

Race, Ethnicity, and Pain Treatment: Striving to Understand the Causes and Solutions to the Disparities in Pain Treatment

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I would like for them to know that I am in pain or this part of my body hurts or the other part hurts — that I am not lying about it. To examine me and to cut down on the pain.... And help me out.¹

*Patient with Sickle Cell Disease,
Focus Group Participant*

Pain in the United States is widely recognized to be undertreated; however, the capacity to treat pain has never been greater.² The causes of this undertreatment are varied. As we focus on pain and why it is too often ineffectively treated, we also discover that this undertreatment afflicts some more than others. What divides the some from the others isn't limited to one factor, but one particularly disturbing factor is race and ethnicity. Racial and ethnic minority populations are at higher risk for oligoanalgesia, or the ineffective treatment of pain. Only through further study of the differences in pain treatment based on race and ethnicity can we develop strategies to reduce the disparities in care.

Racial and ethnic disparities in health care in the United States have received greater focus in the last ten years than any time in our history. Numerous studies have revealed that racial and ethnic minority groups often receive different and less optimal management of their health care than white Americans. Research studies have identified inequalities in the treatment of black Americans for early stage lung cancer,³ ischemic heart disease,⁴ and access to invasive cardiac procedures⁵ as well as cadaveric renal transplantations.⁶ Studies have shown that a patient's race has a substantial effect on the treatment provided and the mortality rates among Medicare beneficiaries⁷ and veterans.⁸

Scholars have concluded that persistent racial disparities in access to health care and treatment result from unequal health care that is the legacy of a racially divided health system.⁹ In October 1999, the Henry J. Kaiser Family Foundation published a comprehensive review of the literature on racial and ethnic differences in access to health services from 1985 to 1999.¹⁰ This major study did not, however, include a review of racial and ethnic differences related to pain treatment. It is time that this occurred.

This paper has three aims. It will (1) review the published literature on disparities in the treatment of pain based on race and ethnicity; (2) outline what may be some of the causes for disparities in pain treatment; and (3) provide suggestions for future health-services research regarding the causes and solutions to pain treatment disparities.

Biological and cultural disparities in pain?

People interpret and react to health symptoms, including pain, based on their life experiences and their cultural norms.¹¹ Numerous anthropological studies have been conducted on differences in the perception of pain based on culture, race, and ethnicity.¹²

The 1969 seminal study by Mark Zborowski, *People in Pain*,¹³ is a comparative study of the role of cultural patterns in attitudes toward and reaction to pain. Other anthropologists and sociologists have expanded on Zborowski's work. Subsequent studies have included various racial and ethnic groups;¹⁴ the studies, however, are not without limitations.¹⁵ Some of the studies demonstrated significant racial and ethnic variation in baseline pain threshold and/or tolerance.

A second body of literature involves experimental studies in which subjects are exposed to pain stimuli and the pain responses of the different racial, ethnic, and cultural

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groups are studied.¹⁶ These studies have not found differences in the ability to discriminate painful stimuli of a neurosensory basis based on race and ethnicity.¹⁷ Researchers will continue to look for biological and cultural differences in the perception of pain, but we must also study actual clinical treatment and investigate the differences that have been documented there.

A SUMMARY OF THE LITERATURE

The studies chosen for this review were published in peer-reviewed journals indexed in the bibliographic databases, MEDLINE¹⁸ and HealthSTAR.¹⁹ The databases were searched for articles published in the United States between July 1, 1990 and June 30, 2000 using the following search words: analgesic, pain, ethnicity, race, and treatment.

A total of 472 articles were identified. Reviewing the references cited in the selected articles provided additional articles. Eight published studies that had a primary objective to investigate differences in pain treatment were then selected for this literature review. Table 1 provides a summary of each study, including author and publication source, study population and location, research question, methodology, results, and limitations. In the discussion below, the studies have been divided by type of health-care setting (emergency department, inpatient post-operative care, and nursing home) and by type of pain (long bone fracture pain, cancer pain, and other types of pain).²⁰

PAIN TREATMENT IN THE EMERGENCY DEPARTMENT

The emergency room used to be the worst part of my going to the hospital; the nurses didn't understand, the doctors didn't understand, they do all this questioning. They wanted to know why the medication was not working? Why you are still in pain? If you are crying, why you are crying; if you are not crying, how can you be in pain? If you are laughing or talking, it is mental. Really you are not only experiencing your pain — the crises you are going through — but you are experiencing other peoples' opinions and feelings; that makes it worse. Dealing with your crisis and dealing with someone else who comes into your room to tell you that you can do this or, if you are doing that, something else is wrong. It's better for them to keep their opinions to themselves and just treat you.²¹

*Patient with Sickle Cell Disease,
Focus Group Participant*

The lack of an established patient-physician relationship in an emergency department may increase the influence

of physicians' stereotypes of patients and, consequently, the failure to properly treat pain. Four studies were reviewed in which the clinical setting was the emergency department.

Long bone fracture pain

Todd, Samaroo, and Hoffman

Todd, Samaroo, and Hoffman published, "Ethnicity as a Risk Factor for Inadequate Emergency Department Analgesia," in the *Journal of the American Medical Association* in 1993. The objective of the study was to determine whether Hispanic patients with isolated long bone fractures are less likely to receive emergency department analgesics than similar non-Hispanic white patients.²² This retrospective cohort study is important because it is the first article published in the *Journal of the American Medical Association* to analyze disparities in pain treatment due to one's ethnicity. The study has stimulated other researchers to conduct similar studies (with a similar study design) with different populations.

The study found that Hispanics with isolated long bone fractures were twice as likely as similar non-Hispanic whites to receive no pain medication in the emergency department. Fifty-five percent of Hispanics received no analgesic, as compared with 26 percent of the non-Hispanic whites. The relative risk of receiving no analgesic was more than twice as great for Hispanics compared with non-Hispanic whites. Controlling for specific covariates, such as patient characteristics (sex, language, and insurance status), degree of injury severity (admission, open fracture, and reduction), and factors associated with potential presentation (concurrent ethanol intoxication, time of presentation, and occupational injury), did not substantially change the relative risk.²³

Todd and colleagues concluded that one possible explanation for the differential analgesic use relates to a failure on the part of physicians, and perhaps other staff members, to recognize the presence of pain in patients who are culturally different from themselves. They also concluded that it was unlikely that the underuse of analgesics in Hispanic patients occurred because these patients felt less pain than did the non-Hispanic white patients.²⁴

The study is limited by its sample size of 139 patients — specifically, 31 Hispanics and 108 non-Hispanic whites — who were diagnosed with isolated long bone fractures and treated at the UCLA Emergency Department between January 1, 1990 and December 31, 1991.²⁵ Nonetheless, the study begins to unravel the causes of the disparities in pain treatment based on race and ethnicity: What is the role of language and physician-patient communication in the differences in pain treatment based on ethnicity? Is the issue of disparity also a function of education, income, and status?

Todd, Lee, and Hoffman

A 1994 published study by Todd, Lee, and Hoffman analyzed whether physicians' estimates of pain severity were influenced by a patient's ethnicity.²⁶ This companion study to Todd's 1993 study²⁷ was a prospective analysis of the doctors' medical judgment of pain severity at the time the patients were seen in the emergency department for medical care and pain treatment. The study did not investigate the actual treatment of pain²⁸ (see Table 1).

They found that there was no difference between physicians' assessment of pain for white and Hispanic patients.²⁹ In the context of the body of research of treatment differences in pain based on perception, communication, and culture, this study is important for its finding of no difference in how physicians assessed pain based on ethnicity.³⁰ Todd and colleagues commented: "Thus the unequal use of analgesics we observed in our original study is not explained by physicians' inability to assess the pain experience of Hispanic patients, assuming that physicians in this study do not behave in a fundamentally different way from the very similar group of physicians whose behavior was the subject of the previous study. Another possible explanation of the discrepant treatment pattern is straightforward bias by physicians who are equally aware of pain in both ethnic groups, but less interested in treating it when patients are Hispanic."³¹

Is physician behavior based on stereotypes and discrimination the cause of the disparity? What Todd and colleagues in the 1994 companion study did was to confront the question of physician bias in pain treatment. They presented data in support of the position that physician bias and discrimination are factors in the disparity of pain treatment based on ethnicity.

