

Racial Differences in Prescription of Opioid Analgesics for Chronic Noncancer Pain in a National Sample of Veterans

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Abstract: The purpose of this study was to investigate possible racial differences in opioid prescriptions among primary care patients with chronic noncancer pain receiving care in the Veterans Affairs health care system. This was a retrospective cohort study of 99,903 veterans with diagnoses of low back, neck, or joint pain selected to participate in the Veterans Affairs Survey of the Healthcare Experiences of Patients in fiscal year 2006. The outcome was prescription of opioids in the year following the first pain diagnosis, obtained through electronic medical record data. Analyses incorporated fixed effects for race, most recent pain intensity rating, new or established primary care patient status, and an interaction between race and most recent pain intensity rating, together with random effects for health care facility and race within facility. The association between patient race and prescription of opioids was moderated by baseline level of pain intensity scores (assessed on a 0–10 scale) and patient age. Among patients under 65 years of age, blacks with moderate (4–6) or high (7–10) levels of pain were less likely to receive opioids than whites ($P = .0025$, $P = .0011$); however, there were no significant differences between black and white patients with low levels of pain intensity (1–3) and those with pain intensity ratings of 0 (no pain). Among patients 65 and older with pain intensity ratings of zero, blacks were more likely than whites to receive opioid prescriptions ($P = .0087$), but there were no significant racial differences in opioid prescriptions in those with low to high levels of pain.

Perspective: Among veterans under age 65 reporting moderate to high levels of chronic noncancer pain, blacks were less likely to be prescribed opioids than whites, even after controlling for clinical and system-level factors. Results underscore the challenges of eliminating racial differences in pain treatment, despite comprehensive systemwide improvement initiatives.

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Numerous studies have shown that blacks are less likely than whites to be treated with opioid analgesics for a variety of pain conditions.^{2,37} In a meta-analysis and systematic review of studies from 1989 to 2011, Meghani and colleagues found that blacks were consistently less likely than whites to be treated with opioid prescriptions for traumatic/surgical and non-traumatic/nonsurgical pain, with greater racial differences for nontraumatic/nonsurgical pain.³⁷ Moreover, despite increasing attention to the issue, Meghani et al found that these racial differences did not diminish over time.³⁷ Racial disparities in pain treatment have been considered especially problematic in the light of evidence that blacks experience greater pain-related disability, physical and emotional impairment,^{2,39,51} and pain severity^{38,45,47} than whites. Although many factors contribute to racial disparities in pain outcomes (eg, racial differences in patients' beliefs about pain,^{1,36,48-50} exposure to racial discrimination),^{13,23} undermedication has been identified as a possible contributor.^{2,37,39,46}

The objective of this national study was to investigate whether black patients with diagnoses of chronic non-cancer pain receiving care in a Department of Veterans Affairs (VA) health care facility receive different pharmacologic care than whites. Specifically, we examined whether black patients were less likely to be prescribed opioids than their white counterparts. Although the VA is the largest integrated health care system in the United States, to date there have been no studies examining the presence of racial differences in prescription of opioids nationwide across the VA. Such an examination is important because the VA has devoted substantial resources to improving the quality of pain management.²¹ Beginning in 1999, the VA launched its National Pain Management Strategy to promote systemwide improvements in pain management.³² Of particular importance is the "Pain as the Fifth Vital Sign" initiative that mandated the systematic screening for the presence and intensity of pain at every outpatient visit on a 0 to 10 numeric rating scale, and the documentation of this pain intensity score in the Electronic Medical Record (EMR). This was followed by a collaborative project with the Institute for Healthcare Improvement that encouraged additional improvements in pain assessment and treatment.¹⁹ Specifically, moderate to severe pain, as indicated by a score of at least 4 on the numeric rating scale, is expected to result in a comprehensive pain assessment and appropriate intervention. This type of intervention could feasibly reduce racial differences in pain treatment, as it provides information about the patient's pain intensity and may help overcome certain barriers to pain management such as providers' underestimation of pain in black patients compared to patients from other ethnic groups.⁵⁴ Ongoing initiatives in the VA to promote safe and effective use of opioids for pain management such as policy guidance, dissemination of evidence-based clinical practice guidelines for chronic pain management, and provider education initiatives may also serve to promote equitable access to opioid therapy.³³ It is important, then, to determine whether racial differences in opioid

Racial Differences in Prescription of Opioid Analgesics prescription exist in this setting. We also explored the effect of patient ratings of pain intensity on racial differences in opioid prescribing, as prior studies have shown that clinical uncertainty is more likely for patients who report greater pain intensity or severity, particularly in the absence of objective medical evidence (which is often the case in chronic, musculoskeletal pain).^{17,55,56} Because racial stereotyping is more likely under conditions of clinical uncertainty,¹⁴ it is possible that the influence of race on prescribing decisions would be greater for higher levels of pain intensity.

We use the term *racial differences* rather than *racial disparities* when referring to our study, as the latter is generally used to refer to inequities in health care quality (see Institute of Medicine definition, for example, which explicitly refers to differences in quality of care⁵²). Given the ongoing debate as to the appropriateness of using opioids to treat chronic noncancer pain, we have elected to use the more neutral term *differences*, as it is unclear whether lower rates of opioid prescriptions among black versus white chronic pain patients should be considered lower quality care.

Methods

Study Design

This was a retrospective cohort study using data from the VA's 2007 Survey of Healthcare Experiences of Patients (SHEP) and VA EMR system data. This study was approved by the institutional review board of the Minneapolis VA Medical Center.

Setting and Participants

We identified the study cohort using the ambulatory care module of the 2007 SHEP, a national survey administered quarterly by the VA Office of Quality and Performance, to solicit patient-reported information concerning specific episodes of outpatient care. Patients were eligible to participate each quarter if they received provider-based ambulatory care and did not participate in an SHEP survey in the previous 12 months. Each individual selected was asked about a specific care encounter (referred to here as the SHEP index visit). Our cohort comprised established and new primary care patients in the 2007 SHEP sampling frame with 1) any diagnoses of back, neck, or joint pain in the year prior to the SHEP index visit; 2) no cancer diagnoses in the year prior to the index visit; and 3) no opioid prescription in the 3 months prior to the first pain diagnosis observed in the year prior to the SHEP index visit. Among the 109,289 veterans meeting these criteria, there were 9,831 non-Hispanic black patients, 71,471 non-Hispanic white patients, and 9,955 veterans of unknown race, from 129 VA health care facilities.

Study Outcomes

Receipt of any opioid prescription was defined as having a record in the EMR for an outpatient prescription of any opioid, for any duration, issued by a VA pharmacy in the year following the first pain diagnosis.

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