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Leslie R. Harrold

University of Massachusetts Medical School

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Do Younger TKR and THR Patients Have Similar Disability at Time of Surgery as Older Adults? Lessons from FORCE-TJR

Leslie Harrold¹ MD MPH, Wenjun Li² PhD, Courtland Lewis⁴ MD, Jeroan Allison³ MD MS, David Ayers¹ MD, Patricia D. Franklin¹ MD MBA MPH

UMass Medical School ¹department of Orthopedics and Physical Rehabilitation, ²department of Preventive and Behavioral Medicine, ³department of Quantitative Health, Worcester, MA; ⁴Hartford Hospital, Hartford CT

Corresponding Author: Leslie Harrold MD MPH, Associate Professor
Department of Orthopedics and Physical Rehabilitation, UMass Medical School
Phone: 508-856-6139; Email: leslie.harrold@umassmed.edu

Introduction: The number of US patients under 65 year old who are undergoing total knee replacement (TKR) and total hip replacement (THR) has been rising, raising concerns that younger patients may receive surgery prematurely. Therefore, we examined demographics and clinical factors and compared the severity of operative knee pain and functional status in younger versus older TKR patients from a US national sample.

Materials & methods: The FORCE-TJR registry gathers data from patients, surgeons and hospitals on sociodemographic factors (age, sex, race), BMI, comorbid conditions using the modified Charlson comorbidity scores, burden of musculoskeletal disease using the Knee/Hip injury and Osteoarthritis Outcome Score (KOOS/HOOS) in both knees and hips, emotional health based on the Short Form 36 (SF-36) Mental Component Score (MCS) and physical function based on the Physical Component Score (SF-36 PCS).

Results: We analysed data from 2035 younger (<65) and 3084 older (≥65) TKR patients and 1780 younger and 1831 older THR patients. Younger TKR and THR patients were more likely nonwhite (TKR: 13.1% vs. 6.6%; THR: 51.7% vs. 48.3%), with greater body mass index (mean BMI TKR: 33.1 vs. 30.5; THR: 29.9 vs. 28.4), smokers, had fewer number of comorbid conditions. Younger TKR patients reported lower emotional health (MCS 49.1 vs. 52.6), greater joint pain, stiffness and functional impairment (based on estimated WOMAC) and global functional impairment (using PCS). Younger THR patients reported greater joint pain, stiffness and functional impairment (estimated WOMAC) but not global function.

Conclusion: At the time of TKR and THR, younger patients have fewer medical illnesses, but higher rates of obesity and smoking as well as lower mental health scores. Younger have the same or greater joint specific and global functional impairment compared to older patients, suggesting surgeons use comparable standards for selecting TKR and THR candidates in younger and older adults.