reporting depression is increased 2.5-fold compared to those reporting only their surgical joint as symptomatic.
Conclusions: Our findings suggest that among patients undergoing hip or knee replacement surgery for OA, an exclusive focus on the surgical joint only is likely to miss a potentially important determinant of post-surgical patient-reported outcomes. We report that multiple symptomatic joints are frequent in this population, and associated with depression, independent of the index joint-specific level of pain and functional limitation. This has implications for treatment and care and should inform the patient educational process and setting of realistic patient expectations of surgery.

303
THE ASSOCIATION OF COMORBID CONDITIONS WITH PATIENT REPORTED OUTCOMES IN OSTEOARTHRITIS

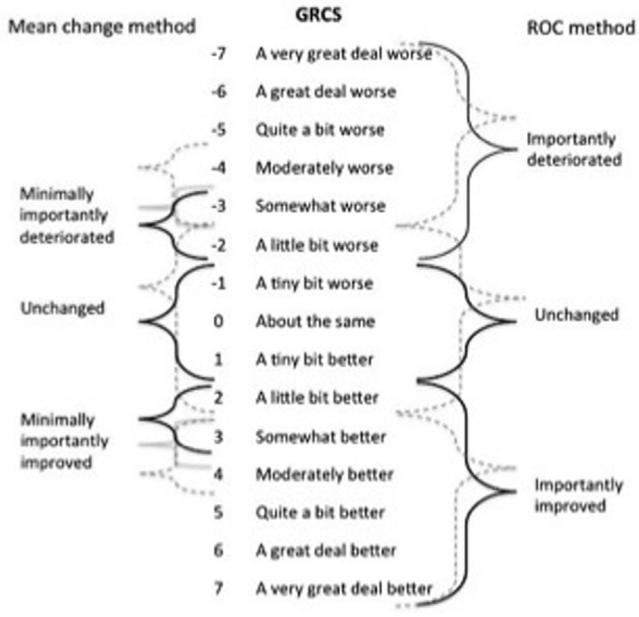
L.L. Zullig †, H.B. Bosworth †‡, L. Corsino ‡, C.J. Coffman †‡, A.S. Jeffreys †, E.Z. Oddone †‡, W.S. Yancy, Jr. †‡, K.D. Allen †‡. † *Durham VA Med. Ctr., Durham, NC, USA;* ‡ *Duke Univ. Med. Ctr., Durham, NC, USA*

Purpose: Osteoarthritis (OA) of the hip and knee are common chronic conditions, often resulting in substantial pain and physical function limitations. Although many patients with OA experience multiple comorbid health conditions, there has been limited research on the impact of overall comorbidity or specific comorbid conditions among individuals with OA. The objective of this analysis was to examine the associations of different indices of comorbidity with patient-reported outcomes (PROs) in patients with hip and knee OA.
Methods: Baseline data were obtained from an ongoing randomized clinical trial comparing a combined patient and provider intervention relative to usual care in the Department of Veterans Affairs healthcare system. All participants had hip and / or knee OA, were overweight, and were not meeting physical activity recommendations. Individual multivariable regression models were conducted for five PROs: pain (Western Ontario and McMasters Universities Osteoarthritis Index; WOMAC subscale); physical function (WOMAC subscale); depressive symptoms (Patient Health Questionnaire-8); fatigue (Visual Analogue Scale); and insomnia (Insomnia Sleep Index). Separate models were conducted for each of six self-reported measures of comorbidity: Self-Administered Comorbidity Questionnaire (SACQ), a modified version of the SACQ that summed the number of conditions participants indicated as activity-limiting (SACQ-AL), and individual indicators of the most selr-reported common comorbid conditions: depression, diabetes, hypertension, and back pain. Because all patients had OA, arthritis was omitted from the comorbidity scores. All models controlled for the following factors age, race (white vs. non-white), gender (male vs. female), marital status (married/living with partner vs. other), financial status (live comfortably/meet basic expenses vs. just meet basic expenses/don't have enough), body mass index, number of joints with OA-related symptoms, and number of years with symptoms.
Results: 300 patients completed baseline assessments; mean age was 61.0 (SD = 9.2) and 9.3% were female. On average, patients reported 3 comorbid conditions and 1.6 activity limiting conditions on the SACQ. The overall comorbidity score (SACQ) was associated with worse pain (β = 0.15, 95% CI 0.04-0.26, $p < 0.01$), depressive symptoms(β = 0.42,95% CI 0.28-0.56, $p < 0.01$), fatigue (β = 0.16, 95% CI 0.07-0.25, $p < 0.01$), and insomnia (0.58, 95% CI 0.36-0.80, $p < 0.01$). Comorbid activity-limiting conditions (SACQ-AL) were associated with worse scores for all PROs: pain (β = 0.67, 95% CI 0.35-0.98, $p < 0.01$), physical function (β = 2.11, 95% CI 1.06-3.16, $p < 0.01$), depressive symptoms (β = 1.41, 95% CI 1.01-1.81, $p < 0.01$), fatigue (β = 0.65, 95% CI 0.39-0.91, $p < 0.01$), and insomnia (β = 1.83, 95% CI 1.21-2.45, $p < 0.01$). Comorbid depression was associated with worse pain (β = 1.02, 95% CI 0.13-1.91, $p = 0.03$), fatigue (β = 1.61, 95% CI 0.89-2.32, $p < 0.01$), and insomnia (β = 5.50, 95% CI 3.79-7.21, $p < 0.01$); a model was not conducted for depressive symptoms. Diabetes was associated with worse fatigue (β = 0.89, 95% CI 0.17-1.60, $p = 0.01$), insomnia (β = 1.94, 95% CI 0.19-3.70, $p = 0.03$) and depressive symptoms (β = 1.34, 95% CI 0.18-2.50, $p = 0.02$). Back pain was only associated with worse WOMAC pain scores (β = 1.16, 95% CI 0.16-2.16, $p = 0.02$), and hypertension was not significantly associated with any PROs.
Conclusions: Measures of comorbidity were associated with worse scores for all PROs. These associations were strongest for SACQ-AL, highlighting the particular importance of additional activity-limiting conditions on health outcomes among patients with OA. Of the individual comorbid conditions, depression and diabetes were associated with the most PROs, reinforcing the importance of standardized screening in this patient group. These results highlight the need for clinical care models and other interventions that simultaneously address the complexity and interrelationships of multiple chronic health conditions in the context of OA.

