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It's Not What You Say ...:

Racial Disparities in Communication Between Orthopedic Surgeons and Patients

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Abstract

Background—Excellent communication between surgeons and patients is critical to helping patients to make informed decisions and is a key component of both high quality of care and patient satisfaction. Understanding racial disparities in communication is essential to provide quality care to all patients.

Objective—To examine the content and process of informed decision-making (IDM) between orthopedic surgeons and elderly white versus African American patients. To assess the association of race and patient satisfaction with surgeon communication.

Research Design—Analysis of audiotape recordings of office visits between orthopedic surgeons and patients.

Participants—Eighty-nine orthopedic surgeons and 886 patients age 60 years or older in Chicago, Illinois.

Methods—Tapes were analyzed by coders for content using 9 elements of IDM and for process using 4 global ratings of the relationship-building component of communication (responsiveness, respect, listening, and sharing). Ratings by race were compared using χ^2 analysis. Patients completed a questionnaire rating satisfaction with surgeon communication and the visit overall. Logistic analysis was used to assess the effect of race on satisfaction.

Results—Overall there were practically no significant differences in the content of the 9 IDM elements based on race. However, coder ratings of relationship were higher on 3 of 4 global ratings (responsiveness, respect, and listening) in visits with white patients compared with African American patients ($P < 0.01$). Patient ratings of communication and overall satisfaction with the visit were significantly higher for white patients.

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Conclusions—The content of IDM conversations does not differ by race. Yet differences in the process of relationship building and in patient satisfaction ratings were clearly present. Efforts to enhance cultural communication competence of surgeons should emphasize the skills of building relationships with patients in addition to the content of IDM.

Keywords

racial disparities; physician-patient relationship; communication

Disparities in the quality of health and health care between white and African American (AA) patients have been widely reported yet the etiology and effective remedies for these disparities remain elusive.¹ One key dimension of quality is the provision of patient centered care which encompasses the “compassion, empathy and responsiveness to the need, values, and expressed preferences of the individual patient.”² Patient centered care has been demonstrated to improve health status, encourage patients to adhere to treatment recommendations, lessen symptom burden, and reduce the chances of misdiagnosis.^{3–6} A 2005 Agency for Health-care Research and Quality Report (AHRQ) on health disparities indicated concern that patient centered care maybe less well performed for minority patients, including AA patients.⁷

The majority of the research on which the AHRQ conclusions were based was conducted in primary care settings, but our previous work suggests that patient centered communication maybe quite different in surgical settings.^{8,9} Strikingly little research has focused on communication in the surgical setting where patients make complex decisions about whether to have potentially risky procedures. Surgeons need to understand the needs, values, and preferences of patients to help them choose the best treatment option. This is called informed decision-making (IDM) and is a key component of patient centered care. Studies demonstrate disparities in rates of surgical procedures, including orthopedic procedures, between AA patients than white patients,^{10–16} raising the question of whether the IDM process may contribute to these disparities. Understanding potential disparities in IDM requires closer examination of what transpires in visits between surgeons and patients.

The AHRQ disparities report also relies primarily on survey-based studies in which patients are asked to recall their perceptions of care received at some prior visit. Surveys do not allow opportunity to assess specific communication behaviors and patterns. These behaviors can be better evaluated using methods of direct observation or recording of visits which allow analysis of both the content of what is spoken and the process of communication that houses the content. To use a musical analogy, the content of a concerto is contained in the score; its impact upon the listener depends upon how the notes are played and interpreted by the musicians. One of the few direct observation studies of disparities in communication was conducted by Cooper et al who audiotaped primary care visits to examine communication in race concordant (AA patients with AA physicians) versus race discordant (AA patients with white physicians) visits.¹⁷ They found no significant difference in the audiotape analysis of patient centered communication. No comparable studies using recorded visits have been conducted in surgery.

We designed a study to examine content and process of IDM between surgeons and patients using audio recording of routine office visits. Our goal was to understand specific communication behaviors that maybe different in visits between surgeons and their white versus AA patients. We hypothesized that IDM conversations would be less complete with AA patients, based on the literature related to disparities in surgical care. Such an understanding could inform educational efforts to enhance the quality of care and decrease racial disparities in communication.