Karpman, Del Mar, and Bay

In 1996, Karpman, Del Mar, and Bay conducted a study to replicate the study by Todd and colleagues in 1993.³² The study, titled "Analgesia for Emergency Centers' Orthopaedic Patients: Does and Ethnic Bias Exist?," was published in *Clinical Orthopaedics and Related Research* in 1997. The objective of the study was to determine if a correlation existed between the race and ethnicity of the patient and the amount of analgesia administered to reduce pain related to a long bone fracture.³³ The study was conducted in a community hospital in Phoenix, Arizona. The community surrounding the facility had been historically diverse both ethnically and racially, with a majority of the residents Hispanic.³⁴ The study included both an adult and pediatric cohort of patients. The adult cohort consisted of 84 patients (29 Hispanics and 55 whites) seen between January 1, 1992 and December 31, 1992 for isolated long bone fractures requiring a closed reduction.

Karpman and colleagues found that 44.8 percent of the Hispanic patients and 43 percent of the white patients re-

ceived no analgesia. The relative risk of Hispanic patients not receiving analgesia was not significant. Their findings indicated that 55.2 percent of Hispanic patients and 56.4 percent of white patients received analgesia. Analysis of high versus low dose for those who received analgesia also indicated no statistically significant differences (50 percent of Hispanic patients and 32.3 percent of white patients received the high dosage).³⁵ The study did not confirm the findings of the 1993 study by Todd and colleagues,³⁶ but found that Hispanics were not likely to be undermedicated for fracture reduction at that facility.³⁷

Karpman recognized that the study's small sample size of 84 adults was a limitation of their study,³⁸ which was smaller than the sample size in Todd's 1993 study.³⁹ Karpman and colleagues concluded that the health-care facility's diversity might account for the differences found between this study and Todd's.⁴⁰

This study directly raises the question of whether the type of facility and the patient populations there influence the treatment of pain. Does it make a difference where the facility is located and the demographics of the patients who are typically treated there? Does it matter if the facility is a large urban academic health center, a community hospital in an ethnically and financially diverse neighborhood, or a community hospital in an upper socioeconomic neighborhood with limited ethnic and racial diversity? This study identifies the type of health-care facility and its geographic location as important variables in investigating the disparities in the treatment of pain based on race and ethnicity.

Todd, Deaton, D'Adamo, and Goe

The most recent study published as of June 30, 2000 on race and ethnicity as variables in pain treatment is a January 2000 study published by Todd, Deaton, D'Adamo, and Goe, titled "Ethnicity and Analgesic Practice," in the *Annals of Emergency Medicine*.⁴¹

The objective of this study was to determine whether black patients with extremity fractures were less likely to receive emergency department analgesics than similarly injured white patients. The study builds on Todd's 1993 study of Hispanics at the Southern California Academic Center in the city of Los Angeles.⁴²

The study was a retrospective cohort study at an urban emergency department in Atlanta, Georgia. Emergency department records were reviewed for a forty-month period (September 1, 1992 through December 31, 1995) to identify all black and white patients discharged from the emergency department with a diagnosis of isolated long bone fracture.⁴³ The study consisted of 217 patients, of whom 127 were black and 90 were white. The study found that the white patients were significantly more likely than black patients to receive analgesics (74 percent versus 57 percent, $p = 0.01$) despite similar records of pain complaints in the medical record.

The risk of receiving no analgesic while in the emergency department was 66 percent greater for black patients than for white patients.⁴⁴ The researchers stated:

We have previously examined health professionals' ability to assess pain in different ethnic groups, by testing physicians' skill in estimating pain severity among Hispanic and white patients with extremity trauma. Although disparities between patient and physician pain scores were noted, they were identical for the two ethnic groups. This implies that any ethnic disparity in analgesic prescribing could not be attributed to differences in pain assessment. We are left then, with the final step, the physician's decision to administer analgesics. Our findings suggest that patient ethnicity affects decision-making independent of objective clinical criteria. Beyond this, we have no specific data to shed light on the reasons physicians order analgesics less frequently for minority patients than for white patients.⁴⁵

This study replicates Todd and colleagues' original work with a different population. The findings conclude that disparity in the treatment of pain for long bone fracture in an emergency room is different based not only on the ethnicity of the patient, but also on the race of the patient. Being black is just as significant a factor as being Hispanic in receiving different pain treatment from white patients. The study also shows that disparity of pain treatment based on race and ethnicity occurs in different geographic areas of the country. Seven years after his first study, Todd and colleagues require us to confront empirical evidence of continued disparities in pain treatment in the emergency department based on race.

PAIN TREATMENT OUTSIDE THE EMERGENCY DEPARTMENT

Cancer pain

In 1994, Cleeland, Gonin, Hatfield, and additional colleagues published a multicenter study in the *New England Journal of Medicine* that found that outpatients with cancer who went to clinics that served ethnic and racial minority patients were three times more likely to be undermedicated with analgesics than were patients in other settings.⁴⁶ The percentage of patients indicating inadequate analgesia was significantly higher in community clinical oncology programs that treated predominantly black and Hispanic patients than in university cancer centers and community-based hospitals and practices. Also, black and Hispanic patients were more likely than non-minority patients to have inadequate analgesia no matter what the setting.⁴⁷

Cleeland, Gonin, Baez et al.

Cleeland, Gonin, Baez, and additional colleagues published a follow-up study in the *Annals of Internal Medicine*, "Pain and Treatment of Pain in Minority Patients with Cancer," in 1997.⁴⁸ The objective of the second study was to analyze specifically the severity of cancer-related pain and the adequacy of prescribed analgesics in black and Hispanic patients by treatment site, determine which factors might predict inadequate pain management for minorities, and whether pain treatment differed among ethnic minority groups. The study involved patients from academic health centers, community hospitals and practices, and centers that primarily treat minority patients.⁴⁹ The racial and ethnic demographics of the patients were described as 106 blacks, 94 Hispanics, and 16 persons of other racial and ethnic minority groups. Their pain severity was measured using the Brief Pain Inventory. The researchers estimated the adequacy of analgesic prescription by using the Pain Management Index.⁵⁰

The researchers concluded: "Patients who were treated at centers that primarily saw black persons, Hispanic persons, or both and patients who were treated at university centers were more likely to receive inadequate analgesia than were those who received treatment in non-minority community treatment settings."⁵¹ To reach this conclusion, Cleeland and colleagues compared data from their previous study⁵² and found that 65 percent of minority patients with pain received inadequate analgesic prescription, compared with 50 percent of patients from non-minority settings. Minority patients were more likely to have had the severity of their pain underestimated by their physicians and to have reported that they needed stronger pain medication.⁵³

Cleeland and colleagues discussed what might be some of the causes for the disparity in pain treatment:

Inadequate prescribing of analgesics for minority patients may result from many factors, including concern about potential drug abuse in minority patients, fewer resources with which to pay for analgesics, greater difficulty in assessing care and in filling analgesic prescriptions, and greater difficulty for the physicians in assessing pain in minority patients because of differences in language and cultural background. Inadequate treatment may also result from the patient's fear of aggressive treatment, the patient's lack of assertiveness seeking care, or lack of expertise at the sites that treat patients belonging to ethnic minority groups.⁵⁴

The Cleeland studies highlight the importance of considering the type of health-care facility when analyzing the data for disparities in pain treatment based on race and ethnicity. More research should be conducted to better understand the influence of health-care facilities' financial pressures, staffing inadequacies, and the predominant socioeco-

Table 1. Summary of the Literature.

