does provide a starting point for dialogue, planning, and implementation in which to address the multitude of health disparities and health inequities that have always existed but systematically ignored either intentionally or unintentionally. Regardless of intentions, it took a pandemic to be the moving force and catalyst for enlightenment as it relates to the determinants of health and racism within communities of color.

KEYWORDS: COVID-19; racism; structural racism; communities of color

Introduction
The summer of 2020 was filled with social unrest amidst a global pandemic. The news broadcasts were filled with stories of deaths of George Floyd, Breonna Taylor, and Ahmaud Arbery. At the same time, across the United States, as well as Nevada, data was starting to clearly show that the COVID-19 pandemic was hitting communities of color particularly hard. Questions started to rise about how we got here. One of the answers to this question was racism. Not just racism that happens between individual people, but structural and institutional racism that have served as the foundation of our country.

In 2014, Camara Jones, MD, PhD, MPH was elected as President of the American Public Health Association (APHA). As an esteemed scholar of race and health, in 2015, Dr. Jones launched an initiative at APHA’s annual meeting to begin to discuss the impact of race and racism on public health (Ford, Griffith, Bruce, and Gilbert,
2019). Her work launched a movement within APHA to examine the roles of and address race and racism on public health. Since then, APHA has produced webinar series, statements, a book, and other resources that explore these issues. (See: https://apha.org/topics-and-issues/health-equity/racism-and-health)

Additionally, in 2020, across the U.S., racism has been declared a public health issue by various jurisdictions across 26 different states, including states as a whole, counties, and cities, as well as by local health authorities. Nevada has also been a part of this movement. In June 2020, the Southern Nevada Health District declared racism as a public health issue (See: https://www.southernnevadahealthdistrict.org/news-info/racism-is-a-public-health-crisis/). In August 2020, Governor Steve Sisolak issued a proclamation declaring racism as a public health issue (See: https://gov.nv.gov/News/Proclamations/2020/Racism_as_A_Public_Health_Crisis/). In September and November 2020, the City of North Las Vegas and Clark County, respectively, issued similar proclamations.

The purpose of the article is to provide a foundation for the discussion of public health, racism, and COVID-19 in Nevada. This article will define racism and relate racism to public health and COVID-19. Where appropriate, Nevada specific examples will be provided. The article will end with potential solutions that can be implemented across the public health spectrum. We hope that the discussions that are triggered by this article will lead to continued and focused efforts to eliminate health disparities and promote health equity in Nevada and throughout the country.

The Historical Context of Racism

Throughout history, racism has been a pervasive issue in the U.S. Race relations and racism are intimately linked to historical trends where the sociopolitical and economic conditions formed, and continues to form, racial divides. Racism has always been a feature of life in the U.S., starting with the enslavement and genocide of Native American tribes and the trans-Atlantic slave trade (Edmondson, 1976; Fisher, 2017). Racism was used as a means to justify the white exploitation of anyone who was deemed different or unworthy and became a vehicle to subjugate people of color in the U.S. The notion of racism required that people be placed into hierarchies (Jacques, 2003). The early history of the U.S. saw people being classified into a hierarchical structure (Roediger, n.d.). By eventually categorizing humans by “race,” a new hierarchy was invented based on what many considered science (Roediger, n.d.). However, the thoughts, ideas, and notions of race and racism are considerably more complex and furtive than this. The following section further defines racism and the level at which racism operates.

Levels of Racism

Race and racism are products of one’s social thought and the promotion of one’s own self-interest. Jones (2018) explained, “Racism is a system of structuring opportunity and assigning value based on the social interpretation of how one looks (which is what we call “race”), that unfairly disadvantages some individuals and communities, unfairly advantages other individuals and communities, and saps the strength of the whole society through the waste of human resources” (p. 231). This explanation asserts the fact that the power, privilege, and advantages that are inherent in non-communities of color, and the disadvantages associated with communities
of color, remain in existence and continually adapt over time (Griffith et al., 2007). For many years, communities of color have received several different facets of inequitable treatment due to being placed at the bottom of the proverbial racial status hierarchy. Whereas, non-communities of color have experienced a myriad of social privileges, advantages, and benefits by simply being members of the dominant race.

Different levels of racism are interwoven into U.S. society. Jones (1999) formulated a theoretical framework, which categorizes the three levels of racism. They include institutionalized, personally mediated, and internalized racism. Institutionalized racism is defined as the manifestation of material conditions, structural barriers, and an unequal access to power (Jones, 1999). For example, receiving access to appropriate health care or a quality education fall under the category of institutionalized racism.