METHODS

Between January 2003 and February 2004, we collected data in the offices of 89 orthopedic surgeons practicing in the Chicago metropolitan area. Sequential English-speaking patients, 60 years of age and older, were recruited to participate in the study. The study obtained data through questionnaires and recording of the visits by audiotape. All demographic data for both surgeons and patients were obtained through questionnaires. Study participants were limited to patients older than 60 years of age because elderly patients are more likely to face complex decisions about surgery than younger patients. All visits were eligible unless it was anticipated to be very brief (eg, suture removal). The study goal was to complete 10 visits per surgeon.

Informed consent was obtained from all subjects (patients and surgeons) before their participation. Institutional review board approval was obtained from all 5 participating hospitals in Chicago (University of Chicago, Evanston Northwestern Healthcare, Rush-Presbyterian-St. Luke's Medical Centre, Northwestern University, University of Illinois at Chicago), the University of Toronto, Stanford University, and National Opinion Research Center. All study data were de-identified to ensure confidentiality.

Physician Sample

Physicians were recruited from a list provided by the American Academy of Orthopedic Surgeons. All physicians were in practice in Chicago, Illinois, or surrounding contiguous communities. Practices were sampled to maximize those with a higher percentage of patients over 60 years and to balance academic and community settings. All surgeons received a letter and a follow-up phone call from a well-known orthopedic surgeon from the community. The recruiter explained the nature of the study, requested participation, and recorded reasons for declining. In total, the recruiters called 112 surgeons and 89 (79.5%) agreed to participate. Reasons for refusal were concerns that the research would require additional surgeon time or make demands on busy office staff.

Patient Sample

All patients over 60 years of age were asked by the office receptionist, after registering for the visit, if they would talk to a research assistant about a study of communication. The research assistant explained the study including the need to complete a questionnaire at the end of the visit and to allow audiotaping of the visit. In all, 1007 patients were asked to participate and 886 (88%) agreed. The reasons for declining participation included concerns about confidentiality or possible additional time required, general lack of willingness to participate in research studies, and not feeling well enough. In general, the refusals for participation came from the caregiver accompanying the patient, typically spouses or children of the patient. No significant differences were found in patients who did and did not participate.

Audiotaping and Coding

A research assistant started the audiotape recorder just before the surgeon entered the room, and then left. The tape was left running unless the patient left to go for an x-ray or the surgeon left the room for an extended period of time. When either one returned, the audio recorder was restarted. Tapes were coded directly from the audio recordings without transcription. Three coders were trained until rates of inter-rater reliability were acceptable as measured by Kappa statistic. A 15% sample of the tapes was double coded to insure accuracy and reliability.

Coders were blinded to patient and physician demographics including race. In addition, coders were unaware that the data would be analyzed by race. Three coders completed all audiotape coding; all were women, 2 self-identified as white and 1 mixed race (half south-Asian and half white).

Tapes were analyzed to assess communication elements that we believe to be important aspects of care in the surgical setting. These included: (1) content of communication measuring elements of IDM previously studied by the authors, (2) process of communication using global ratings of relationship-building components. In addition, patients were asked to rate specific elements of communication in the visits.

For IDM, a scoring system previously developed by the authors was used.⁹ The original scoring system rated 7 content areas of IDM. For this study, which was based on IDM in older adults, 2 additional elements were added. The 9 IDM elements are shown in Table 1. The elements are grouped into those that (1) provide information for patients, and those that (2) foster patient involvement in decision-making. For each decision, the coders identified the presence or absence of the 9 IDM elements. Decisions were also categorized on the basis of complexity: basic (eg, ordering an x-ray), intermediate (eg, ordering a medication), or complex (eg, considering a surgical procedure). The scheme recognizes that some elements are important to basic or intermediate decisions, although all elements are important in complex decisions.⁹

Global Ratings of Relationship-Building Communication

We measured process using global ratings of relationship-building behaviors exhibited by surgeons over the course of the entire visit. Ratings were done by the coders. The scale contains 4 domains: responsiveness, respectfulness, listening, and sharing. The domains were derived from existing models in the literature, focus groups with clinicians and patients, and the advice of experts in patient-physician communication. The domains map well onto other models of patient-physician communication.^{18–20} The scale has good interitem reliability, with a Cronbach $\alpha = 0.74$.

Global ratings were defined as in our prior work.⁹ Responsiveness measured how the surgeon reacted to patients' concerns, explored patients' ideas and acknowledged patients' expectations. Respectfulness was based on tone of voice and attitudes expressed toward the patient. Listening was based on how the surgeon facilitated and responded to patients' expressions of concerns and questions. Sharing was coded according to how, and if, the surgeon promoted shared decision making and patient participation throughout the visit. Coders rated each category on a 1–5 scale with 5 representing the best behaviors.