Author, Source, and Year	Population/ Location	Research Question	Methodology	Results	Limitations
Todd, Deaton, D'Adamo, and Goe "Ethnicity and Analgesic Practice," <i>Annals of Emergency Medicine</i> , 35, no. 1 (2000): 11–16.	Sample consisted of 217 patients who were discharged from emergency department with isolated long-bone fracture diagnosis. Ethnicity: black ($n = 127$) white ($n = 90$) Mean Age: black: 33 (24–42 range) white: 35 (25–47 range) Sex: black: 59% male white: 58% male	Whether black patients with extremity fractures are less likely to receive emergency department analgesics than white patients with similar fractures.	Retrospective cohort study of medical records for a forty-month period. Ethnic identifiers were removed and records reviewed by: <ul style="list-style-type: none"> Physicians, for injury and treatment; and Nurses, for administration of analgesics. 	Some Key Findings: <ul style="list-style-type: none"> 140 patients received analgesic(s), 81% received narcotics Blacks were less likely than whites to receive analgesics (57% vs. 74%, $p = 0.01$) despite similar pain complaints. Blacks had a 66% greater risk of receiving no analgesic (relative risk = 1.66; 95% CI 1.11 to 2.50). Race predicted the absence of any analgesic administration in the emergency department even after controlling for covariates. 	<ul style="list-style-type: none"> Small number of subjects. Limited number of minority physicians to test association between physician and patient race and ethnicity and analgesic-prescribing patterns.
Todd, Samaroo, Hoffman "Ethnicity as a Risk Factor for Inadequate Emergency Department Analgesia," <i>JAMA</i> , 269, no. 12 (1993): 1537–1539.	Sample consisted of 139 patients who were discharged from emergency department with diagnosis of isolated long-bone fractures. Ethnicity: Hispanic ($n = 31$) non-Hispanic white ($n = 108$) Mean Age: Hispanic: 32.8 (10.4 SD) non-Hispanic: 31.3 (9.6 SD) Sex: Hispanic: 71.0% male non-Hispanic: 58.3% male Primary Language English: Hispanic: 58.1% non-Hispanic: 97.2%	Whether Hispanic patients with isolated long-bone fractures are less likely to receive emergency department analgesics than similar non-Hispanic white patients.	Retrospective cohort study of emergency department medical records for a two-year period. Medical record abstraction procedure: <ul style="list-style-type: none"> Demographic and analgesic information dichotomized as any analgesic or none. 	Some Key Findings: <ul style="list-style-type: none"> Hispanics were twice as likely as non-Hispanic whites to not receive analgesics in the emergency department (55% of Hispanics received no analgesic vs. 26% of non-Hispanic whites). Ethnicity was the strongest predictor of no analgesic administration in the emergency department after controlling for covariates. Patient's primary language reached borderline significance ($p = 0.052$) as an independent predictor of the absence of any analgesic administration. 	<ul style="list-style-type: none"> Ethnicity was not self-reported. Classification of Hispanic ethnicity was based on clerical emergency department personnel's perception of patient's ethnicity. The extent to which patient advocates, such as family members or friends, might have influenced physicians' pain management decisions was not measured. The presence and use of translators in this study wasn't measured. Availability of translators might have influenced physicians' management decisions.
Todd, Lee, and Hoffman "The Effect of Ethnicity on Physician Estimates of Pain Severity in Patients with Isolated Extremity Trauma," <i>JAMA</i> , 271, no. 12 (1994): 925–928.	Sample consisted of 207 patients. Ethnicity: Hispanic ($n = 69$) non-Hispanic white ($n = 138$) Mean Age: Hispanic: 33.8 (12.6 SD) non-Hispanic: 34.9 (15.1 SD) Sex: Hispanic: 68.1% male non-Hispanic: 58.7% male Primary Language English: Hispanic: 27.6% non-Hispanic: 89.1%	Whether a patient's ethnicity influences a physician's estimate of the severity of pain.	Prospective cohort study. Patients enrolled for study during a seven-month period (July 1992 through January 1993).	Some Key Findings: <ul style="list-style-type: none"> Mean patient pain assessment, mean physician pain assessment, and mean disparity in patient and physician pain assessment were not significant between white and Hispanic patients (0.86, 0.23, and 0.38 respectively). Patient pain assessment was higher than physician pain assessment for both Hispanics ($p = 0.003$) and whites ($p = 0.005$). Patient ethnicity was not predictive of disparity in patient vs. physician pain assessment. 	<ul style="list-style-type: none"> Evidence of the clinical significance of differences in pain assessment on a visual analog scale was not established. Convenience sample of patients presenting during dates and times when research assistants were available was used for this study.

Author, Source, and Year	Population/Location	Research Question	Methodology	Results	Limitations
<p>Ng, Dimsdale, Rollnik, and Shapiro</p> <p>"The Effect of Ethnicity on Prescriptions for Patient-Controlled Analgesia for Post-Operative Pain," <i>Pain</i>, 66 (1996): 9-12.</p>	<p>Sample consisted of 454 consecutive patients who were treated with patient-controlled analgesia (PCA) for pain in the immediate inpatient post-operative period (the first eight to twelve hours after surgery).</p> <p>Ethnicity: Hispanic ($n = 73$) white ($n = 314$) Asian ($n = 37$) black ($n = 30$)</p> <p>Sex: white: 65% male Hispanic: 53% male Asian: 51% male black: 73% male</p>	<p>Whether ethnicity influences PCA for post-operative pain.</p>	<p>Retrospective medical record abstraction for patients seen between January and June 1993.</p> <p>Data collection included:</p> <ul style="list-style-type: none"> Demographic information; type and use of narcotics before, during, and after surgery; and pain site/location abstracted from medical records. Patient rating of pain from visual analog scale (scores 0 – 10) regarding minimum and maximum pain experienced during immediate post-operative period. 	<p><u>Some Key Findings:</u></p> <ul style="list-style-type: none"> Subjective pain scores reported by patients of different ethnic groups did not differ statistically from one another. Prescribed analgesics: Ethnic groups differed significantly from one another in the amount of PCA they were prescribed both before and after controlling for covariates. Whites were prescribed more narcotics than Hispanics. Blacks were prescribed more narcotics than Hispanics and Asians. 	<ul style="list-style-type: none"> Sample sizes for blacks and Asians were relatively small. Patients' body sizes were not measured in relation to both the amount of analgesics they were prescribed and the amount they self-administered. Patients' primary language was not measured, especially in relation to patients' completing the visual analog scale. Patients' primary language can influence physicians' pain management decisions based on patients' ability (or inability) to communicate subjective pain experience.
<p>Bartfield, Salluzzo, Raccio-Robak et al.</p> <p>"Physician and Patient Factors Influencing the Treatment of Low Back Pain," <i>Pain</i>, 73 (1997): 209-211</p>	<p>Convenience sample of 91 adult emergency department patients treated and released with non-traumatic lower back pain</p> <p>Ethnicity: Caucasian: 65% ($n = 59$) non-Caucasian: 35% ($n = 32$)</p> <p>Mean Age: 35.4 (12.7 years SD) (Ages spanned from 18 to 74)</p> <p>Sex: female: 45% ($n = 41$) male: 55% ($n = 50$)</p> <p>Insurance Status: self-pay/Medicaid: 38% ($n = 34$) private/Medicare: 62% ($n = 57$)</p>	<p>Whether physician impression of the degree of a patient's pain and patient demographics influence the prescription of analgesics.</p>	<p>Physician pain score measured on same scale as patient pain score; both patient and physician were blind to each others' scales.</p> <p>Outcome variable: Analgesics administered in emergency department treatment</p> <p>Dichotomous variables: • parenteral analgesics • oral opioids</p> <p>Patient demographics: • ethnicity (Caucasian or non-Caucasian) • sex • age • insurance</p>	<p><u>Some Key Findings:</u></p> <ul style="list-style-type: none"> 38% received analgesics ($n = 35$). Of these, 28% were Caucasian ($n = 9$) and 44% non-Caucasian ($n = 26$). Patient ethnicity was determined not to be significant. 	<ul style="list-style-type: none"> Small sample size (type II error). Race and ethnicity were not defined beyond Caucasian vs. non-Caucasian. Hawthorne effect (even though physicians didn't know their decision to administer analgesics was being examined, their decisions might have been influenced by their completing the visual analog pain scale for their patients).
<p>Ng, Dimsdale, Shragg, and Deutsch</p> <p>"Ethnic Differences in Analgesic Consumption for Postoperative Pain," <i>Psychosomatic Medicine</i>, 58 (1996): 125-129</p>	<p>Ethnicity: Hispanic ($n = 100$) black ($n = 36$) white ($n = 114$)</p> <p>Insurance: • Hispanics = 100% Medicaid or other publicly funded program • blacks = 89% public; 11% private • whites = 91% Medicaid or other publicly funded program; 10% private insurance</p>	<p>Whether patient ethnicity influences the receipt of post-operative analgesia.</p>	<p>Of 250 consecutive patients who were hospitalized for open reduction and internal fixation of a limb fracture, the following data were collected:</p> <ul style="list-style-type: none"> length of hospitalization, length of operative time, number of diagnoses (current fracture and other concurrent diagnoses), and number of procedures (reduction of fracture and any other during hospitalization, e.g., arterial blood gases). 	<p><u>Some Key Findings:</u></p> <ul style="list-style-type: none"> Significant number of diagnoses ($p = 0.001$): whites had larger number. No differences in receipt of acetaminophen or non-steroidal anti-inflammatory drugs (NSAIDs) across ethnic groups. Significant differences among blacks, Hispanics, and whites ($p < 0.002$) in analgesic consumption (narcotics): <ul style="list-style-type: none"> whites = 22 mg./day blacks = 16 mg./day Hispanics = 13 mg./day (approx. 60% less than whites) 	<ul style="list-style-type: none"> Low proportion of blacks compared to rest of sample. Authors considered insurance status (in this case, the majority didn't have any) as a possible proxy for social class. A more precise measure of social class is needed.

