

Missed Opportunities: Underbilling of Non-Operative Fracture Care is Common in Orthopedic Polytrauma Patients

Douglas Zhang, BA; Jeffrey Blibo, BS; Miriyam Ghali, MD, MBA; Gregory V. Schimizzi, MD, PhD; Tony Christiano, MD; Mary K. Erdman, MD

Purpose: Literature has demonstrated the occurrence of missed injuries in patients with severe polytrauma, often attributed to the presence of distracting injuries. Similarly, the documentation of surgical fracture care may “distract” the surgeon from comprehensive billing, and services for nonoperative fracture care of lesser injuries may go unrecognized. The purpose of this study is to quantify underbilling of nonoperative care in orthopaedic patients with polytrauma and to measure the economic impact of nonoperative care that goes unbilled.

Methods: This retrospective study included adult and pediatric patients presenting to a single Level I trauma center between July 2019 and July 2023; patients had an injury severity score >16 and multiple orthopaedic injuries. Only patients with at least one surgically treated orthopaedic injury, not including operations performed by a hand or spine surgeon, were included. A billing database was queried to obtain all CPT codes submitted for billing. A list of managed diagnoses was obtained for each patient through chart review. A list of missed CPT codes for nonoperative care was derived via reconciling the list of submitted CPT codes with the managed diagnoses for each patient. Lost revenue was calculated using the 2025 Centers for Medicare & Medicaid Services Physician Fee Schedule.

Results: In total, 123 patients were included; 69 (56%) patients had a total of 127 missed codes for nonoperative orthopaedic care. Lost revenue totaled \$35,797.06 overall, corresponding to losses of \$8,949.26 per year and \$518.80 per patient with missed codes. Most missed codes (55.91%) were related to lower extremity diagnoses (n = 71 codes). The most common missed codes were for closed treatment of metatarsal (n = 20 codes; 8 patients), scapula (n = 15; 14 patients), and tarsal (n = 15; 7 patients) fractures, which correspond to total losses of \$4414.60, \$4060.05, and \$3097.50 for each fracture type, respectively.

Conclusion: Underbilling of nonoperative fracture care occurs in most heavily traumatized patients who undergo orthopaedic surgery. The strict inclusion criteria of this study likely underestimate the total occurrence of underbilling and subsequent lost revenue. Surgeons should be mindful of this pattern to ensure appropriate reimbursement for all services rendered.