

Emergency Department Visit Within One Year Prior to Elective Total Joint Arthroplasty is Predictive of Postoperative Return to Emergency Department Within 90 Days

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Introduction: The Comprehensive Care for Joint Replacement Model, developed by Centers for Medicare and Medicaid Services, aims to improve the quality of joint replacement. Metrics, including emergency room visit rates after Primary Total Knee and Total Hip Arthroplasty (TKA and THA), are of particular interest. The purpose of this study was to determine if preoperative Emergency Department (ED) visits are predictive of postoperative ED visits among patients undergoing elective THA or TKA.

Methods: In a retrospective analysis of 6979 patients who underwent elective primary arthroplasty (2437 hip, 4542 knee), we identified all patients who had an ED visit from up to one year prior to their surgical date to 90 days after. We assessed if preoperative visit frequency or temporality are predictive of a return ED visit within 90 days.

Results: TKA and THA patients with a single preoperative ED visit had an OR of 1.9 and 2.0, respectively, of returning to the ER postoperatively ($P < 0.001$). Increasing preoperative visit frequency correlated with increasing odds ratios (up to 5 preoperative visits) (OR 1.9-16.7, $P < 0.001$). The proximity of the most recent preoperative visit to surgery was a risk factor for postoperative return to ED (OR 4.6 hips, 2.9 knees, $P < 0.001$).

Conclusions: Presentation to the ED is common prior to total joint arthroplasty and is predictive of a postoperative visit within 90 days. Preoperative visit frequency and proximity prior to surgery increases a patient's risk of a postoperative visit within 90 days.