Author, Source, and Year	Population/Location	Research Question	Methodology	Results	Limitations
Bembel, Gambassi, Lapane et al. "Management of Pain in Elderly Patients With Cancer," <i>JAMA</i> , 279, no. 23 (1998): 1877-1882	Sample consisted of 13,625 cancer patients who were 65 or older and discharged from a hospital to one of 1,492 Medicare-certified and/or Medicaid-certified nursing homes in five states participating in the Health Care Financing Administration's demonstration project Ethnicity: Hispanic ($n = 163$) white ($n = 12,038$) black ($n = 1,041$) American Indian ($n = 276$) Asian ($n = 107$) Mean Age: 81 (8 years SD) Sex: female: 57%	Whether pain management in elderly and minority cancer patients admitted to U.S. nursing homes is adequate.	350-item minimum data set completed by multidisciplinary team of various researchers (SAGE database) Record of different medicines received by patient during prior seven days (by nursing staff) "Daily pain" defined as "any type of physical pain or discomfort in any part of the body that was manifested daily."	<u>Some Key Findings:</u> • Minority patients were less likely to have pain recorded relative to whites (even after language differences were taken into account). Statistical significance only for blacks, but trend was there for Hispanics, Asians, and American Indians. • Minority patients were more likely to receive no analgesic compared to whites (multivariate analysis). • Blacks were less likely to receive analgesics (relative risk = 1.63; CI 1.18 to 2.26) — specifically a 63% increased probability of being untreated relative to whites.	• Small number of persons per racial group. • Limitations in accuracy of assessment of pain: Data set was not focused specifically on pain; observational evaluation of patient's pain by staff may be underestimated of pain; and site of pain was not located with certainty.
Karpman, Del Mar, and Bay "Analgesia for Emergency Centers' Orthopaedic Patients: Does an Ethnic Bias Exist?," <i>Clinical Orthopaedics and Related Research</i> , 334 (1997): 270-275	Sample consisted of 84 adult patients older than 16 years of age who were discharged from the emergency department of a level-I trauma center community hospital with a diagnosis of isolated long-bone fractures requiring a closed reduction Ethnicity: Hispanic ($n = 29$) white ($n = 44$) Sex: male ($n = 54$) female ($n = 30$)	Whether Hispanic patients with isolated long-bone fractures are less likely to receive emergency department analgesics than similar non-Hispanic white patients seen at Maricopa Medical Center.	Retrospective cohort study of emergency department medical records for a one-year period. Medical record abstraction procedure: • demographic and analgesic information collected, • record reviewed if an analgesia was recorded in the physician's progress note and medication records, • linear regression was used to assess the relationship between ethnicity and the equivalent dose of analgesia, and • patients not receiving analgesia were excluded.	<u>Some Key Findings:</u> • 44.8% of Hispanic patients and 43.6% of white non-Hispanic patients received no analgesia. The relative risk for Hispanic patients not receiving analgesia was 1.03 that of white patients, so the probabilities of receiving analgesia for the two groups were not significant. • Analysis of high versus low dose for those who received analgesia also indicated no difference: 50% of Hispanic patients and 32.3% of white patients received the high dosage.	• Small sample size in the current study. • Incomplete information from medical abstraction on payer source. • No evidence of a blinded review.
Cleland, Gonin, Baez et al. "Pain and Treatment of Pain in Minority Patients with Cancer," <i>Annals of Internal Medicine</i> , 127, (1997): 813-816	Sample consisted of 281 minority (Hispanic and non-white) outpatients with cancer who were receiving care at university cancer centers, community hospitals and cancer centers, and centers that treat predominantly minority patients. Of the sample population, 216 patients (77%) reported that in the 7 days before the study, they had pain or had taken analgesics on a daily basis. Ethnicity: black ($n = 106$) Hispanic ($n = 94$) other minority ethnicity ($n = 16$)	Whether pain treatment differed among ethnic minority groups and whether pain treatment in minority patients varied by treatment site.	Prospective cohort study of minority patients treated for cancer-related pain at nine university cancer centers (26%), seventeen community hospitals and practices (41%), and four centers that primarily treat minority patients (33%). Ethnicity was reported by the institution.	<u>Some Key Findings:</u> • For 90% of the patients, the pain was attributed by their physician to the disease process of cancer. • In comparison to the previous study, minority patients were more likely to be undereducated (65% and 50%; $p < 0.001$). • Minority patients had the severity of their pain underestimated by their physicians ($p < 0.04$), reported that they needed stronger pain medication ($p < 0.001$), and felt that they needed to take more analgesics than their physicians had prescribed ($p < 0.001$).	• Data were collected immediately after data collected on the non-minority comparison group, which may have biased the results. • Study did not consider reluctance to report pain by patients. • Data on patients' race and ethnicity were not available for comparison group.

conomic status of the facilities' patients on the treatment of pain. As a subset of this, more studies are needed to analyze the relationship between physicians' attitudes toward (and stereotypes of) their patients and physicians' treatment of their patients' pain. For instance, are physicians more likely to believe that their black and Hispanic patients, rather than their white patients, are drug abusers?

Bernabei, Gambassi, Lapane et al.

A 1998 study by Bernabei, Gambassi, Lapane, and additional colleagues of the management of pain in elderly patients with cancer included an analysis of pain treatment for elderly minority patients.⁵⁵ The study, titled "Management of Pain in Elderly Patients with Cancer," was published in the *Journal of the American Medical Association*. The study characterizes the treatment of pain for 13,625 individuals receiving Medicare. The data for the study was from the Systematic Assessment of Geriatric Drug Use via Epidemiology (SAGE) database.⁵⁶

The study found that black and Hispanic patients were less likely to have pain recorded relative to non-Hispanic whites.⁵⁷ The study found that minority patients with cancer in nursing homes were more likely not to have received any analgesia. Black Americans appeared to have a 63 percent increased probability of having their pain untreated relative to whites. Similar results were observed for patients belonging to other racial and ethnic groups, although the confidence intervals were wide because of the small number of patients in these groups in the study.⁵⁸

Pain was assessed based on observational evaluation by the nursing home staff, which has the potential for underestimation.⁵⁹ All of the patients were in a Medicare-certified and/or Medicaid-certified nursing home. All patients were age 65 or older and thus eligible for and receiving Medicare. Sadly, in addition to this study, other studies have found that Medicare patients who are black or poor receive a lower quality of care.⁶⁰ The passage of the Civil Rights Act of 1964 *should* have provided the legal remedy for addressing racial disparities in such government-sponsored health care. Title VI of the Act prohibits institutions that receive federal assistance from discriminating. Specifically, the law provides:

No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.⁶¹

Medicare and Medicaid funding are within the definition of federal assistance pursuant to Title VI.⁶² The purpose of Title VI is to prohibit discrimination that is either intentional or based on policies that appear facially neutral, but have a disproportionate or adverse negative impact. Title VI,

however, has failed to be an effective law to end discrimination in our country's health-care delivery systems. Health law scholars have specifically commented about the ineffectiveness of Title VI in redressing the disparities in health-care treatment.⁶³

In 1999, the Office for Civil Rights (an office within the Department of Health and Human Services) established a Racial Disparities Task Force to further the U.S. Department of Health and Human Services Initiative to eliminate racial and ethnic disparities.⁶⁴ The Office of Civil Rights reported in its fall 1999 newsletter: "OCR's enforcement experience, coupled with compelling research documenting the prevalence of racial bias in physician decision-making, demonstrates that eliminating racial disparities in the provision of health care services is both a public health and civil rights challenge. Aggressive enforcement of civil rights laws must be an important component of our overall strategy to eliminate the racial disparities in health."⁶⁵ Our country's elderly have a right to equal pain treatment in a government-sponsored health-care program; hopefully, the Office of Civil Rights will take its enforcement responsibility seriously.

