

Characterization of Outcomes with Standardized Hip Fracture Care Programs in the United States

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Purpose: Our objective was to describe treatment characteristics and outcomes of patients undergoing fixation of hip fractures at institutions with and without standardized hip fracture care (SHFC) programs.

Methods: We retrospectively reviewed the American College of Surgeons-National Surgical Quality Improvement Program (ACS-NSQIP) database for patients treated for hip fracture in 2016 and 2017 through CPT codes 27236, 27244 and 27245 as well as appropriate diagnostic codes. Outcomes were reported up to 30 days postoperatively.

Results: A total of 14,049 patients were included in the study. About half (53.7%) were treated at institutions with SHFC programs. Differences in fracture type ($P = 0.001$) and fixation method ($P < 0.001$) were noted between groups. Time from admission to operation was longer and more variable in the SHFC group (1.4 ± 6.5 days vs 1.2 ± 2.1 days, $P < 0.001$), and these patients were in the hospital on average 1.2 days longer after surgery than non-SHFC patients (6.3 ± 6.9 days vs 5.1 ± 4.9 days, $P < 0.001$). However, SHFC programs were associated with fewer unplanned readmissions (7.5% vs 8.9%, $P = 0.009$) and deep venous thromboses (DVTs) (1.5% vs 2.3%, $P = 0.002$) in the 30-day postoperative period. In addition, SHFC programs were associated with fewer unplanned intubations and need for mechanical ventilation ($P < 0.05$). No differences were noted with reoperation or mortality.

Conclusion: To the best of our knowledge, this is the first study to compare outcomes of SHFC and non-SHFC in a large population database. While we were unable to demonstrate lower 30-day mortality rates or earlier time to surgery, SHFC programs result in lower complication rates and fewer unplanned readmissions.