HEALTH EQUITY IN PAIN MANAGMENT DURING THE OPIOID EPIDEMIC: HOW STEREOTYPES, RACISM, BIAS HARM VULNERABLE POPULATIONS

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ABSTRACT

Bias and stereotypes around race, gender, sexuality, and class have been concepts that have and continue to plague medicine. Whether conscious or not, physicians have demonstrated bias when prescribing opioids to Black, Indigenous, and people of color (BIPOC) populations. These patients deserve proper pain control. In 2021, the CDC stated 75,673 people died in the United States from opioid overdose. Because of this, the medical community has an obligation to treat every patient equally and fairly regardless of their skin color or background. With the nature of pain as it is, there exists no clinical, objective measurement of pain. Currently, vulnerable populations, such as individuals with obstacles to self-advocacy, are being left to suffer through pain crises. Additional oversight and inclusion of healthcare equity is needed to combat this unethical gap in patient care. There are numerous ways to create pain management equity, in terms of conversations around pain along with the proper distribution of pain medication, especially opiates. The way to do this is through conversation and discussions around systemic racism and implicit bias. These can take the form of rounds or group discussions within a healthcare setting. There are many ways to combat this bias, but among the first should be discussion.

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CHAPTER 1: INTRODUCTION

I start by providing an overview of the opioid crisis, how it links to social racism, bias in society and healthcare and introduce bias training/discussion as a means to move forward. Chapter 2 offers a discussion around articles that speak about deficits in pain management for BIPOC patients, racism in the healthcare system around pain management, and the role implicit bias training plays in the healthcare field today. Chapter 3 is a literature review with a more indepth look at the articles used in the discussion section. I conclude with possible implementations of implicit bias training, ways to address and combat implicit bias moving forward, and shortcomings of implicit bias training.

Systemic racism continues to be a problem and has plagued this country since its inception. It exists across most institutions and systems within this country. Discussions of systemic and historic racism are becoming more common and visible within this country. As this issue grows and becomes more prominent, the need to address and solve it as soon as possible only becomes more important.

The United States was built with slaves brought from Africa during the Atlantic Slave trade. Although today free, the decendants of these slaves lived segregated from the rest of the American population. They were kept apart by racist policies such as Jim Crow, redlining, and segregation. Today, the days of segregation and Jim Crow may have ended, but their racist echoes still haunt this country.

Recently, injustices are being brought to light in the form of retribution and justice for past harms. Discussions around events such as the the US Public Health

Service Study of Untreated Syphilis at Tuskegee syphilis experiment, Tulsa Race Riots, and killing of black men by law enforcement are becoming more and more common.

This paper focuses primarily on the healthcare field and how implicit bias of healthcare workers limits access to pain management for vulnerable populations. Although there are many vulnerable populations within this country including, but not limited to transexual, indigenous, and undocumented, this paper will focus primarily on the vulnerable racial groups of people of color.

Pain is measured subjectively in the healthcare field and there exists no objective way to measure it. Therefore, it falls entirely on the practitioner to determine the severity of a patient's stated pain and the best course of action for treatment. The issue is that humans are not blank slates. We all have inherent biases, even though we may not wish to see ourselves as having racist tendencies. Ignoring the possibility of bias in a healthcare provider can leave people to suffer.

There are many ways to treat acute and/or chronic painincluding NSAIDS, SNRIs, physical therapy, but one of the most effective ways is through the use of opiates. Opiates are psychoactive substances that relax the body and offer temporary relief of pain. They work by activating certain receptors on nerve cells called G protein coupled receptors. There are different classes of G protein coupled receptors (Mu, delta, and kappa). Different classes of opiates work on different receptors treating pain differently. There are many types of opiates with different strengths. Fentanyl, for instance, is estimated to be 80 to 100 times stronger than morphine and the effects of pain relief last significantly longer. However, opiates are not without their drawbacks.

We are currently within an opioid overdose epidemic. Stimulation of the G coupled protein receptors also creates an addictive euphoria along with the addictiveness of decreased pain. Opiates also temporarily decrease the respiratory drive in a person's brain; resulting in death by hypoxia if used at a high enough dosage. There are medications, such as naloxone, that rapidly reverse the effects of opiates and return a person's respiratory drive to normal if used in time; potentially saving a person's life who has overdosed on an opiate.

According to the CDC, 75,673 people overdosed on opioids in the year 2021, up from 56,064 in the year 2020 (CDC, 2021). Overdoses and overdose related deaths have been on the rise across all communities in the United States, especially since 2019 and the onset of Covid-19.

Opioids can be incredibly addicting and recovery for those addicted is incredibly difficult as well. Opioid dependence treatment typically takes the form of outpatient methadone or buprenorphine (two long acting opioids that temporarily quell opioid cravings and withdrawal symptoms) along with outpatient therapy.

Within the medical field, bias is present and proven to involve patients of color, especially Black patients. This bias is multifaceted, it comes in the form of healthcare professionals being less able to identify pain and discomfort in people of color, as well as healthcare professionals being less sympathetic to the sight of pain in people of color (MATHUR 2014).

Historic stereotypes are still common in medicine. One persistent stereotype claism blacks are more tolerant to pain or have "thicker skin" compared to non-black patients (HOFFMAN 2016). There is also a paternalistic racism present among many

healthcare workers with somebelieving black patients are more likely to overdose or misuse their medication. This bias is unfounded and not true. Whether this paternalism is out of a misguided attempt to aid patients of color or a fear that having patients who have overdosed will reflect poorly on them, doctors as a whole are less likely and more uncomfortable to prescribe peoples of color (especially black patients) with prescriptions for opiates. Because of the suffering this provider bias causes, the need for it to be addressed is pertinent.