Post-operative pain and low back pain

Ng, Dimsdale, Shragg, and Deutsch

A study published in 1996 by Ng, Dimsdale, Shragg, and Deutsch studied the influence of a patient's ethnicity and race on treatment of post-operative pain. The retrospective medical record study included 250 consecutive patients hospitalized for open reduction and internal fixation of a limb fracture.⁶⁶ The objective of the study was to examine whether the findings from Todd's 1993 study⁶⁷ could be generalized to post-operative pain in inpatient settings and with other racial and ethnic groups.⁶⁸

The study found that "whites ($n = 114$) consistently received higher doses of analgesics than blacks ($n = 36$) or Hispanics ($n = 100$). Despite the fact that the groups differed in some demographic and clinical variables, the difference in analgesic consumption was highly significant (based upon race and ethnicity) and persisted even after controlling for these variables (age, sex, insurance status, number of diagnoses)."⁶⁹ The authors commented: "What is it about ethnicity that influences so profoundly pain behavior? The receipt of analgesic medication requires a transaction between patient and staff. Our study cannot disentangle whether the differences in analgesic used reflect *patient* behavior/attitudes, *staff* behavior/attitudes, or both."⁷⁰

Ng, Dimsdale, Rollnik, and Shapiro

A follow-up study, titled "The Effect of Ethnicity on Prescriptions for Patient-Controlled Analgesia for Post-Opera-

tive Pain” and published in *Pain*, was conducted by Ng, Dimsdale, Rollnik, and Shapiro in 1996 to examine the influence of ethnicity on patient-controlled analgesia. When patients are prescribed patient-controlled analgesia, the interaction between patient and staff is reduced, giving patients more autonomy in the treatment of their pain. With this self-administered analgesia, the main interaction between patient and staff is the interaction with the physician while the device is being set up.⁷¹ This study is unique in that it focused on both the patient’s self-administering behavior and the physician’s prescribing behavior.

The sample included 454 patients who were prescribed patient-controlled analgesia for pain following a surgical procedure. Patients were excluded from the sample if they did not have a surgical procedure prior to the use of the patient-controlled analgesia or did not use the patient-controlled analgesia in the immediate post-operative period. The ethnic and racial sample included Asians ($n = 37$), blacks ($n = 30$), Hispanics ($n = 73$), and whites ($n = 314$).

The study found that the amount of narcotic prescribed was greater for whites than for Hispanics, and greater for blacks than for Hispanics and Asians. The study indicated that variables such as age, sex, site of the surgery, and history of pre-operative narcotic use influenced the physician’s decision on the initial patient-controlled analgesia prescription. When the study statistically controlled for these variables, however, ethnicity continued to be a significant independent predictor of the amount of narcotic prescribed.⁷²

The authors commented that this study suggests that ethnicity exerts a prominent effect on physicians’ behavior, even when patients’ behavior is relatively constant across ethnic groups. Although other issues — like the effectiveness of communication between the physician and patient before surgery, the physician’s ethnicity, and the physician’s prior experience in treating pain — still have to be considered, it seems clear that ethnicity has a profound influence on the physician’s treatment plan.⁷³

In making the Presidential Address to the American Psychosomatic Society in 1999, Dimsdale described the conclusion of the original and follow-up studies in bleak terms:

The doctor apparently arrives at the patient’s bedside with preconceived notions about the patient’s needs for pain medication that are tied to ethnicity and not to the illness per se. What is worse is that there are no data to suggest that such perceptions are accurate, nor are physicians even aware of their behavior.⁷⁴

Bartfield, Salluzzo, Raccio-Roback et al.

Contrary findings were found in a 1997 study conducted by Bartfield, Salluzzo, Raccio-Roback, and additional colleagues.

The study, titled “Physician and Patient Factors Influencing the Treatment of Low Back Pain” and published in *Pain*, was designed as a prospective study of adult patients treated for non-traumatic low back pain. Bartfield and colleagues investigated the influence of the physician’s impression of the patient’s pain, race, and ethnicity on the prescribing of analgesics.⁷⁵ They concluded that the physician’s impression of the patient’s pain, rather than of the patient’s ethnicity and race, influenced analgesic use.

Ninety-one patients were enrolled in the study; the authors described race and ethnicity as Caucasian ($n = 59$) and Non-Caucasian ($n = 32$). Physicians and patients who participated in the study were told that the study was being done only to test the ability of physicians to estimate a patient’s pain. Following the initial physician contact and prior to the initiation of any therapeutic or diagnostic interventions, both patients and physicians rated patient pain and discomfort using a visual analog pain scale. Of the patients in the study, 38 percent received analgesics. The physician pain score was determined to be the only predictive factor significant to actual pain treatment. Patient ethnicity was found not to significantly influence analgesic administration. The authors commented: “We have demonstrated that physician pain assessment was the only factor that was significantly associated with whether or not analgesics were administered to patients with non-traumatic low back pain.”⁷⁶

The authors, however, acknowledged two significant limitations of the study. First, physician medication decisions may have been biased by the knowledge that they were participating in a research study. Second, the sample size of 91 patients was very small. A further limitation of the study is the categorization of the sample population as “Caucasian” and “non-Caucasian.”

UNDERSTANDING THE LESSONS OF THE STUDIES

The studies as a body of research paint the clear picture that one’s race and ethnicity matter in the treatment of pain. The common thread is that there are empirical data indicating differences in pain treatment based on the patient’s racial and ethnic background. The studies’ most poignant findings are related to the disparity in treatment of blacks and Hispanics in comparison to the treatment of whites. The studies, when reviewed as a group, find that disparities cross different types of health-care facilities and treatment settings, from the emergency room to the community hospital to the nursing home.

Not all studies found disparities that could be attributed to the patient’s race or ethnicity. Two of the eight studies reviewed did not find a difference in treatment based on race. These studies concluded that the type of health-care facility and the physician’s impression of the patient’s pain were more determinative factors than race and ethnicity in the extent to which pain was treated (or not treated) prop-

erly. What the studies do as a body of research is make a very strong argument that this is an important area for further research, physician education, and health advocacy to improve the treatment of pain for all people in our society. The larger dialogue on improving pain relief should not be permitted to marginalize the evidence of disparities in pain treatment for people of color.

GENERAL LIMITATIONS OF THE STUDIES

The studies presented have provided a foundation for other researchers to further study the treatment of pain based on the race and ethnicity of the patient. Much can be learned from this work including the limitations of the studies. General limitations of the studies include:

1. **Sample Size.** The limited number of subjects in the studies diminishes their ability to be generalized. The sample size is a major limitation of most of the studies.
2. **Unreliability of Recorded Information.** A limitation of retrospective medical record reviews is the accuracy of the information collected, which may include misclassifications of predictor or outcome variables. Recognizing this limitation is important in describing and analyzing pain treatment.
3. **Race and Ethnicity Identification.** How information about race and ethnicity is collected is an important component of study design. Studies must clearly state how the information is collected and how race and ethnicity are defined. Race and ethnicity misclassification must be recognized as a potential limitation of health-services research that collects data from medical records and by hospital staff judgment. The validity of health-services research data is based on the assumption that the categories of race and ethnicity are consistently defined and collected.⁷⁷ As a result, how race and ethnicity are classified and collected should be a part of any discussion of racial and ethnic disparities in health care.

CAUSES OF THE DISPARITIES IN PAIN TREATMENT

Perceptions of race and ethnicity

“When people look at me, they tend to fill in the blank with what they’re comfortable with and often assume I’m Asian. So I hear things that maybe I wasn’t supposed to see or hear. I know what it feels like to be black in America and I know what it feels like to be Asian.”⁷⁸

The classification of individuals’ racial and ethnic identity is fraught with researchers’ biases. Race is not defined in

a singular way.⁷⁹ Race is an ambiguous concept that has played a prominent role in health-services research.⁸⁰ Demographic data, including race and ethnicity, are commonly collected by admitting clerks at hospitals at the time of admission.⁸¹ Many institutions do not have any formal rules for assigning race to a patient.⁸² The “gold standard” for the classification of race and ethnicity is self-identification.⁸³ However, there is a competing theory that physicians’ perceptions of a patient’s race would be more appropriate.⁸⁴ In the 1993 Todd study, the researchers wrote:

Hispanic ethnic classification is recorded by clerical personnel in our ED [emergency department] on the basis of Hispanic surnames and use of Spanish as the primary language in the home. It is possible that such classification was imprecise and even erroneous, but it seems unlikely that “perception” of ethnicity by treating medical personnel would have been significantly different than that of the registration clerks.⁸⁵

Too often, a physician’s perception of a patient’s race and ethnicity, which is not based on any communication with the patient, is being recorded and used by the health-care team to make clinical decisions and medical and social judgments about the patient. This practice perpetuates physician paternalism and racism.