Patient Ratings of Communication

After the visit, patients rated how the surgeon performed on 11 specific aspects of communication. These communication items were based on the Consumer Assessment of Health Providers and Systems survey²¹ and the Patient Satisfaction Questionnaire.²² Items were rated on a 5-point scale: excellent, very good, good, fair, and poor. In addition, patients rated their overall satisfaction with the visit, and how likely they were to return to see the surgeon for care or to recommend the surgeon to a friend.

χ^2 was used to test differences between white and AA patients. A 0.05 significance level was used. Rao-Scott corrections, to compensate for the clustering by surgeon, were applied to all χ^2 . Logistic regression was used to control for covariates that might confound the relation between race and satisfaction with the following variables entered into the regression: race, health status, prior experience with surgeon, sex, age, educational attainment, and whether surgery was discussed during the visit. Variables were selected on

the basis of whether there was reason to believe that their inclusion might influence the association of race and satisfaction. For instance, patient reports of health status tend to correlate with satisfaction and AA patients tend to report lower health status. The dependent variable was patient satisfaction, “All things considered, how satisfied you are with the care you have received from this surgeon?” The response categories constituted a 5-point scale. Responses were dichotomized into “very satisfied” and “less than very satisfied.”

We also conducted an analysis to understand whether the differences we observed in communication between races were due to AA patients seeing surgeons who were overall less skilled in communication than surgeons caring for white patients. In this analysis, we compared the 23 surgeons who had 25% or more of the taped visits with AA patients to the 66 surgeons with a lower percentage of visits with AA patients. For these 2 groups of surgeons we compared their IDM scores and the patients’ ratings of 11 communication skills. We compared the patient ratings of white patients visiting surgeons in both of these groups. χ^2 analysis was used for these comparisons.

RESULTS

Table 2 describes the characteristics of the surgeons and the patients. The final sample of 89 surgeons included 88 males and 1 female (consistent with the American Academy of Orthopedic Surgery [AAOS] membership gender ratio). The surgeons were mainly white (84%). Forty-four percent were in an academic practice and 56% in community settings. The final sample of 889 patients had an average age of 70.3 years (range 60–96). Seventy-nine percent were white and 20% were AA; 3% were Hispanic. Twenty-six percent of the visits were first visits to the surgeons, whereas 74% were follow-up visits. Audiotapes were available for 879 of the 889 patients; 10 tapes were inaudible.

Inter-rater reliability was generally good using weighted Kappa statistics. The Kappa statistics for the final coding for the IDM elements ranged from 0.7 to 1.0 with only 1 item, explaining the nature of the decision, below this at 0.62. Agreement on the global ratings was also good with Kappas of 0.55 on respect and sharing, and 0.79 on responsiveness and listening. The interitem reliability for the 4 items on the global subscale was 0.74.

Visits included an average of 2.7 decisions, ranging from 1 to 10. Overall, 65.5% of the decisions were basic, 20.4% intermediate, and 14.0% complex. A total of 282 visits included consideration of an invasive procedure (ie, arthroscopy or surgery). Overall there was no difference in the frequency of complex, intermediate, and basic decisions in the visits with AA compared with white patients.

IDM Scores

Scores on the IDM elements for all decisions are shown in Table 3 with basic and intermediate decisions combined and shown separately from complex decisions. Scores are presented for the dimensions of “providing information” and “fostering patient involvement.” For complex decisions, the provision of information was most complete on the nature of the decision (84.3%) and intermediate for describing the alternatives, pros and cons, and uncertainties (55.8%, 44.2%, and 38.1%). These discussions were least complete on assessing the level of patient understanding (7.7%). In terms of fostering patient involvement surgeons were most complete in exploring the context of the decision (58.7%) and intermediate in exploring patient preferences (46.5%). Discussions were least complete in explicitly stating the patient’s role in making the decision (7.4%). The patterns of completeness were the same in the basic/intermediate decisions, but absolute levels of completeness were appropriately lower than for the complex decisions.

There were no statistically significant differences between AA and white patients for most of the elements of IDM. There was only 1 element where surgeons were significantly more likely to be complete for white versus AA patients: for complex decisions, surgeons were more likely to assess the patient's desire for input from other family members or friends.