In addition to provider bias, it is also noteworthy that communities consisting of people of color have less access to pharmacies with opioid medications stocked (GHOSHAL 2020). It is more difficult to get medications within these communities. Despite major cities like Philadelphia and Los Angeles having wealth and resources, these resources are not distributed properly. Strict lines are drawn around race in every American city and lines drawn in areas with a majority of black and Hispanic citizens are given less. There is not a shortage of medications everywhere throughout a city, just within these struggling communities. Shipments of adequate medications and pharmacy supplies stocks can be sent everywhere in America, except there. Beyond just opiates; shortages of vaccines, syringes, and other drugs are common in these pharmacies. (CENTER USCS 2021).

At the same time, Hispanic and black people are the least likely to be insured within the United States (HILL 2021). Being uninsured creates additional barriers to seeking proper care, seeing a trained specialist, and being prescribed and filling a medication. This is worth considering because provider bias is irrelevant if people of color cannot even speak with a healthcare worker due to lack of insurance.The most

commonly uninsured demographic in America is Hispanic. This is largely due to undocumented Americans being afraid to seek Medicaid or Medicare. These patients are left to navigate the already incredibly complex American healthcare system alone and without financial assistance.

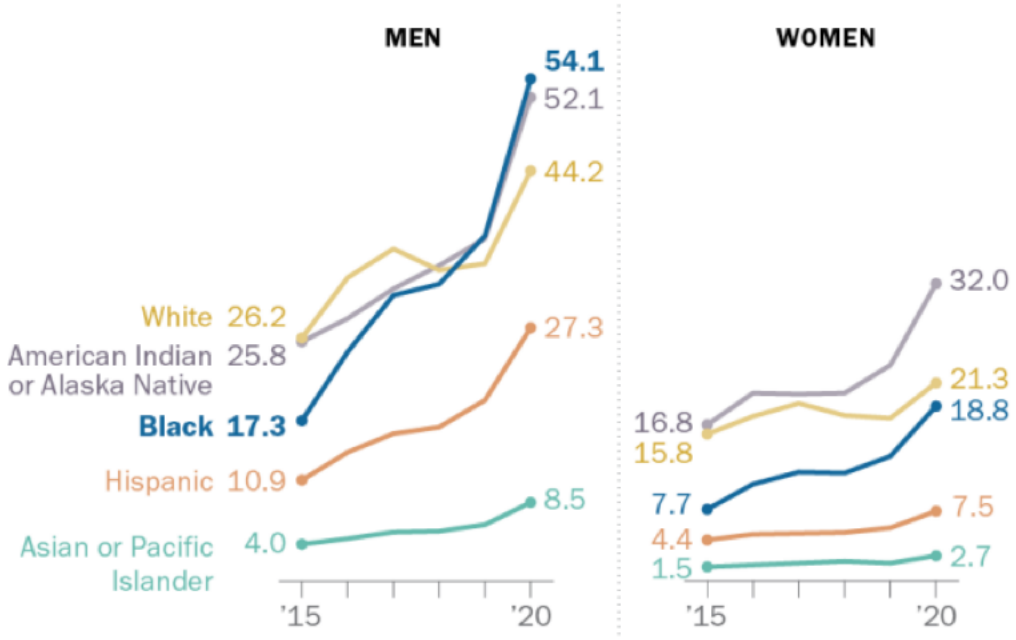
Black patients are also over represented among Medicare and Medicaid users (HILL 2021). These government insurance programs are helpful to many and aid those who cannot afford private insurance or do not receive insurance through work. Government programs are not without their faults. Doctors have a decision as to what insurance they accept in their practices and many private practices do not accept these insurances, thus creating long wait times at public hospitals with doctors that do accept Medicare and Medicaid. For primary care checkup there have been wait times for months to see a practitioner who accepts government insurance. At the same time, oversight can be more strict with medication referrals and is more often to be denied compared to private insurance as a result of this increased oversight.

The solution to this complex issue is not to simply increase the amount of opiates given to people of color. This problem is much more nuanced than a fix with a simple solution. Within the past five years, black men have overtaken white men and Native American men as the demographic most likely to die from an overdose (Figure 1). Blatantly throwing opiates into the black community will do nothing to create equity of pain management and will only increase overdose deaths of black men, which is already steeply on the rise.

Figure 1

Drug overdose death rate among Black men in the U.S. more than tripled between 2015 and 2020

U.S. drug overdose death rate per 100,000 people, by race and ethnicity (age-adjusted)



Note: All racial categories include people of one race, as well as those who are multiracial. For those who are multiracial, the CDC selects a single race to allow for consistent comparisons. All racial groups refer to non-Hispanic members of those groups, while Hispanics are of any race.
Source: Centers for Disease Control and Prevention.

PEW RESEARCH CENTER

What is the best course of action to create equity of pain management without unnecessarily increasing the opioid epidemic? The solution lies in discussion and properly addressing the issue in an open and honest way. This solution has already been implemented in addressing other forms of systematic racism in the United States and should work here; primarily, implicit bias training.

Implicit bias training is becoming more common in the healthcare setting and studies have shown it to be effective in addressing systemic racism. In the same way companies implement diversity and inclusion awareness programs to address casual racism and microaggressions within the workplace and academic settings,implicit bias training can be used to address biases healthcare workers may unknowingly carry in a workplace setting. This training can help raise awareness about how bias may be impacting their patients' health and care. Oftentimes, racism can be invisible to those not directly affected. By bringing it to the forefront of conversation and into the light, the ugliness of racism becomes incredibly difficult to hide. This is the importance of discussion and implicit bias training.

