



NEWS RELEASE

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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

(OAKBROOK TERRACE, Illinois, March 23, 2021) – Hip fracture in older patients is common, debilitating and costly.^{1,2,3} A new study in the April 2021 issue of *The Joint Commission Journal on Quality and Patient Safety* assessed which complications are associated with the highest mortality rates and resource utilization for older patients who undergo hip fracture repair.

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%)

¹ Brauer CA, et al. Incidence and mortality of hip fractures in the United States. *JAMA*. 2009 Oct 14;302:1573–1579.

² Bhandari M, Swiontkowski M. Management of acute hip fracture. *N Engl J Med*. 2017 Nov 23;377:2053–2062.

³ Kim SH, et al. Hip fractures in the United States: 2008 nationwide emergency department sample. *Arthritis Care Res (Hoboken)*. 2012;64:751–757.

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.

The Joint Commission Journal on Quality and Patient Safety

[The Joint Commission Journal on Quality and Patient Safety](#) (JQPS) is a peer-reviewed journal providing health care professionals with innovative thinking, strategies and practices in improving quality and safety in health care. JQPS is the official journal of [The Joint Commission](#) and [Joint Commission Resources, Inc.](#) Original case studies,

program or project reports, reports of new methodologies or the new application of methodologies, research studies, and commentaries on issues and practices are all considered.