

6-16-2021

COVID-19 & BLM: Racial Inequity in Healthcare

Laken Berndt
Portland State University

Follow this and additional works at: <https://pdxscholar.library.pdx.edu/honorsthesis>

 Part of the [Biology Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Berndt, Laken, "COVID-19 & BLM: Racial Inequity in Healthcare" (2021). *University Honors Theses*. Paper 1090.

<https://doi.org/10.15760/honors.1117>

This Thesis is brought to you for free and open access. It has been accepted for inclusion in University Honors Theses by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.

COVID-19 & BLM: Racial Inequity in Healthcare

by

Laken Berndt

An undergraduate honors thesis submitted in partial fulfillment of the

requirements for the degree of

Bachelors of Science

in

University Honors

and

Biology

Thesis Advisor

William York

Portland State University

2021

Abstract

In this review of scholarship on healthcare inequality, as well as recent scholarship focused on COVID-19, we find there are clear racial disparities within healthcare, seen within previous trends, as well as the current pandemic. Minorities have historically been at greater risk during prior health crises, as well as being at risk for various underlying health conditions, and now, there are higher rates of infection and mortality amongst minority groups.

Socioeconomic factors play an incredibly important role in these disparities, and much of the current discourse does regard socioeconomic status as a primary factor in these trends. However, we find that there is a layer of inequality extending beyond socioeconomic status that is due to systemic racism within healthcare.

The complex notion of systemic racism can be further broken down into three primary categories that will be discussed in this thesis: historical, interpersonal, and institutional, all of which are connected, but have contributed to systemic racism in their own unique way, thus requiring their own unique solutions to alleviate racial inequality within healthcare and COVID-19.

Historical causes require alleviating mistrust of healthcare through increasing minority representation in healthcare and public outreach to underserved communities. Adapting medical education to systemic racism can improve interpersonal relationships between physicians and minority patients. Finally, to promote true, systemic change, institutional causes must be addressed, through the proper allocation and funding of resources to minority communities, but also with the conscientious provision of healthcare that acknowledges systemic racism in its practice.

Introduction

2020 was a year of great importance. It was mere weeks into the beginning of the year that the World Health Organization declared a global emergency: a novel virus, one that humans had never faced before, had begun to spread from the Wuhan province in China. Only a few months later, this viral pathogen, SARS-CoV2, better known as the coronavirus or COVID-19, had officially been declared a pandemic. Now, a year later, there have been more than 100 million infected, with more than 3 million dead, making COVID-19 the greatest health crisis in over 100 years.

As the pandemic had begun to reach its height in the spring of 2020, there was another crisis facing the world, a social justice crisis. On May 25 of 2020, a man named George Floyd was killed by a white police officer. George Floyd's death was a wake-up call for Americans. Black Lives Matter, as an organization, has been around since 2013, but it was becoming clear that despite previous attempts towards social justice, nothing had changed; systemic racism still ran deep within the law enforcement of this country. From George Floyd, to Breonna Taylor, to Elijah McClain, to the killing of Michael Brown back in 2014, there are countless, similar examples of racial injustice throughout this country's recent and distant history. As a result, we saw one of the largest social justice movements in history, and more and more individuals are continuously fighting for a better world.

Now, on the surface, these two events, while both incredibly important for the course of human history, seem to have little else in common. What does a virus have to do with social justice? Theoretically, a virus is just a virus, and infects and kills along a random distribution. Unfortunately, this is not the case. While BLM has made great strides in exposing the institutional racism within the American government and law enforcement, COVID-19 has exposed these same trends within healthcare. While the institution of law enforcement exhibited great racial injustice, there are other institutions that have created their own form of racial injustice, including the institution of healthcare. Through a review of public health literature, this paper will address a long history of racial inequality that has led to the current inequality seen in the current COVID-19 pandemic. The discussion will then be

shifted to the importance race has played within healthcare by addressing the historical, interpersonal, and institutional causes of systemic racism found within the institution of healthcare. Finally, based on this review, solutions will be offered that address the distinct causes of systemic racism within healthcare, and how these difficult, generational solutions can be applied to the immediate threat of COVID-19.

Larger Trends of Racial Disparity Throughout Healthcare

Just as there are countless examples of racial injustice committed by law enforcement through this country's recent and distant history, so are similar patterns of racial inequality seen throughout healthcare as a whole. These racial disparities that will be discussed within the current COVID-19 pandemic are not a new occurrence. The inequality that will be described in our current health crisis is not unique, and are is no different than previously seen trends throughout prior health crises, and modern healthcare.

Past health crises, such as the H1N1 pandemic and measles outbreaks, show some degree of racial disparity; furthermore, even before the current pandemic, minorities have had historically lower rates of vaccination in general. (Bibbins-Domingo, 2020) The largest pandemic prior to COVID-19 was the Spanish Flu in 1918, and during that time minorities also experienced high mortality rates when compared to whites. (Mein, 2020)

Infectious diseases are not the only aspect of healthcare where we see these racial disparities. In relation to COVID-19, a primary determinant of COVID-19 severity is the presence of one or more comorbidities— underlying health conditions in addition to the viral infection. According to the CDC, 90% of patients hospitalized for COVID-19 infection had one or more of these underlying conditions, the most common being obesity, hypertension, chronic lung disease, diabetes, and cardiovascular disease. (Garg, 2020) Multiple authors, such as Webb (2020), Kullar (2020) and Phillips (2020), report that

African Americans and other minority groups are also at an increased risk for certain underlying conditions, such as obesity, diabetes, hypertension, asthma and respiratory diseases, kidney disease, and cardiovascular disease—a nearly identical list to the comorbidities seen in COVID-19. It is clear that all the comorbidities known to increase the severity of COVID-19 infection are more prevalent in African Americans. One author, Anyane-Yeboah (2020), reports similar findings: “Rates for conditions like hypertension, heart disease and high cholesterol are far higher among African Americans making their impact on patients with COVID-19 expected.”

The significance of these underlying health conditions goes beyond just an increased risk of COVID-19 hospitalization and mortality. When compared to whites, African Americans have a 44% greater chance of dying from stroke, 20% more likely to have asthma, 25% more likely to have heart disease, 72% more likely to have diabetes, and 23% more likely to be obese. (Louis-Jean, 2020) Overall, these statistics contribute to the worse healthcare outcomes and decreased life expectancy seen in African Americans. The prevalence of these underlying health conditions creates racial inequities, not just in relation to the current pandemic, but lifelong health as well, given nearly all of the comorbidities seen here are chronic problems. This reveals that these issues are greater than the COVID-19 pandemic. Minorities, especially African Americans, have vastly different healthcare outcomes compared to white groups.

Racial Disparities within the COVID-19 Pandemic:

The current pandemic can now be viewed as a reflection of prior trends of racial inequality in healthcare. No different from the previous examples, COVID-19 has not infected and killed equally. After nearly a year of this global pandemic, we are seeing great disparities in which groups are at greater risk in terms of infection and mortality rates.

According to current CDC estimates, African Americans make up 18% of the current sampled population size, yet represent 33% of infections. (Garg, 2020) This trend remains constant across state-level data. For example, the state of Michigan has an African American population of about 14.1%, yet African Americans represent 33% of COVID-19 cases, according to research done by both Shah (2020) and Webb (2020) in separate articles. Each of their studies reached similar conclusions— mortality rates were disproportionately higher amongst African Americans. Furthermore, even after excluding the densely populated region of New York City, African Americans still accounted for 17% of COVID-19 deaths in New York State, despite only representing 9% of that population. (Kullar, 2020) Additional data collected by Moore (2020) determined that COVID-19 “hotspots”, or areas with a higher density of COVID-19 infection, were disproportionately affecting minorities.

These disparities are even greater in states with a greater proportion of African Americans. In Louisiana, for example, African Americans represent 40% of the population, and a shocking 70% of all COVID-19 related deaths. (Bonner, 2020) Furthermore, studies done by Kullar suggest the mortality rate for African Americans may actually even be greater than the 70% reported by Bonner.

