

Should Institutions Determine Minimal Clinically Important Differences Based on Their Own Knee Arthroplasty Data?

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INTRODUCTION: Because the minimal clinically important difference (MCID) may differ for unicondylar (UKA) and total knee arthroplasty (TKA), we evaluated the MCID for the Knee Osteoarthritis Outcome Score, Joint Replacement (KOOS JR) based primary knee arthroplasty data from our institution.

METHODS: We identified 712 UKAs and 1867 TKAs performed from 2020-2024 among patients who had completed KOOS JR surveys at preoperative and 1-year follow-up intervals. These patients also responded to three questions regarding satisfaction, better function and less pain at 1-year follow-up and the binary Yes/No responses were used as anchors to establish MCID values for the KOOS JR. The mean age at surgery was 67 ± 9 for the UKAs and 69 ± 9 for the TKAs while 54% (382/712) of UKAs and 64% (1188/1867) of TKAs were performed among women.

RESULTS: At 1-year follow-up, 92% (655/712) of UKA and 91% (1708/1867) of TKA patients reported being satisfied with the outcome of their knee replacement ($p=0.68$), 88% (623/712) of UKA and 86% (1605/1867) of TKA patients responded affirmatively to all three questions ($p=0.31$), and the mean KOOS JR score was 80 ± 14 for UKAs and 79 ± 14 for TKAs ($p=0.03$). Compared to preoperative values, the mean KOOS JR score increased by 25 ± 16 for UKAs and by 27 ± 17 for TKAs ($p=0.01$). The anchor-based MCID for the KOOS JR using only the satisfaction question was 20 for both UKAs and TKAs while the MCID using affirmative responses to all three questions was 18 for UKAs and 15 for TKAs.

DISCUSSION AND CONCLUSION: At 1-year follow-up, KOOS JR scores among UKA and TKA patients demonstrated relatively small differences and MCID values were similar. For patients who were satisfied with their knee arthroplasty, had better function, and less pain, 69% (430/623) of UKAs and 73% (1168/1605) of TKAs achieved the 20-point increase defined as a significant clinical benefit by Medicare.