

# Virtual Mentor

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## POLICY FORUM

### Pain and Ethnicity

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It is estimated that more than 116 million Americans suffer from chronic pain, which costs \$560 to \$635 billion annually in medical treatment and lost productivity [1]. Although pain is a widespread problem, studies have found that chronic disease, psychological distress, Medicaid insurance, and lower education levels are associated with higher incidences of severe pain [2]. Undertreating pain can lead to adverse outcomes, including elevated heart rates after surgery and increased risk of myocardial infarction, ischemic stroke, and bleeding events as a result of elevated systemic vascular resistance and elevated levels of catecholamines [2]. Other consequences of uncontrolled pain include reduced mobility, loss of strength, sleep disturbances, immune system impairment, increased susceptibility to disease, and medication dependence [3].

Despite the availability of effective pharmacologic and nonpharmacologic interventions and methods to manage pain, there is a significant gap between the evaluation and treatment of pain in white people and its evaluation and treatment in African American and Hispanic people [4]. Differences in pain treatment may be due to differences in needs—e.g., resulting from genetic differences—or to inequities—unfair differences in access or opportunity, e.g., unavailability of opioids in a neighborhood [2]. Another cause of differences in treatment may be a lack of awareness among clinicians and trainees of evidence-based guidelines.

### Defining Pain

The American Academy of Pain Medicine classifies pain as acute or chronic. In acute pain, a “one-to-one relationship exists between injury and pain,” and the “pain is frequently short-lived and self-limiting” [5]. However, the pain “can become persistent and intractable if the underlying disease process or injury is chronic or incurable, or if the activation of pain is unavoidable, as in pain caused by movement or weight bearing in injuries of the spine or in diseases such as arthritis” [5]. Chronic pain is defined as pain that persists longer than three months [5]. Pain can be managed with a range or combination of treatments such as nonsteroidal anti-inflammatories (NSAIDs) and other nonopioid medications, physical therapy, psychological interventions, alternative medicine, referral to a specialist, or opioids.

### Pharmacogenomics and Pain

A review of the literature on the influence of race or ethnicity on the pharmacokinetics of analgesics found that there may be differences in bioavailability, hepatic metabolism, renal secretion, protein binding, and distribution

[6]. For this reason, a patient's genetic makeup should be considered when prescribing medications that are known to be affected by genetic factors [6]. Research in the area is limited, but pharmacokinetic studies of codeine have demonstrated that 10 percent of the white population and 0.5 percent of the African American and Asian populations obtain no pain relief from codeine due to the lack of an enzyme needed for metabolism of codeine to morphine [6]. However, although pharmacogenomics has the potential to identify a particular analgesic that may not work in certain populations, more research is needed.

### **Social and Economic Conditions and Pain**

Pain and its treatment are strongly influenced by race and ethnicity as well as by the social and economic conditions in which people work and live [4]. Reviews of literature on race and pain found that:

*Race influences the experience of pain and of seeking treatment.*

- In a population-based survey, 27 percent of African Americans and 28 percent of Hispanics over the age of 50 reported having severe pain most of the time; only 17 percent of non-Hispanic whites did [7].
- African Americans were found to have lower pain thresholds than whites for cold, heat, pressure, and ischemia [4]. Most studies showed no racial differences in pain intensity ratings, although African Americans described comparable pain intensity as a more unpleasant sensation than did whites [4]. Racial disparities in reports of pain unpleasantness differed by condition [4].
- African Americans were more likely than non-Hispanic whites to underreport pain unpleasantness in the clinical setting, especially in the presence of physicians who were perceived as having "higher social status" [4].
- African Americans were more likely to attribute pain to personal inadequacies and to use "passive" coping strategies, such as prayer, than were non-Hispanic whites [4].

*White people are more likely to endanger themselves with the misuse of drugs.*

- African Americans and Hispanics were more afraid than were non-Hispanic whites of opioid addiction [4].
- African Americans and Hispanics were less likely than white people to misuse prescription opioids [4].
- The overall rate of drug-related deaths was highest among non-Hispanic white people [4].

*Despite this, whites receive more and better pain treatment than African Americans and Hispanics.*

- African Americans and Hispanics were less likely than white patients to receive any pain medication and more likely to receive lower doses of pain medication, despite higher pain scores [4].
- They had their pain needs met less frequently in hospice care than did non-Hispanic whites [4].

- They were more likely to wait longer to receive pain medications in the emergency department than whites [4].
- Several studies of patients with low back pain found that African Americans reported greater pain and higher levels of disability than whites but were rated by their clinicians as having less severe pain [8].
- African American and Hispanic veterans with osteoarthritis—particularly African Americans—received fewer days’ supply of a nonsteroidal anti-inflammatory drug than white veterans did [8].
- “Minority” and low-income children were less likely to have oral pain assessed and treated appropriately, especially if they had Medicaid insurance coverage [8]. For example, Hispanic children received 30 percent less opioid analgesia after tonsillectomies or adenoidectomies than white children [4].