These disparities are also more pronounced in certain urban areas. For example, in Chicago, Illinois, African Americans account for 14.6% of the population, yet account for 51.5% of infections, and account for at least 67.3% of deaths. (Shah, 2020) Furthermore, in New York City, African Americans, as well as hispanic groups, represent the highest rates of hospitalizations, infections, and deaths. (Bibbins-Domingo, 2020)

Yet, regardless of location, Phillips (2020), estimates that African Americans account for 72% of COVID-19 related deaths in the United States, despite only representing roughly 30% of the total population. Furthermore, according to Shah, African Americans are also seeing lower rates of COVID-19

testing than other groups, so the reality of these racial disparities may actually be more severe than current estimates.

Overall, African Americans are at the very least, three times more likely to be infected with COVID-19 than any other racial group, and are at an increased likelihood of infection and mortality, even after controlling for comorbidities, presenting symptoms, and other health characteristics. (Muñoz-Price, 2020) Now, a year later into the pandemic, as we have begun to see greater government effort towards the distribution of COVID-19 vaccines, we continue to see these disparities, even if overall cases and deaths may diminish. Just as we see racial disparities in COVID-19 infection and mortality rates, so too do we see disparities in vaccination rates among minorities. In Philadelphia, only 12% of the vaccinated population has been Black, despite Black people representing 44% of the city's population; similarly, 7% of people vaccinated in Miami-Dade County have been Black, despite Black people making up 17% of the population. (Goodnough & Hoffman, 2021) In Washington, 40% of the initial vaccines available to the state were distributed to the whitest and wealthiest regions, despite only representing 5% of COVID-19 related deaths. (Goodnough & Hoffman, 2021)

So, based on the data that has been collected over the last year, as well as additional data that is becoming more available as vaccination continues, there are incredibly apparent and significant differences in how minorities, especially African Americans, are impacted by this disease. What we have seen is a pandemic that has disproportionately impacted minority groups, not only through increased prevalence and severity of disease, but through inequitable healthcare and federal outreach as well. Overall, the current evidence demonstrates two trends: a greater risk for COVID-19 infection for Black people and other minorities, and less access to healthcare during the pandemic amongst these groups.

Socioeconomic Status as an Explanation for Racial Inequality within Healthcare

To summarize, there are very clear, significant differences in how African Americans and other minorities are being impacted by the COVID-19 pandemic, similarly to previous patterns within healthcare as a whole. Now, there is a question that requires answering: what is causing this racial inequality, as observed in this current pandemic?

Without a doubt, socioeconomic status (SES) is an incredibly important factor in deterring the severity of COVID-19 infection. Regardless of race or ethnicity, low SES is associated with increased severity of COVID-19 infection. Low SES is also associated with increased risk for the same comorbidities associated with greater risk of COVID-19 infection and mortality. (Dahab, 2020)

Other causes of increased risk of infection in low SES, beyond comorbidities, include environmental factors. Low SES is often associated with conditions such as overcrowded housing or inability to work from home, increasing one's risk of exposure to respiratory illness. (Patel, 2020) Raifman (2020) reported similar findings as Patel, finding that low income households were at higher risk for COVID-19 infection compared to higher income households. Further, people of low SES often present at a more advanced stage of illness, and have an overall lower access and ability to utilize healthcare services. (Patel, 2020) Low-income communities are also less likely to possess available ICU beds, which are critical for advanced care, such as one-on-one surveillance and ventilation. Kanter (2020) found that, while only 3% of the highest-income communities lacked ICU beds, 49% of the lowest-income communities had no available ICU beds. Furthermore, Blundell (2020) also reports that individuals of low SES are at greater risk of being effected by long-standing mental health problems. Thus, this creates a threefold effect of low SES— physical, social, and psychological factors, all exacerbated by the pandemic.

So, do these socioeconomic inequities explain the racial disparities seen in COVID-19? They certainly play an important role. African Americans, as well as other minority groups, are at greater risk of being effected by low socioeconomic factors that would put an individual at greater risk for infection or mortality. Compared to the disparities seen within low SES, Raifman also reported similar findings within African American groups, and concluded that both low income and belonging to a racial minority group increased one's risk of possessing multiple comorbidities or risk factors for COVID-19 infection. African Americans are more likely to live in densely populated neighborhoods, as well as being less likely to work from home, at 19.7%, compared to 29.9% of white employees being able to work from home. (Shah, 2020) Minorities are more likely to live in crowded urban areas, and work in "public-facing occupations" (such as service and transportation jobs), preventing them from properly social distancing. (Webb, 2020) African Americans, as reported by Anyane-Yebo, were more likely to have lower paying jobs and higher unemployment rates. African Americans represented nine of the ten lowest paying jobs, and many of these jobs are "high-contact essential services" increasing risk of infection, while also being relatively unstable jobs, posing high risk in pay or hour reduction. Overall, "nearly 70% of the African American population reside in the 16 states that rank below the national average in economic and job opportunities, health access and healthcare quality" (Anyane-Yebo, 2020)

Furthermore, multiple authors, including Van Spall (2020), Struthers (2020), and Louis-Jean (2020), all make note of how African Americans and other minorities are more likely to live in low-income neighborhoods, thus exposing them to not only COVID-19, but other health hazards, such as the lack of ICU beds as described by Kanter earlier. Data collected by Struther showed that minority groups as well as households living below the federal poverty threshold both demonstrated higher percentages of COVID-19 associated deaths.

Now, given that African Americans and other minorities appear to be at greater risk of the effects of low socioeconomic status, it seems it could be concluded that SES is a primary cause of the disparities seen within healthcare and the current pandemic. In fact, much of the current discourse does indeed primarily attribute the existence of this racial inequality to socioeconomic factors. For example, one author, Struthers, describes wealth inequality as a “primary driver of disparity.” Mein, mentioned earlier, calls socioeconomic status (SES) a “primary factor.”

Systemic Racism as an Explanation for Racial Inequality within Healthcare

While SES is definitely an important factor, it does not entirely explain the racial disparities seen during this pandemic and throughout healthcare as a whole. Research done by Muñoz-Price found that regardless of socioeconomic status, African Americans were more likely to be infected by COVID-19. Furthermore, in greater healthcare trends, even African Americans of high SES often see more pronounced inequity within healthcare compared to low SES groups (Feagin & Bennefield, 2014) If SES was the primary cause, we would expect these racial disparities to be corrected after controlling for socioeconomic status, however this is not the case. So, it is clear that SES can and indeed does play a role in racial inequity in healthcare, but there is still another underlying cause of this inequity that must be addressed.

Based on the current data, race is a primary factor alongside SES that determines an individual’s susceptibility to a wide range of diseases that are now consequentially predisposing them to additional illnesses such as COVID-19. It is clear SES is an incredibly important factor in determining one’s overall wellbeing; yet, as stated previously, regardless of SES, African Americans were considerably more likely to test positive for the virus than persons of other races, even after controlling for differences in demographic and health characteristics, comorbidities, presenting symptoms, and clustering at the zip-code level.” (Muñoz-Price) Given these alarming disparities, one of the primary conclusions of

Chowkwanyun (2020) was the need for more race-specific data to better address these disparities. It is clear there is a deeper, underlying problem within healthcare.

Much of the current literature addresses the dire need for healthcare reform, allocation of medical personnel and resources, and community outreach to low income areas to improve health education and preventative care. These are incredibly important in terms of addressing the socioeconomic disparities within healthcare; however, as highlighted in this review, the fact remains that there is a layer of systemic racism within healthcare that cannot be entirely solved via socioeconomic solutions. It is clear that based on current research, and observations made by authors like Chowkwanyun and others, there is an unfortunate difficulty in obtaining the necessary data and evidence to properly address these questions. The majority of current scholarship is centered on racial disparities within healthcare, and its relation to SES; and as a result, most recommendations related to healthcare reform have been focused on SES reform. Again, while SES reform is crucial to improving healthcare, socioeconomic reform without racial justice will undoubtedly lift certain groups up more than others. It seems racial disparities in healthcare have been treated as a symptom of low SES, when really, healthcare disparities are a symptom of race.

Focusing on socioeconomic differences between minorities and white Americans is not enough to address healthcare inequity. A primary goal needs to be a shift towards healthcare reform that specifically addresses systemic racism within healthcare. Systemic racism is indeed the underlying factor of the current racial inequities within this pandemic and healthcare as a whole. The healthcare system is an institution, and like any institution, it is not immune to the effects of racism. This requires us to analyze what we already know about systemic racism within healthcare, and use this information to predict the best direction for future research, and to make recommendations for the best course of action to address racial healthcare inequities— not just on a long-term scale across healthcare as whole but to also solutions necessary to address the immediate crisis of the COVID-19 pandemic.