CHAPTER 2: GAPS IN PATIENT CARE BASED ON DEMOGRAPHICS AND STEREOTYPES IN MEDICINE

Rationale for why patients are denied pain medications

In the United States, studies have shown that pain is less likely to be managed and properly treated in people of color compared to white patients. Recently, the plight of people of color has been brought to the forefront in the healthcare field. The unsatisfactory treatment of their pain is just another example of inadequate care as a result of bias.

In regard to the treatment of both acute and chronic pain, black and brown patients tend to receive less adequate care, patients who use translators relieve lower standards of care, lower doses of pain medication, are less likely to receive a prescription for a pain medication, and more likely to have their complaints ignored.

Examples abound. BIPOC patients with chronic non-cancer pain have been found to have their pain ignored, less pain counseling, and decreased pain management in comparison to white patients (GHOSHAL 2020). With the nature of pain being what it is, perception of pain for the patient in many ways is enough to determine unsatisfactory treatment. Studies of patients with sickle cell disease, a disease which primarily affects people of African ancestry, have shown 16% more likely to feel their pain is inadequately treated compared to Black patients without sickle cell disease (HAYWOOD 2014). When someone says that they feel pain, this does not mean it is true, but there is a strong pattern that black people with Sickle Cell Disease report their pain as undermanaged.

What are the psychological effects that improperly treated pain have on people? A study on lower back pain found that black and Hispanic patients were more likely to have less satisfactory pain management and more likely to feel discriminated against. At the same time, there was a positive correlation between the amount of perceived discrimination and rates of depression (ZIADNI 2020), further illustrating the multifaceted effects of systemic racism in America. In another study that looked at middle-aged African American women with osteoarthritis, it was found that the greater they felt perceived discrimination in regards to their osteoarthritis pain management, the greater depressive symptoms they experienced. The study concluded that racial discrimination was significantly associated with pain intensity and depressive symptoms (WALKER 2018).

Pain is mismanaged for BIPOC patients, but why does this occur? What is the rationale for this mismanagement and who is responsible? The answer is a combination of implicit bias and racism, both historic and systemic.

Scientific and historic racism go hand in hand. For centuries, black patients have been subjected to scientific experiments. Examples include, but are not limited to: Henrietta Lacks and her *immortal* HELA cells, Marion Sims, the infamous *Father of Gynecology* and his experimentation on black slave women, and the Tuskegee Syphilis experiment. These and other racist experiments both have and have not benefited the public, but all have been at great expense to the individual and black people as a whole. Stereotypes around ethnic groups existed to dehumanize blacks and make mistreatment of them easier to tolerate.

In the medical field today, the belief that black people are “sub-human” or “built to be slaves” is no longer present, but historic and biological stereotypes have stuck around and are an explanation for the undertreatment of BIPOC pain. Physicians are significantly less likely to prescribe black patients opiates in an emergency room setting. For example, in extreme bone fractures 57% prescribed opiates for black patients as compared to 74% for white patients, and in cancer related pain only 35% of black patients receive appropriate pain medication.

A 2016 study (HOFFMAN 2016) found that a major cause of this lack of pain treatment is based on stereotypes, specifically the false belief that black patients feel less pain compared to non-black patients. Physicians were found to underestimate black patient pain 47% of the time compared to 33.5% of the time compared to white patients. When medical students and resident doctors were asked about biological differences between races it was found that almost half of the cohort endorsed beliefs that black people have thicker skin compared to white people and black people are more tolerant of pain.

Implicit bias is defined as either having a preference for or an aversion to a group of people, without a conscious knowledge of this bias. It has been well known clinicians are more responsive and better able to recognize pain in white patients compared to black patients. Research shows this may be an unconscious decision unknown to the clinician. A 2014 study (MATHUR 2014) had participants respond to the sight of pain on a computerized patient. It was found that women overall are more responsive to recognizing pain compared to men, that white people are less likely to recognize pain in

black people compared to other white people, and most surprisingly, that black people are more likely to recognize pain in white people compared to other black people.

A 2021 study (FISCELLA 2021) oversaw 96 physicians who treated standardized patients (white and black) for the same complaint: uncontrolled bone pain from metastatic lung cancer. The physicians did not know they were standardized patients. Assessment of the treatment of the standardized patients revealed physicians gave a lower quality of care to black patients. Black patients received less opiates prescriptions, less medication refills, and significantly less patient-centered pain communication. All standardized patients had the same complaint, but were treated differently based on their race.

Why this occurs is not known or completely understood. One speculation is that the overrepresentation of white people in media (movies and television) has more socialized people to emotions in white people. Although knowing the exact cause is not necessary or entirely pertinent to solving this problem and creating equity of pain management across all races, it is interesting to speculate on.

Lastly, there is a bias amongst the public and physicians about which patients are more likely to misuse prescription opiates. BIPOC patients are prescribed opiates at half the rate as white patients yet, it is believed that BIPOC individuals are more likely to misuse medications, use their medication not as prescribed (illegally), sell their medication, become addicted to it, not seek treatment if addicted, and overdose on pain medication. These beliefs are unfounded and false, but they still persist.

the crack cocaine epidemic, which primarily affected black individuals, may be part of the basis for these incorrect beliefs. Stereotypes exist from this including that

blacks are more likely to become addicted to drugs along with black overrepresentation in the prison system for drug offenses; stemming from systemic racism. In the media, when there is a portrayal of white or middle class people with drug addictions, a background or cause is included as to how they become addicted, while black characters are often left without a backstory and their addiction is just part of who they are, making their plight less sympathetic. BIPOC patients also have more barriers to seeking treatment due to economic and limited community resources. Whether out of unconscious bias, self preservation (the practitioner thinking overdoses would make them look poorly) or a misguided beneficence and wanting to reduce addiction in the BIPOC community, physician bias against BIPOC patients has led to discrimination in the form of fewer prescriptions for pain management compared to white patients.. Racism plays a role in the inability to receive these medications.

