Topic Overview: Racial/Ethnic Musculoskeletal Disparities and The Role of Culture

In its landmark 2003 report, Unequal Treatment: Confronting Racial and Ethnic Disparities in Care, The Institute of Medicine defined “disparity” as a variation in the quality of care provided to racial and ethnic minority patients that is not due to factors such as access to care, ability to pay or insurance coverage. Since that time, hundreds of studies and publications continue to document the disparate care provided to racial/ethnic minorities, and the extent of inequalities in treatment for common chronic diseases such as heart disease, diabetes, cancer among others. Since its 2003 inaugural report, ARHQ’s annual National Health Disparities Report continues to demonstrate that the measures of disparities worsened significantly or remained the same, outnumbering those that improved. Minorities are less likely to receive preventive, diagnostic, medical or surgical interventions.

What has been glaring by omission is the prioritization of musculoskeletal health disparities within the context of ongoing disparities conversation as discussion evolves from documenting differences to exploring the underlying reasons for disparities.

With one in five Americans reporting doctor-diagnosed arthritis, the prevalence of lower extremity of OA increases with age; 2/3 of people who have doctor-diagnosed are under the age of 65; nearly 80% of adults either have or know someone who has arthritis and it is the leading cause of disability and work-related limitation. The most prevalent form of arthritis is osteoarthritis (OA), a degenerative joint disease in which the cartilage that covers the ends of bones in the joint deteriorates, causing pain and loss of movement as bone begins to rub against bone. Perhaps because it is so common, it seems that arthritis is not considered as serious an ailment as it is. However, arthritis is a more frequent cause of activity limitation than heart disease, diabetes or cancer.

According to the CDC, the disabling effects of arthritis (e.g., arthritis-attributable activity limitations, work limitations, and severe pain) are disproportionately prevalent in racial/ethnic minorities.

Studies show that African-Americans have a higher prevalence of knee symptoms, radiographic knee OA, and symptomatic knee OA compared to whites. Additionally, a significantly higher proportion of African-Americans compared to whites suffer from severe radiographic knee OA. According to estimates from the Centers for Disease Control and Prevention (CDC), nearly three million Hispanic adults in the U.S. (13% in Colorado, 18% in Montana, and 26% in Wyoming) report doctor-diagnosed arthritis, while millions more live with chronic joint symptoms but have not seen a doctor. The CDC study also revealed that, despite a lower population prevalence of arthritis, Hispanics with arthritis have more severe joint pain and a higher proportion of arthritis-attributed work limitations than non-

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2 Disparities in Joint Replacement Utilization: A Quality of Care Issue. Experimental Rheumatology, 2001
3 Arthritis Prevalence: A Nation In Pain, Arthritis Foundation, Arthritis Foundation 2008
4 Ibid 2
5 Arthritis Program Health Disparities Activities – Centers For Disease Control http://www.cdc.gov/arthritis/aboutus/disparities.htm
6 Ibid 1
Hispanics. Hispanics were 50% more likely than non-Hispanic whites to report needing assistance with at least one instrumental activity of daily living, and reported difficulty walking.

So how do minorities who are disproportionately impacted by OA deal with their joint disease?

There is an extensive body of research regarding African-Americans but unfortunately the research on the Latino community is minimal.

Studies demonstrate that African-Americans regard joint pain and reduced mobility as a part of the normal aging process and not as a disease. Ethnic differences were also noted in the coping strategies used for pain. Differences in the use of self-care, alternative or complementary medicine or traditional medical care for arthritis and other musculoskeletal conditions have been observed. African-Americans and Hispanics were more likely to use herbs, ointments and rubs and less likely to use traditional medical care for arthritis symptoms than whites.