An important step in addressing systemic racism within healthcare is to first identify components of our culture and institutions that have paved the way for racial inequity to reach its current prevalence within healthcare today. Systemic racism is not new— there are centuries of racist history and deeply-

rooted societal convictions that made their way into medical practice. Acknowledging each of these key components of our past and present will better enable us to understand how systemic racism became such a discrete yet rampant flaw in modern healthcare.

Historical Causes of Racial Inequality within Healthcare

The origin of healthcare inequity for Black Americans can be easily traced back to the barbaric practice of slavery they were subjected to hardly more than a century ago. Since their arrival to the Americas in the early 1600s, Black people were considered to be nothing more than property to white Americans; as a result, the dehumanization of black Americans was engrained within American culture from the very beginning. Even within early forms of healthcare, the basic human decency expected when treating white patients was not extended to their black counterparts.

In the first national census in 1790, the United States defined three racial groups: whites, blacks (who only represented three-fifths of a person) and “civilized Indians” (indigenous peoples who paid taxes.) From the very first institutional classification of race, Black people and other minorities were placed in marginalizing categories that highlighted the differential access to power between whites and minorities. As a result, throughout both law and culture, minorities have received inferior treatment throughout societal institutions, including healthcare. (Williams & Rucker, 2000)

In the 19th century, African Americans were continually the “guinea pigs” for medical progress, received inadequate treatments, and often were downright denied access to healthcare. (Feagin & Bennefield, 2014) Around this time in the South, medical experiments were carried out on enslaved black women that white physicians would not dare attempt on white women. A prime example is the research conducted by James Marion Sims, a man hailed as the father of modern gynecology, who conducted his experiments on enslaved black women, often without the use of anesthetics, as during that time, it was commonly thought that Black people did not experience pain to the same extent as white people.

In the 20th century, many black women underwent involuntary sterilization and hysterectomies, attempting “negative eugenics” to reduce the black population. In 1932, the US Public Health Service

partook in the infamous Tuskegee experiments in which treatment for syphilis was withheld from black men to allow white researchers to study the course of the disease. (Feagin & Bennefield, 2014)

There are countless more examples of medical mistreatment of Black people throughout American history, and it is clear that Black people have not only received inequitable, but downright inhumane healthcare throughout the past. The disparities seen within the current COVID-19 pandemic is evidence that we as a society have not progressed as much as we would have ourselves believe. While healthcare for Black people today may not be as inhumane as it once was, America's dark history of slavery and dehumanization of Black people still plays a role today, as the maltreatment that has resulted from this history has produced a general distrust of healthcare within Black people and other minorities. Due to the stress related to seeing healthcare practitioners, and the distrust of minority patients in healthcare practitioners, as a result of institutionalized, discriminatory medical practices, there are delays in seeking medical care, lower likelihoods for follow-up care, and less adherence to prescribed treatment or medical recommendations in minority populations— which, in turn, has led to higher morbidities and mortality rates from various underlying health issues. (Sabin et al., 2009)

Interpersonal Causes of Racial Inequality within Healthcare

Though this justified mistrust held by Black people and minorities partially explains racial disparities within healthcare, it cannot fully account for the inequality seen within modern medical practice. Even though practices such as slavery, segregation, and discriminatory policies are no longer a part of current American institutions, the significant role they played throughout our recent history have, either directly or indirectly, shaped societal perspectives, cultural attitudes, and subconscious biases of healthcare practitioners. For example, physicians tend to view Black patients and those of low income less favorably than white patients and those of higher income. White patients were assumed to be more intelligent and more likely to follow medical advice, with Black patients being less likely to follow instruction or assumed to be unable to afford medication. (Van Ryn, Burke, 2000) Furthermore, a study in 2010 analyzed how white doctors and nurses responded to racial inequalities within healthcare. Most

were likely to blame the Black patients as opposed to the white professionals, describing the patients as being “passive” or “failing to make medical requests.” (Malat et al.)

Based on these results, it can be concluded that racial stereotyping of Black patients not only leads in disparities in medical treatment, but also to remove any blame from the white practitioners and to displace it onto the Black patients. This misguided racial narrative of the irresponsible Black patient who refuses medical advice is undeniably prominent within healthcare today. According to Snipes (2011), discrimination by white practitioners was rarely suggested as an explanation for healthcare inequity—when compared to Black physicians, white physicians were more likely to hold the view that race was an unimportant factor in medical decision-making. As a result, there is not just a negative narrative of the Black patient, but a positive narrative of the non-discriminatory, “color-blind” white doctor. Through both patient stereotyping, and discriminatory racial narratives, it is no surprise that systemic racism is underestimated, ignored, or disbelieved entirely.

An important phenomena responsible for this racial ignorance or disbelief is the concept of racial framing. Racial framing, as defined by Feagin and Bennefield, is the focusing on healthcare problems facing minorities, while neglecting the racist practices and institutions creating these healthcare problems. Past research that has focused on inequality has utilized “weak and individualistic” language, such as “bias, prejudice, or cultural competence” as opposed to “stronger and analytical language,” such as “systemic racism and discriminators.” Another author, Smedley, notes that many studies that do address racism within healthcare often “tiptoe around the realities of medical racism”, using language such as “well-intentioned” or “fatigued.”

By relying on faultless terminology, the existence of racial inequity in healthcare removes any blame on the white institutions controlling healthcare, and shifts blame to the individual, either by relying on racial stereotypes and narratives such as the irresponsible Black patient, or through the “weak and individualistic” language described by Feagin and Bennefield, by describing a practitioner as bias or prejudiced. While there is undoubtedly, and unfortunately, current healthcare practitioners who may be prejudiced or use implicit biases when practicing medicine, this alone cannot explain the systemic

disparities seen within healthcare, and in essence acts as a scapegoat to avoid further discussion on institutional racism within healthcare. This flaw within implicit bias as a primary cause of racism within healthcare will be further discussed later in this review.

As a result of these commonly held stereotypes, racial narratives, and racial framing, there are measurable differences in the direct patient care and treatments Black patients receive compared to white patients. In a study done by Ridley in 1984, nearly forty years ago, it was found that white physicians who were more likely to adopt negative stereotypes in their practice were more likely to display negative communication within their treatment behavior, consequentially making patients of color less likely to disclose personal health information necessary for effective treatment. A similar, more recent study by Cooper in 2012 found that white and Asian physicians with attitudes similar to those described by Ridley were more likely to dominate the dialogue while seeing black patients, have less positive overall interaction with the Black patient, and have lower patient ratings in terms of trust and confidence. Using breast cancer as an example, black women are less likely to contract breast cancer, but are more likely to die from it. Black women receive less education on preventative care, are screened less effectively, and are not referred to newer, “state of the art” treatments. (Feagin & Bennefield, 2014) Overall, the racial differences are seen in the administration of therapeutic treatment for a variety of conditions even after adjusting for insurance status and severity of disease. (Williams & Rucker, 2000)

Institutional Causes of Racial Inequality within Healthcare

Before reviewing institutional causes, it is necessary to address the importance, but also the negative implications, of focusing on implicit bias as a primary driver of racial inequality within healthcare. Implicit bias refers to the subconscious prejudice an individual may harbor for another individual simply due to superficial attributes they may possess. In healthcare, this is often used in the context of acknowledging the subconscious prejudices a white healthcare professional may hold against a patient that represents a race or ethnicity distinct from their own. The concept of implicit bias and how it affects white practitioners’ decision making is becoming a more frequently discussed problem, and for good reason. Studies that have utilized the implicit association test (IAT), which assesses subconscious

stereotyping by showing a participant images of a white or black face, and determining if the participant primarily associates positive or negative traits with the face. These tests have revealed that whites primarily operate on a pro-white, anti-black basis. (Feagin & Bennefield, 2014) Another study that used a sample size of 2535 physicians revealed that 70% preferred whites over black people. (Sabin et al., 2009) Furthermore, IAT score was also shown to be correlated with recommendations for pain treatment. Based on these studies, the implicit biases of white physicians do appear to be strongly correlated with their attitudes and treatment of Black and minority patients.

