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Insley, P., Sabino, J. (2015, July 16). *The Import of Cultural Competency and Language Preference in Total Joint Arthroplasty Utilization Rates.* Poster presented at the Prologue II Presentation Day University of South Florida, Tampa FL.

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The Import of Cultural Competency and Language Preference in Total Joint Arthroplasty Utilization Rates

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Introduction

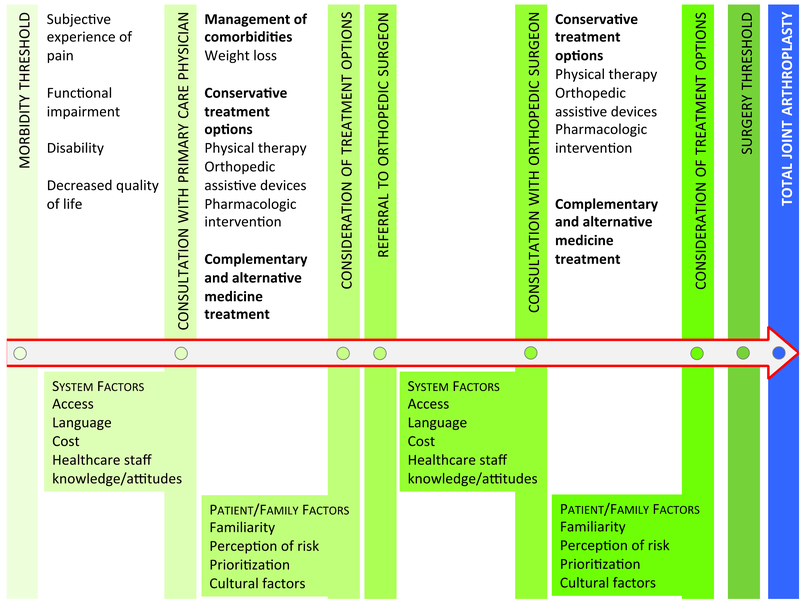
In 2003, the Institute of Medicine (IOM) report *Unequal Treatment* outlined in stark terms what an ever-growing body of evidence had been suggesting: members of racial and ethnic minorities are subject to gross healthcare disparities across numerous disease states and healthcare services[1]. Included among this litany of disparities is underutilization of total joint arthroplasty (TJA) — including both total knee arthroplasty (TKA) and total hip arthroplasty (THA) — among Hispanic American (HA) patients[2,3,4,5]. Similar underutilization rates have been better documented and explored comparing African American (AA) patients to non-Hispanic white (NHW) patients[6,7,8]. However, these data are not necessarily generalizable to HA patients. Thus, while marked TJA underutilization has been noted among HA patients, the factors underlying and perpetuating this disparity are less understood.

What findings are available surprise most healthcare providers. Differences in the prevalence of osteoarthritis between HA and NHW patients are negligible or insufficient to explain rampant TJA disparity[9]. In looking at potential mediators of systemic disparity, TJA underutilization rates between HA patients and NHW patients persist even when adjusted for age; sex; insurance status; socioeconomic status, measured as median household income by ZIP code; geographic region; and severity of osteoarthritis[2,5,10].

Eliminating these factors as potential causative elements contributing to TJA underutilization among HA patients necessitates that one examine how cultural factors may mediate TJA utilization rates. With a population that is 42.8% Hispanic or Latino — well above the national demographics of 17.1 percent — Allentown, Pennsylvania presents an opportunity to examine the dynamics that lead to TJA underutilization. This study sought to document the progression of steps that escalates to TJA and to assess the contributing factors that manifest as TJA underutilization among HA patients.

TJA Progression Model

The **morbidity threshold** defines the subjective point at which the patient experiences pain, functional impairment, disability, and/or decreased quality of life of a self-deemed significant nature to seek medical treatment. Once the morbidity threshold is reached, the patient may begin to progress towards the **surgery threshold**. Progression through this chain of events may be accelerated or impeded by both **system factors** and **patient/family factors**. System factors are those mediators directly and indirectly related to the patient's interaction with the health care system. Patient and family factors are those attributes that mediate the patient's decision-making process. The likelihood of TJA increases as the patient moves across this gradient as the patient exhausts conservative and complementary or alternative treatment options.



Methods

This study sought to localize the primary point or points along the progression series at which Hispanic American patients were most likely to cease advancement as (1) a matter of patient-based values-centered care and/or (2) satisfactory treatment with conservative and/or complementary and alternative medicine treatment options. The timing of this progression is a key determinant of quality of care. AA and HA patients have worse preoperative status than NHW patients[13,14]. Preoperative functional status is a direct predictor of TJA outcome. Patients with better functional status preoperatively achieve greater levels of rehabilitation following TJA[15,16]. To understand the patient-based values and systemic mediators of TJA underutilization among HA patients, healthcare providers who work with primarily HA patients were interviewed. A set series of ten open-ended questions and prompts was developed to be administered to primary care physicians, orthopedic surgeons, rehabilitation physicians, and interpreters. Their narratives form the basis of a qualitative assessment of TJA underutilization variables among the HA community in Allentown, Pennsylvania. Interviews were conducted in one-hour time intervals at the physicians' offices.

Findings and Future Directions

Two consistent trends were identified.
①Familiarity with TJA as a treatment option is a key mediator of willingness to undergo TJA.
②There is a stigma against surgery in many Hispanic and Latino cultures.
First, personal familiarity with TJA increases the likelihood of undergoing TJA[17]. Every PCP interviewed noted that they have never had a HA patient bring up surgery as a treatment option for knee and/or hip pain. Conversely, NHW patients frequently asked questions about TJA. This lack of familiarity with TJA among HA patients is not unsurprising given the TJA utilization rate disparity. Moreover, the disparity is widening[18]. Multiple providers noted what one physician described as a "self-perpetuating cycle": HA patients are less likely to undergo TJA, thus HA patients as a whole are less likely to have a friend or family member who has undergone the procedure – i.e., lack of familiarity. Those HA patients who *do* undergo TJA tend to have worse preoperative functionality, and therefore their postoperative performance is objectively worse. Thus, HA patients who do have familiarity with TJA are more likely to have a negative impression of its efficacy.

Second, one of the physicians stated a stigma against surgery in his Hispanic culture: "Surgery equals death." This challenge of cross-cultural care is explained through Kleinman's explanatory model of sickness, which identifies the "different cognitive and value orientations" of the physician and the patient shaped by diverse aspects of culture[19]. Language is the most fundamental barrier to developing a shared model. The interviews and the literature suggest that this motivates two behaviors by HA patients: (1) they are more likely to rate their experience with surgical specialists unfavorably[20] and (2) racial and ethnic concordance increases HA patient satisfaction with care when cultural paradigms are shared[21].

This study sought to understand how culturally derived patient-based values among Hispanic and Latino patients mediate TJA underutilization rates. Interviews of healthcare providers in Allentown, Pennsylvania, provide qualitative evidence for the import of cultural competency as necessary to optimizing quality of care. TJA underutilization rates among HA patients remain when adjusted for age, sex, insurance status, socioeconomic status, geographic region, and severity of osteoarthritis. This study identified that cultural and language barriers shape HA patients' willingness to consult with an orthopedic surgeon and to consider surgery. Targeted efforts to increase HA patients' familiarity with TJA can address skewed perceptions of efficacy and risk.

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Acknowledgments

I would like to thank Judy Sabino for her mentorship, expertise, and ethusiasm; Dr. Jarret Patton for guidance and support; Mary Kate Erdman for conceiving this project; and the numerous health care providers and staff at LVHN who graciously participated in this study.