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RACIAL AND ETHNIC DIFFERENCES IN THE USAGE OF OPIOIDS TO TREAT CHRONIC PAIN

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Introduction

Pain is a complex and multifaceted phenomenon. Cultural norms, social contexts, and individual experiences, among many other factors, all contribute to the varying perceptions and expressions of pain across different racial groups. These differences may manifest in how pain is tolerated and described, leading to disparities in management and outcomes. Numerous studies have found that Black and Hispanic patients report higher pain intensity than Caucasian patients, even after controlling for socioeconomic status and other health conditions. However, Black and Hispanic patients are less likely than Caucasian patients to be prescribed opioids for their chronic pain. These disparities underscore the importance of equitable access to effective pain interventions and the need for ongoing efforts to raise awareness about how implicit biases can impede the delivery of culturally competent, patient-centered care.

Materials and Methods

After receiving approval from the Advocate Healthcare Institutional Review Board, we conducted a retrospective analysis of 1,272 chronic pain patients at the Chicago Anesthesia Pain Specialists Clinic. All patients were seen at least 4 times over the span of at least 6 months. Chart reviews were conducted to collect information on patient demographics, interventions, and outcomes. Each patient's race was categorized as 1. Non-Hispanic White (White), 2. Hispanic or Latino (Hispanic), or 3. Black or African American (Black). They were asked to quantify their pain levels at each visit using the Numeric Pain Rating Scale, generating pre- and post-treatment pain scores. Opioid usage at any point throughout the treatment course was also documented, and morphine milligram equivalents (MMEs) given at the first and last clinic visits were calculated using MDCalc. The provider's response to the patient's pain was quantified by dividing the MME given at the visit by the corresponding pain score (MME/P), and an average was calculated for each race. Paired t-tests were used to assess differences in pain scores and MMEs between the first and last clinic visits for each race.

Results/Case Report

The average pre-treatment pain score was 7.62, 8.08, and 8.13 for White, Hispanic, and Black patients, respectively ($p < 0.001$). The average post-treatment pain score for each of these groups was 4.05, 4.32, and 4.38 ($p = 0.35$), respectively. The average MME given at the first clinic visit was 34.87, 13.29, and 20.62 ($p < 0.001$) for White,

Hispanic, and Black patients, respectively. The average MME given at the last clinic visit was 28.04, 12.47, and 17.46 ($p < 0.001$), respectively. The average MME/P at the first visit was 8.05, 3.69, and 4.30 for White, Hispanic, and Black patients, respectively, while the average MME/P at the last visit was 13.08, 7.60, and 7.03, respectively.

Discussion

These results are consistent with previous findings that Black and Hispanic patients report higher intensity pain, and that non-Hispanic white patients are given significantly more opioids for pain management than non-white patients. However, even though non-Hispanic white patients were given more morphine per "unit" of pain experienced, they still ended their course of treatment in the same amount of pain as non-white patients. These findings could be due to many factors; for instance, the efficacy of morphine could vary among patients of different races, therefore making a higher dose necessary in non-Hispanic white patients for the same amount of pain reduction. Other possibilities to consider include providers giving excess amounts of morphine, non-Hispanic white patients under-reporting their initial pain, or over-reporting their final pain score. We see that despite advancements in medical knowledge and expansion of treatment options, racial and ethnic disparities persist in the management of chronic pain, resulting in Black and Hispanic patients being given less pain medication despite reporting the same levels of pain as non-Hispanic white patients. These findings highlight several significant implications, not only about the complexity of the interplay of factors such as cultural beliefs, implicit biases, or misconceptions, but also about the potentially varying biological responses to medications and the perception of pain itself. Providers must adopt a holistic approach that considers not only the physiologic dimension of pain, but also the psychological, emotional, cultural, and social aspects that shape a patient's pain experience.

References

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Disclosures

No

Tables / Images

Race	Average Pre-Treatment Pain Score (1st visit)	Average Post-Treatment Pain Score (Last visit)
Non-Hispanic White	7.62	4.05
Hispanic or Latino	8.08	4.32
Black or African American	8.13	4.38

Race	Average MME 1st visit	Average MME Last visit
Non-Hispanic White	34.87	28.04
Hispanic or Latino	13.29	12.47
Black or African American	20.62	17.46

Race/Ethnicity	Average MME/P 1st visit (Average MME 1 st visit ÷ Pre-Treatment Pain Score)	Average MME/P Last visit (Average MME Last visit ÷ Post-Treatment Pain Score)
Non-Hispanic White	8.05 (n = 362)	13.08 (n = 350)
Hispanic or Latino	3.69 (n = 182)	7.60 (n = 171)
Black or African American	4.30 (n = 128)	7.03 (n = 121)