

Postoperative Utilization of Other Orthopedic Services Adversely Affects Patient Reported Outcomes After Total Hip Arthroplasty

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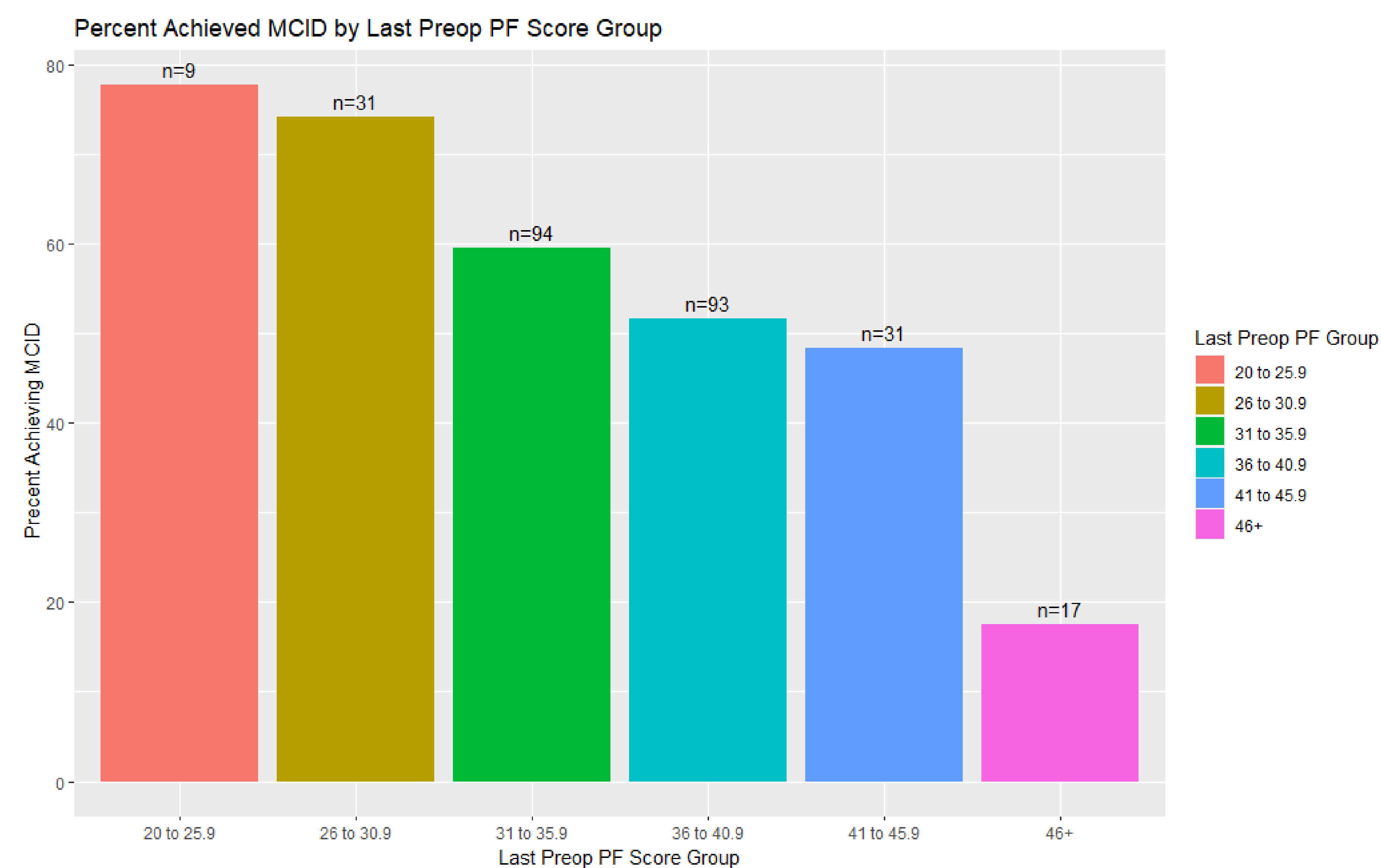
Background

Prior studies have identified baseline function and comorbidities as predictors of total hip arthroplasty (THA) outcomes.^{1, 2} However, most studies evaluate joint-specific, rather than general health outcomes such as PROMIS-Physical Function (PF).¹ Patient reported outcome measures, including PROMIS-PF, are increasingly being used to inform clinical decision making and improve patient centered care.^{3, 4} The purpose of this study was to evaluate patient characteristics and postoperative events associated with minimal clinically important difference (MCID) achievement after THA using PROMIS-PF.

Methods

- A retrospective review of 274 patients undergoing THA with preoperative and 1-year postoperative PROMIS-PF scores from March 2020 to January 2022 was performed
- Three multivariate models were built to evaluate predictors of MCID achievement: preoperative factors, postoperative clinical outcomes and utilization of other orthopedic services in 1-year postoperatively

Distribution of MCID Achievement by Preoperative PROMIS-PF



Preoperative Predictors of Achieving MCID

Predictors of Achieving MCID	Odd Ratio	95% Confidence Interval	P-value
Age	1.00	0.96 to 1.04	0.987
BMI	1.01	0.95 to 1.07	0.740
Sex (Male)	1.46	0.84 to 2.57	0.181
Non-White	0.94	0.46 to 1.95	0.870
ASA 3+	0.74	0.38 to 1.44	0.380
CCI Score	0.89	0.59 to 1.35	0.564
Baseline PROMIS PF Score	0.89	0.84 to 0.94	<0.001
Chronic Opioid Use	0.59	0.30 to 1.13	0.111
History of Spine Fusion	1.23	0.45 to 2.92	0.879
History of Hip Surgery	0.74	0.21 to 2.65	0.636
History of Prior THA	1.10	0.59 to 2.07	0.770

Postoperative Outcomes as Predictors of Achieving MCID

Predictor	Odds Ratio	95% Confidence Interval	P-value
Length of Stay (Days)	0.85	0.62 to 1.03	0.181
Home Discharge	0.11	0.00 to 1.86	0.173
90-Day ED Return	1.15	0.35 to 3.95	0.816
90-Day Readmission	0.45	0.06 to 2.62	0.395
1-year Surgical Complication	0.83	0.47 to 1.46	0.514

Postoperative Orthopedic Utilization as Predictors of MCID

Predictor	Odds Ratio	95% Confidence Interval	P-Value
1 Year Orthopedic Utilization			
Other Condition	0.40	0.17 to 0.93	0.034
Other Surgery	0.61	0.30 to 1.21	0.158
Other Injection	0.80	0.41 to 1.53	0.501
Orthopedic Area			
Foot and Ankle	0.39	0.13 to 1.07	0.078
Contralateral Hip	1.49	0.79 to 2.82	0.222
Knee	1.06	0.56 to 2.00	0.868
Upper Extremity	0.96	0.45 to 2.06	0.926
Spine	0.54	0.29 to 0.99	0.048

Conclusion

Predictors for failure to achieve MCID after THA were higher baseline PROMIS-PF, postoperative treatment for another orthopedic condition, and postoperative care for a spine condition. Although general PROMs such as PROMIS-PF are useful in assessing THA outcomes, these results highlight that coexistent orthopedic conditions may confound results.