Conversely, personally mediated racism, which is defined as individual-level prejudice and discrimination, whether it is intentional or unintentional (Jones, 1999). Prejudice means differential thoughts and feelings about the abilities, motives, of others based on their race. According to Jones (1999), prejudice is what most people think of when they think about racism. Personally mediated racism may be manifested as intentional or unintentional thoughts and/or actions (Jones, 1999). Some of these actions, when directed towards other cultural or ethnic groups, may manifest themselves as a lack of respect, suspicion, devaluation, and/or dehumanizing behaviors (Jones, 1999).

Internalized racism are the types of privilege-based systems and societal values, which causes one to reflect on and devalue one’s own sense of racial identity. For example, messages about one’s own abilities and intrinsic worth have the tendency to be negative in nature. Jones (1999) metaphorically used flower boxes, seeds, and the gardener to explain the relationships between the different levels of racism, and it illustrated what happens when the gardener (the structural system) is not concerned with equity. Her work also demonstrated what happens when one level of racism is addressed and adequately dealt with accordingly.

From a more practical standpoint, many different types of racism involve oppression, which are based on a hierarchical level and include the personal and interpersonal, institutional, and structural levels. Personal, or the individualized level of racism, is an issue that exists within that particular individual (Felder, 2020). The individual holds negative perceptions about his or her own, or another individual’s race, ethnicity, and/or culture, which can be an inadvertent, unconscious bias that the individual possesses. This perception is also known as xenophobia. An occurrence of racism between two different individuals is known as interpersonal racism (Felder, 2020). Circumstances of this nature often involve a victim and a perpetrator. This demonstrates the myth of meritocracy where some individuals believe that if one works hard and makes the sacrifice, then they, too, will be successful. No consideration is given that members within communities do indeed work hard, yet do not achieve success because many issues that impede a person of color from being successful. Racism is one of the reasons for this issue. Thus, society is apoplectic when it comes to addressing this area of racism. Also, a denial of racism exists. For example, when two babies are born, they both have equal potential or the same abilities; however, they are not given
an equal opportunity, which makes a difference in those babies' lives.

Institutional racism entails actions and practices that propagate racial inequity and inequality (Felder, 2020). Felder (2020) posited that one example of institutional racism is redlining. Housing segregation as a result of one’s race is known as redlining. Redlining has led to densely populated urban areas. This particular infrastructure resulted in poor housing quality. And more importantly, the housing that is there, has a devaluation because of said redlining. Oftentimes, they are multigenerational homes. The issue of redlining has hindered communities of color from accumulating wealth. Advantage is given to dominant groups at the expense of denigrating communities of color. In essence, institutional racism has greatly contributed to the deculturation and disempowerment of significant numbers in communities of color.

Structural racism refers to a formalized and unified system of entities that jointly yield intentional or unintentional racism; which includes inequitable treatment based on power and privilege, access, and policy (Felder, 2020). As the top tier of the hierarchical system, structural racism perpetuates racial division and resists paradigm shifts as it relates to equity. Structural racism continues to pervasively influence society. Attempting to challenge structural deficits, such as lack of affordable housing, the deinstitutionalization of the U.S. healthcare system (including managed care), social welfare reform, and criminalization of substance use dramatically impacts communities of color. Although the more recent advances and urgency in addressing racism at the structural level has been witnessed through the social justice movement, there is still a polarization between communities of color and non-communities of color. As a result of this tension, there is only marginal growth in promoting racial equity in the U.S.

Relating Structural and Institutional Racism to Public Health

Despite the public health and healthcare advances that have occurred over the last 100 years, African Americans still face disproportionate morbidity and mortality, especially as compared to their White counterparts. African American health disparities start at birth and continue up to the age of 65 (Cunningham et al., 2017). Compared to White Americans, African Americans up to the age of 65, have higher levels of self-reported risk factors that lead to increased mortality from cardiovascular-related disease and cancer, diseases that are most common in people over the age of 65 (Cunningham et al., 2017). The health disparities that exist between Black America and White America are not normal and should not exist in 21st century America (Weinstein et al., 2017). While tempting to ascribe the disparities in morbidity and mortality to biological differences between Blacks and Whites in America, this thought would be ignoring the reality that the patterns of illness and death we see between Black and White America reflect structural and institutionalized racism in America. If we are to eliminate health disparities, the effort will need to begin with a recognition of how racism has shaped health in America.

Institutional and Structural Racism Example

While many examples of institutional and structural racism exist, this article will use the example of redlining to examine the impact of these particular types of racism on public health.