However, as mentioned previously during the discussion of racial framing, a focus on individual biases and personal prejudices of a single healthcare professional gives rise to the possible consequence of avoiding further discussion on institutional causes of racism, and instead accepting the simpler explanation of individual fault as the source of racial inequity in healthcare. This is not to say the effects of implicit bias are unimportant, but future discussions must ensure it does not overshadow the greater, systemic causes at play. Again, this relates back to racial framing, in which racial inequities within healthcare are approached from the micro-level, where the focus is on how minority patients are effected by the flawed beliefs of one individual, instead of acknowledging the white institutions in charge. Even as implicit bias training becomes more prevalent, and perhaps leads to greater cultural awareness within individual medical professionals, this would still not address the historical, institutional, and socioeconomic causes of racial healthcare inequity. As stated by Williams and Rucker, “the evidence is abundant and clear that racial discrimination is not the aberrant behavior of a few ‘bad apples’ but a widespread societal problem.” The importance here is that implicit bias is just one aspect of racism within healthcare, one that ignores the larger, systemic factors at play. Much of the current discussion focuses on a bottom-up approach. Now we must also consider a top-down approach to understand how these macro-level inequities have had an impact on the interpersonal relationship between white-practitioners and minority patients. True systemic racism implies a level of inequality beyond the interactions of the patient and provider, and an analysis of the institutions that have had a negative impact on these interpersonal interactions. For healthcare, systemic racism can be broken down into three institutional entities that have

all played a unique role in modern racial inequality; education, research, and healthcare provision and distribution.

The first component of systemic racism within healthcare is the education of medical professionals. Continuing the earlier discussion of implicit bias, this dilemma continues into medical education. Training and schooling for healthcare professionals— if taking part in discussions on prejudice, discrimination and racism— often focus on individualistic aspects, such as implicit bias, but often ignore the larger, historical trends; the concept of systemic racism is rarely taught in historically white medical schools and public health. (Feagin & Bennefield, 2014) Furthermore, traditional training focuses on the tendency to center values and beliefs around the practitioner, utilizing the concept of “cultural competency,” which recommends an awareness and sensitivity to those from different cultures to combat “cultural threat”—self-perceived harm caused by those with different morals, values or beliefs. This method of healthcare creates a clinical setting which focuses on an individual patient’s differences that create the need for changes in healthcare practices, as opposed to the practitioner being focused on how their culture and institutions have created healthcare inequity. (Feagin & Bennefield, 2014)

In recent years, there has been increasing interest and inclusion of curriculum highlighting inequities caused by race and other social determinants. This curriculum typically consists of single lesson plans or community service opportunities, but new approaches may also include didactic training, mentorship, collaborative longitudinal service and advocacy projects with community partners, career seminars, and research. (Sharma, 2018) Despite this newfound investment in education regarding healthcare inequity, as of now there is little evidence that current approaches alleviate inequity, and while participating in such curriculum has shown to improve student’s awareness to healthcare inequity, current studies have shown it has failed to produce any changes in student behavior. (Sharma, 2018) Sharma provides possible suggestions as to why this may be the case. Current education utilizes, what she calls, a “content-rich, action-poor approach.” This enables students to identify the effects of healthcare inequity on a particular patient in a particular clinical encounter but does not equip them with the skills to understand and *change* the broader structural contexts in which that encounter takes place. Similar to how Feagin and Bennefield describe current education as being focused on the patient, Sharma also reaches

this conclusion, stating current education may identify inequity within an individual patient, but it does not further examine the power dynamics between physician-patient interaction and the privileges possessed by the practitioner. Furthermore, even if students are informed on how to take action and taught possible interventions, these often focus on lifestyle modification, rather than policy-based intervention— this creates what Sharma calls a “blame game”— placing fault on the individual and not the institution, preventing the potential for solidarity between patient and provider.

Second, it is not only medical education, but also medical research, that is flawed in its approach to systemic racism. The majority of current research is compiled from large, shared databases, primarily from organizations such as the CDC, or city, state, or federal-level data. Few researchers targeted specific hospitals or health systems, and even then, much of their data collected was not obtained on an individualistic scale; for example, previously mentioned authors such as Kullar, Muñoz-Price, and Stein all used socioeconomic data that was collected at the zip-code level. While these methods of data collection may be able to highlight the macroscopic role SES plays in healthcare inequity, it misses the individualistic approach necessary to address the underlying influence of race. As was mentioned earlier, the author Chowkwanyun (2020) had suggested utilizing more racial-specific data to better identify systemic causes in healthcare. Another author discussed previously, Evans, argues for the importance of racial data on an institution scale makes in determining the appropriate allocation of resources for individual patients. This idea of racial-specific data is a shift from how current and past research has often been focused. A change in focus not only requires a greater acknowledgement of racial data the role race plays in healthcare inequity, but also the approach we take towards viewing racism within healthcare. For example, Feagin & Bennefield found that, traditionally, research often focuses on individual discrimination by medical professionals, without looking at larger, institutional racism. This data captures micro-level discrimination, but cannot capture macro-level depictions of inequity within healthcare— “Individual experiences of health care and broader public health issues should be considered together when examining racism and health.” Feagin & Bennefield conclude that healthcare inequity is caused both by patient-physician interaction and unequal distribution of healthcare resources as a result of systemic racism. So, alongside a lack of attention to race within healthcare, current research also pays too

much attention to individualistic racism (i.e. implicit bias) while ignoring systemic, societal and historical trends that have created such macro-level disparities.

This also relates to how we currently view SES as a primary determinant of healthcare inequity, more-so than race. As addressed earlier, many of the same inequities seen within healthcare for SES are also seen within race, and remain even after adjusting for SES. Beyond healthcare, individuals belonging to minority groups were more likely to be a low SES, and possess a greater likelihood of socioeconomic risk factors. Minority groups are at greater risk of healthcare inequity, not just due to race, but the low SES that often accompanies minority status as well. Given that race effects both healthcare and socioeconomic status, this alone makes it a primary factor in an individual's overall wellbeing, yet it is not treated as such. Feagin & Bennefield suggest that the relationship between race and SES is not addressed to the extent it should be and focus should be on advantaged groups who control the allocation of health resources. SES and its relationship to healthcare is not isolated within itself, and current research does not adequately address the correlative, or perhaps causal, implications of race in regards to SES. Given race is as indicative of health outcomes as socioeconomic status, it deserves the same level of analysis.

Beyond flaws in the focus and inattentiveness of current research to race, a major barrier towards the improvement of how we analyze systemic racism is the apparent lack of representation in current research. A study done by Ginther in 2011 found that Black NIH applicants were less likely than white applicants to receive research funding. As a result, NIH research on healthcare inequity has an administrative branch that is almost entirely white, as well as 90% of lab chiefs and 83% of senior investigators being white. (Gottesman, 2011) Again, in regards to racial framing, even research that is being conducted on racial inequities is framed from a white perspective, and overseen by white administration, controlling who receives funding. There absolutely needs to be a greater amount of Black and minority researchers given the opportunity to express their perspectives, so that we can obtain and interpret data in a manner that prevents racial framing, stereotyping, and racist narratives to the furthest extent possible.

Finally, though it may not appear obvious on the surface, there is still racial inequality in how healthcare is provided and distributed on an institutional level. In terms of distribution, there are apparent differences in the healthcare that is accessible to minority populations. Though there may not be a physical segregation of healthcare distribution, there is still some form of segregation in terms of institutional quality and resource availability. Caress (2020), writes on the systemic racism seen within the healthcare systems of New York City. Two-thirds of white patients in New York City are treated by wealthy, private hospitals that belong to the major, city-wide networks, while most Black patients are treated at public or private, but non-affiliated hospitals in low income communities. In accordance, these same Black people are more likely to be uninsured or insured through Medicaid, as opposed to white patients with private insurance. These disparities were exacerbated further within specialist care. Two renowned specialist hospitals in New York City, one a cancer hospital, the other a hospital for orthopedic surgery, displayed extreme examples of racial disparity. Of their total patient populations, only 9% and 5% were Black people, respectively, and of these Black patients, only 7% were privately insured, despite nearly a quarter of the city's population being Black.

These systemic inequalities persist beyond broad distribution of healthcare, and into the provision of healthcare to individual patients. An example of this by Evans (2020), is based on a recent study that found racial bias baked into a commercial algorithm used to predict the needs of patients with uncontrolled illnesses. Using health spending as a proxy for gravity of illness, the algorithm ignored the fact that disparities in access result in lower spending on black patients and thus failed to identify black patients with complex needs.