These findings suggest that clinicians incorrectly believe that Hispanic and African American patients are more likely to abuse drugs than whites and therefore should have less access to them, when in fact they are *less* likely to do so, and that Hispanic and African American patients experience less severe pain than whites, when in fact they report comparable pain. The findings suggest, in other words, that variations in treatment are based on misconceptions rather than evidence.

### **Sickle Cell and Pain Management**

Sickle cell diseases (SCDs) are an example of how biological differences and social inequities come together to create a “perfect storm” of inappropriate pain management. The spectrum of SCDs affects more than 100,000 people, predominantly young African Americans from urban areas, in the United States [6]. About one in every 300-400 African Americans born will have SCD; among Hispanics, the rate is approximately one out of every 36,000 and, among whites, roughly one out of 41,647 [3]. The fact that SCD is most prevalent among urban members of “minority” groups may result in discrimination by health care staff and miscommunication between patients and their clinicians [9].

The presentation of SCD is variable so it can be challenging for clinicians to determine whether a patient is experiencing a true pain episode or engaging in drug-seeking behavior. In SCD, pain may be the only symptom; there may be no pertinent laboratory or physical findings.

Guidelines for pain management in SCD include prompt initiation of parenteral opioids, use of effective opioid doses, repeat opioid doses at frequent intervals, and individualization of treatment based on prior opioid response histories [10]. Though cognitive behavioral therapy can be a useful long-term strategy [11], there is no evidence that adjuvant therapies such as heating pads and nonsteroidal anti-inflammatory agents are beneficial in the inpatient setting [12]. Patients with SCD may know which analgesics are most likely to be beneficial to them. What 7-22 percent of physicians, residents, nurses, and medical students considered drug-seeking behavior [13]—requesting particular opioids, rather than an openness to

trying various methods including nonopioid treatment—is appropriate patient behavior in the case of sickle cell disease.

Furthermore, a survey found that less than 4 percent of sickle cell patients met the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for substance dependence [14]. Large academic centers have estimated the proportion of adults with SCD abusing opioids to be in the range of 0 to 9 percent—less than the rate in the general population (estimated to be 6 to 9 percent) [15, 16]. If clinicians were better informed about condition-specific appropriate behavior for patients with sickle cell diseases, pain associated with it would be managed better and with less suspicion.

### **Adequate Pain Assessment and Management**

Possible barriers to equitable pain management include [8]:

#### *Health care-specific inequalities.*

- Inadequate knowledge and education on the part of clinicians.
- Overreliance on pain scales in clinical assessment, as opposed to exploring the pain in a more multifaceted way, including its characteristics and symptoms, its impact on the patient's social and physical function and quality of life, and the patient's perception of it.
- Conscious or unconscious negative racial attitudes and stereotyping that affect clinical decision-making despite evidence-based guidelines.
- Lack of cultural sensitivity or competence.

#### *Larger social inequalities that affect health.*

- Unequally distributed insurance coverage and underinsurance.
- Limited access due to geography (e.g., segregated communities that have poor access to pharmacies).
- Insufficient health literacy.
- Insufficient advocacy from pain organizations for nondiscriminatory assessment and treatment.

Addressing such a multifactorial phenomenon will require a multipronged approach. Clearly, improving cultural sensitivity and competence is key. Mossey [4] recommends addressing the presence of bias and discrimination directly and at the level of the individual: empowering individuals to report pain accurately, encouraging physicians to examine their own cultural beliefs and stereotypical perceptions, and modifying counterproductive beliefs and attitudes regarding pain. The Institute of Medicine (IOM) advocates for improving and increasing education and training of health care professionals on these topics.

Evidence-based treatment approaches that are culturally sensitive are also recommended. The IOM recommends revising reimbursement policies to promote evidence-based pain management [1]. Anderson and colleagues [8] suggest

employing cultural leverage—briefly, tailoring interventions to patients’ cultures; recruiting individuals from the community who have training and knowledge of pain management to assist in counseling patients; and relying more on face-to-face interventions than computer-based or automated intervention, unless cultural leverage indicates otherwise.

Several significant organizations have called for increasing and improving the data available about pain and pain treatment. In 2010, The Joint Commission released requirements for the collection of data on all patients’ race, ethnicity, and language as a means to identify potential disparities in care and to improve patient-clinician communication [17]. In the 2011 report *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education and Research*, the Institute of Medicine cited the lack of data on the scope of pain among some racial and ethnic groups and emphasized the need for better data collection on subpopulations at risk [1].

### **Conclusion**

Pain control is a quality-of-life and quality-of-care issue. Although the effective treatment of pain is a professional responsibility of all healing professionals and health care organizations, there is overwhelming evidence that the management of pain in the United States is inequitable. Additional research and urgent action are needed to achieve the goal of eliminating disparities in pain management. By acknowledging gaps in pain management and actively seeking improvement, the imperative to deliver equitable care can be met.

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