Redlining
Redlining is the systematic denial or raising of prices on mortgages and loans; this process typically was targeted at African Americans, Latinx, and immigrant neighborhoods (Crossney & Bartelt, 2005; Gee, 2008). After the Great Depression, the Home Owners Loan Corporation (HOLC), a now defunct Federal agency, produced maps of 239 U.S. cities. The maps were divided into four categories: (1) Hazardous, (2) Definitely Declining, (3) Still Desirable, and (4) Best. The lowest category communities, hazardous, were colored red on the maps and these were communities where many African Americans, Latinx, and immigrants resided (Crossney & Bartelt, 2005). These redlined communities, which also tend to be highly segregated, are also strongly correlated with high poverty rates (Williams and Collins, 2001).

Traditionally, the impact of redlining has been thought about in terms of lost economic opportunity; however, redlining has had a profound, negative impact on the health of communities of color (Bower et al., 2015; Rabouin, 2020; Robert & Reither, 2004). For example, redlined neighborhoods tend to have homes and businesses that are undervalued (Perry, Rothwell, & Harshbarger, 2018). Thus, homeowners and business owners will not receive the same tax breaks that are available in suburban homeowners.

The undervaluing of properties has resulted in a lower tax based for schools in redlined communities (Williams and Collins, 2001). As such, these schools tend to have lower test scores, less participation in advanced placement courses, less qualified teachers, limited curricula offerings, deteriorating facilities, and higher dropout rates. These communities then have limited employment opportunities, which results in decreased income levels and high rates of unemployment (Williams and Collins, 2001). Figure 1 shows the impact of structural racism on health and health disparities.

Furthermore, as a result of the deleterious impacts of redlining on communities of color, grocery stores may opt not to build in these communities due to perceived lack of return on their investment (Shannon, 2018). Living in communities that lack access to healthy foods has been linked to obesity and diabetes (Robert & Reither, 2004). Low income communities tend to have more fast food restaurants and convenience stores that sale low-quality, nutrient poor foods. As such, individuals residing in these low income, redlined communities must place greater reliance on nutrient-poor foods that contribute to obesity and diabetes (Bower et al., 2015; Robert & Reither, 2004).

Here in Nevada, what is now known as the Historic Westside community was established as a result of redlining (Kohler, 2018; Strott, 2020). The community started primarily as an all Black community as that was the only place in Las Vegas where Blacks could live, stay in hotels, and socialize, among other things. Due to segregation, Blacks who worked and entertained in the casinos were relegated to
staying, dining, and thriving on the Historic Westside until into the 1960s when integration was allowed. This community centers on the zip code of 89106, but also includes portions of 89030, 89032, 89101. The residents of the zip codes are still primarily African American and Latinx. These zip codes are known for high rates of unemployment and poverty, but also with limited resources and high rates of disease incidence and prevalence (Strott, 2020). For example, this community had the highest food insecurity rate in 2017 (Three Square Food Bank, 2021), and still does not have a major grocery store in 2021. Many of the issues faced in other redlined communities around the country were and still are experienced in the Historic Westside community.

**Health Impacts of COVID-19 on Communities of Color**

COVID-19-related morbidity and mortality has disproportionately affected African American communities across America (Yancy, 2020). Originally dubbed the “great equalizer” as it was assumed that everyone would be impacted equally by the COVID-19 pandemic (Gupta, 2020). However, as the virus has spread across America, racial differences in morbidity and mortality were exposed. Early data shows that African Americans are more likely to grow ill and die from COVID-19 than white Americans.

Early COVID-19 data from January 2020 through April 2020 regarding the U.S. pandemic supports early January 2020 Chinese and Italian COVID-19 studies. Data from China and Europe suggested that individuals who are older, male, have hypertension, diabetes, are obese, or suffer cardiovascular disease have increased COVID-19-related morbidity and mortality (Bonow, Fonarow, O’Gara, & Yancy, 2020; Grasselli et al., 2020; Shi et al., 2020). For example, more than 50% of COVID-19 illnesses and almost 70% of COVID-19 deaths in Chicago are among African Americans, many of whom have COVID-19 related pre-existing conditions such as hypertension, diabetes, or cardiovascular disease.

Further, the COVID-19 deaths in Chicago are concentrated on the city’s South Side (Reyes, Husain, Gutowski, St. Clair, & Pratt, 2020). Michigan and Louisiana are seeing similar patterns of morbidity and mortality in the African American community. About 33% of COVID-19 illnesses and 40% of deaths in Michigan have been among African Americans and in Louisiana, almost 71% of COVID-19 deaths have been among African Americans (Deslatte, 2020; Thebault, Ba Tran, & Williams, 2020). In New York City, one of the nation’s hardest hit cities, African Americans and Latinos accounted for 28% and 34% of COVID-19 deaths in the city during the early stages of the pandemic (New York State Department of Health, 2020).

According to preliminary data from Johns Hopkins University and the American Community survey, the infection rate in 131 predominantly Black U.S. counties is 137.5/100,000 and the death rate is 6.3/100,000, six times higher than that for counties that are predominantly white (Thebault et al., 2020). Further study is necessary to further refine the data; however, it is clear that African Americans are getting ill and are dying of COVID-19 more frequently than whites.