Opiates and Racism

In the United States there is an opioid epidemic. This could be a justification for limiting the amount of pain medication distributed. Unfortunately, this is not done equitably with black and brown patients who receive inequitable and incomparable pain management. This is done due to a multitude of possible reasons, but the one that stands out is implicit bias. Adding to that is an unfounded and untrue belief that BIPOC patients are more likely to misuse prescription opiates.

A 2019 study (SWIFT 2019) looked at a cohort of 3,528 young adults and their rates of opiate misuse. The study found that black patients were less likely to misuse their opiate prescription and that healthcare racial discrimination is a risk factor for opiate misuse. Again a separate 2021 study (BROWN 2021) had similar findings that amongst the Covid-19 epidemic, rates of opiate misuse rose for all ethnic groups. But, BIPOC groups were not disproportional and that racial discrimination is heavily associated with opiate prescription misuse.

With racial discrimination being linked to opiate misuse it seems the best way for physicians to curtail opiate misuse is limiting patient experience with discrimination. For physicians with good intentions and hoping to limit drug overdoses, the best solution is simply not to discriminate against your patients based on their race. While rates of opiate misuse among BIPOC communities is better than white communities, for those who do develop an addiction, recovery outcomes are unfortunately not up to par.

Opiates are extremely addicting and life-consuming. For most, recovery requires a lot of outside help from a combination of community support, government programs,

medical personnel, and loved ones. A large part of opiate addiction recovery is proper treatment with a long acting opiate substitute to control withdrawal symptoms. Typically, either in the form of methadone or buprenorphine.

The opioid epidemic has made visible the structural barriers to treatment systemic racism created in BIPOC communities and the resulting worsened outcomes. When black patients have access to proper and higher quality opiate recovery treatment programs their recovery rates were significantly improved and on par with other ethnic groups (PARLIER-AHMAD 2021).

In another study, when American Indian/American Alaskans predictors for opiate treatment relapse were examined, it was found that discrimination is one of the strongest predictors for poor methadone maintenance therapy (PRO 2020). With this being the case, the best way to fight poor opiate recovery outcomes in the BIPOC community is addressing structural racism and economic barriers limiting recovery.

Discrimination has also been linked to higher rates of mental illnesses and a decreased rate at which opioid dependence is reported. Thus indicating that BIPOC communities developed coping methods when faced with high levels of discrimination transfers into how they deal with other problems such as mental disorders or opiate addiction (JONES 2019).

Fighting Implicit Bias With Training

A 2015 systematic review of 15 different studies (HALL 2015) looked at how implicit bias impacted healthcare professionals' attitude toward people of color compared to white patients. This review determined that providers, in general, had a more positive opinion of white patients and a more negative one towards people of color. This bias plays into and adds to systemic racism: it makes opiate treatment recovery more difficult for minority populations, it makes it harder to access certain medications, and even be prescribed medication at all. But, most of all, it takes away the trust BIPOC patients have in the healthcare system.

Just like with systemic racism, the first step to solving implicit bias is to talk about it. Implicit bias is invisible and can live in anyone's subconsciousness. In the healthcare field, group discussions and presentations are one of the best ways to address this problem.

A 2019 study (SHERMAN 2019) created a workshop for fighting implicit bias that was attended by a group of residents and hospital faculty leadership. Six months later, the residents and faculty leaders were asked how they felt about the implicit bias workshop and how it was implemented into their own practice. All those involved found the workshop to be empowering and helpful for their future practice and treatment of diverse patient populations.

A separate 2019 study (PERDOMO 2019) looked at the implementation of healthcare equity rounds in fighting implicit bias. For this study, a longitudinal quarterly case series was developed to address topics such as structural racism and implicit bias in

patient care. In this study, 66 participants attended a one-hour session four times in a year. At the end of the series, over 88% indicated that healthcare equity rounds promoted personal reflection on implicit bias and systematic racism. Over 75% endorsed that healthcare equity rounds impacted their own clinical practice.

In 2012, a study (DEVINE 2012) looked at the impacts of a course that raises awareness about implicit bias and cultural sensitivity. The study lasted 12 weeks and found that by the end of the course participants were significantly more concerned about discrimination and implcicit bias in comparison to the control group who had not undergone an implicit bias course.

Another great and fascinating advancement came in the form of a 2019 study (QIAN 2019) that looked at the long term impacts of implicit bias training in five-year-old Chinese school children. At the beginning of the study, the children had an inherent pro-Asian and anti-black bias. The anti-bias training came in the form of individualizing faces rather than identifying them as solely a part of an ethnic group. The results were successful and found that even months after the study, children in the study were less biased than prior to the study. This shows the positive effects of anti-bias training in children. In theory, it should transfer properly into the form of anti-racism training as well. Implementations of critical race theory into public schools fills this gap in America and hopefully will be supported by a new generation of anti-racist policy and increased societal equity.

Either in the form of a workshop, group discussion, rounds, etc., discussion about issues like systemic racism and implicit bias make a huge impact on practitioner awareness and care for patients. If something as simple as four hours a year in training

can change the way over 88% of doctors feel about proper management of vulnerable populations in the healthcare setting, it seems like a simple solution with no downside for a minimalist approach.

