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CORR Insights®: Women Demonstrate More Pain and Worse Function Before THA but Comparable Results 12 Months After Surgery

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Where Are We Now?

Substantial evidence [1, 3, 4] suggests that women have worse preoperative hip-specific health status than men at the time they undergo hip arthroplasty. The reasons for this disparity are multifactorial, and have not been completely illuminated.

This CORR Insights® is a commentary on the article “Women Demonstrate More Pain and Worse Function Before THA but Comparable Results 12 Months After Surgery?” by Mannion and colleagues available at: DOI: 10.1007/s11999-015-4479-3.

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It appears that women seek operative intervention later in the course of hip osteoarthritis, but the reason for this is unclear. It may be related to gender-based roles, such as care-giving for a spouse or loved one, or it may be more willingness to tolerate pain [2]. The fact that no appreciable difference in outcomes after surgery has been found—despite the preoperative differences—suggests that hip arthroplasty is a highly effective procedure for women.

Where Do We Need To Go?

The larger issue is that the patient reported outcomes measures (PROMs) currently at our disposal do not appear to be accurate or precise enough to detect potentially meaningful differences between men and women. For example, in the current study by Mannion and colleagues, the

preoperative standard deviations were 7.3 for the Oxford Hip Score (OHS) and ranged from 19.5 to 22.4 for the WOMAC. This variability far exceeds the mean differences seen (1.9 for the OHS and 5.5 to 7.6 for the WOMAC). Despite “statistical” significance and achieving some previously defined thresholds of minimum clinical important differences for these PROMs, the results may simply reflect nonsex-specific factors such as education (twice as many women as men did not continue beyond high school). Health literacy is highly related to education, and educated patients may be more likely to interpret the PROM items correctly [6]. The fact that education was unrelated to PROM values, but was different between groups, may explain some of the differences found.

How Do We Get There?

Unexpected variability will always be present in response to PROMs. Outside factors—such as education—will likely continue to influence a patient’s interpretation of an outcomes tool,

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potentially biasing results for specific subgroups of patients in ways that are unrelated to their condition or treatment outcomes. The NIH Patient Reported Outcomes Measurement Information System initiative may provide some resolution to this issue using computer adaptive testing methods as items are used to guide the PROM to a score rather than every item being included in the score. This should minimize the effect of misunderstood items, theoretically anyway. However, another approach may be patient-directed or patient-specific PROMs, which solicit directly from the patient what they hope to achieve from the treatment and then later assess whether those goals were achieved [5, 7]. Initial development of those instruments, however, utilized paper administration, which was highly inefficient with individualized paper surveys needing to be created for

each patient in a study. With new electronic data capture technology, the barrier to implementation of these patient-specific PROMs is much lower. Additionally, given the near ubiquity of mobile phone technology, there may be opportunities to develop more efficient and direct measurement of patient activities.

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