Today in our nation, we are facing the political and social issue of defining people by race and ethnicity in a new way.⁸⁶ Race is a social construct that continues to influence how people are treated. In future research, we must further investigate how physicians’ preconceptions about race and ethnicity are biasing not only the way they treat patients for pain, but also how information about race and ethnicity is collected.

Language barriers

The health-care provider’s level of fluency in patients’ primary language is an important factor in effective physician-patient communication.⁸⁷ Physician-patient communication is essential to properly assessing a patient’s pain. It should be noted that in the 1993 Todd study, the effect of ethnicity on pain treatment persisted after controlling for primary language use.⁸⁸

One area that the Office for Civil Rights has targeted for enforcement is ensuring access to health-care services for Limited-English Proficient (LEP) patients. The Office of Civil Rights has issued a Guidance Memorandum on national origin non-discrimination and Limited-English-Proficiency to its staff to ensure consistent application of Title VI of the Civil Rights Act of 1964 to health and social services programs funded by the department. The focus of the Office of Civil Rights is on the ability of

patients with limited English proficiency to obtain access to health care.⁸⁹

In April 2000, the Commonwealth of Massachusetts passed the "Emergency Room Interpreter Bill," effective July 1, 2001. This law requires all hospitals that provide acute care in emergency rooms or acute psychiatric services to use competent interpreter services when treating non-English speakers.⁹⁰ The law recognizes that effective pain assessment requires the ability to communicate with the patient.

Patient-physician communication

Once you go through registration and you go in the back, it is like your little prison; you are sitting there, you listen to everybody's crying, and in pain, and you are in pain, so you try to hold back. You are wondering if he (Doctor) is coming or not coming. They make you feel like you are in a prison, a ward, and you are stuck there until it gets better and it never gets better. I hate it. I really, really hate it. Then there has been some wonderful times, I went in and got treated.⁹¹

*Patient with Sickle Cell Disease,
Focus Group Participant*

Studies have shown that race and ethnicity are important cultural barriers in patient-physician communication. A study⁹² by Cooper-Patrick and colleagues found that African American patients had significantly less participatory visits with their physicians than white patients. The objective of the study was to determine how the race, ethnicity, and sex of patients and physicians were associated with physicians' participatory decision-making styles.⁹³ Physicians who involved their patients in treatment decisions were defined as having a "shared" or "participatory" decision-making style.⁹⁴

Understanding the influence of race, ethnicity, and sex in the clinical decision-making process is important in understanding their effect on the communication between patients and physicians. Cooper-Patrick indicated that ethnic differences between physicians and patients are often barriers to partnership and effective communication. She theorized that a number of physician and patient factors might account for these problems, including that physicians may unintentionally incorporate racial biases, such as stereotypes, into their interpretation of patients' symptoms, predictions of patients' behaviors, and medical decision-making.⁹⁵ Physicians may not understand a patient's expression of his or her symptoms. Patients might contribute less to participatory medical visits because of factors such as language barriers, low health literacy, little education, as well as the inability or failure to advocate for one's health.⁹⁶

Socioeconomic status

Race, ethnicity, and socioeconomic status are intertwined in the United States. It is difficult to isolate racial and ethnic disparities from socioeconomic disparities.⁹⁷ Socioeconomic status is commonly used to discuss disparities in health-care status and treatment; however, the way it is defined is not always clear. Socioeconomic status includes both resource-based and prestige-based measures. Resource-based measures refer to income, wealth, and educational credentials. Prestige-based measures refer to an individual's status in a social hierarchy, typically evaluated by reference to people's access to and consumption of goods, services, and knowledge, as linked to the prestige of their occupation, income, and education level.⁹⁸

The influence that a patient's socioeconomic status has on the treatment of pain should be further studied and separated from the race and ethnicity of the patient to better understand the causes of disparities in pain treatment. The type of facility where patients receive their health care is associated with socioeconomic status and should be considered in understanding disparities in pain treatment. The Cleeland studies found that the percentage of patients with inadequate pain treatment was significantly higher in community clinical oncology programs that treated predominantly black and Hispanic patients than in the other settings.⁹⁹ This may be caused by many factors, including resources available at the facility and the health-care providers' perceptions of their patients.

Sidney Watson, commenting on disparities in care in the inner city, stated: "Most doctors and hospitals who serve only the poor do, in fact, provide unequal care. In some cases the differences may be only cosmetic.... In others, the differences mean less than optimal service — fewer prescription drugs, fewer staff, less care. Under our present system, inequality results from inadequate financing. Even with financing reforms, however, the poor do not have the political clout to demand better services. Programs designed specifically for their needs may slip inexorably into providing substandard care."¹⁰⁰ Studies of pain treatment and racial and ethnic disparities in treatment must include, as a variable and a major focus, analysis of the type of facility in which the patient received care.

Clinical assessment of pain

We need to get physicians and nurses, health-care providers in general, to understand we deserve to be triaged better than we are.... They always triage us badly. I think as a sickle cell person I need to be moved up in the triage process. Don't take my complaints quite so lightly. We are always the last people to be seen. Our pain is as real as that

guy over there with a gunshot wound. Our pain is every bit as REAL. And that again is the education. We got to get the doctors to understand that this thing is REAL.¹⁰¹

*Patient with Sickle Cell Disease,
Focus Group Participant*

Assessment of pain is the first step in its treatment. Thus, understanding the potential for bias in the assessment of pain based on differences of race, ethnicity, and socioeconomic status is necessary if we are to reduce barriers to equal pain treatment. Knox Todd commented that a possible cause of the disparity in treatment is not racial and ethnic bias, but a failure to properly assess the patients' pain. "It is possible that, unless prompted, physicians are less likely to perform an adequate or conscious pain assessment for Hispanic or other minority patients, which could then explain the disparity in [the] ordering of analgesics. If this were true, the chance of changing physician behavior would appear to be much greater than if conscious racial bias were the root cause."¹⁰² The 1994 study by Todd and colleagues raised many questions to support the need for further research of differences in the assessment of pain.

"Pain is a complex, subjective response with several quantifiable features, including intensity, time course, quality, impact, and personal meaning. The reporting of pain is a social transaction between caregiver and patient."¹⁰³ Because pain and the reporting of pain are so subjective, standardized pain assessment is a critical process in ensuring complete patient-physician communication regarding pain. The debate continues regarding the best approach to assess pain and the use of various pain scales.¹⁰⁴ Too often, however, nothing is used and pain is not discussed and assessed in any type of routine clinical manner. See Figure 1 for the Agency for Healthcare Research and Quality's clinical guidelines for acute pain assessment.

THE NEED FOR MORE RESEARCH

Further study is needed to look at differences of treatment based on patient-physician racial and ethnic concordance. This is important to further understand the differences in pain treatment and to decrease disparities based on non-clinical factors.

The first major study on differences in pain treatment based on race and ethnicity was published in 1993. We are only beginning to unravel the causes of this disparity, and we must continue this work. Additional study of the influence of English language proficiency on pain treatment should be pursued to understand how patient-physician communication influences the assessment of pain. The role of acculturation in how pain is communicated and assessed by physicians should also be further studied.

How pain is assessed, the influence of trust between a health-care provider and patient, physicians' perception of patients, and patients' perception of physicians must, too, be studied as part of the investigation of the differences in treatment based on race and ethnicity.

The influence of socioeconomic status on pain treatment must be further studied. Intra-race and Intra-ethnicity studies can provide valuable data in distinguishing differences based on socioeconomic factors from differences based on race and ethnicity. Further studies to understand the role of the health-care institution on the treatment of pain will help health-care providers understand why some institutions have significantly different treatments based on race and ethnicity and others do not. The National Institutes of Health, the Agency for Healthcare Research and Quality, and private foundations should fund projects with sufficiently large stratified study populations to be generalizable to the national population and sub-populations by race and ethnicity, geographic location, sex, and insurance and income status.

Standard data collection is needed to provide health researchers accessible and accurate data on pain treatment by race, ethnicity, sex, and age. Empirical data and effective laws can work together to assist in reducing barriers in treatment based on race and ethnicity.