CHAPTER 3: LITERATURE REVIEW

Gaps in patient care based on demographics and Stereotypes in medicine; Rationale for why patients are denied pain medications

Reviewing physician treatment of ethnic minorities has shown bias and stereotypes can influence their treatment in the healthcare system. Pain being subjective, the assessment of it falls upon the practitioner to define its severity. Time and time again studies have shown that implicit bias and stereotyping of patients from minority backgrounds exists.

A 2016 paper (HOFFMAN 2016) looked at the role implicit bias plays in the healthcare system. The study sought to determine the role that stereotypes played regarding black patients around pain. These stereotypes included “Black people have thicker skin compared to non-black people”, “Black patient’s blood coagulates faster than non-black patients”, “Black patients have less sensitive nervous systems or over-dramatize pain”, and a general belief that blacks and whites are fundamentally different in a biological sense.

This paper contained two separate studies. The first study assessed the average racial stereotypes held amongst “medical laymen” (those not within the medical field). A second study assessed the racial stereotypes held by those in the medical field. The paper found that in study one “medical laymen” on average held some form of a pain-related racial stereotype regarding black patients and pain. Study two found that among participants in the medical field, almost half of medical students and resident doctors

endorsed beliefs stereotyping black patients' pain. Also, these participants were more likely to rate white patients' pain as more legitimate and higher in severity than that of black patients' pain.

A 2020 meta-analysis (GHOSHAL 2020) looked at the role systemic racism in medicine plays for care in non-cancer related chronic care pain management for BIPOC patients. This piece is of particular importance because of the additional vulnerability of chronic care patients. The meta-analysis found that in multiple settings BIPOC patients were less likely to have their pain considered or be properly treated for their pain. It also found that BIPOC patients who did receive care were more likely to be discriminated against by the medical community. Black patients were more likely to have their urine tested before receiving opioid treatments as well as to be denied early refills for opioid medications. Black patients were more likely to have their opioid prescription pulled after testing positive for other illicit drugs, and black patients were more likely to have their pain medications dosages tapered. Most importantly, the meta-analysis found that black patients were less likely to receive an opioid prescription in comparison to white patients as well as be given a prescription for naloxone when they were prescribed opiates. Indicating a general mistrust within the medical community regarding black patients.

This study also looked at pharmacy access and concluded another empirical cause of BIPOC patients receiving inadequate pain management is that pharmacies within predominantly black neighborhood had inadequate medication supplies of almost all medications and that many predominantly black neighborhoods suffer from "Pharmacy Deserts" similar in the way these neighborhoods also suffer from "Food Deserts" as there is a much lower rate per capita of pharmacies in these neighborhoods. In addition, access

to medical insurance and language barriers also played a role in inferior pain management for BIPOC patients.

A 2018 study (WALKER 2018) looked at the interconnection between racism, depression, and chronic pain among African American women. African American women, over the age of 65, have one of the highest rates of pain among any demographic cohort in America, over 56% report unresolved chronic pain. In this study, 120 African American women aged 50-80 with self-reported osteoarthritic pain answered a survey about racial discrimination, pain, and depression.

The study found that the higher the self-reported healthcare racial discrimination percieved by the participant, the higher rates of pain and depression. This correlation indicates that pain and depression could be linked with racial discrimination regarding proper pain and depression treatment and that by decreasing racial discrimination there would be a correlated decrease in pain and depression among African American middle-aged women.

A 2021 study (FISCELLA 2021) looked at the role implicit bias plays in relation to race in the treatment of patients with metastatic cancer. Ninety-six physicians saw unannounced standardized black and white patients, each with the same complaint of metastatic cancer related bone pain. These encounters were recorded and evaluated. Compared to white patients, black patients were given a lower quality of care and less likely to be counseled on pain.

A 2020 study (ZIADNI 2020) examined the perceived racial discrimination in regard to treatment of lower back pain for Hispanic, black, and white patients with a history of lower back pain. The study found that black and Hispanic patients were

significantly more likely to have experienced perceived discrimination during treatment for their chronic pain. There was also a positive correlation between the amount of perceived discrimination and the severity of depressive symptoms, indicating the psychological effects of discrimination along with the physical ones.

A 2014 study (MATHUR 2014) examined practitioner reception to pain of patients by race. White and black practitioners saw both black and white patients, then their perception of the patients' pain was compared. The researcher found that black patients were more likely to have their pain ignored or be unrecognized compared to white patients and that black practitioners were more likely to recognize the pain of a patient, regardless of their race.

A 2014 article (HAYWOOD 2014) examined the perceived discrimination faced by patients with sickle cell disease, a disease that primarily effects patients with African ancestry. The study asked 291 people with sickle cell disease about their treatment and any discrimination they had faced. Patients with sickle cell survey results were compared to black patients without sickle cell given from a previous study. It was found patients with sickle cell disease reported a greater amount of discrimination compared to black patients without sickle cell disease and that patients with sickle cell disease felt their discrimination was primarily the result of sickle cell disease, even more so than their race.

A 2018 literature review (SANTORO 2018) looked at rates of drug abuse and discrepancies in care in the US. BIPOC patients are prescribed opiates at half the rate as white patients. What is the rationale for this? This review found it to be a combination of perception, associated with the historic crack epidemic and depiction in the media.

Coupled with governmental regulations that limit access to treatment and drug recovery services within BIPOC communities.

Opioids and Racism

A 2021 study (PARLIER-AHMAD 2021) looked at the rates of opioid dependence disorder recovery among black participants. Black individuals, with opioid dependence disorder, who answered the survey, were asked about their treatments, recovery, and methods used. Black patients with opioid dependence disorder have a lower rate of recovery and worse outcomes compared to other races. This study found that black patients who received higher quality treatment for their dependence had significantly improved outcomes for abstinence from opioids. The study concluded that it is due to structural racism which creates barriers obstructing black patients from receiving higher quality care from having rates of opioid dependence disorder recovery comparable to other races.