African-Americans and Hispanics were more likely to use praying or hoping and diverting attention to control their pain, whereas whites were more likely to ignore pain. Strong evidence of a faith-based approach to dealing with health issues in general and the belief that God determines the outcome of illness. African-Americans have been found to place more emphasis on difficulty in walking than on the level of pain. According to Dr. Veronica Mesquida, a Hispanic rheumatologist and Arthritis Foundation medical adviser, Hispanics don’t talk about pain and even consider it to be a sign of weakness, so many people in the Hispanic community are not getting the help and information they need. Another common theme is the role of faith, that God is in charge of their life and determines the outcome of illness. Because of the acceptance of the “sick role”, Latinos may not seek medical care until the situation worsens significantly. Within some Latino communities, medical care is sought from curanderos or folk healers. Within both communities, home therapies and alternative medicine remedies are in common use.

It can be argued that one of the most significant outcomes from arthritis is disability, whether defined by activity limitation, difficulty or dependence in performing activities of daily living, or work loss or modification. In the 1989-1991 National Health Interview Survey although African-Americans reported similar rates of arthritis as did white, African-Americans were more likely to report activity limitations. And although Hispanics had relatively lower rates of self-reported arthritis, they were more likely than non-Hispanics to report activity limitations.

Due to delays in seeking or receive interventions and the abundance of self-care practices, the progression of the disease state among African-Americans and Latinos often warrants a surgical intervention due to major morbidity and disability. Total joint replacement (TJR) is an effective treatment option for end-stage lower extremity osteoarthritis. The evidence for this has been summarized in the National Institutes of Health (NIH) consensus statements and systematic evidence-based reviews by the Agency for Healthcare Research and Quality (AHRQ). Total knee arthroplasty (TKA) and total hip arthroplasty (THA) are associated with lower mortality and morbidity and has been show to increase quality adjusted life years. Documented disparities among racial/ethnic groups in the use of surgical interventions such as knee and hip replacement are largely based on data from Medicare and Veterans Administration beneficiaries age 65 or older removing insurance access as a contributory issue. As a result of delay in surgical intervention until

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8 "Effect of Race and Ethnicity on Outcomes in Arthritis and Rheumatic Conditions," Current Opinions in Rheumatology 1999
10 IBID 3
11 IBID 5
13 Communicating with your Latino Patient – Culture Clues: University of Washington Medical Center, April 2007
significantly advanced stage of arthritis, and usually accompanying obesity, Hispanic and African American patients have worse preoperative hip and knee function before arthroplasty than white patients.¹⁵

The arguments for the worsening of disparities focus on the intertwining of patient factors, provider factors, and health system factors. This overview focuses on patient factors.

Patient beliefs and preferences are often cited as key reasons for observed racial and ethnic disparities in care.

Understanding Ethnic Differences in the Utilization of Joint Replacement For Osteoarthritis: The Role of Patient Level Factors, Med Ed 2002, Ibrahim et al. were the first to report that AAs were less likely than whites to have heard of Total Joint Replacement (TJR) as a treatment for OA, to have had a family member or friend who had undergone TJR, and or possess a good understanding of what happens to a patient when he/she undergoes TJR. With regard to the risks and benefits of TJR, AAs were more likely than whites to expect a prolonged hospital course after surgery, moderate or extreme pain after recovery from TJR, and moderate to extreme difficulty walking after recovery from TJR. Blake et al. drew similar conclusions in a study of a community-based sample; African-Americans were less likely to report that they knew someone who had TJR or knew someone who had benefited from TJR.

Research also shows that compared with white patients, African American patients with knee or hip OA are less likely to perceive joint replacement as an effective treatment option. In another study assessing patient familiarity with joint replacement and expectations of surgical outcomes found that African American patients were less familiar with the details of joint replacement surgery and the duration of the expected recovery period.¹⁶

Additional studies referenced in Racial Differences in Expectations of Joint Replacement Surgery reveal that more African American patients may lack access to accurate information (e.g., interpersonal networks where receipt of joint replacement is common, etc.) about the experiences after surgery than do white patients. In a context in which trust in the health system is low, African American patients may therefore discount the benefits of surgery as described by health care providers. Interventions designed to improve the accuracy of, and reduce racial differences in, patients’ understanding of the outcomes of joint replacement surgery may be a particularly effective way of reducing racial disparities in utilization of this effective treatment option.