CONCLUSION

Because racial disparities may be occurring despite the lack of any intent or purposeful efforts to treat patients differently on the basis of race, physicians should examine their own practices to ensure that inappropriate considerations do not affect their clinical judgment. In addition, the profession should help increase the awareness of its members of racial disparities in medical treatment decisions by engaging in open and broad discussion about the issue. Such discussions should take place as part of the medical school curriculum, medical journals, at professional conferences, and as a part of professional peer review activities.¹⁰⁵

The majority of the studies conducted to date have found a disparity in pain treatment. The studies have found that blacks and Hispanics are more likely to be undertreated for pain than whites. "Any attempt to remedy disparities in the delivery of health care services must confront the possibility of racism as a motivating factor in treatment decisions."¹⁰⁶

Why are so many people of color (racial and ethnic minorities) not surprised by these findings? Vanessa Northington-Gamble comments: "They [African Americans] perceive, at times correctly, that they are treated differently in the health care system solely because of their race, and such perceptions fuel mistrust of the medical profession. For

Figure 1. Pain Assessment and Reassessment.

PRINCIPLES

- Patients who may have difficulty communicating their pain require particular attention. This includes patients ... who do not speak English and patients whose level of education or cultural background differs significantly from that of their health care team.
- Family members should be involved when appropriate.

PAIN ASSESSMENT TOOLS

- The single most reliable indicator of the existence and intensity of pain — and any resultant distress — is the patient's self-report.
- Self-report measurement scales include numerical or adjective ratings and visual analog scales. Tools should be reliable, valid, and easy for the patient and the nurse or doctor to use. These tools may be used by showing a diagram to the patient and asking the patient to indicate the appropriate rating.
- The tools may also be used by simply asking the patient for a verbal response (e.g., "On a scale of 0 to 10 with 0 as no pain and 10 as the worst pain possible, how would you rate your pain?").
- Tools must be appropriate for the patient's developmental, physical, emotional, and cognitive status.

PREOPERATIVE PREPARATION

- Discuss the patient's previous experiences with pain and beliefs about and preferences for pain assessment and management.
- Give the patient information about pain management therapies that are available and the rationale underlying their use.
- Develop with the patient a plan for pain assessment and management. Select a pain assessment tool, and teach the patient to use it. Determine the level of pain above which adjustment of analgesia or other interventions will be considered.
- Provide the patient with education and information about pain control, including training in nonpharmacologic options such as relaxation.
- Inform patients that it is easier to prevent pain than to chase and reduce it once it has become established and that communication of unrelieved pain is essential to its relief.
- Emphasize the importance of a factual report of pain, avoiding stoicism or exaggeration.

POSTOPERATIVE ASSESSMENT

- Assess the patient's perceptions, along with behavioral and physiologic responses. Remember that observations of behavior and vital signs should not be used instead of a self-report unless the patient is unable to communicate.
- Assess and reassess pain frequently during the immediate postoperative period. Determine the frequency of assessment based on the operation performed and the severity of the pain. For example, pain should be assessed every 2 hours during the first postoperative day after major surgery.
- Increase the frequency of assessment and reassessment if the pain is poorly controlled or if interventions are changing.
- Record the pain intensity and response to intervention in an easily visible and accessible place, such as a bedside flow sheet.
- Revise the management plan if the pain is poorly controlled.
- Review with the patient before discharge the interventions used and their efficacy and provide specific discharge instructions regarding pain and its management.

Source: U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research, *Acute Pain Management in Adults: Operative Procedures. (Quick Reference Guide for Clinicians No. 1a)*, AHCPR Pub. No. 92-0019; (Washington, D.C.: U.S. Gov't Printing Office, 1993).

example, a national telephone survey conducted in 1986 revealed that African Americans were more likely than whites to report that their physicians did not inquire sufficiently about their pain, did not tell them how long it would take for prescribed medicine to work, did not explain the seriousness of their illness or injury, and did not discuss test and examination findings.¹⁰⁷

The experience of racism in the every day lives of people is pervasive.¹⁰⁸ It is a part of our unconscious and conscious lives to treat people who look or speak differently as in fact different from those who look or speak like ourselves. The majority of the time, the disparity in how we treat people is only a demonstration of our ignorance. However, health care is an area where this ignorance can cause potentially life-threatening outcomes. If we are to solve these disparities in treatment, we must study them and determine their causes. We must have a serious dialogue about the many factors that cause racial and ethnic disparities in health-care treatment. Health inequities should be an important bioethics concern.¹⁰⁹ Race matters in the delivery of health care services. While the causes of health-care disparities are more complicated than race, we must continue to study race as a factor.¹¹⁰

The Council on Ethical and Judicial Affairs for the American Medical Association stated in its 1990 report, "Black-White Disparities in Health Care," that one response to the disparities is greater awareness.¹¹¹ Greater awareness is particularly important for the study of the treatment of pain. Greater awareness by the legal, medical, and ethics communities of the studies that have investigated race, ethnicity, and pain treatment, as well as these communities' promotion of further research, is a step in eliminating the disparities. It is my hope that by reviewing the research conducted on pain treatment based on patients' race and ethnicity and presenting the voices of people who experience pain, I will encourage others to pursue research in this field. Only then will we fully understand the causes of disparities and identify solutions to eliminate them.

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ease is an inherited blood disorder and is characterized by excruciating musculoskeletal pain that punctuates the lives of patients with the disease. Often referred to as "crises," these episodes of pain are the principal causes of morbidity among patients with the disease. See O.S. Platt et al., "Pain in Sickle Cell Disease," *N. Engl. J. Med.*, 325 (1991): 11–16. The voices of individuals whose lives are intertwined with pain episodes provide an important personal context to the data of race and pain treatment studies. They also should also serve as a plea — a demand — for further study of the inequities resulting from the differences in pain treatment based on race and ethnicity.

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18. MEDLINE is the National Library of Medicine's premier bibliographic database covering the fields of medicine, nursing, dentistry, veterinary medicine, the health-care system, and the pre-clinical sciences. The MEDLINE file contains bibliographic citations and author abstracts from approximately 3,900 current biomedical journals published in the United States.

19. HealthSTAR contains citations to journal articles, monographs, technical reports, meeting abstracts and papers, book chapters, government documents, and newspaper articles from 1975 to the present. HealthSTAR focuses on the non-clinical (emphasizing health-care administration, economics, planning, and policy) and the clinical (emphasizing the evaluation of patient outcomes and the effectiveness of procedures, programs, products, services, and processes) aspects of health-care delivery.

20. A study not included in MEDLINE and HealthSTAR that should be referenced is a 1996 study of black and female emergency department patients complaining of chest pain. See C.L. Barrow and K.A. Easley, "The Role of Gender and Race on the Time Delay for Emergency Department Patients Complaining of Chest Pain to be Evaluated by a Physician," *Saint Louis University Public Law Review*, 12 (1996): 267-77.

21. See Adult Sickle Cell Disease Focus Group Voices, *supra* note 1.

22. K.H. Todd et al., "Ethnicity as a Risk Factor for Inadequate Emergency Department Analgesia," *JAMA*, 269, no. 12 (1993): 1537-39.

23. *Id.* at 1538.

24. *Id.* at 1539.

25. *Id.* at 1537.

26. K.H. Todd et al., "The Effect of Ethnicity on Physician Estimates of Pain Severity in Patients with Isolated Extremity Trauma," *JAMA*, 271, no. 12 (1994): 925-28.

27. See Todd, *supra* note 22.

28. See Todd, *supra* note 26, at 926. A total of 207 patients participated in the study (138 Non-Hispanic white and 69 Hispanic non-white). Sixty-five different physicians evaluated the patients. There was no difference between white and Hispanic

patients with regard to patient pain assessment, which was higher than the physicians' pain assessment for both groups.

29. *Id.* at 926.

30. *Id.* at 927.

31. *Id.* at 927-28.

32. See Todd, *supra* note 22.

33. R.R. Karpman et al. "Analgesia for Emergency Centers' Orthopaedic Patients: Does an Ethnic Bias Exist?," *Clinical Orthopaedics and Related Research*, 334 (1997): 270-75.

34. *Id.* at 275.

35. *Id.* at 274.

36. See Todd, *supra* note 22.

37. See Karpman, *supra* note 33.

38. *Id.* at 275.

39. See Todd, *supra* note 22.

40. See Karpman, *supra* note 35.

41. K.H. Todd et al., "Ethnicity and Analgesic Practice," *Annals of Emergency Medicine*, 35 (2000): 11-16.

42. See Todd, *supra* note 22.

43. See Todd, *supra* note 41.

44. *Id.* at 11.