Why are the COVID-19 disparities so striking between Black and White communities? Unfortunately, zip code is one predictor of differences in health status. The communities where many African Americans reside, formed by redlining, are
low income areas characterized by high crime, food insecurity, lack of access to healthcare, high housing density, and at times, poor environmental conditions related to the air, water, and soil (Gupta, 2020; Yancy, 2020). Furthermore, the very idea of social distancing conveys a level of privilege that is not available to many African Americans (Yancy, 2020). Having the ability to maintain social distancing while working from home and possibly caring for children is an issue of privilege. In many African American communities, these privileges are not accessible. For example, according to the Brookings Institute, some 15% of households with children in high cost metropolitan areas are overcrowded (Schuetz, 2020). African Americans in these metropolitan areas tend to live in crowded housing at higher rates than whites (Perry et al., 2020). Social distancing and/or quarantining in a multigenerational home where one or more members works as an essential worker is often not feasible.

Additionally, many African American communities affected by chronic disease and COVID-19 are also disproportionately affected by political policies that are rooted in historical policies that promote poverty, racism, and unequal access to education and employment opportunities, all of which contribute to the racial/ethnic disparities that are seen with the current COVID-19 pandemic. A legal policy which may hinder access to facilitate COVID-19 testing and treatment is the lack of Medicaid expansion in some states, particularly those states in the Southern U.S. (Graves, Hatfield, Blot, Keating, & McWilliams, 2020). Addressing these social determinants of health within Black communities requires support and buy-in from key community stakeholders before community engagement can begin (Dean & Fenton, 2010).

Nevada has not been immune to the impact of COVID-19 on selected communities. With COVID-19, these trends have continued in 2021. With a focus again on the zip codes that make up the Historic Westside and selected other zip codes in Las Vegas, in examining maps put together by the Nevada Independent, the following can be seen in Table 1. COVID-19 infection rates in the Historic Westside, while not the highest in the Las Vegas, are about two times higher than among the lowest rates in Clark County.

Table 1. COVID-19 Case Rates in Selected Zip Codes in Las Vegas

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>Part of the Las Vegas Valley</th>
<th>COVID-19 Rates per 10,000 Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>89106</td>
<td>Historic Westside</td>
<td>960</td>
</tr>
<tr>
<td>89032</td>
<td>Historic Westside</td>
<td>1,193</td>
</tr>
<tr>
<td>89030</td>
<td>Historic Westside</td>
<td>1,297</td>
</tr>
<tr>
<td>89101</td>
<td>Historic Westside</td>
<td>1,139</td>
</tr>
<tr>
<td>89005</td>
<td>Boulder City</td>
<td>552</td>
</tr>
<tr>
<td>89142</td>
<td>Sunrise Manor/East Las Vegas</td>
<td>1369</td>
</tr>
</tbody>
</table>

(Messerly, 2021)
In February 2021, Governor Sisolak announced an initiative to establish equity in the distribution of COVID-19 vaccines in Clark County. Based on maps put together by the Nevada Independent, Table 2 shows the vaccine rates for the zip codes that make up the Historic Westside and selected other zip codes in the Las Vegas Valley. The vaccination rates in just these two zip codes are nearly 2 to 4 plus times the vaccination rates of the zip codes for the Historic Westside.

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>Part of the Las Vegas Valley</th>
<th>COVID-19 Vaccines per 10,000 Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>89106</td>
<td>Historic Westside</td>
<td>293</td>
</tr>
<tr>
<td>89032</td>
<td>Historic Westside</td>
<td>395</td>
</tr>
<tr>
<td>89030</td>
<td>Historic Westside</td>
<td>212</td>
</tr>
<tr>
<td>89101</td>
<td>Historic Westside</td>
<td>193</td>
</tr>
<tr>
<td>89135</td>
<td>Summerlin</td>
<td>1226</td>
</tr>
<tr>
<td>89123</td>
<td>Silverado Ranch</td>
<td>762</td>
</tr>
</tbody>
</table>

(Messerly, 2021)

**Health Equity in Light of Structural Racism**

As public health professionals, a focus has to be on identifying the impact of structural racism on health and promoting health equity for all to be healthy. Health equity is assurance of the conditions for optimal health for all people (Gee & Ford, 2011). Achieving health equity requires valuing all individuals and populations equally, while also recognizing and rectifying historical injustices. Health equity provides resources according to need. Communities of color have called for more equitable treatment, as opposed to equal treatment. Equality refers to all individuals having the same access to care and resources, where everyone needs the same exact thing (George Washington University, 2020).