Another study by Vyas in 2020 found that clinical algorithms used by physicians for risk assessment and clinical decision-making showed innate racial inequality and often had the indirect effect of directing more attention or resources towards white patients over minority groups. For example, within the field of cardiology, a select set of variables, including race (defined as black or nonblack) are used to predict a patient's risk in relation to acute heart failure, and a concerning score consequentially calls for initiating medical therapy. Three points are added to the score if nonblack, thus increasing the likelihood of further treatment. Another example includes nephrology, in which a potential kidney donor is

considered to be at increased risk one transplant failure if they are Black— and since most Black patients in need of a kidney often require a Black donor, this essentially downgrades Black patients on a transplant wait list and decreases their likelihood of receiving the organ they need. These racially charged algorithms extend across a variety specialty fields, including obstetrics, urology, oncology, endocrinology and pulmonology, all of which possess some sort of race correction in their clinical formulas that create an inherent disparity in the likelihood of receiving treatment as a Black person or minority.

Furthermore, the presence of racial framing has also led to normalizing the biological and cultural distinctions between racial groups, thus allowing for the institutionalization of healthcare inequality. (Feagin, Bennefield 2014). An example of this would be “white racial framing”, in which treatment is primary centered around “white” biology. This is seen through diagrams or pictures utilizing primarily white anatomical models, and is a major issue for dermatology, as diseases and pathologies are typically demonstrated on white skin. This white racial framing can be seen now in the current COVID-19 pandemic. As mentioned earlier, Evans had reported that, despite the overwhelming disproportion of Black people being infected by COVID-19, the dermatological effects of the disease were represented on white skin. Another example is pulse oximeters, which measure oxygen saturation levels. Feiner (2007) found that individuals with darker pigmentation saw a decrease in pulse oximeter accuracy compared to individuals with lighter pigmentation. These are all prime examples of white racial framing, and clearly highlight the role race plays in institutional healthcare. Though many white physicians doubt or deny that race is important during medical decision making, it is apparent that our current healthcare system was established to treat white patients first, and minority patients second. Through focusing on individualistic factors while ignoring systemic causes, coupled with the preference shown to white patients over minority patients, race becomes a more evident and encompassing determinant of healthcare.

To summarize, given the role race has played in receiving adequate healthcare and determining one’s medical outcomes, it becomes clear socioeconomic factors alone cannot explain these inequities. While socioeconomic solutions would increase an individual’s ability to afford or access healthcare, it does not address the centuries of dehumanization, and both past and ongoing institutional discrimination that has led to the distrust and avoidance of healthcare seen in minorities. Changes in healthcare costs are

necessary, but this alone is not enough— as Feagin & Bennefield had stated, even after adjusting for SES, Black people still possessed greater levels of healthcare inequity, and even Black people of high SES saw healthcare disparities often more pronounced than those of lower SES. Socioeconomic changes are, without doubt, necessary to improving the state of our current healthcare; yet, without acknowledging and addressing the effects of race, these socioeconomic changes would inevitably effect certain groups to a greater extent than those groups who are subject to the burden of systemic racism. Thus, it can be concluded SES alone does not explain these inequalities seen in healthcare, and as a result, there must be further examination on the racial determinants of healthcare inequality. Furthermore, as we review possible solutions to these inequalities, we must recognize that individual racial biases do not fully explain racial inequality, and institutional racial biases must be recognized and attended to as well.

Systemic Solutions to Racial Inequalities within Healthcare

Based on both historical and modern components, it becomes clear that, beyond individualistic causes, there is an underlying layer of systemic racism that has played a role in the majority of the disparities seen within healthcare today. Unfortunately, the presence of institutional racism is an incredibly complex, intricate phenomena rooted in centuries of history. Solutions which focus entirely on socioeconomic factors, such as the allocation of funds and resources solely based on socioeconomic needs, may be simpler, but inevitably ignore the equal, if not greater, role race has played in healthcare inequity. There is, of course, no simple, easily defined method to decrease the prevalence of racism within healthcare. However, there are possible options that would allow us to combat the effects of systemic racism and raise awareness to these effects to promote a more progressive understanding within our society— and over time, hopefully produce a decrease in the racial disparities seen in our current time.

Historical Inequalities: Alleviating Mistrust of Healthcare

As a result of a history of dehumanization, racial stereotyping, and objective differences in patient care, Black people and other minorities have overtime developed understandable mistrust in the healthcare system, as was discussed earlier, with examples of mistrust including lower rates of vaccination, lower rates of follow-up, and greater delays in seeking medical care. A more immediate

example of this mistrust is demonstrated by data from the Kaiser Family Foundation in December 2020 regarding public opinion of the COVID-19 vaccine. Their study found that 35% of African Americans are currently hesitant to receive the vaccine, compared to 27% of the overall population. Furthermore, 47% of African Americans mistrust vaccination, and 71% are worried about the possible side effects of the vaccine, and would prefer for others to receive it before receiving it themselves. Given these past and current discrepancies, it is clear that many Black Americans are still mistrusting or avoidant of healthcare.

Continuing the conversation of a shift in focus to the flaws within the institution versus the individual, we must make a shift towards alleviating mistrust at a systemic level, with a focus on how the healthcare systems in place can be changed for the better. Two methods using different approaches that can be used to achieve this are increasing public outreach from the provider to minority communities; and increasing minority representation amongst providers.

Public outreach involves systemic changes that would make an interpersonal impact within the patient-provider interaction. The end goal would be to increase the availability and appropriateness of patient care to minority communities who are more likely to avoid or mistrust healthcare by utilizing innovative solutions that don't require the patient to directly seek medical care independently. Bonner (2020) offers several examples of systemic solutions that could be used to address patient mistrust and promote public outreach. First, hospitals and health systems can improve and increase their use of the Community Health Needs Assessment (CHNA), which had been mandated under the Affordable Care Act. This essentially incentivizes hospitals to reach out to the geographical or demographical community they serve directly, to better understand the exact health needs of their community. Bonner suggests the CHNA has the potential to build "community based partnerships" between hospitals and their patient population, thus reducing both financial and non-financial barriers to healthcare. Second, with the advancements in virtual technology, we could see a rapid expansion in the ability to provide accessible healthcare. Bonner recommends an increased utility of tele-medicine, to improve the ability to provide quick, effortless interactions for patients within the comforts of their home. The ability to contact a doctor immediately without requiring travel or placement within a stressful hospital environment may increase a patient's likelihood of seeking medical care or consultation, in situations they would otherwise avoid it.

Furthermore, a virtual interaction may alleviate some of the intimidation or invasiveness associated with patient-physician interactions. Establishing a virtual relationship before a physical one may help to build trust over time, preparing a patient for a physical encounter.

The next method utilizes a top-down approach, in which healthcare systems and medical education institutions increase their representation of minority populations. This would demonstrate to minority patients that they belong to the community that is providing their care, and would indeed increase the likelihood of minority patients to establish trust within their providers. Evans (2020) found that Black men assigned to a physician of the same race were more likely to seek preventative care than black men assigned to white or racially dissimilar physicians. Furthermore, from the perspective of the provider, Williams and Rucker (2000) reported that “black and Hispanic physicians are much more likely than other physicians to care for the uninsured and those with Medicaid and to practice in urban and rural underserved areas where the percentage of residents of their racial/ethnic group is high.” Unfortunately, there is a great lack of representation of minorities in medical practitioners. Data from the Association of American Medical Colleges (AAMC) in 2016 shows that, despite representing about 13% of the US population, Black Americans only contribute to 6% of graduating physicians. Hispanic populations actually see even greater disparities, representing 18% of the population, yet only accounting for 5% of graduating physicians. Furthermore, Black people have a significantly lower likelihood of acceptance into a medical school, at 34%, compared to whites and Hispanics, at 44% and 42%, respectively. Due to this lack of minority representation, Black Americans or any minority group within the US has a much lower chance of finding a physician who identifies as the same race as them. (Evans, 2020) In order to reach racial and ethnic population parity, Williams and Rucker report that the United States needs to double the number of Black and Hispanic first-year residents. This would simply require accepting a greater number of minority applicants into medical programs. Evans observes that waiting for minority students to apply to medical schools requires them to have been actively pursuing a challenging career throughout undergrad and perhaps even earlier. AAMC’s data shows similar disparities not just in graduates, but applicants as well, with 7.8% of applicants being Black, and 6.1% of applicants being Hispanic. What Evans would recommend is early education— removing racial bias and providing greater academic

opportunities sooner in a minority child's education, sending a message that anyone can pursue a career in medicine, allowing the timeframe necessary for these children to develop the appropriate skills and competitiveness required to apply to a medical school.