45. *Id.* at 14-15.

46. C.S. Cleeland et al., "Pain and Its Treatment in Outpatients with Metastatic Cancer," *N. Engl. J. Med.*, 330 (1994): 592-96, at 595.

47. *Id.* at 59.

48. C. Cleeland et al., "Pain and Treatment of Pain in Minority Patients with Cancer," *Annals of Internal Medicine*, 127 (1997): 813-16.

49. *Id.* at 813.

50. *Id.* at 814 ("The Pain Management Index is based on guidelines from the World Health Organization and the Agency for Healthcare and Quality.").

51. *Id.* at 814.

52. See Cleeland et al., *supra* note 46.

53. See Cleeland et al., *supra* note 48, at 815.

54. *Id.* at 815.

55. R. Bernabei et al. "Management of Pain in Elderly Patients With Cancer," *JAMA*, 279, no. 23 (1998): 1877-82.

56. *Id.* at 1878. "SAGE" is a population-based multilinked database that includes computerized data collected as part of the Health Care Financing Administration's Multistate Nursing Home Case-Mix and Quality Demonstration Project.

57. *Id.* at 1879.

58. *Id.* at 1880.

59. *Id.* at 1881.

60. K.L. Kahn et al., "Health Care for Black and Poor Hospitalized Medicare Patients," *JAMA*, 271 (1994): 1169-74.

61. 42 U.S.C. § 2000d (1999).

62. *United States v. Baylor University Medical Center*, 736 F.2d 1039, 1500 (5th Cir. 1984).

63. S.D. Watson, "Minority Access and Health Reform: A Civil Rights to Health Care," *Journal of Law, Medicine & Ethics*, 22 (1994): 127-37, at 130 ("Enactment of Title VI ended the most blatant forms of healthcare discrimination. But Title VI has proved ineffective in ending the less obvious inequities caused by policies and practices that disproportionately adversely impact on racial minorities. Title VI's deficiencies are inherent in the structure of the statute: it relies on administrative enforcement; it fails to define statutorily prohibited discrimination and the evidentiary burdens in a case alleging discrimination because of disparate racial impact; it relies on voluntary receipt of federal funds; and it lacks monetary remedies in a private enforcement action."). See also S.D. Watson, "Reinvigorating Title VI: Defending Health Care Discrimination — It Shouldn't Be So Easy,"

Fordham Law Review, 58 (1990): 939–78; Smith, *supra* at 9.

64. Office for Civil Rights, U.S. Department of Health and Human Services, *OCR Update* (Fall 1999): 1–12.

65. *Id.* at 3.

66. B. Ng et al., “Ethnic Differences in Analgesic Consumption for Postoperative Pain,” *Psychosomatic Medicine*, 58 (1996): 125–29.

67. See Todd, *supra* note 22.

68. See Ng et al., *supra* note 66.

69. *Id.* at 127.

70. *Id.* at 128.

71. B. Ng et al., “The Effect of Ethnicity on Prescriptions for Patient-Controlled Analgesia for Post-Operative Pain,” *Pain*, 66 (1996): 9–12.

72. *Id.* at 11.

73. *Id.* at 12.

74. J.E. Dimsdale, “Stalked by the Past: The Influence of Ethnicity on Health,” *Psychosomatic Medicine*, 62 (2000): 161–70.

75. J.M. Bartfield et al., “Physician and Patient Factors Influencing the Treatment of Low Back Pain,” *Pain*, 73 (1997): 209–11.

76. *Id.* at 211.

77. R.A. Hahn, “The State of Federal Health Statistics on Racial and Ethnic Groups,” *JAMA*, 267, no. 2 (1992): 268–71.

78. C. Saint Louis and E. Nussbaum, “What They Were Thinking about Race, All-of-a-Kind Family,” *New York Times Magazine*, July 16, 2000, at 31.

79. L. Wright, “Who’s Black, Who’s White, Who Cares: Reconceptualizing the United States’ Definition of Race and Racial Classifications,” *Vanderbilt Law Review*, 48 (1995): 513–67, at 561.

80. P.A. King, “Race, Justice and Research,” in J.P. Kahn, A.C. Mastroianni, J. Sugarman, eds., *Beyond Consent Seeking Justice in Research* (New York: Oxford University Press, 1998): 88–110.

81. “Hospital personnel [are] often unsure how to classify patients.... [but are] reluctant to ask the patient directly.” See J. Blustein, “The Reliability of Racial Classifications in Hospital Discharge Abstract Data,” *American Journal of Public Health*, 84 (1994): 1018–21, citing *Report of Results of the OSHPD Reabstraction Project* (Sacramento, California: Office of State-wide Planning and Development, California Department of Health, 1990).

82. K.H. Todd, “Pain Assessment and Ethnicity,” *Annals of Emergency Medicine*, 27 (1996): 421–23.

83. Centers for Disease Control, “Use of Race and Ethnicity in Public Health Surveillance,” *MMWR* (Morbidity and Mortality Weekly Report), 42 (1993): 1–17.

84. See Blustein, *supra* note 81.

85. See Todd, *supra* note 22.

86. On October 20, 1997, the Office of Management and Budget (OMB) published Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity. See 62 Fed. Reg. at 58,781–58,790. The standards changed the data collection policies for all federal agencies. Under the new policy, federal agencies are required to offer respondents the option of selecting one or more of the following racial categories: American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; and White. These categories are the minimum set for data on race for federal statistics, administrative reporting, and civil rights compliance reporting. For ethnicity, the standards require the collection of data on whether or not a person is of “Hispanic or Latino” culture or origin. See Tabulation Working Group of the Interagency Committee for the Review of Standards for Data on Race and Ethnicity,

Provisional Guidance on the Implementation of 1997 Standards for Federal Data on Race and Ethnicity (December 15, 2000), available on-line at < http://whitehouse.gov/omb/inforeg/r&e_guidance2000update.pdf >.

87. E.O. Perez-Stable et al., “The Effects of Ethnicity and Language on Medical Outcomes of Patients with Hypertension or Diabetes,” *Medical Care*, 35, no. 12 (1997): 1212–19.

88. See Todd, *supra* note 22.

89. “The key to ensuring equal access to benefits and services for LEP persons, is to ensure the service provider and the LEP client can communicate effectively, i.e., the LEP client should be given information about, and be able to understand, the services that can be provided by the recipient to address his/her situation and must be able to communicate his/her situation to the recipient service provider. Recipients are more likely to utilize effective communication if they approach this responsibility in a structured rather than an ad hoc basis.” See Office for Civil Rights, *Guidance Memorandum, Title VI Prohibition Against National Origin Discrimination — Persons with Limited-English Proficiency* (January 29, 1998).

90. See M.G.L. c. 111, § 25J (2000).

91. See Adult Sickle Cell Disease Focus Group Voices, *supra* note 1.

92. L. Cooper-Patrick et al., “Race, Gender, and Partnership in the Patient-Physician Relationship,” *JAMA*, 282 (1999): 583.

93. *Id.* at 583.

94. S.H. Kaplan et al., “Characteristics of Physicians with Participatory Decision-Making Styles,” *Annals of Internal Medicine*, 124 (1996): 497–505.

95. *Id.* at 588. Cooper-Patrick references Schulman K.A. et al., “The Effect of Race and Sex on Physicians’ Recommendations for Cardiac Catheterization,” *N. Engl. J. Med.*, 340 (1999): 618–26.

96. See Cooper-Patrick, *supra* at note 92.

97. K. Fiscella et al., “Inequality in Quality Addressing Socio-economic, Racial, and Ethnic Disparities in Health Care,” *JAMA*, 283 (2000): 2579–2584.

98. N. Krieger et al., “Measuring Social Class in US Public Health Research,” *Annual Review Public Health*, 18 (1997): 341–378.

99. See Cleeland et al., *supra* notes 46 and 48.

100. S.D. Watson, “Health Care in the Inner City: Asking the Right Question,” *North Carolina Law Review*, 71 (1993): 1647–71.

101. See Adult Sickle Cell Disease Focus Group Voices, *supra* note 1.

102. U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research, *Acute Pain Management in Adults: Operative Procedures (Quick Reference Guide for Clinicians No. 1a)*, AHCPR Pub. No. 92-0019 (Washington, D.C.: U.S. Gov’t Printing Office, 1993).

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Fair": The Ethics of Health Care for African Americans (Westport, Connecticut: Praeger, 1994): 11-20.

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