However, communities of color are not a monolith, and individually speaking, communities all need different things. Health means providing individuals with what he or she needs in order to level the playing field (George Washington University, 2020). The reality is, some people have an exorbitant amount of health resources while some cannot even get one basic health resource. They start off with nothing at all. Life circumstances do not always provide equitable and fair treatment in health care due to race and racism. The bottom line is health disparities will be eliminated once health equity is achieved.

**Barriers to Achieving Health Equity**

Very little focus has been placed on fully understanding that communities of color experience a multitude of barriers to achieving health equity. The systemic and structural level of racism is seen as invisible or irrelevant (Gee & Ford, 2011). Further, a limited sense of interdependence exists. For instance, it is important for individuals to know that what impacts one community will indeed impact other communities. The limited sense of collective efficacy inhibits
growth as a community (Gee & Ford, 2011). If all communities of color were headed in the same direction, then they could get to where they want to go much faster in terms of achieving health equity. All in all, these factors are structural barriers that are not taken very seriously. Some individuals seem to think issues surrounding health equity are irrelevant or that it does not exist anymore due to health policy advancements, like the Patient Protection and Affordable Care Act (PPACA) (Gee & Ford, 2011). Still, other individuals believe that these barriers have never existed when, in fact, they do.

**Potential Solutions**
This article outlines a brief origin of racism and its impact on public health, which contributes to profound health disparities in COVID-19 treatment and outcomes for people of color in Nevada and across the U.S. In this section, the authors discuss potential policy, research, public health, and healthcare and COVID-19-related solutions in an effort to help public health practitioners combat racial health inequities when addressing this public health crisis.

**Policy Solutions**
Policy plays a significant role in the health and well-being of individuals and society at large (Dawes, 2020). Racism permeates individual attitudes or interpersonal exchanges and pervades structural factors such as institutional policies and societal norms (Jee-Lyn García & Sharif, 2015). As such, public health professionals and the larger society must recognize racism as a dominant and structural force that impedes optimal health achievement for all (Jee-Lyn García & Sharif, 2015). Governments interested in enacting laws and policies that declare racism a public health crisis should ensure that they identify racism as a system that causes racial inequalities in the social determinants of health, which results in physical and physiological harm to the communities impacted (Yearby, Lewis, Gilbert, & Banks, 2020). When racism is defined as a system, it transcends the current limited understanding of racism within the social determinants of health framework and requires that solutions designed to end racism change the system (Yearby et al., 2020). Thus, a race-conscious approach to public health includes examining how racism influences individual, institutional, and societal levels to impact health outcomes (Jee-Lyn García & Sharif, 2015).

Furthermore, during the COVID-19 pandemic, Black and Latinx people's economic conditions have deteriorated disproportionately compared to White people (Yearby et al., 2020). As a result of the equal opportunities that racism limits for wealth, education, employment, and housing over multiple generations, the damages from racism cannot be adequately addressed and rectified without providing material, institutional, and social support to affected communities (Yearby et al., 2020). Moreover, to effectively anticipate and mitigate any racially disproportionate harms, governments should utilize racial equity tools in their decision-making processes (Yearby et al., 2020). These vital tools can be implemented to evaluate if and how proposed policies disproportionately affect different racial and ethnic minorities (Yearby et al., 2020). Political systems across all levels should understand that their citizens' lives are all linked, whereas when one community is negatively affected, others will also experience deleterious impacts (Dawes, 2020).

**Research Solutions**
Research is another essential mechanism to address racism in public health meaningfully. However, research on racial
health inequities must be performed in a more informed manner. As such, the way that race is traditionally conceptualized and operationalized in public health research is not a sufficient proxy measure for racism (Jee-Lyn García & Sharif, 2015). Race is usually only included as a research question, variable, or topic in most health studies, although race and racism are equally crucial to health. Controlling for race is a standard statistical technique employed in public health research, but this type of analysis does not advance understanding of racism’s impact on health (Jee-Lyn García & Sharif, 2015). Therefore, public health researchers must increase their efforts to discern the mechanisms that potentially link racism to racialized health disparities (Jee-Lyn García & Sharif, 2015).

Additionally, the long-standing theoretical and methodological procedures used in public health fails to address the complexities of structural racism and its impacts on health and the production of knowledge concerning populations, health, and health disparities (Ford & Airhihenbuwa, 2010a). Ford and Airhihenbuwa (2010a) introduced Critical Race Theory (CRT), a race equity methodology created in legal studies, to the public health community. The race equity and social justice principles included in CRT foster the expansion of solutions addressing gaps in health, housing, employment, and other social determinants of health. Furthermore, Ford and Airhihenbuwa (2010b) developed the Public Health Critical Race Praxis (PHCRP) to improve CRT’s utilization and fidelity for public health researchers to conduct health equity research.

