Addressing Arthritis Treatment Disparities Among Different Patient Populations

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In September 2010 I attended "Movement Is Life™: A National Dialogue on Musculoskeletal Health Disparities and the Health of the Nation" in Washington, DC. As a representative of ARN, I was able to join orthopedic surgeons, pediatricians, family practice physicians, physical therapists, community health nurses, and representatives from the National Agency on Aging, National Baptist, NIH, AHRQ, the CDC, the Arthritis Foundation, State Delegates, and other national organizations to discuss disparities in arthritis treatment. It was an opportunity to explore the many complex reasons for disparity in arthritis treatment and to take steps toward a solution.

Incidence

Overall incidence

Early and successful arthritis treatment prevents the development of comorbid or chronic conditions related to immobility and is critical to improve the overall health of the nation as the population ages. Between 2007 and 2009, 49.9 million adults reported physician-diagnosed arthritis, 21.1 million of whom cited arthritis-attributed activity limitations, making arthritis the most common cause of disability in the United States (CDC, 2010). By 2030 it is estimated that 25% of all U.S. adults will have arthritis, with 9.3% experiencing arthritis-related activity limitations (Bolen et al., 2010). Activity limitations caused by arthritis increase the risk of developing other comorbid conditions such as obesity, hypertension, and diabetes (Hauseman, 2008).
Cultural disparity between patients and care providers creates a barrier for improved management of arthritis. Self-management education, when inclusive of cultural preferences, has been shown to increase acceptance and involvement (Goeppinger, Armstrong, Schwartz, Ensley, & Brady, 2007). Endorsing educational programs that enhance culturally sensitive communication and encouraging patients to seek professional care for their arthritis management may reduce racial disparities in arthritis treatment.

Race
Although people from all races and ages can develop arthritis, there is significant disparity in the prevalence, impact, and treatment of people of different races. The overall prevalence of physician-diagnosed arthritis was found to be lower in African-American patients (19%) than Caucasian (24%) and Hispanic patients (11%; Bolen et al., 2010). Bolen and colleagues identified significant variation in the degree of activity limitation and report of severe joint pain by race—African Americans and Hispanics were 1.3 times more likely than Caucasians to experience activity limitation, 1.8–1.9 times more likely to have severe joint pain, and 1.6–1.7 times more likely to have work limitations, respectively. Although the prevalence of physician-diagnosed arthritis may be lower in African Americans and Hispanics, the functional impact is worse (Bolen et al.). These findings suggest that the prevalence of arthritis has been underestimated because African-American patients do not seek treatment until the disease has progressed further.

Age
In addition, the Center for Health Equity Research and Promotion identified disparity in arthritis treatment with increasing age; 52.4% of African Americans 60 years or older had radiographic knee arthritis compared with 36.2% of Caucasians in the same age range. Symptomatic radiographic rates were 36.2% for African Americans compared to 17.7% for Caucasians (Jordan et al., 2002). In a study combining data from 1998–2002, after adjustment for education and socioeconomic status, African Americans were less than
half as likely as Caucasians to receive a joint replacement (Steel, Clark, Lang, Wallace, & Melzer, 2008).

**Treatment Disparity**

**Race**

Socioeconomic and racial disparities in treatment exist. For individuals 65 years and older, after adjustment for demographic, health, and medical access factors, 9.7 per 1,000 Caucasian patients received hip and knee replacement surgeries, compared with 6.0 per 1,000 Hispanic patients and 3.8 per 1,000 African-American patients.

Although there has been an overall increase in the rate of joint replacement in African Americans during the past 10 years, the gap in joint replacement rates between African Americans and Caucasians has widened, from 38% in 2000 to 39% in 2006 (Ibrahim, 2010).

**Insurance status**

Disparities in arthritis treatment persist after controlling for insurance status. In a study comparing the rates of knee replacements in Veterans Administration patients, African Americans were significantly less likely than Caucasians to have a joint replacement (Jones, Kwoh, Kelley, & Ibrahim, 2005). These findings have been repeated in studies comparing patients with Medicare coverage (Dunlop et al., 2008; Skinner, Weiping, & Weinstein, 2006). Minorities with Medicare coverage received total knee replacements at a significantly lower rate than Caucasians regardless of socioeconomic status (Skinner et al.).

**Explanations**

Current research demonstrates that African Americans present for arthritis treatment late in the course of the disease, often after comorbid conditions have developed and treatment is more complex (Bolen et al., 2010). Multiple factors are hypothesized to affect the likelihood that an individual will seek treatment for arthritis-related symptoms,
including the belief and perception that arthritis is a normal and inevitable part of aging (Turner, Barlow, Buszewicz, Atkinson, & Rait, 2007), the perception that arthritis is not serious, the belief that there is no cure, and the expectation that physical function will decrease with age.

Patients' culturally based beliefs regarding arthritis and the expectations of the aging process may influence the overall utilization of treatment options (Appelt, Burant, Siminoff, Kwoh, & Ibrahim, 2007). Studies by Ibrahim and colleagues demonstrate that African Americans were more likely to believe in the use of acetaminophen, physical therapy, and nontraditional treatments such as prayer, ointments, and herbs (Ibrahim, Siminoff, Burant, & Kwoh, 2001). African-American patients had lower levels of expectations for surgical outcomes and were more likely to report using prayer to self-treat knee or hip pain (Ibrahim, 2010).

Research demonstrates many varied and complex reasons for disparity in arthritis care and treatment. The differences in perception of the educational needs of the patients and the education provided by the physician demonstrate incongruity. Interventions that focus on patient preferences and informed decision making have the potential to impact care on an individual basis. Educational interventions designed to address cultural and ethnic beliefs allow informed decision making at the patient level and enhance patient-centered care. To define the necessary education for patients, clinicians need to explore expectations regarding pain and function. Patients older than 70 years may not view arthritis as a condition that can be addressed with treatment. Clinicians need to assess the patient's expectation regarding improvement in pain and function (Appelt et al., 2007). Effective interventions require clinicians to build relationships with patients (Levinson et al., 2008). Relationship building requires "listening, expressing concern for patient's emotions, expressing empathy, and understanding the impact of disease on patient's lives" (Levinson et al.).

Arthritis will continue to be a major factor determining health and well being as the population ages. By seeking ways to improve patients' ability and willingness to be involved in informed decision making, rehabilitation nurses have an opportunity to
educate African Americans regarding arthritis treatment and potential complications of immobility, encouraging them to explore treatment options that will prevent further deterioration in their health status.

Rehabilitation nurses have an opportunity to teach patients to be self-advocates. Education about mobility and its effects on weight management and joint health is a central topic for all rehabilitation nurses. Immobility due to joint pain can cause increased weight gain, which leads to increased joint pain and further immobility. Rehabilitation nurses often are involved in many levels of patient education. Whether in a clinic setting or hospital care, the rehabilitation nurse can impact the patient's success by providing culturally sensitive education regarding arthritis treatment and the preservation of mobility.

The disparity is present throughout different geographic regions of the United States, although some areas demonstrate a greater degree of disparity than others. Joint replacement rates were one-third lower for African Americans compared to Caucasians in Jackson, MS, and Detroit (Turner et al., 2007). The disparity, prevalence, and severity of arthritis and arthritis-related disability in elderly African Americans compared to Caucasians continue to increase.

References


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