Finally, an entirely unique and distinct form of public outreach to minority patients would include the potential use of social media towards positive patient interaction and the promotion of racial equity. Movements like BLM that are highly prevalent on social media provide the general population with an increased ability to educate themselves on these issues, and enhance their awareness and conscious behavior towards addressing this inequity, to improve systemic racism from a cultural perspective. Furthermore, shifts in access to and how we use social media could be use to combat sociological stress. (Cogburn, 2019) Given mass media has a history of discrimination and dehumanization of black Americans, there are still many negative connotations against black people, and many racially toxic environments on social media. Cogburn calls for further research on how sociocultural phenomenon effect psychological and physiological processes within black people, and how this consequentially plays a role in health inequity. However, this further highlights the importance of forming social media movements such as BLM, as these not only increase awareness to systemic causes of racism, but work to shift the collective narrative from a negative to positive tone, that could in turn help to alleviate cultural norms, beliefs, and behaviors that have promoted racial stereotypes and biases in the past.

By applying this to healthcare, there could be great strides in the capabilities of medical professionals' outreach to minority groups, further alleviating mistrust of healthcare. Social media provides the potential for instantaneous outreach with countless individuals and groups at any given time. Healthcare systems could utilize this advantage by establishing virtual contact with demographics who may be less apt to physically present themselves to clinics and hospitals when they require medical attention. Furthermore, healthcare systems could coordinate outreach with groups like BLM, to establish a layer of racial justice within their virtual healthcare, to promote their commitment to racial equity that would hopefully over time build an increased level of faith in healthcare within minority groups.

Interpersonal Inequalities: Improving Future Medical Education

The other side of patient-physician interaction is, of course, the physician. Given that minority mistrust of healthcare is the result of racial biases and stereotypes of the physician, we cannot simply address mistrust alone— action needs to be taken to change how white physicians view and interact with patients who represent a group unlike themselves. As mentioned earlier, Feagin and Bennefield highlight how conventional discussions of healthcare inequity utilize a practitioner-centric methodology, with a focus on instilling a competency necessary as a result of the patient’s cultural differences. Again, a shift needs to be made from the “threat” produced by the patient to the institutions responsible for this perceived threat. According to Sharma, these cultural differences are actually the result of structural inequalities, which formulate arbitrary “threats” medical students are then informed they must direct their attention towards. What Sharma recommends is not a “cultural” competency, but a “structural” competency. While cultural competency refers to a focus on the traditions, beliefs and values the patient possesses that are different from the provider, structural competency instead focuses on how our healthcare institutions have led providers to view and treat patients differently because of their cultural origin. Similar to Feagin and Bennefield’s perspective, this focus must be shifted away from the faultless patient, and towards the institutions that have created the perceived threats produced by certain patient populations.

This leads into Feagin and Bennefield’s discussion on how systemic, macro-scaled racism is rarely discussed in medical education. Dialogues of interpersonal racism and implicit bias are incredibly important and must be continued, but educators must also not be afraid to discuss the history and prevalence of systemic racism. As Sharma had reported, despite advancements in education on healthcare inequity, there has still been little change in patient care and student behavior. What Sharma recommends is essentially a complete shift in how we approach training and education on healthcare inequity. She describes the current approach to the SDOH within medical education positions them as “facts to be known” rather than as “conditions to be challenged and changed.” To revolutionize education on healthcare inequity, “students must be taught not just *what* they [healthcare inequities] are but also *how* they came to be; *who* benefits and *who* suffers; and *what* can be done about them, *how*, and *by whom*.” From Sharma’s perspective, healthcare inequity training would be no different than education students on

medical procedures—it should be addressed as not just content, but as a skill set, in which an individual has to go beyond understanding, and have the ability to apply their training to their patient care, thus alleviating interpersonal causes of inequity. By providing proper education at the institutional level, this, according to Sharma, has the potential to trickle down and cause mass change in patient-provider interactions.

Institutional Inequalities: A Racial Focus to Healthcare Provision and Allocation

Just as our medical education requires reform, so does our future research on racism within healthcare. Again, future research must incorporate race-specific data and provide a more in-depth analysis of race, alongside other factors such as SES. Given race is a primary indicator of increased risk for comorbidities, COVID-19 infection, and other healthcare issues, the same dedication and thoroughness applied to the study of any medical disease should be applied to the study of racial inequities within healthcare, leading to critical evidence-based interventions (Evans, 2020). This could be achieved by integrating cultural racism into empirical research to better examine racial inequities in healthcare, to better reveal how cultural processes promote structural inequities, since subjective data, such as self reports from patients or providers, may not be the most efficient or accurate way to measure processes associated with racial inequity; furthermore, objectively analyzing personal bias within white practitioners, coping behaviors utilized by Black patients to manage racism (i.e. monitoring speech/dress, minimizing one's perception as a threat, decreasing one's exposure to white or other advantaged groups) can then be used to better understand how they play a role in systemic-level inequities. (Cogburn, 2019) With that said, racism is based on beliefs, prejudice, and subjectivity, and, although there are several instruments of measure, it is difficult to be fully translated into quantitative data, so properly utilizing qualitative data alongside statistical data is incredibly important. "Public health professionals should not be limited to documenting health disparities [quantitatively], but also start bringing forward possible interventions, raise awareness of inequalities, and work to influence policy for change." (Cobbinah, 2018)

Beyond the methods utilized to collect racial data, there also needs to be an increase in the frequency and duration of data collected. As suggested by Williams and Rucker, routine reporting of data

could identify which healthcare institutions most demonstrate racial parity (or, conversely, inequity), given there is likely to be considerable variation in racial disparities across multiple settings. This kind of data can be used to establish benchmarks—levels of excellence, or failures, achieved by different healthcare administrations that could enhance our understanding of the varying medical policies and practices that should be replicated or avoided. Furthermore, contemporary data is not effective in terms of analyzing large, historical trends. If research on racial inequity in healthcare utilized longitudinal data, this would allow future research to analyze generational patterns of health inequity for minorities. (Cobbinah, 2018) Together, increased frequency and duration of racial data would greatly improve our current understanding of racial inequity in healthcare, and the expected trajectory of this inequity in the near future.

Similarly to practicing physicians and medical students, the research conducted by both Ginther (2011) and Gottesman (2011) demonstrated great racial disparities in the representation of minorities in healthcare research. Both of these authors strongly highlight the importance of increased representation of Black and minority researchers. This would allow more research on healthcare inequity to avoid the possibility of any racial bias, and to allow research to be conducted from a Black or minority perspective.

Yet, true systemic change would be incomplete without actual, structural changes to healthcare institutions. These solutions must produce the proper allocation and funding of resources, but also create conscientious provision of healthcare. Socioeconomic inequity, as previously discussed, is incredibly important in alleviating healthcare disparities, but it often ignores the underlying racial inequities. Moving forward, future socioeconomic solutions relying on monetary methods of combating healthcare inequity must not be afraid to consider race when making decisions on allocation of resources and funding, as race has both health and socioeconomic implications. Not only must we improve access and affordability of healthcare, but we must be conscientious of all component's that effect an individual's quality of care, including race.

Again, many scholars acknowledge the need for socioeconomic change within healthcare. Struthers (2020), for example, calls for “structural change at the federal level,” and to “invest in public

health infrastructure.” Van Spall (2020), promotes similar solutions, on an even broader scale. She recommends a “community investment” with a broad, preventative approach to healthcare in various forms, including urban planning, safer housing, eliminating food deserts, and increased public health education and initiatives. Bonner (2020) suggest the formation of “regional collaboratives” to integrate healthcare across multiple locations and specialties, in an attempt to mitigate disparities in access and outcomes. These solutions address the socioeconomic needs within healthcare, but all still lack the crucial component of acknowledging racial disparities. Socioeconomic solutions cannot be generalized— they must be targeted and include racial inequity as a primary factor in their distribution and utilization. As discussed earlier, Caress highlighted the apparent segregation of healthcare— even in similar geographic locations as whites, Black people and minorities still have a lower accessibility and lower quality of care. Shah (2020) offers a rather simple solution for this. She calls for a change in the “allocation of [healthcare] resources”— similar to the previous solutions; but she specifies— “with a higher priority assessment of racial disparities.” This demonstrates the racial focus needed to solve healthcare inequity. To produce the most significant change with socioeconomic solutions, a proper analysis of racial demographics and their associated effects on healthcare within a given population would produce the most productive and meaningful outcomes. Building off of his earlier recommendation of forming regional collaboratives, Bonner also recommends a shift in the geographical distribution of providers, to provide minority communities with closer, easily accessible healthcare. He advises, not just general practitioners, but specialists as well, which would provide more complete healthcare coverage. Similarly, Kullar (2020) calls for a long-term commitment to decrease healthcare disparities in minority communities, through specialized social programs, changes and expansion to healthcare coverage for minorities, and optimizing communication and accessibility of healthcare to these communities.

