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Emergency Department Visit Within One Year Prior to Elective Total Hip Arthroplasty is Predictive of Post-Operative Return to Emergency Department within 90 Days

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EMERGENCY DEPARTMENT VISIT WITHIN ONE YEAR PRIOR TO ELECTIVE TOTAL HIP ARTHROPLASTY IS PREDICTIVE OF POSTOPERATIVE RETURN TO EMERGENCY DEPARTMENT WITHIN 90 DAYS

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BACKGROUND

- Bundled payment models, such as the **Comprehensive Care for Joint Replacement Model (CJR)**, developed by Centers for Medicare and Medicaid Services (CMS), aim to **improve the quality and cost efficiency of joint replacement care**
- Among the metrics tracked, **Emergency Department (ED) visit rates after Primary Total Hip Arthroplasty (THA)** are of particular interest



PURPOSE

- Determine if preoperative ED visits are predictive of postoperative ED visits among patients undergoing elective primary THA



METHODS

- **Michigan Arthroplasty Registry Collaborative Quality Initiative (MARCQI)** database was utilized to identify all patients who underwent **elective primary THA** at all hospitals within our healthcare system between January 1, 2014 and December 31, 2017
- **2453 THA patients** were identified
- These patients were cross-referenced with institutional data to determine which patients 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
- **Total charges of each postoperative ED visit were recorded**



