Study identifies high-impact postoperative complications in older patients undergoing hip fracture repair

(Article in April 2021 issue of The Joint Commission Journal on Quality and Patient Safety)


The study, “The Relative Impact of Specific Postoperative Complications on Older Patients Undergoing Hip Fracture Repair,” details how researchers used data for patients aged 65 years and older from the 2016–2017 Hip Fracture Targeted American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP).

Population attributable fractions (PAFs) were used to quantify the anticipated reduction in the primary outcomes (30-day mortality and readmission) that would result from complete prevention of 10 postoperative complications. In 17,755 patients who underwent hip fracture repair across 117 hospitals, postoperative delirium and pneumonia were the highest-impact complications.

Postoperative delirium affected 29.8% of patients and was associated with:
- 30-day mortality (11.5%)
- Prolonged hospitalization (43%)
- 30-day hospital readmission (11.9%)

Pneumonia affected 4.1% of patients and was associated with:

- 30-day mortality (27.3%)
- Prolonged hospitalization (66%)
- 30-day hospital readmission (28.1%)

The impact of the other eight complications – bleeding, *Clostridium difficile* colitis, decubitus ulcer, myocardial infarction, stroke, surgical site infection, urinary tract infection and venous thromboembolism – was comparatively small.

“Using an interprofessional team-based approach to identify and mitigate perioperative risks, for delirium and pneumonia in particular, hospitals may be able to improve key patient outcome measures such as mortality, length of stay and readmissions,” notes an accompanying editorial by Lindee Strizich, MD, MSc and Christopher S. Kim, MD, MBA.

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**Note for editors**
The article is “The Relative Impact of Specific Postoperative Complications on Older Patients Undergoing Hip Fracture Repair” by Christopher C. Stahl, MD; Luke M. Funk, MD, MPH; Jessica R. Schumacher, PhD, MS; Ben L. Zarzaur, MD, MPH; and John E. Scarborough, MD. The article appears in *The Joint Commission Journal on Quality and Patient Safety*, volume 47, number 4 (April 2021), published by Elsevier.

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