Finally, systemic changes must be made within the institutions themselves, in terms of how they operate and establish treatment plans for patients. Examples of this were shown through the medical algorithms highlighted by both Evans and Vyas. These algorithms used to predict patient needs or further course of treatments must be redesigned or reconsidered entirely, so that race adjustments do not enhance racial inequality within healthcare. An immediate solution would be to simply remove race adjustments

entirely. This would more or less alleviate much of the inequality seen through algorithms such as the heart failure and kidney transplant scores mentioned by Vyas, for example; however, algorithms such as the one mentioned by Evans, did not input race directly— rather, the inequality was the indirect result of lower healthcare spending in minority patients as a result of racial inequality. So, instead of removing race adjustments entirely, healthcare systems could make a shift from “race correction” to “inequality correction” in which these medical algorithms acknowledge the sociocultural implications of systemic racism within healthcare, and use this to relieve racial disparities instead of promote it. Black and minority patients who are uninsured or of low income, those who are actually at greater risk for the most prevalent underlying conditions according to current data, could then potentially see an increase in treatment and be deemed of higher importance within a healthcare system that has neglected them for far too long.

Return to COVID-19: Long Term Solutions Needed Now

Unfortunately, COVID-19 is still here a year later, and the changes necessary to combat the effects of systemic racism within healthcare are slow, generational operations. The fact of the matter remains— we are still in a pandemic, and the sickness, death, and racial disparity associated with this have not gone away. In an ideal world, we would begin to organized and implement these long-lasting changes now, but we have not been awarded that luxury. The COVID-19 is the eminent healthcare crisis that must be solved so we can once again work towards lasting change.

The previous solutions, while still relevant and incredibly important, exist on a year to decade-long scale, and are generally vague with a broad approach towards addressing systemic issues. In the midst of a pandemic, solutions must be adjusted to a more immediate pace, with an innovative and conscientious approach that produces direct, specified outcomes.

Alleviating mistrust within minority patients is likely to be the hardest challenge on such a short time-scale, but is indeed essential to improving the rate at which Black people and other minorities present for COVID-19 symptoms or vaccination, both of which are incredibly important in preventing severe illness or death. Establishing trust in healthcare takes a generation, not months, but steps can be taken to establish some faith in healthcare professionals as quickly as possible, through rapid public outreach targeted towards minority, low-income, and other at-risk communities. Mein (2020) recommends mobile clinics, or utilizing non-traditional sites like shelters, for quick, basic healthcare, and vaccine campaigns performed in a similar way. This would make receiving healthcare and vaccination much easier for individuals who are avoidant of or unable to access healthcare. Such methods could also be potentially applied to future viral outbreaks, or general immunization. Further public outreach could be successfully achieved through the use of social media. As discussed previously, social media offers instantaneous, global outreach, and if coordinated with groups like BLM, efforts could be made to virtually extend COVID-19 education and vaccine campaigns into minority groups and communities, while advocating for racial justice and parity within healthcare simultaneously.

Current research can shift its greater focus to the immediate threat of COVID-19, while ensuring proper attention to the ongoing racial disparities and the underlying effects of systemic racism. Rapid education can be undergone in a variety of ways, such as developing workshops or brief training programs to quickly inform medical students and professionals, or healthcare institutions, again, utilizing social media to spread increased awareness and empathy to the general public.

Finally, socioeconomic solutions can be applied rapidly by focusing on short-term budgets and immediately available resources. As Shah had recommended, we need a higher priority assessment of racial disparities in regards to how we allocate our healthcare resources, both on a long and short term-scale. Whether it is through the appropriate distribution of vaccines, ensuring appropriate PPE, or

providing minority communities with adequate healthcare resources and critical care coverage, any immediate socioeconomic that accounts for racial disparities in the pandemic has a greater potential to combat the threat of COVID-19 morbidity or mortality.

Conclusion

There are very clear disparities in how African Americans and other minority groups are being impacted by the COVID-19 pandemic, and this phenomenon is not new, but part of greater trends throughout healthcare, linked to both past and present-day factors that have created systemic racism within modern healthcare. Socioeconomic solutions alone, while important, can not fully address racism. Changes in financial policy will inevitably have a greater impact on white Americans over African Americans and other minorities, if the component of systemic racism is ignored.

Systemic racism is an incredibly complex problem, but improving our research on racism within healthcare, improving our education of systemic racism, and increasing minority representation within healthcare are the first steps in increasing societal awareness and producing a new generation of medical professionals that are capable of combating systemic racism within healthcare. Furthermore, institutional and federal level policy changes must continue to address socioeconomic solutions, while making minorities a priority in these future discussions, through public outreach, proper allocation and funding, and conscientious provision of healthcare.

We must also continue to support the BLM movement, as it has played a vital role in combating racial inequality. Through coordinated outreach with groups like BLM who promote racial justice, healthcare has the potential to provide equitable support and guidance on a rapid, global scale. We must continue to use social media as a force for good, to provide ongoing support for movements against racial injustice and to produce a new generation of people who are capable of putting their trust and faith in healthcare professionals and institutions.

Finally, these long term solutions, while pivotal for the betterment of our society, mean nothing if we cannot escape our current crisis. We must do what we can to adapt these slow changes to a rapid timeframe, by taking an aggressive approach to our research and education on racial disparities within COVID-19, utilizing rapid public outreach through mobile clinics and vaccine campaigns to promote trust within our healthcare's management of the pandemic, and ensuring we account for the apparent racial disparities in how we provide vaccinations, resources, and organize our healthcare spending during this crisis.

Again, COVID-19 is not an isolated occurrence. It is part of a large trend rooted deep within human history, and this trend will continue unless further research and action are taken to make lasting changes. As Van Spall (2020) states, "we do not seek a 'new normal' as a return to our pre- COVID-19 state perpetuates the same disparities. Rather we aspire for a better normal." This will not be the last time we see a global health crises on the same scale as COVID-19. Once we have defeated COVID-19, we need to think long term, with a focus on institution and societal level solutions, so that when the next crisis comes, the people of the world can fight the problem together as equals.

References

- Anyane-Yeboah, A., Sato, T., & Sakuraba, A. (2020). Racial disparities in COVID-19 deaths reveal harsh truths about structural inequality in America. *Journal of Internal Medicine*, 288(4), 479-480. doi: 10.1111/joim.13117
- Association of American Medical Colleges. (2019). Current Trends in Medical Education: Facts and Figures.
- Bibbins-Domingo, K. (2020). This Time Must Be Different: Disparities During the COVID-19 Pandemic. *Annals of Internal Medicine*, 173(3), 233-234. doi: 10.7326/M20-2247
- Blundell, R., Costa Dias, M., Joyce, R., & Xu, X. (2020). *Journal of Applied Public Economics*, 41(2), 291-319. doi: 10.1111/1475-5890.12232
- Bonner, S. N., Wakam, G. K., Kwayke, G., & Scott, J. W. (2020). COVID-19 and Racial Disparities. *Annals of Surgery*, 272(3). doi:10.1097/sla.0000000000004111
- Brodie, M., Hamel, L., Kirzinger, A. & Muñana, C. KFF COVID-19 Vaccine Monitor: December 2020. Kaiser Family Foundation. <https://www.kff.org/coronavirus-covid-19/report/kff-covid-19-vaccine-monitor-december-2020/>.
- Carens, B. (2020). Hospital Care in Black and White: How Systemic Racism Persists. *Center for New York City Affairs*. <http://www.centernyc.org/urban-matters-2/2020/9/15/hospital-care-in-black-and-white-how-systemic-racism-persists-saved>
- Chowkwanyun, M., & Reed, A. L. (2020). Racial Health Disparities and Covid-19 — Caution and Context. *New England Journal of Medicine*, 383(3), 201-203. doi:10.1056/nejmp2012910
- Cobbinah, S. and Lewis, J. (2018). Racism & Health: A public health perspective on racial discrimination. *Journal of Evaluation in Clinical Practice*, 24(5), 995-998. doi: 10.1111/jep.12894