The Public Health Critical Race Praxis is an "iterative, semi-structured research methodology that guides investigators through a systematic process to conduct self-reflexive, race-conscious research into the root cause of health inequities" (Ford, 2016, p. 484). The goal of both CRT and PHCRP is to move beyond just documenting health disparities and gain a comprehensive understanding and challenge the power structures that bolster them (Ford & Airhihenbuwa, 2010b). Public health is advanced through PHCR with an improved understanding of how to measure racism and its effects on health, awareness that public health’s conventions may unintentionally reinforce disparities, and acknowledgment of the profound contributions of racial/ethnic minorities in the study of health disparities (Ford & Airhihenbuwa, 2010b). As such, CRT and PHCRP can extend beyond academic institutions to help public health professionals on the front lines to identify and monitor potential racism-related inequities in organizational culture, program planning, and program evaluation or other forms of applied research (Ford & Jeffers, 2019).

Researchers in various disciplines within public health studying racial health inequities must also grapple with better ways to move science forward in their areas. For example, Epidemiologists of the 21st century should convey the profound impact of racial injustice on disease, disability, and death on an individual and population level (Krieger, 2019). Epidemiologists must also consider the impacts of racism in their work to avoid harm and conduct better science regarding health inequities and population health (Krieger, 2019).

As a result, Epidemiologists will gain fundamental knowledge as well as critical thinking skills when they learn to position their research in a historical, societal, and ecological context. This process is essential when analyzing processes that connect racial
injustice to current and evolving population distributions of health and health inequities (Krieger, 2019). Additionally, racism and health inequities may be considered from a life course perspective, which focuses on the relationship between individuals and social institutions and how experiences of racism may vary across the life course and accumulate over time (Gee, Walsemann, & Brondolo, 2012). Thus, efforts to eradicate health inequities must consider how racism's variation in time and exposure can lead to racial inequities in life expectancy and other health outcomes across the life course and many generations (Gee et al., 2012).

Moreover, to improve the conceptualization and development of research on racial health inequities, it is crucial to include communities of color in the research process to address the complex challenges in public health related to how race and racism influence health outcomes (Goodman & Thompson, 2019). Engaging community health stakeholders is critical to increasing communities of color and other vulnerable populations in the research experience. Community members with a lived experience with the research topic can produce an immense amount of information to help the research team to understand the critical issues facing communities of color and other vulnerable populations (Goodman & Thompson, 2019). Community partners need to have basic research literacy to effectively participate in community-engaged and community-based research (Goodman & Thompson, 2019).

Research literacy is defined as the "ability to understand and critically appraise scientific research including basic knowledge of research methodology, study design, and research terminology" (Goodman & Thompson, 2019, p. 274). When communities of color have research literacy, it may reduce the historical trauma associated with researcher misconduct in the past and increase their willingness to participate in studies addressing health disparities and the social determinants of health (Goodman & Thompson, 2019). As a result, researchers have developed educational tools (Simon et al., 2021) as well as training programs (Coats, Stafford, Sanders Thompson, Johnson Javois, & Goodman, 2015; Nebeker & López-Arenas, 2016) to increase research literacy in underserved populations. Public health researchers are responsible for translating findings from racism-related research into understandable formats that community health stakeholders can use to address significant structural barriers or develop policies, programs, and initiatives to address issues revealed in research (Goodman & Thompson, 2019). Thus, academic institutions, which have the infrastructure and capacity to develop research literacy curriculums, should implement training programs for non-academic community partners (Goodman & Thompson, 2019).

To standardize the aforementioned critical considerations for researching racial health inequities, authors Boyd, Lindo, Weeks, and McLemore (2020) have proposed numerous publishing standards on racial health inequities intended for researchers, journals, and peer reviewers. However, for this article, we will focus on standards for researchers. When publishing on racial health inequities, Boyd et al. (2020) suggest that researchers should: (1) define race when designing the study and indicate the reason for its use; (2) name racism, identify the form, describe the mechanism by which it may be operating, and discuss other intersecting forms of oppression that may exacerbate its effects; (3) do not offer genetic interpretations of race as those beliefs are not grounded in science; (4)
obtain patient input as this will ensure that research outcomes reflect the priorities of the target population; (5) identify the implications for broader public policy and clinical practice, and (6) cite the experts, such as the scholars of color whose work creates the foundation of public health's knowledge on racism and its effects (Boyd et al., 2020).

**Public Health Solutions**

Racism is expressed at several levels, and thus, public health needs a more comprehensive understanding of its health consequences and a plan for mitigating those consequences (Smedley, 2019). Also, racism's pervasive presence in American life demands a coordinated response designed to tackle multiple levels, namely intrapersonal, interpersonal, and intergroup levels (Smedley, 2019). Therefore, theory, research, and policy analysis must also adopt this approach, thereby requiring interdisciplinary and inter-sectoral collaboration as well as robust community leadership and engagement (Smedley, 2019).