304
MINIMAL IMPORTANT CHANGE FOR THE KNEE INJURY AND OSTEOARTHRITIS OUTCOME SCORE (KOOS) IN PATIENTS WITH KNEE OSTEOARTHRITIS

L.H. Ingelsrud †, C.B. Terwee ‡, R.S. Gonçalves §, E.M. Roos †. † *Inst. of Sports Sci. and Clinical Biomechanics, Odense M, Denmark;* ‡ *Dept. of Epidemiology and Biostatistics, VU Univ. Med. Ctr., The EMGO Inst. for Hlth.and Care Res., Amsterdam, Netherlands;* § *Polytechnic Inst. of Coimbra, Coimbra Hlth.Sch., Univ. of Coimbra, Ctr. for Hlth.Studies and Res., Coimbra, Portugal*

Purpose: To define Minimal Important Change (MIC) values for the Knee injury and Osteoarthritis Outcome Score (KOOS) in patients with knee osteoarthritis (OA) receiving physical therapy (PT) or undergoing total knee replacement (TKR).
Methods: Two cohorts of patients with knee OA were included: 195 patients receiving PT in Portugal and 102 patients undergoing TKR at Lund University Hospital in Sweden. KOOS was administered with a set of anchor questions at 4 weeks following PT and at 6 months, 12 months and 5 years post-TKR. KOOS baseline values were obtained pre-surgery and before PT was initiated. The KOOS is a 42-item patient reported outcome measure where 5 subscales are scored separately on a 0 (worst) to 100 (best) scale; Pain, Symptoms, Activities of Daily Living (ADL), Sport and Recreational activities (Sport/Rec) and Quality of Life (QOL). The anchor questions asked the patients to rate their perceived change on a scale ranging from "much improved" too "much worse". The PT cohort used a 15-point global rating of change scale. The TKR cohort used 5-point scales relating to each KOOS domains. MIC values were calculated for each cohort, time point and KOOS subscale with the Mean Change method and the Visual anchor-based approach. With the Mean Change method, the anchor points 2: "a little bit better" and 3: "somewhat better" were combined in the PT cohort, and the anchor point 2: "better" in the TKR cohort was chosen to represent those reporting a relevant improvement. The mean change KOOS scores for these patients represent the Mean Change MIC values. With the Visual Anchor-based approach a Receiver Operating Curve-Statistics was performed and the cut-off points associated with the least amount of misclassification: the sum of 1-sensitivity and 1- specificity were chosen as the ROC MIC values.



Results: Mean Change MIC values for the five KOOS subscales increased with the length of follow-up, and higher Mean Change MIC values were found for patients treated with TKR (range 20.6-38.2 and 27.9-48.5 at 6 and 12 months, respectively) than patients treated with PT (range 10.9-15.3 at 4 weeks).