- Cogburn, C. (2019). Culture, Race, and Health: Implications for Racial Inequities and Population Health. *The Milbank Quarterly: A Multidisciplinary Journal of Population Health and Health Policy*, 97(3), 736-761. doi: 10.1111/1468-0009.12411
- Cooper, L. et al. (2012). The associations of clinicians' implicit attitudes about race with medical visit communication and patient ratings of interpersonal care. *American Journal of Public Health*, 2012, 102, 979-987. doi: 10.2105/AJPH.2011.300558
- Dahab, M. et al. (2020). COVID-19 control in low-income settings and displaced populations: What can realistically be done? *Conflict and Health*, 14(1). doi:10.1186/s13031-020-00296-8
- Evans, M. et al. (2020). Diagnosing and Treating Systemic Racism. *The New England Journal of Medicine*, 383, 274-276. doi:10.1056/NEJMe2021693.
- Garg S. et al. (2020). Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 — COVID-NET, 14 States, March 1–30, 2020. *Morbidity and Mortality Weekly Report, Centers for Disease Control and Prevention*, 69, 458–464. doi: 10.15585/mmwr.mm6915e3
- Ginther, D.K. et al. (2011). Race, ethnicity, and NIH research awards. *Science*, 333, 1015-1019
- Goodnough, A. & Hoffman, J. (2021). The Wealthy Are Getting More Vaccinations, Even in Poorer Neighborhoods. *The New York Times*. <https://www.nytimes.com/2021/02/02/health/white-people-covid-vaccines-minorities.html>
- Gottesman, M. (2011). Valuing diversity at NIH. *NIH Catalyst*, 19, 2.
- Feagin J. & Bennefield, Z. (2014). Systemic racism and U.S. health care. *Social Science & Medicine*, 103, 7-14. doi: 10.1016/j.socscimed.2013.09.006. PMID: 24507906.

- Feiner, J., Severinghaus, J. & Bickler, P. (2007). Dark skin decreases the accuracy of pulse oximeters at low oxygen saturation: the effects of oximeter probe type and gender. *Anesth Analg*, *105*, 18-23. doi: 10.1213/01.ane.0000285988.35174.d9
- Kanter, G., Segal, A., & Groeneveld, P. (2020). Income Disparities In Access To Critical Care Services. *Health Affairs*, *39*(8). doi: 10.1377/hlthaff.2020.00581
- Kullar, R. et al. (2020). Racial Disparity of Coronavirus Disease 2019 in African American Communities. *The Journal of Infectious Diseases*, *222*(6), 890-893. doi:10.1093/infdis/ jiaa372
- Louis-Jean, J., Cenat, K., Njoku, C. V., Angelo, J., & Sanon, D. (2020). Coronavirus (COVID-19) and Racial Disparities: A Perspective Analysis. *Journal of Racial and Ethnic Health Disparities*, *7*(6), 1039-1045. doi:10.1007/s40615-020-00879-4
- Malat, J. et al. (2010). White doctors and nurses on racial inequality in health care in the USA: whiteness and colour-blind racial ideology. *Ethnic and Racial Studies*, *33*, 1431-1450.
- Mein, S. A. (2020). COVID-19 and Health Disparities: The Reality of “the Great Equalizer”. *Journal of General Internal Medicine*, *35*(8), 2439-2440. doi:10.1007/ s11606-020-05880-5
- Moore, J. et al. (2020). Disparities in Incidence of COVID-19 Among Underrepresented Racial/Ethnic Groups in Counties Identified as Hotspots During June 5–18, 2020 — 22 States, February–June 2020. *Morbidity and Mortality Weekly Report, Centers for Disease Control and Prevention*, *69*(33), 1122-1126. doi:10.15585/mmwr.mm6933e1
- Muñoz-Price, L. (2020). Racial Disparities in Incidence and Outcomes Among Patients With COVID-19. *Journal of the American Medical Association*, *3*(9). doi: 10.1001/jamanetworkopen.2020.21892
- Patel, J. et al. (2020). Poverty, inequality and COVID-19: the forgotten vulnerable. *Public Health*, *183*: 110-111. doi: 10.1016/j.puhe.2020.05.006

- Phillips, N., Park, I., Robinson, J. R., & Jones, H. P. (2020). The Perfect Storm: COVID-19 Health Disparities in US Blacks. *Journal of Racial and Ethnic Health Disparities*, 23, 1-8. doi: 10.1007/s40615-020-00871-y
- Raifman, M., & Raifmann, J. (2020). Disparities in the Population at Risk of Severe Illness From COVID-19 by Race/Ethnicity and Income. *American Journal of Preventive Medicine*, 59(1), 137-139. doi: 10.1016/j.amepre.2020.04.003
- Ridley, C.R. (1984). Clinical treatment of the non disclosing black client. *American Psychologist*, 39, 1234-1244. doi: 10.1037//0003-066x.39.11.1234
- Sabin, J. et al. (2009). Physicians' implicit and explicit attitudes about race by MD race, ethnicity and gender. *Journal of Healthcare for the Poor and Underserved*, 3, 896-913. doi: 10.1353/hpu.0.0185
- Shah, M., Sachdeva, M., Dodiuk-Gad, R. (2020). COVID-19 and Racial Disparities. *Journal of the American Academy of Dermatology*, 1(83), 35. doi: 10.1016/j.jaad.2020.04.046
- Sharma, M. et al. (2018). Teaching the Social Determinants of Health: A Path to Equity or a Road to Nowhere? *Academic Medicine: Journal of the Association of American Medical Colleges*, 93(1), 25-30. doi: 10.1097/ACM.0000000000001689
- Smedley, B.D. et al. (2003). Unequal treatment: confronting racial and ethnic disparities in health care. *National Academies Press*. doi: 10.17226/12875
- Snipes, S. et al. (2011). Is race medically relevant? A qualitative study of physicians' attitudes about the role of race in treatment decision-making. *BMC Health Services Research*, 11, 183. doi: 10.1186/1472-6963-11-183
- Stein, R. & Ometa, O. (2002). When public health crises collide: Social disparities and COVID- 19. *International Journal of Clinical Practice*, 74(9). doi: 10.1111/ijcp.13524

- Struthers, S. A., & Sanghavi, S. F. (2020). Identifying Disparities in the COVID-19 Pandemic: The Quest for Data. *Kidney Medicine*, 2(5), 517-519. doi:10.1016/j.xkme.2020.08.005
- Townsend, M. J., Kyle, T. K., & Stanford, F. C. (2020). Outcomes of COVID-19: Disparities in obesity and by ethnicity/race. *International Journal of Obesity*, 44(9), 1807-1809. doi:10.1038/s41366-020-0635-2
- Van Ryn, M., & Burke, J. (2020). The effect of race and socio-economic status on physicians' perceptions of patients. *Social Science & Medicine*, 50, 813-828. doi: 10.1016/s0277-9536(99)00338-x
- Van Spall, H., Yancy, C., & Ferdinand, K. (2020). COVID-19 and Katrina: recalcitrant racial disparities. *European Heart Journal*, 41(36), 3390-3393. doi:10.1093/eurheartj/ehaa488
- Vyas, D., Eisenstein, L. & Jones, D. (2020). Hidden in Plain Sight— Reconsidering the Use of Race Correction in Clinical Algorithms. *The New England Journal of Medicine*, 383(9). doi: 10.1056/NEJMms2004740
- Webb, M., Napoles, A., & Perez-Stable, E. (2020). COVID-19 and Racial/Ethnic Disparities. *Journal of the American Medical Association*, 323(24), 2466-2467. doi:10.1001/jama. 2020.8598
- Williams, D. & Rucker, T. (2000). Understanding and Addressing Racial Disparities in Health Care. *Medicare & Medicaid Research Review*, 21(4), 75-90. PMID: PMC4194634.