Quantifying Patient Expectations for Total Knee Arthroplasty (TKA): Is It Time to Rethink Minimal Clinically Important Difference (MCID) or Reset Expectations?

Nicholas C Arpey, Joseph E Tanenbaum, Linda I Suleiman,
Patricia D Franklin, Alpesh A Patel, Adam E Edelstein

Introduction

- Achieving MCID in PROs following TKA is common, yet up to 20% patient dissatisfaction persists

- Unmet expectations may explain post-TKA dissatisfaction

- No prior studies have quantified patient expectations using the same PRO metric as is used for MCID to allow for direct comparison of the two

- The purpose of this study is to quantify patient expectations for TKA and compare these values to MCID

Methods

- 93 patients undergoing TKA were prospectively identified

- Baseline Patient-Reported Outcomes Measurement Information System (PROMIS) Physical Function (PF) and Pain Interference (PI) domains were assessed

- Expected PROMIS scores were determined by asking patients to indicate the outcomes they were expecting at 12 months postoperatively

- Predicted scores were generated from a predictive model validated in the Function and Outcomes Research for Comparative Effectiveness in Total Joint Replacement (FORCE-TJR) dataset

- T-tests were used to compare baseline, expected, and predicted PROMIS scores. Expected scores were compared to PROMIS MCID values obtained from the literature. Regression models were used to identify patient characteristics associated with high expectations

Results

n=93	
Age, years	
Mean (SD)	67.1 (8.9)
Sex, n (%)	
Female	51 (55%)
Male	42 (45%)
BMI	
Mean (SD)	31.1 (5.3)
ASA classification, n (%)	
ASA I	12 (13%)
ASA II	74 (80%)
ASA III	7 (7%)
Prior TKA, n (%)	19 (20%)

PROMIS PF

	Mean	SD
Baseline	34.4	6.7
Patient Expectation	55.9	9.2
Expected Improvement	21.6 95% CI: 19.6-23.5 p<0.001	

PROMIS PF Expectations = 1.9x MCID

PROMIS PI

	Mean	SD
Baseline	62.2	6.4
Patient Expectation	41.5	5.2
Expected Improvement	20.6 95% CI: 19.1-22.2 p<0.001	

PROMIS PI Expectations = 2.3x MCID
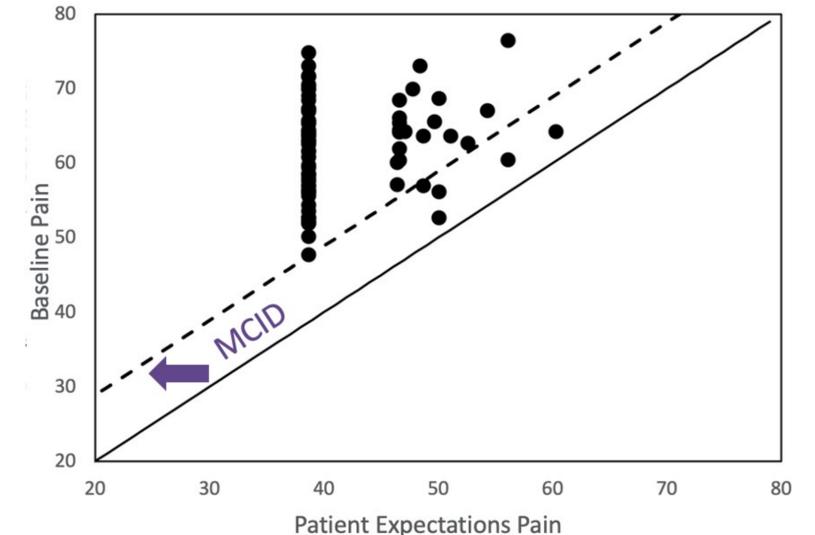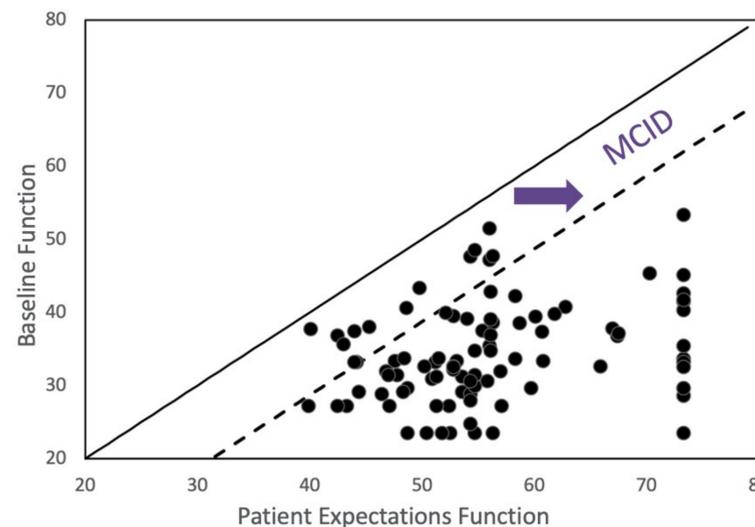
PROMIS PF

	Mean	SD
Predicted	46.4	4.0
Expected	55.9	9.2
Expected vs Predicted	Δ9.5 95% CI: 7.7-11.3 p<0.001	

*No patient characteristic were associated with higher expectations
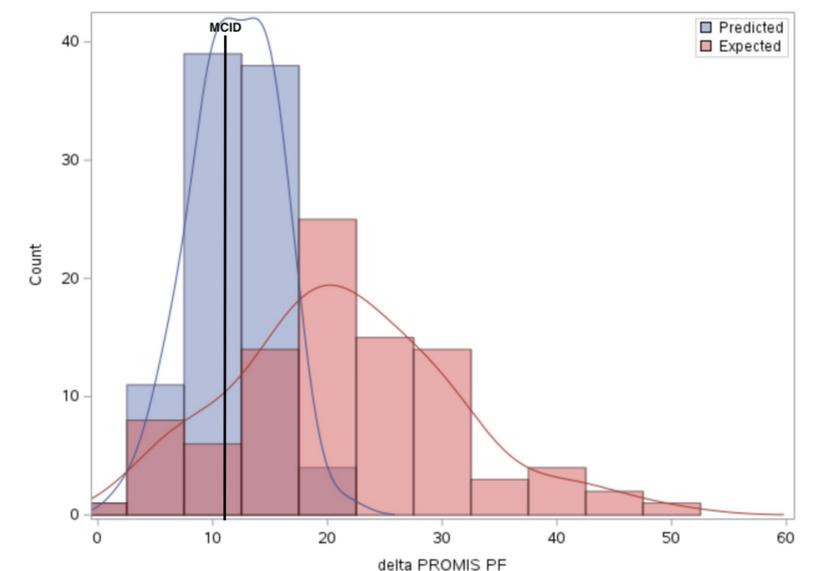
Discussion

- Patient expectations are significantly higher than actual preoperative status as measured by PROMIS

- Patient expectations for improvement are greater than MCID by approximately 2x on average

- Is MCID the best method to define surgical success?

Conclusion

- First study to quantify patient expectations using the same metric as MCID to allow for comparison

- Discrepancy challenges currently accepted standards of success after TKA and indicates a need for improved expectation setting pre-surgery