Patient Demographics Does Not Correlate with Patient Reported Quality of Knee and Hip Osteoarthritis Care

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INTRODUCTION: Osteoarthritis (OA) is a degenerative joint disease responsible for significant pain and disability worldwide. International guidelines exist for the treatment of knee and hip OA, but despite these recommendations, discrepancies exist in adherence to these OA clinical guidelines. There are significant gender and racial disparities in OA care. For instance, females, Black Americans, and patients residing in areas with greater socioeconomic disadvantage have higher rates of OA, but they may receive reduced quality of OA care. The purpose of this study was to assess patient-reported quality of arthritis care using the OsteoArthritis Quality Indicator (OA-QI) and to explore clinical and demographic variables associated with greater reported quality of care. We hypothesized that OA management program recommendations for education, and non-surgical management such as weight loss, physical activity counseling, nutrition counseling, and medication counseling are not fully implemented in our patient sample as reported in the OA-QI. In addition, we hypothesize that disparities exist in patient-reported quality of OA care, with female and BIPOC patients achieving lower QI pass rates compared to white males.

METHODS: This was a cross-sectional study conducted in an academic orthopaedic clinic setting. Eligible participants were adults >22 years with hip or knee arthritis presenting to the department of orthopaedic surgery for evaluation, who had not received joint replacement in the affected joint. Participants completed the OA-QI v2 in clinic. The OA-QI is a validated 17-item survey with a score range of 0-100 (100 = top score), that assesses patient-reported quality of OA care. Chart extraction included participants' demographic information, number of visits in the last 12 months, smoking status, diabetes status, BMI, surgical referral, and Charlson Comorbidity Index (CCI). State and national ADI were calculated. The primary outcome was total OA-QI score, which was calculated as the percent of QI measures achieved based on the total eligible QI measures for an individual. At the group level, an item pass rate was determined by the number of participants that achieved that QI measure (checked 'yes') divided by the total number of eligible participants (checked 'yes' or 'no'). Analyses was conducted using SAS and differences in means and frequencies were calculated using t-tests, chi-square, ANOVA and linear regression.

RESULTS SECTION: The study cohort consisted of 107 participants, the majority of whom were female (65.4%), white (88.8%) and visit was in regards to their knee OA (85%). The mean OA-QI score for hip arthritis patients was 70.95 (SD = 16.04) compared to 73.55 (SD = 15.38) for knee arthritis patients. OA-QI scores for new patients (M = 60.6, SD = 22.06) were significantly lower than OA-QI scores for returning patients (M = 74.03, SD = 14.61) (p = 0.03). OA-QI scores were significantly lower in participants that were referred to surgery (M = 68.0, SD = 17.93) than participants who were not referred (M = 75.2, SD = 13.87)(p = 0.05). Two sample t-tests comparing mean OA-QI scores did not show significant differences in means when examined by gender, race, ethnicity, previous injury to the joint or surgery to the joint. OA-QI scores did not vary by the ADI. Referral to a professional for help with weight loss and prescription of narcotic pain killers had the lowest pass rates, 12.15% and 25.23% respectively. When asked about the perceived next step in their OA care (N=68), 54.4% of patients identified injections, 45.6% identified joint replacement, 33.8% identified weight loss, and 17.6% identified physical therapy. Both BMI and new patient status were independent predictors of OA-QI score after adjustment for age and CCI. For every one-point increase in BMI, the OA-QI score increased by 0.422 (p=0.04), and being a new patient was associated with a 13.21 decrease in OA-QI score compared to being a return patient (p=0.02) after controlling for age and CCI.

DISCUSSION: We did not find a relationship between overall OA-QI score and demographic variables such as biological sex, race, age, or ADI score, suggesting that patient reported quality of information delivered was similar across a wide cross-section of osteoarthritis patients in a tertiary referral, academic setting. Consistent with prior work, the lowest pass rate for any of the QI items was referral for help with weight loss. Given the high prevalence of obesity in our sample, and the clear link between excess body weight and OA symptoms, provision of support with weight loss should remain a priority. It is possible that the link between elevated BMI and higher pass rate reflects the increased education and guidance of overweight and obese patients around weight loss, physical activity, and lifestyle changes. While the lower pass rates in new patients can be explained by fewer opportunities to receive OA education and care, they point to a need to cover basic principles of OA progression and care during new patient visits.

SIGNIFICANCE/CLINICAL RELEVANCE: The findings of this study indicate that despite existing guidelines for non-surgical management of knee and hip OA, patient reported quality of the information received was variable, and subpopulations of patients still receive substandard care for their OA. Future steps need to continue to examine and address these clinical care disparities.

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