MARCQI
MICHIGAN ARTHROPLASTY
REGISTRY
COLLABORATIVE QUALITY INITIATIVE

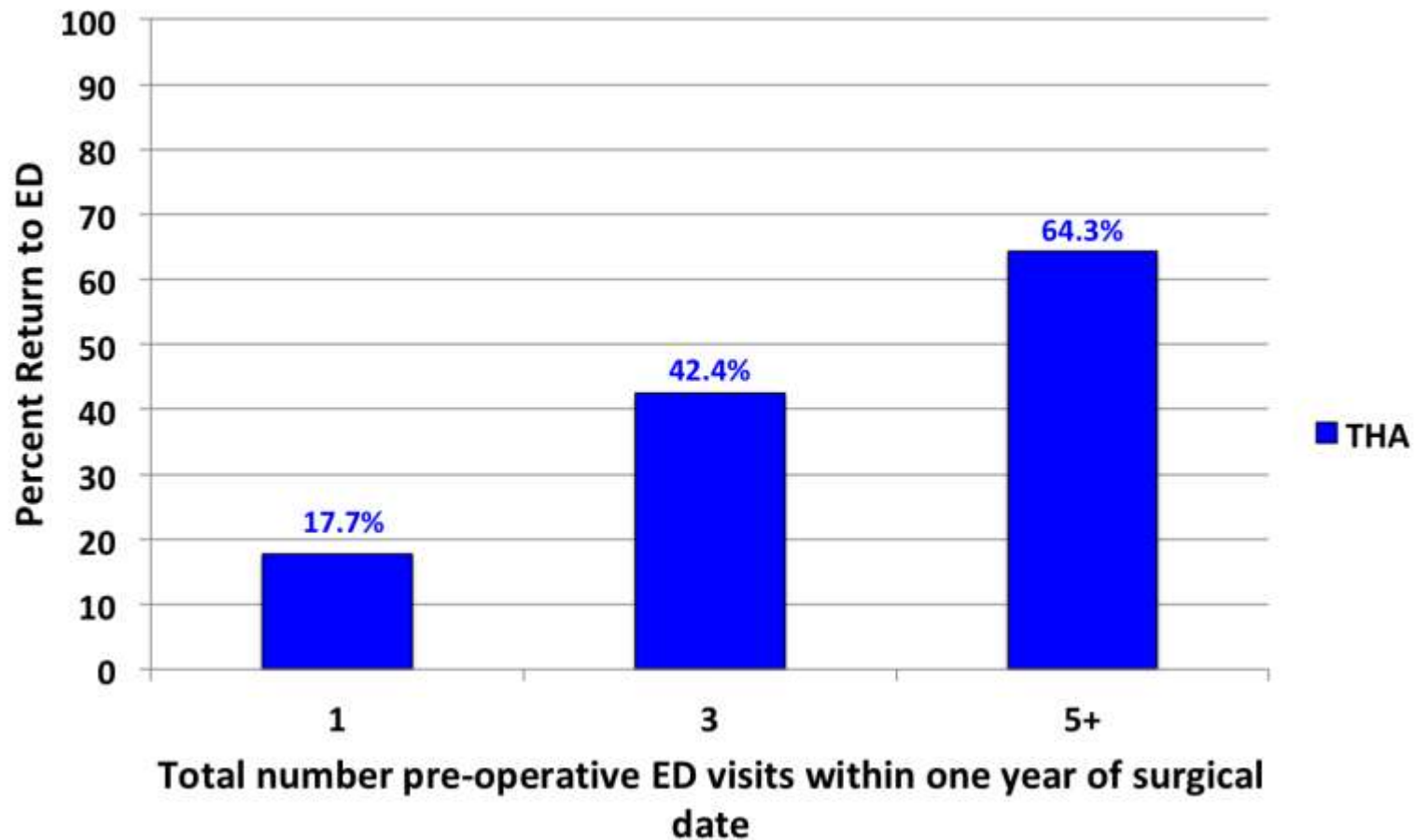


RESULTS

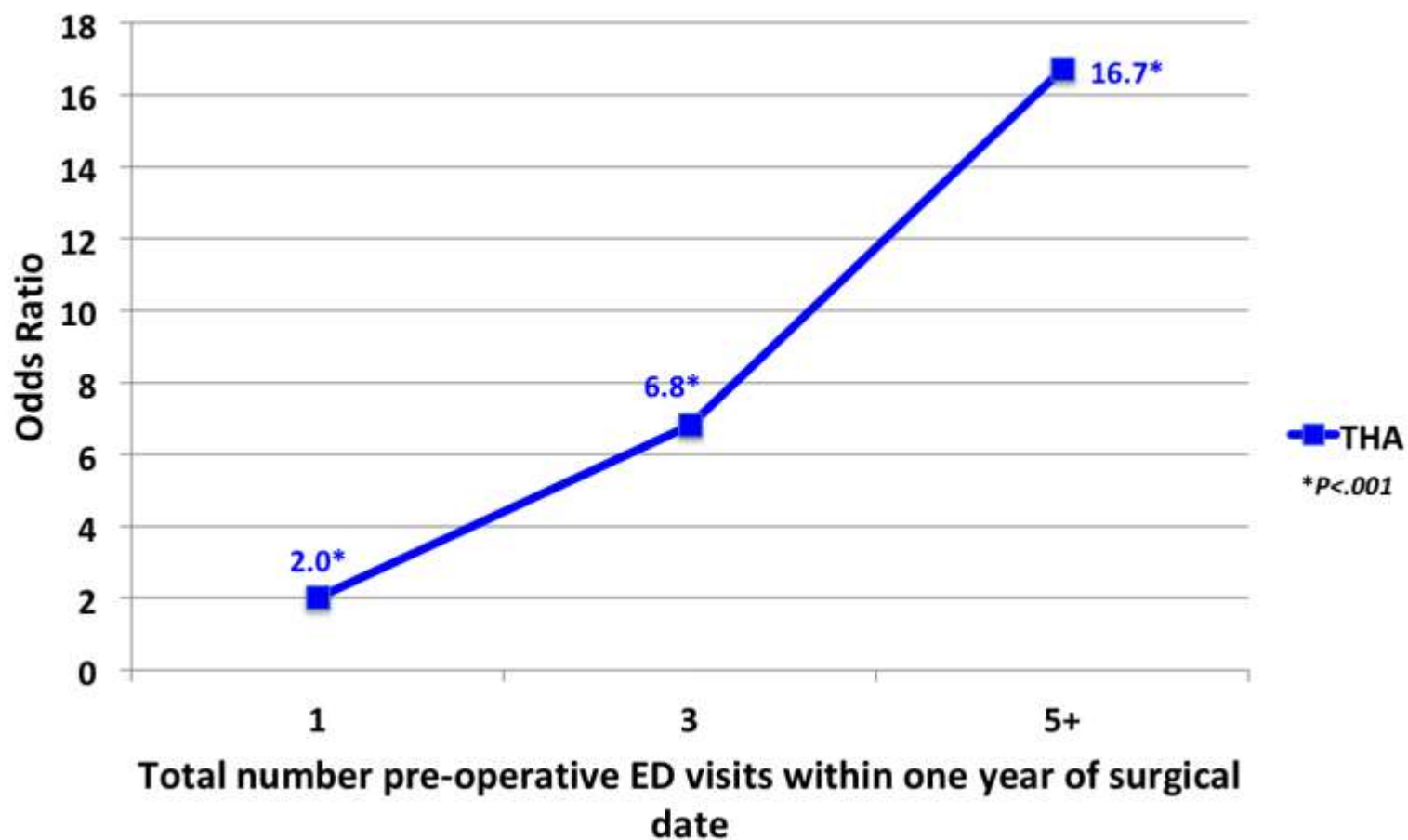
- 466/2453 (**19.0%**) of patients had a **preoperative ED visit within 365 days** of their surgical date
- 370/2453 (**15.1%**) of patients had a **postoperative ED visit within 90 days** of their surgical date
- Of the 466 patients with a **preoperative ED visit**, 123/466 (**26.4%**) also **had a post-op ED visit**
- **Both increasing frequency and proximity of preoperative ED visits were associated with postoperative ED visits**
- The average billable charges per postoperative ED visit after THA were **\$9,669.96**