A 2019 study (SWIFT 2019) compared rates of opioid misuse to rates of prescribed opiates in the United States between the years 1992 to 2015. In the United States, white patients are more likely to misuse opioid medication compared to black patients, while black patients are less likely to be prescribed opioid medications. This may be due to a bias that black patients are more likely to misuse opioid medications. This study found that racial discrimination is more common for black patients and is a major risk factor for opioid misuse. A model found that when corrected for discrimination, black patients were at a decreased risk for opioid abuse, which

suggeststhat if medical professionals wish to aid black patients with limiting opioid misuse, the best solution was not to discriminate.

A 2019 study (JONES 2019) examined the relationship between racial discrimination and mental health for a cohort of 319 black patients. Data was collected through primary health screenings and surveys. The participants did not note a relationship between discrimination and mental health. Racial discrimination impinges on mental health, but not in a way for black patients to want to see mental health professionals. Blacks are 50% less likely to receive mental health treatment than white patients indicating development of coping mechanisms. Patients who demonstrated active coping from perceived racism in healthcare setting were also significantly more likely to develop or have an opioid dependence,indicating opioid misuse may be a coping mechanism in itself against the struggles of racism.

A 2020 study (PRO 2020) looked at 766 individuals who had a substance use disorder and their ability to maintain a methadone maintenance program. The study found that 22% of all black participants have experienced racism of some kind within a healthcare settingand that experiencing racism in a healthcare setting negatively correlated with success of methadone maintenance. This correlation was also found to be even stronger amongst Asian and Native American participants.

A 2021 study (BROWN 2021) looked at the perceived racial discrimination and prescription drug misuse (PDM) among Asian, Black, and Latino Americans during the COVID-19 crisis. The study found that opioid misuse rates have increased since Covid-19 and that through a questionnaire, there is a significant correlation between perceived racial discrimination and prescription drug misuse.

Bias Training

Structural racism and implicit bias is a theme that has plagued healthcare for centuries. A 2019 study (SHERMAN 2019) designed implicit bias training programs for resident doctors at a healthcare facility. The program addresses and teaches skills for patient interaction that mitigates implicit bias. Six months after the program was instituted, residents and faculty leaders were put into focus groups to test their implicit bias, compared to those who had not been in the program. The study found that four themes emerged within the residents that underwent implicit bias training: (1)Increased awareness of and commitment to addressing racial bias, (2) Appreciation of a safe forum for sharing concerns, (3) New ways of addressing and managing bias, and (4) Institutional capacity building for continued vigilance and training regarding implicit bias. The study concluded that all who participated in the training found it to be empowering and important.

A 2015 systematic review (HALL 2015) looked at ten computerized bibliographic databases and used a reference harvesting technique to find studies that focused on rates of implicit bias amongst healthcare workers. On review of the studies, it was found that most healthcare workers have an implicit bias towards white patients and a more negative attitude towards people of color. The study concluded that this implicit bias is detrimental to the health of people of color.

A 2019 study (PERDOMO 2019) implemented health equity rounds (HER) at a local hospital to address impacts of structural racism and systemic bias on patient care within a healthcare setting. The conferences were delivered quarterly and at the end of the four sessions a questionnaire was given for the participants to complete. It was found that over 88% of participants felt that health equity rounds promoted a positive reflection for them on implicit bias, and 75% or more felt that HER will impact their clinical practice and when treating vulnerable populations.

A 2012 study (DEVINE 2012) looked at the effectiveness of an implicit bias course based upon the principle that in order for people to break their prejudices they must have two things. First, they must be concerned about their own bias and second, they must be concerned of the effects that their biases have on others. The participants were assessed prior to the course with a black and white association testthat determines what traits, positive and/or negative, the participants associated with each race. Prior to the implicit bias course the participants scored a 90% pro-white bias.

The implicit bias course used stereotype replacing, which is showing stereotypes that the participants thought were normal and explaining how they are not factual and are only stereotypes. Counter stereotype imaging, which is showing images that are counter to the previous stereotypes, was used. For example, to address the stereotype “black people are not smart,” a photo of an intelligent black man, Barack Obama, was shown. Individualization, which enforces identifying people based on their personal traits rather than that of group traits, was used. In addition to individualization, participants talked through the understanding and listening to people’s perspective from different

backgrounds and experienced increased opportunity for contact, which involved talking with and to people from different backgrounds.

The course was found to be successful with a one-third decrease in discriminatory beliefs. A particular note regarding the course is that participants were, on survey, the least discriminatory during week two. Then there was a slight decrease in effectiveness of the course. The reasoning for this is not understood.

A 2019 study (QIAN 2019) tracked the long term effects of anti-bias training on Chinese school children between the ages of four to six years old. Prior to the study the children demonstrated a pro-Asian and anti-black bias. The study theorized this is partially due to an inherent tendency from an early age to create a causal linkage between perceptual and social processing of faces.

The implicit bias training used was in the form of individualization. The children were shown faces of Asian and black men and women. They were then asked to remember the faces by associating them with different numbers instead of races. For example, this is face one and this is face two, not this is a black man and Asian woman. The children also had their explicit bias tested as well. This was conducted in the form of questions about whom they would rather associate with amongst the races. An example being; “Would you rather have a black tour guide or an Asian tour guide on your vacation?”

The results of the study were promising with the children showing a reduction in both implicit bias and explicit bias. The results were also theorized to be long term; 70 days after the study was conducted the children still demonstrated both reduced implicit and explicit biases.

