

**Safety and Cost-Efficacy of Surgical Fixation of Isolated Ankle Fractures in a Free-Standing Ambulatory Surgical Center (ASC) /versus Hospital-Owned Outpatient Facility (HOPD)**

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**Purpose:** Free-standing ambulatory surgical centers (ASCs) typically provide uncomplicated surgical procedures in a non-hospital setting, and function as “focused factories” that replicate the delivery of quality care while achieving lower costs as compared to hospital-owned outpatient facilities (HOPDs). Despite an increasing interest toward outpatient foot and ankle surgery, few studies have compared the safety and cost-savings associated with surgical fixation of isolated ankle fractures in a free-standing ASC versus an HOPD.

**Methods:** The 2007-2014 Humana Administrative Claims (HAC) database was queried using CPT codes to identify patients undergoing open reduction and internal fixation (ORIF) for unimalleolar (27766, 27769, 27792), bimalleolar (27814), and trimalleolar (27822, 27823) ankle fractures. Patients with polytrauma or those undergoing a concurrent surgical fixation of the upper extremity, hip, femur, knee, or tibia were removed from the study to capture a relevant cohort of isolated ankle fracture patients. Location of surgery was identified using service location codes 22 (HOPD) and 24 (ASC). Propensity-score matching and multivariate regression analyses were used to compare differences in 90-day complications, emergency department (ED) visits, and readmissions between the 2 groups. A 90-day cost comparison was also carried out to assess savings associated with surgery in an ASC versus HOPD.

**Results:** A total of 4832 (80.1%) ankle fractures treated in an HOPD and 1198 (19.9%) in a free-standing ASC were included in the study. Following propensity-score matching to account for differences in baseline demographics and clinical characteristics, each group consisted of 1138 patients. Following multivariate analyses, undergoing surgery in a free-standing ASC versus an HOPD was not associated with a higher rate of 90-day complications (0.73 [95% confidence interval (CI) 0.54-1.00];  $P = 0.05$ ), ED visits (odds ratio [OR] 0.86 [95% CI 0.64-1.16];  $P = 0.331$ ), and readmissions (0.79 [95% CI 0.53-1.18];  $P = 0.251$ ). Furthermore, undergoing surgery in a free-standing ASC was associated with nearly \$2500 cost-savings/case over the 90-day episode of care (ASC = \$8058 vs HOPD = \$10,619;  $P < 0.001$ ).

**Conclusion:** Using national administrative claims of commercial insurance beneficiaries, the results of the study show that performing surgical fixation of ankle fractures in a free-standing ASC is a safe and cost-effective option in a carefully selected patient population.