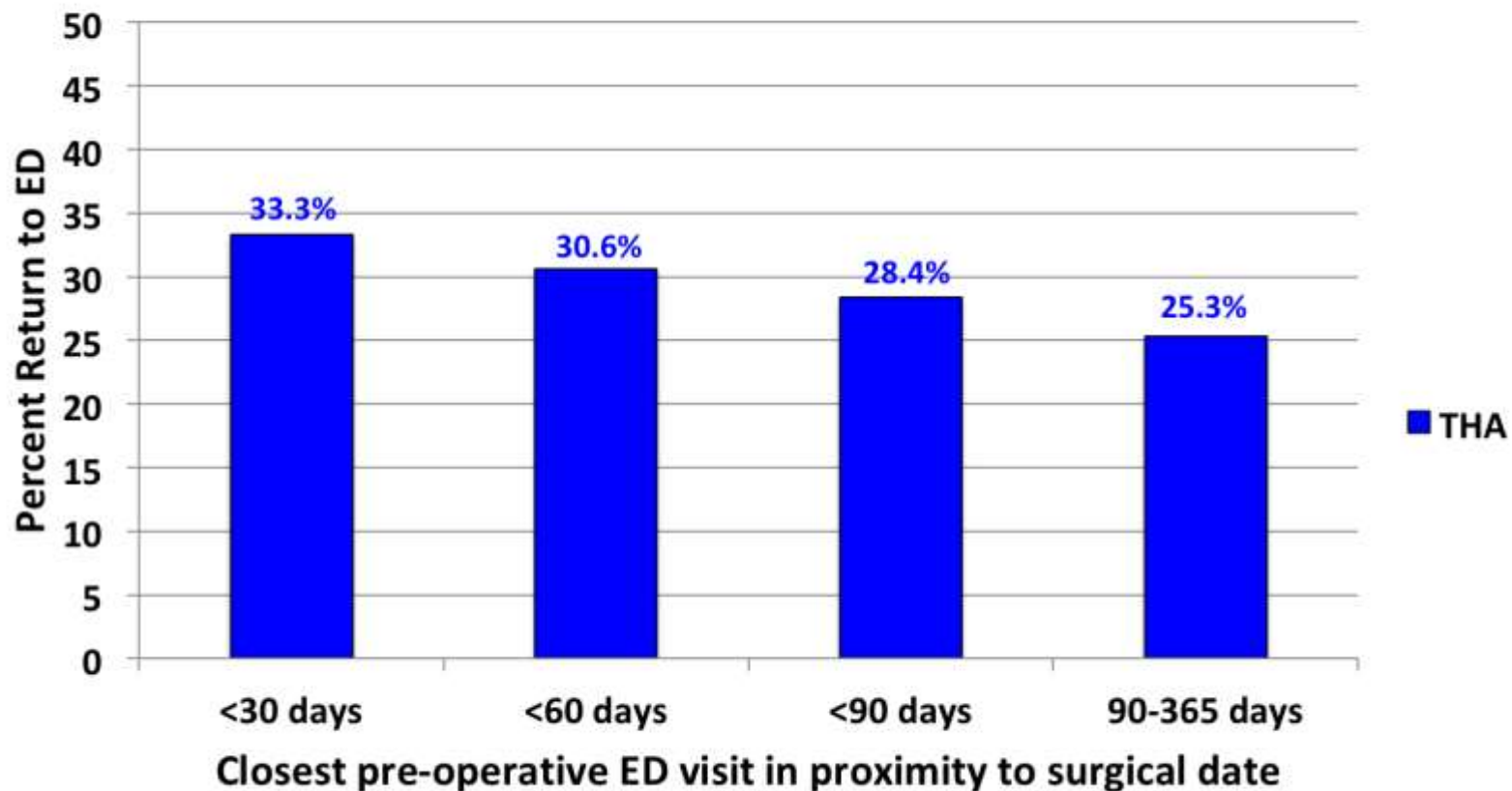
Return to ED within 90 days postoperative after elective THA