Global Ratings of Relationship-Building Communication

Global rating scores of responsiveness, respect, and listening were higher for visits with white compared with AA patients (Table 4). For example, 62.9% of visits with white patients were rated as either 4 or 5 on the respect scale versus 50.9% of visits with AA patients. The global rating for sharing was not statistically different for the 2 groups.

Patient Ratings of Satisfaction and Surgeon Communication

Overall, 93.4% of white patients and 82.7% of AA patients were very satisfied with the visit and 5.1% versus 12.7%, respectively, were "somewhat satisfied." Overall, satisfaction was significantly lower in AA patients ($P < 0.0001$). Among white patients, 94.8% said they were likely to return to see the surgeon and 92.3% would definitely recommend the surgeon to a friend compared with 83.8% and 80.3% of AA patients, respectively, ($P < 0.0001$). In all 11 of the communication ratings, AA patients were significantly less likely to rate the surgeon communication as very good or excellent compared with white patients. For example, "treating you like you're on the same level; not talking down to you" was scored as excellent by 84.8% of white patients versus 64.4% of AA patients ($P < 0.0001$). Similar size differences were present in most communication ratings (Table 5). Factor analysis of the 11 items showed that they were highly correlated and clustered into a single factor.

As can be seen in Table 6, the significance of the relationship between race and satisfaction remained after including a number of potential confounders in the model. Although patients who report suffering from depression, patients seeing the surgeon for the first time, and patients who report poorer health, are all significantly more likely to be less satisfied with the care received from the surgeon, their effect does not diminish the racial disparity. Other variables that were tested in the full model include practice setting (community vs. academic), sex of patient, age of patient, whether the patient reported surgery as having been discussed during the visit, and patient's educational attainment. The coefficients for none on these latter variables were statistically significant and their inclusion did not materially affect the odds ratios for any of the 4 variables we have retained.

In the analysis to compare the surgeons seeing a greater or smaller percentage of AA patients, we found no differences in the skills of the 2 surgeon groups. For example, 78% of white patients seeing surgeons with a low percentage of AA patients in their taped visits scored the surgeons as excellent in "discussing options with you and offering choices." Similarly, 78% of white patients seeing surgeons with a high percentage of AA patients in their taped visits scored this as excellent. IDM scores of the 2 groups were also similar. We concluded that there was no evidence that AA and white patients saw surgeons who overall had a different level of communication skills.

DISCUSSION

Our study design using audiotapes of office visits is the first attempt to directly observe communication patterns of surgeons with patients of different races. Although we did not see statistically significant differences in the content of IDM discussions by race, we did observe striking differences between surgeons and their AA compared with white patients in our measures of relationship-building skills. Coders' ratings of respect, listening, and

responsiveness, identified by the Institute of Medicine as markers of patient centered care, were significantly higher for white patients than for comparable AA patients.

The differences in ratings for respect, listening, and responsiveness indicate that surgeons may be less effective in relationship building with AA as compared with white patients. Several models of communication^{9,17,23–26} indicate that effective interaction between physicians and patients, in any setting, requires physicians to be able to engage in building relationships with patients. The relationship-building skills include listening, expressing concern for patient's emotions, expressing empathy, and understanding the impact of disease on patients' lives. Although Cooper et al's study of primary care visits found no significant differences in race concordant pairs (AA patients with AA physicians) compared with race discordant pairs, they did find that concordant pairs had higher levels of "positive affect" which was defined as ratings of interest, friendliness, responsiveness, and sympathy.¹⁷ Similarly, a Dutch study of racial minorities compared with native born Dutch found similar differences in positive affect.²⁷ Siminoff et al found physicians spent more time in relationship building with white than non-white cancer patients.²⁸ In our own previous studies of the relationship of communication to prior medical malpractice, we found that surgeons' use of partnership-building statements was associated with fewer prior malpractice claims.^{29–30} We conclude that an equally if not more important dimension of racial disparities occurs in the process of relationship building in the surgical setting and that this difference may contribute to the differences in patient satisfaction with care that we observed.

In addition to coder ratings that differed by race, AA and white patients experienced their visits differently. AA patients rated their surgeons less well on all of the Consumer Assessment of Health Providers and Systems communication elements than did white patients. For example, 66% of AA patients thought that surgeons were excellent at "showing interest in you as a person" compared with 78% of white patients. In addition, we found that AA patients were less likely to be satisfied with their overall care and less likely to be willing to return to see the surgeon or recommend them to a friend. Our statistical models demonstrated that race was associated with patient satisfaction after controlling for other variables such as health status and gender. Although studies consistently report lower satisfaction with care among AA patients compared with white patients,^{31–33} our study indicates that both impartial coders and patients perceived a difference in the quality of communication with surgeons based on race.