Moreover, racism is a hierarchy and power system, and individuals with power consistently make decisions that harm those without power, particularly racial and ethnic minorities (Yearby et al., 2020). Thus, to effectively address systemic racism, collaboration with marginalized communities is necessary (Jee-Lyn García & Sharif, 2015; Yearby et al., 2020). Furthermore, laws and policies addressing racism as a public health crisis must involve community members for shared decision making, creating alliances, and community engagement to ensure that laws, policies, and practices address community needs and remedy past harms (Yearby et al., 2020). Public health professionals should augment their professional responsibility by including community advocacy. Public health professionals must support their community partners in advocating for relevant policies that improve health in communities of color and encourage local, state, and federal initiatives that advance social justice (Jee-Lyn García & Sharif, 2015).

To adequately address racism and its impacts on health, the public health workforce should be trained accordingly. The integration of race-conscious curricula in public health programs can be implemented with models, theories, and methodologies that distinguish racial injustice as a threat to health (Jee-Lyn García & Sharif, 2015). When this approach is taken to training, it fundamentally establishes public health as antiracist work, which has implications for the future public health workforce (Jee-Lyn García & Sharif, 2015).

Lastly, white public health practitioners have a central role in serving as allies to those populations impacted by racism, as challenging racism will address a significant determinant of health equity (Margaret & Came, 2019). The work of allies is buttressed by acknowledging and advocating for the agency, authority, and ability of minority and indigenous people to make decisions for themselves and outline their paths forward (Margaret & Came, 2019). In addition, the work of allies encompasses the understanding of how racism works to privilege white ways and distinguishes racism in their practices and systems, as it is a "white-made problem" (Margaret & Came, 2019). Furthermore, racism will not be addressed without engaging in the healing process for communities impacted by past wounds; only this will lead to transformational and sustainable change (Yearby et al., 2020).
Healthcare and COVID-19 Solutions

Many disparities in health status and healthcare exist among underserved populations (Dawes, 2020). Structural racism is evident in healthcare, where care is primarily provided to a patient based on their ability to pay rather than on their medical needs (Yearby et al., 2020). Racial and ethnic minorities are usually disproportionately poor and thus, have less access to affordable healthcare and health insurance (Yearby et al., 2020). As such, these populations experience higher mortality rates and earlier onset of diseases (Dawes, 2020), since they cannot afford the full cost of healthcare and tend to sacrifice necessary treatment (Yearby et al., 2020).

Racial and ethnic biases left unexamined contribute to further healthcare disparities (Dovidio & Fiske, 2012). One way to reduce this bias is to increase the diversity of the healthcare workforce. However, it is important to note that minority health care providers are also victimized by discrimination in the workplace (Dovidio & Fiske, 2012). Also, the bias in healthcare can be reduced by educating providers on the complex nature of existing bias and the varying degrees of stereotyping. As a result, providers may be better prepared to provide higher-quality care in a more equitable fashion (Dovidio & Fiske, 2012). Lastly, providers can develop new mental habits through training that includes developing culturally competent skills and direct experiences to promote effective self-regulation to circumvent subtle healthcare biases (Dovidio & Fiske, 2012).

Moreover, claims that patient mistrust leads to disparities obfuscates the etiologies of racial health inequities and implicitly blames affected patients for their disproportionate health outcomes (Boyd et al., 2020). Notably, any mistrust that Black patients retain towards the U.S. healthcare system results from their ongoing mistreatment and is not the cause of it (Boyd et al., 2020). Furthermore, a series of listening sessions organized by a nonprofit organization aiming to advance the work of the Food and Drug Administration (FDA) highlighted concerns about the COVID-19 vaccine among people of color (Wamsley, 2020). Some of these concerns included the quickness of the process, distrust of government and its agencies, skepticism of the healthcare system, and concern that politics and economics will be a priority over science (Wamsley, 2020).

People of color also expressed doubts that the vaccine will not work for minority populations and a fear based on past experiences such as the Tuskegee experiment (Wamsley, 2020). Therefore, public health researchers can develop quantitative and qualitative assessments to acknowledge and amplify the voices of people of color and their adverse experiences with the healthcare system in an effort to understand their present concerns with the COVID-19 vaccine. Subsequently, in concert with these communities of color, researchers and providers can interactively discuss systematic ways to address their concerns and increase vaccine uptake in a race-conscious manner.