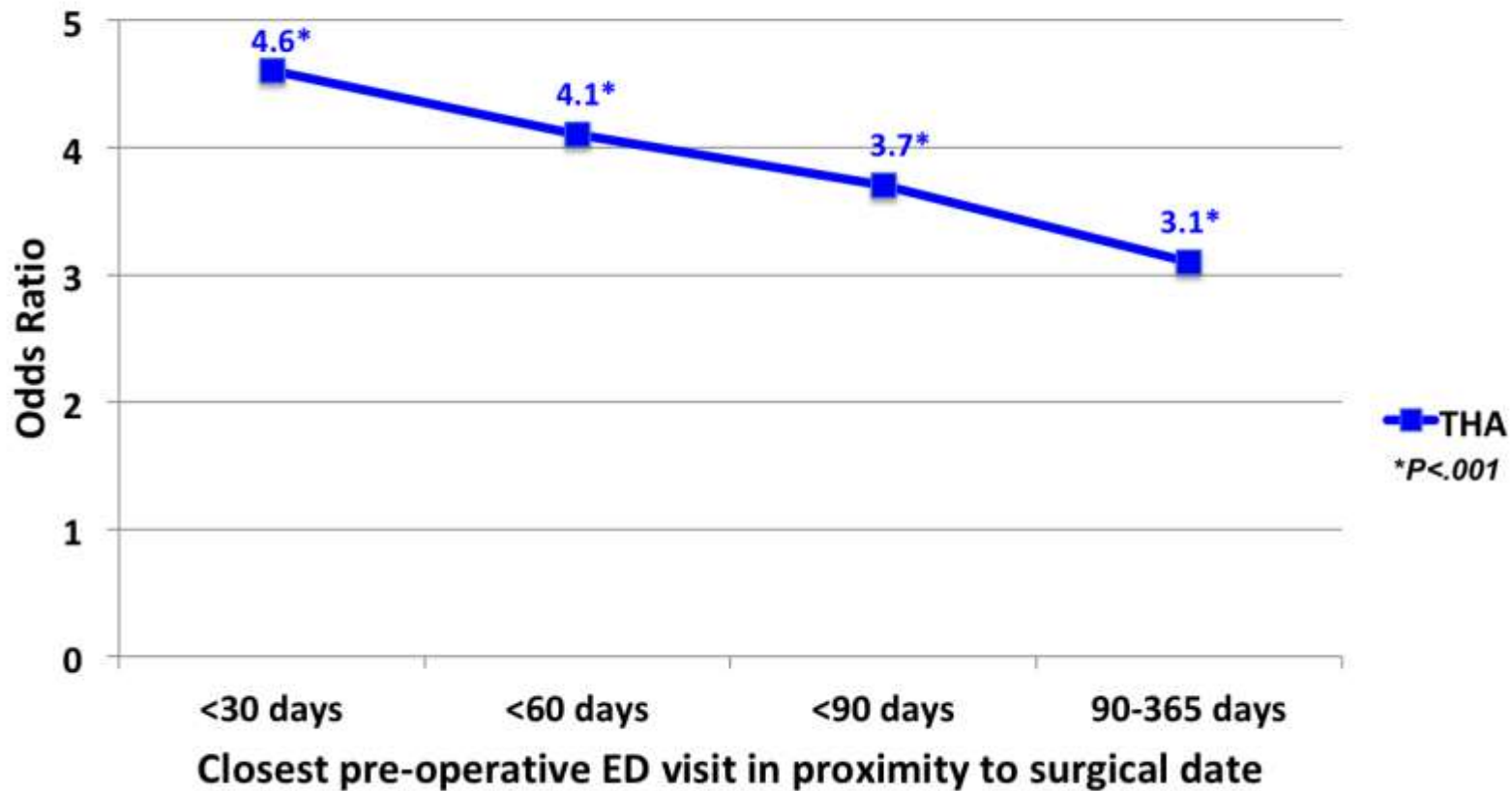
Return to ED within 90 days postoperative after elective THA



Return to ED within 90 days postoperative after elective THA



Return to ED within 90 days postoperative after elective THA



DISCUSSION

- Bundled payment models are designed to improve overall efficiencies within joint replacement care
- **Performance in metrics tracked, including emergency room visits and readmission rates after elective THA, are utilized as a measures of hospital quality**
- **These measures will dictate compensation to hospitals and providers alike**



DISCUSSION

- Our study identifies that, within a large healthcare system, **previous ED visits are predictive of patients returning to the ED** in the 90 day postop period
- **Identification of these at risk patients allows potential opportunity for intervention** to improve performance on these metrics, and more importantly, patient care
- A 10% reduction in postoperative ED visits, at \$10K per visit, could result in an annual savings to the hospital system of \$284K annually



CONCLUSION

- Patient utilization of the ED is common prior to Total Hip Arthroplasty and is a risk factor for post-operative ED visit within 90 days
- Increasing pre-operative visit frequency and proximity prior to surgery further increase a patients' risk of a post-operative visit within 90 days



CONCLUSION

- There is a **significant cost-saving potential** by reducing the number of these postoperative ED visits
- Interventions aimed at **reducing the frequency of postoperative ED visits**, particularly in at risk patients, may **provide value to overall joint replacement care**