CHAPTER 4: ADDRESSING IMPLICIT BIAS

Racism exists in many different ways within our society. It harms those most vulnerable, makes life more difficult for many, and is morally wrong. Racism does not need to take the form of hatred or slurs; it can come in the form of misinformations, unconscious decision making, and incompetence. Not understanding a problem does not make you not complicit in it.

BIPOC patients, especially black patients, are failed by the healthcare system for pain management. They are denied proper care for pain. They are less likely to be counseled by their doctors about pain and treatment options compared to white patients, they are given lower doses of opiates, prescribed less refills, or not given any medication significantly more often than for white patients. Living with untreated pain lowers quality of life, leads to psychological harm, development of depression, and lowers expectations as to what to expect within society.

We are in an opioid epidemic, but this is no excuse to deny pain treatments to anybody. Doctors have no right to treat any patient differently based on race, even if they believe it is in the patient's interest. This is systematic racism. When people are treated differently for no reason other than their skin color.

All the way back to slavery, racist stereotypes have existed. Some used to justify slavery, some to justify mistreatment of slaves. Black people do not have thicker skin, black people experience pain identically to every other race and BIPOC patients have been shown to not be anymore likely to abuse prescription medications, especially opiates, any more than any other racial group.

One aspect black patients fall behind is success in recovery programs. When adjusted for treatment in poor programs, black patients in higher quality programs have positive success rates in opioid dependence recovery treatments equivalent to other races.

This indicates it is not that black people are less successful in opiate treatment programs, but that the system has failed them. Through systematic racism they are exposed to lower quality treatment programs and are more likely to waste their time in these programs. The simple solution to this is increased government resource allocation to urban opiate recovery programs.

Implicit bias has been demonstrated by physicians in the US. It is a major cause of BIPOC mismanagement of pain. It occurs in elderly black women just as it does in young black men. It is a problem more of race rather than age or gender.

Programs to limit implicit bias and stereotypes among healthcare workers have been shown to be successful. Whether in the form of a health equity round or an implicit bias workshop. Four hours of training over the course of a year made an impact on over 88% of people who attended a health equity round.

Part of working in a hospital, whether as a medical student, physician, resident doctor, or other faculty member is to attend morbidity and mortality seminars. Commonplace in many hospitals are lunch seminars, peer presentations, among a slew of guest speakers. It wouldn't be too much of a burden to insert the discussion of systemic racism, healthcare equity, and implicit bias into the average United States hospitals educational curriculum.

With the normalization of Critical Race Theory into public schools curriculums,it does not appear to be too much of a leap to add it into hospitals, residency training programs, and medical school curriculums as well. It is a process and there will always be some opposed to progress.

In many ways, implicit bias training would have overlap to and similarities with critical race theory. Both aim to educate about tolerance, historical racism, and equity. Whether in healthcare or a classroom setting, the aim is the same: to help vulnerable communities, mitigate suffering, and educate about injustices they presently face in this country.

Every patient, regardless of who they are, what they look like, where they come from or what language they speak, always deserves to be treated with the utmost of respect. Part of the Hippocratic Oath is to do no harm. Allowing pain to persist unnecessarily is not different from causing harm. Discriminating against your patients is immoral and yet, it still occurs. Would this not be contradictory and a violation to the Hippocratic Oath?

Future Solutions

As America and the healthcare field continue to become increasingly diverse, tolerance of others needs to increase as well. Hopefully, this increased diversity will bring new changes and perspectives. With more people from different backgrounds and demographics representing healthcare workers we can only hope it will create lasting change for all and an improvement of medical care for all as well.

Further research is needed into the best way to target implicit bias and teach against it. Research into this topic is currently very scarce. Especially research into the effectiveness of it both short and long term. Also studies looking at the proper timeline and length of anti bias training as well as the form it should take and be presented to a group. At the same time, it is never too early to begin to discuss and educate about this topic.

BIBLIOGRAPHY

CDC (Ed.). (2021, November 17). *Drug overdose deaths in the U.S. top 100,000 annually*. Centers for Disease Control and Prevention. Retrieved March 12, 2022, from https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2021/20211117.htm

Center, U. S. C. S. (2021, May 20). *'pharmacy deserts' disproportionately affect black and Latino residents in largest U.S. cities*. USC Schaeffer. Retrieved March 12, 2022, from https://healthpolicy.usc.edu/article/pharmacy-deserts-disproportionately-affect-black-and-latino-residents-in-largest-u-s-cities/

Devine, P. G., Forscher, P. S., Austin, A. J., & Cox, W. T. (2012). Long-term reduction in implicit race bias: A prejudice habit-breaking intervention. Journal of experimental social psychology, 48(6), 1267–1278. https://doi.org/10.1016/j.jesp.2012.06.003Ω

Fiscella, K., Epstein, R. M., Griggs, J. J., Marshall, M. M., & Shields, C. G. (2021). Is physician implicit bias associated with differences in care by patient race for metastatic cancer-related pain?. *PloS one*, *16*(10), e0257794. https://doi.org/10.1371/journal.pone.0257794

Ghoshal, M., Shapiro, H., Todd, K., & Schatman, M. E. (2020). Chronic Noncancer Pain Management and Systemic Racism: Time to Move Toward Equal Care Standards. *Journal of pain research*, *13*, 2825–2836. https://doi.org/10.2147/JPR.S287314

Gramlich, J. (2022, January 21). *Recent surge in U.S. drug overdose deaths has hit black men the hardest*. Pew Research Center. Retrieved March 12, 2022, from https://www.pewresearch.org/fact-tank/2022/01/19/recent-surge-in-u-s-drug-overdose-deaths-has-hit-black-men-the-hardest/