Additionally, an effective rollout of policy initiatives that could address COVID-19 disparities would require a more in-depth look at the social determinants of health data stratified by zip code or neighborhood (Heath, 2020) across the U.S. Researchers currently do not have access to this vital information that can help public health professionals, as well as local, state, and federal governments, make informed decisions about public health measures and equitable healthcare access. Thus, it is
imperative for healthcare systems across the U.S. to collect, track, and disseminate more comprehensive COVID-19 data by race and ethnicity to develop race-conscious solutions for this public health crisis.

**Discussion and Conclusion**
The social unrest of the Summer 2020 and COVID-19 exposed the inequalities that exist throughout the U.S. and Nevada. Communities of color are being exposed as being sicker and under resourced. As the fight against COVID-19 turns towards vaccines, these communities of color tend to be hesitant to take the vaccine. As seen in Clark County, vaccine distribution may not be done in an equitable manner (Strott, 2021).

As progress is made on the elimination of COVID-19, it should be remembered that the health of the community is only as strong as its weakest links. In other words, the entire health of the state will only be as healthy as the sickest communities. In this case, the sickest communities tend to be communities of color, whether it is COVID-19, HIV, or other chronic or infectious diseases.

Moving forward, public health needs to understand how structural racism impacts the social determinants of health and the health of communities of color. Addressing social determinants of health without considering the impact of racism, particularly structural racism, will have limited results. To truly make improvements in the health of all communities, advancing health equity must be the focus. Thus, the strategies outlined in this article can inform as well as enhance the antiracist work of public health professionals across the U.S. and in Nevada.

References


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# Appendix: Resources

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covid, Race, and the Revolution</td>
<td></td>
<td>PolicyLink</td>
</tr>
<tr>
<td>Brandi Collins-Dexter on COVID-19 Misinformation and Black Communities</td>
<td>Brandi Collins-Dexter, Quinta Jurecic, and Evelyn Douek</td>
<td>Brookings Institution, TechStream; Color of Change</td>
</tr>
<tr>
<td>How racism in US health system hinders care and costs lives of African Americans</td>
<td>Tamika C.B. Zapolski and Ukamaka M. Oruche</td>
<td>The Conversation</td>
</tr>
<tr>
<td>Rebuilding the House That Anti-Blackness Built in Our COVID Response</td>
<td></td>
<td>Economic Policy Institute</td>
</tr>
<tr>
<td>Social Distancing Is a Privilege</td>
<td>Charles M. Blow</td>
<td>The NY Times</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Institution</td>
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<tr>
<td>The Coronavirus Pandemic and the Racial Wealth Gap</td>
<td>Danyelle Solomon and Darrick Hamilton</td>
<td>Center for American Progress; Kirwan Institute</td>
</tr>
<tr>
<td>To Protect Public Health, Don’t Police It</td>
<td>Anand Subramanian and Angela Glover Blackwell</td>
<td>PolicyLink</td>
</tr>
<tr>
<td>Under the Blacklight: The Intersectional Failures That COVID Lays Bare</td>
<td>Kimberlé Crenshaw</td>
<td>The African American Policy Forum</td>
</tr>
<tr>
<td>Podcast: Racism and COVID-19: The historical, political, and social foundations</td>
<td>Catherine Ceniza Choy, Ian Haney López, and Osagie K. Obasogie with Marc Abizeid</td>
<td>Othering &amp; Belonging Institute</td>
</tr>
<tr>
<td>Women of Color Will Save Us All</td>
<td>Erin Trent Johnson</td>
<td></td>
</tr>
<tr>
<td>Your Racism Is Showing: Coronavirus and the Racist History of Pandemics</td>
<td>Felice León</td>
<td>The Root</td>
</tr>
<tr>
<td>Black Communities Are on the 'Frontline' of the COVID-19 Pandemic. Here's Why</td>
<td>Anne Branigin</td>
<td>The Root</td>
</tr>
<tr>
<td>COVID-19 Puts Structural Racism On Full Display — Will We Finally Do Something to Correct It?</td>
<td>Stephen F. Gray</td>
<td>Next City</td>
</tr>
<tr>
<td>How Testing for Coronavirus Became a Rorschach Test for Racism</td>
<td>Hilary Beard</td>
<td>Colorlines</td>
</tr>
<tr>
<td>Race Forward Statement on the Coronavirus Emergency, Official Response and its Impacts on Communities of Color</td>
<td>Race Forward</td>
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<tr>
<td>COVID-19 – Racial Equity and Social Justice Resources</td>
<td>Racial Equity Tools</td>
<td></td>
</tr>
<tr>
<td>Resources &amp; Tools Regarding Racism &amp; Anti/Blackness &amp; How to be a Better Ally</td>
<td>Tatum Dorrell, Matt Herndon, and Jourdan Dorrell</td>
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</tbody>
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