In contrast, we did not find any differences in IDM across race. The content of conversations including the nature of the decision, alternative treatments, and discussing the pros and cons of decisions were equally presented to patients of both races. Levels of performance on some elements of IDM, like discussing the pros and cons, were lower than ideal,^{17,34} but these relative deficiencies were true for both AA and white patients. Although there are well documented disparities in the use of orthopedic surgical procedures by AA versus white patients,^{10–16} we found no evidence of differences in the content of conversations about these procedures. Surgical education focused only on teaching the content skills of IDM may improve the quality of information presented, but it is unlikely to decrease racial disparities in communication.

Our findings have important implications for educating orthopedic surgeons and other physician groups. Educational programs to enhance culturally sensitive communication competence are one component of efforts to decrease racial disparities. These programs often include communication skills training for physicians, but few have been designed for surgeons.³⁵ Based on our findings, programs for surgeons must include efforts to enhance the relationship-building skills of listening, responsiveness, and demonstrating respect.

Our study has limitations. First, the orthopedic surgeons participating in the study might have had different communication patterns than either other surgeons in their field or than in other surgical specialties. As well, this is not a representative sample of orthopedic surgeons in the United States. However, we think this is a reasonable sample to study as a first effort to assess racial differences in actual surgical encounters in a mixed sample of community and academic surgeons. Second, we are not capturing all elements of communication and their complexity. Some elements of patient centered care, like empathy, are difficult to adequately measure without qualitative analysis. Third, the coders were blinded to race and were unaware of the subsequent plan to analyze the data for racial differences. However, it is possible that coders were not fully blinded, because accent or dialect may have given them clues as to participants' race. Overall, we do not think this significantly biases our results, as we found racial differences for some measures of communication, yet not for others. Finally, it would be ideal to measure racial differences within individual surgeon practices. However, most of orthopedic surgeons are white and relatively few surgeons have a mix of both AA and white patients in their practice, limiting this analysis.

In conclusion, our study using audiotape analysis of visits with orthopedic surgeons confirms the critical importance of attending to the process of building relationships as well as content in clinical conversations with patients of different races. As organizations like the Agency for Health-care Research and Quality seek to decrease racial disparities in the quality of care, our findings suggest that interventions to improve communication between surgeons and patients should include content, and more importantly, process elements. The adage "It's not what you say, but how you say it" is guidance that surgical and other medical educators should heed well in designing programs to improve communication and to decrease racial disparities in our care.

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TABLE 1**Informed Decision-Making Model**

Dimensions of Decision Making	IDM Element
Providing relevant information	
Discuss nature of decision	What are the essential clinical issues we are addressing?
Describe alternatives	What are the clinically reasonable choices?
Discuss pros/cons	What are the pros and cons of relevance to this patient?
Discuss uncertainty	How can I convey the likelihood of success?
Assess understanding	Is the patient now an “informed participant” with a working understanding of the decision?
Fostering patient involvement	
Discuss patient’s role	What role should the patient play in making the decision? Patients should be offered a role in decision-making, even if some will decline, preferring to defer to the physician.
Explore “context”	How will the decision impact the patient’s daily life?
Assess desire for other’s input	Who else would the patient like to consult?
Explore patient’s preferences	Based on the information given, which way is the patient leaning?

TABLE 2

Patient and Surgeon Characteristics

	Percent
Patient characteristics	
Sex	
Male	32.1
Female	67.9
Age (yr)	
60–64	24.3
65–74	43.8
75 or older	31.9
Race	
White	78.6
African American	19.6
Other	1.8
Hispanic origin	
Non-Hispanic	96.8
Hispanic	3.2
Educational attainment	
Some high school or less	12.6
High school diploma or GED	32.5
Some college or university	23.4
College degree or greater	31.5
Experience with surgeon	
First visit	26.4
Later visit, hasn't performed surgery	27.1
Later visit, surgery performed	46.5
Surgeon characteristics	
Sex	
Male	98.9
Female	1.1
Age (yr)	
Younger than 40	15.7
40–49	33.7
50–59	31.5
60 or older	19.1
Race	
White	85.2
African American	4.5
Asian/Pacific Islander	8.0
Other	2.3
Hispanic origin	

	Percent
Non-Hispanic	97.8
Hispanic	2.2
Practice setting	
Community	56.8
Academic	43.2