As reported in the following articles, Variations In The Perception of Treatment and Self-Care Practices in Elderly with Osteoarthritis: A Comparison Between African-American and White Patients (Arthritis Rheumatology, Aug 2001) and Differences In Expectations and Outcomes Mediate African-American/White Patient Differences in Willingness To Consider Joint Replacement (Arthritis Rheumatology Sept 2002) Ibrahim’s research noted that the relationship between ethnicity and the acceptance of surgery was therefore mediated by perceptions of the “helpfulness of prayer. A number of participants in one of his studies stated that faith could help them alleviate their joint disease, believed that only God could heal them and their physician’s healing powers were conferred by God. Survey results imply that African-American community, faith and religion may be inextricably linked with arthritis disease prevention, management and cure. Physicians unaware of these beliefs may be less able to understand and prepare for the most effective approach to dealing with patient issues and barriers to seeking or agreeing to appropriate treatment.

According to the Health Belief Model postulated by researchers, Drs. Dennis Ang, Patrick Monahan and Terry Cronan, before making a decision to undergo TJA, the individual must believe that the benefits of TJA outweigh its costs or the negative aspects (barriers) of surgery. Because multiple interacting beliefs could influence health behavior, the researcher postulate that beliefs (i.e., lower perceived benefits and a higher perceived barrier of TJA) held by African


Americans may partly explain the potential underuse of the procedure among ethnic minorities. In another study, Ang, now partnered with Drs. Golda James and Timothy Stump also report that Consistent with the known disparities in health care use in different medical and surgical specialties, we hypothesized that African Americans would be less likely to be referred to orthopedic surgery for knee or hip OA than their white counterparts. Second, because we and other have previously reported that African Americans were less likely than whites to perceive the benefits of TJA and more likely to recognize barriers to TJA, we hypothesized that these racial differences in TJA-specific health beliefs would influence referral to orthopedic surgery.

According to Ibrahim African-Americans were more likely to expect a negative outcome from TJR than whites, and were more likely than white patients to express concerns about postsurgical pain and difficulty walking, and this difference mediated the relationship between ethnicity and the willingness to undergo TJR.

Ibrahim et al. reported that AAs were less willing than whites to undergo TJR even if their condition warranted it. And when they decide to have the procedure, non-whites were more likely to have surgery performed by low volume surgeons and low volume hospitals. A number of studies have reported that patients who undergo THA or TKA performed by surgeons with low surgical volume or at hospitals with low surgical volume are more likely to have worse outcomes. These factors have contributory effect on disparities as studies show that African Americans perceived less benefit and greater risks from TJA than whites, but did not differ in their perceptions of arthritis severity or susceptibility to progression.

As mentioned earlier, the data on the Latino community with regards to joint replacement is very limited. It has been inferred that the issues outlined above regarding African-Americans are likely relevant to the experience of the Latino patient. It is clear that further research is needed to understand the nature of such factors.

According the past a past President of the National Medical Association, some of the studies documenting racial and ethnic health disparities illustrate the need for new attitudes toward minority patients.

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17 Understanding ethnic disparities in the use of total joint arthroplasty: Application of the health belief model, Arthritis & Rheumatism, Arthritis Care & Research January 2008

18 Clinical Appropriateness and Not Race Predicted Referral for Joint Arthroplasty - Arthritis & Rheumatism, Arthritis Care & Research December 2009

19 IBID 5

20 Clinical Appropriateness and Not Race Predicted Referral for Joint Arthroplasty - Ang DC, et al.

21 Decades of Work To Reduce Disparities In Health Care Produce Limited Success – JAMA March 26, 2008