Hall, W. J., Chapman, M. V., Lee, K. M., Merino, Y. M., Thomas, T. W., Payne, B. K., Eng, E., Day, S. H., & Coyne-Beasley, T. (2015). Implicit Racial/Ethnic Bias Among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review. *American journal of public health*, *105*(12), e60–e76. https://doi.org/10.2105/AJPH.2015.302903

Haywood, C., Jr, Diener-West, M., Strouse, J., Carroll, C. P., Bediako, S., Lanzkron, S., Haythornthwaite, J., Onojobi, G., Beach, M. C., IMPORT Investigators, & IMPORT Investigators (2014). Perceived discrimination in health care is associated with a greater burden of pain in sickle cell disease. *Journal of pain and symptom management*, *48*(5), 934–943. https://doi.org/10.1016/j.jpainsymman.2014.02.002

Hill, Latoya (2021, July 16). *Health coverage by Race and ethnicity, 2010-2019*. KFF. Retrieved March 12, 2022, from https://www.kff.org/racial-equity-and-health-policy/issue-brief/health-coverage-by-race-and-ethnicity/

Hoffman, K. M., Trawalter, S., Axt, J. R., & Oliver, M. N. (2016). Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proceedings of the National Academy of Sciences of the United States of America*, *113*(16), 4296–4301. https://doi.org/10.1073/pnas.1516047113

Jones, S., Brooks, J. H., Milam, A. J., Barajas, C. B., LaVeist, T. A., Kane, E., & Furr-Holden, C. (2019). Racial discrimination, John Henryism coping, and behavioral health conditions among predominantly poor, urban African Americans: Implications for community-level opioid problems and mental health services. *Journal of community psychology*, *47*(5), 1032–1042. https://doi.org/10.1002/jcop.22168

Mathur, V. A., Richeson, J. A., Paice, J. A., Muzyka, M., & Chiao, J. Y. (2014). Racial bias in pain perception and response: experimental examination of automatic and deliberate processes. *The journal of pain*, *15*(5), 476–484. https://doi.org/10.1016/j.jpain.2014.01.488

P. Brown, V. Watts, M. Hanna, M. Rizk, E. Tucker, A. Saddlemire & B. Peteet (2021) Two Epidemics and a Pandemic: The Collision of Prescription Drug Misuse and Racism during COVID-19, Journal of Psychoactive Drugs, 53:5, 413-421, DOI: 10.1080/02791072.2021.1992048Literature Review-

Parlier-Ahmad, A. B., Pugh, M., Jr, & Martin, C. E. (2021). Treatment Outcomes Among Black Adults Receiving Medication for Opioid Use Disorder. *Journal of racial and ethnic health disparities*, 1–11. Advance online publication. https://doi.org/10.1007/s40615-021-01095-4

Perdomo, J., Tolliver, D., Hsu, H., He, Y., Nash, K. A., Donatelli, S., Mateo, C., Akagbosu, C., Alizadeh, F., Power-Hays, A., Rainer, T., Zheng, D. J., Kistin, C. J., Vinci, R. J., & Michelson, C. D. (2019). Health Equity Rounds: An Interdisciplinary Case Conference to Address Implicit Bias and Structural Racism for Faculty and Trainees. *MedEdPORTAL :*
the journal of teaching and learning resources, *15*, 10858. https://doi.org/10.15766/mep_2374-8265.10858

Pro, G., & Zaller, N. (2020). Interaction effects in the association between methadone maintenance therapy and experiences of racial discrimination in U.S. healthcare settings. *PloS one*, *15*(2), e0228755. https://doi.org/10.1371/journal.pone.0228755

Qian, M. K., Quinn, P. C., Heyman, G. D., Pascalis, O., Fu, G., & Lee, K. (2019). A Long-Term Effect of Perceptual Individuation Training on Reducing Implicit Racial Bias in Preschool Children. *Child development*, *90*(3), e290–e305. https://doi.org/10.1111/cdev.12971

Santoro, T. N., & Santoro, J. D. (2018). Racial Bias in the US Opioid Epidemic: A Review of the History of Systemic Bias and Implications for Care. *Cureus*, *10*(12), e3733. https://doi.org/10.7759/cureus.3733

Swift, S. L., Glymour, M. M., Elfassy, T., Lewis, C., Kiefe, C. I., Sidney, S., Calonico, S., Feaster, D., Bailey, Z., & Zeki Al Hazzouri, A. (2019). Racial discrimination in medical care settings and opioid pain reliever misuse in a U.S. cohort: 1992 to 2015. *PloS one*, *14*(12), e0226490.

Sherman MD, Ricco J, Nelson SC, Nezhad SJ, Prasad S. Implicit Bias Training in a Residency Program: Aiming for Enduring Effects. Fam Med. 2019;51(8):677-681. https://doi.org/10.22454/FamMed.2019.947255.Gaps in patient care based on demographics and Stereotypes in pain

Walker Taylor, J. L., Campbell, C. M., Thorpe, R. J., Jr, Whitfield, K. E., Nkimbeng, M., & Szanton, S. L. (2018). Pain, Racial Discrimination, and Depressive Symptoms among African American Women. *Pain management nursing : official journal of the American Society of Pain Management Nurses*, *19*(1), 79–87. https://doi.org/10.1016/j.pmn.2017.11.008

Ziadni, M. S., Sturgeon, J. A., Bissell, D., Guck, A., Martin, K. J., Scott, W., & Trost, Z. (2020). Injustice Appraisal, but not Pain Catastrophizing, Mediates the Relationship Between Perceived Ethnic Discrimination and Depression and Disability in Low Back Pain. *The journal of pain*, *21*(5-6), 582–592. https://doi.org/10.1016/j.jpain.2019.09.007