TABLE 3
 Informed Decision-Making Elements by Race (Percent of Decisions for Which Element Was Addressed)

Elements	Complex Decision (%)			Basic and Intermediate Decision (%)		
	W	AA	χ^2 *	W	AA	χ^2 *
Providing information						
Discuss nature of decision	83.8	86.2	0.20	65.9	64.8	0.07
Describe alternatives	56.3	53.8	0.10	20.1	17.1	1.11
Discuss pros/cons	44.1	44.6	0.00	10.0	6.8	2.26
Discuss uncertainty	39.7	32.3	1.05	6.6	4.3	1.91
Assess patient understanding	6.9	10.8	0.85	2.0	1.6	0.20
Fostering patient involvement						
Discuss patient's role	8.5	3.1	2.15	0.9	0.5	0.70
Explore context	60.3	52.3	1.47	40.6	35.0	2.41
Assess desire for other's input	28.3	15.4	5.58 [†]	6.2	5.1	0.35
Explore patient preferences	45.3	50.8	0.38	13.9	16.3	0.77

* Rao-Scott corrected χ^2 , 1 df. The correction takes into account design effects due to clustering by surgeon. χ^2 values of 3.84 or higher are significant at 0.05 level.

[†] Significant at the 0.05 level.

TABLE 4

Global Ratings by Coders

Element	Positive Global Rating						P
	White			AA			
	Percent*	CI [†]	Percent	CI	Percent	CI	
Responsiveness	60.0	±3.7	42.2	±7.4	±7.4	±7.4	<0.0001
Respectful	62.9	±3.6	50.9	±7.4	±7.4	±7.4	0.005
Listening	52.4	±3.7	33.5	±7.0	±7.0	±7.0	<0.0001
Sharing	12.8	±2.4	10.6	‡	‡	‡	0.507

* Percent rating 4 or 5 on 5-point scale.

† 95% confidence interval.

‡ Exact 95% binomial confidence limits: 6.4–16.2.

TABLE 5

Patient Ratings of Communication With Surgeons

	Race	Excellent	Very Good	Good/Below	P
a. Treating you like you're on the same level; not "talking down" to you	W	84.8	13.8	1.4	<0.0001
	AA	64.4	23.5	12.1	
b. Letting you tell your story and listening	W	78.7	17.4	3.9	<0.0001
	AA	62.6	23.0	14.4	
c. Showing interest in you as a person	W	77.8	17.2	5.0	<0.0001
	AA	65.9	19.7	14.4	
d. Discussing options with you and offering choices	W	77.7	17.0	5.3	<0.001
	AA	61.4	20.5	18.1	
e. Letting you help decide what to do	W	74.6	19.4	6.0	<0.001
	AA	58.4	16.9	24.7	
f. Encouraging you to ask questions	W	70.6	19.6	9.8	<0.001
	AA	58.5	19.9	21.6	
g. Answering your questions clearly	W	80.9	15.8	3.3	<0.0183
	AA	71.5	22.1	6.4	
h. Explaining what you need to know about your problems, how and why they occurred and what to expect next	W	77.8	16.6	5.6	<0.0027
	AA	69.4	17.7	12.9	
i. Using language you can understand when explaining your problems and treatments	W	82.6	14.4	3.0	<0.0009
	AA	71.7	20.2	8.1	
j. Discussing how your problem or treatment impacts on your daily life	W	73.2	19.3	7.5	<0.0001
	AA	60.7	17.8	21.5	
k. Taking all your medical history into account when considering your current problem or treatment	W	76.9	18.1	5.0	<0.0001
	AA	64.8	17.6	17.6	

TABLE 6

Variables Associated With Patient Satisfaction *

	Odds Ratio	95% Confidence Limits [†]		Less Satisfied
		Upper	Lower	
Race	2.37 [‡]	1.28	4.38	AA
Patient depressed	2.00 [‡]	1.15	3.47	Depressed
Experience with surgeon [§]	1.50 [‡]	1.13	1.98	First visit
Health: status (excellent to poor)	1.38 [‡]	1.12	1.69	Poorer health

* Modeled for the dependent variable "less than very satisfied."

[†] Adjusted for clustering by surgeon.

[‡] Significantly different from 1 at the 0.05 level.

[§] Experience with surgeons: (1) had performed surgery on this patient, (2) had not performed surgery but patient had visited surgeon in the past, and (3) first visit to surgeon.