

Orthopaedic Staffed Urgent Care Versus the Emergency Department Setting: Cost and Quality Implications of Low-Energy Fracture Care

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Purpose: Our urgent immediate care (I-Care) orthopaedic facility caters exclusively to patients with musculoskeletal complaints. It is staffed by an orthopaedic resident physician delivering care overseen by an emergency medicine attending physician with an on-call orthopaedic attending surgeon on standby for escalation of care. This study sought to compare costs, acute length of stay (LOS), and utilization trends for fracture patients seen in an immediate care orthopaedic center (I-Care) versus the emergency department (ED) in a major metropolitan area. It was hypothesized that LOS would be shorter and estimated costs lower for fracture patients seen in the I-Care setting.

Methods: A retrospective chart review of patient demographics, procedures performed (splinting, reduction maneuver, aspiration, or physician-assisted radiography) care category (low acuity vs high acuity), estimated costs, and disposition information was conducted for fracture patients managed on an outpatient basis in the ED and I-Care over a 6-month period. Within the low-acuity fracture care group, a cost-comparison analysis was conducted. Paired Student t tests were used to assess continuous variables. Pearson's χ^2 and odds ratios were used for categorical variables.

Results: A total of 610 fracture patients met inclusion criteria for this study with 311 seen in I-Care and 299 in the ED. The most common fractures treated in the overall cohort were distal radius fractures (66 patients, 10.8%). Gender distribution was similar between groups (62.7% female in ED, 60.3% female in I-Care, $P = 0.523$) as were insurance type and race. I-Care patients were younger (average age 49.9 years vs 53.9 years, $P = 0.014$) and more likely to have low-acuity injuries compared to ED patients (60.1% vs 18.1%, $P < 0.001$). The length of visit was longer for patients seen in the ED compared to I-Care (6.1 hours vs 1.43 hours, $P < 0.001$). This difference persisted when analyzing 241 patients with low-acuity injuries only (mean LOS 5.08 hours ED standard deviation [SD] ± 0.12 vs 1.66 hours I-Care SD ± 0.12 , $P < 0.001$). A cost analysis of low-acuity patients revealed that an estimated \$55,620 USD could potentially have been saved in health-care costs by initial diversion of patients seen in the ED to I-Care during the 6-month period of this study.

Conclusion: These results suggest the I-Care orthopaedic urgent care model of fracture care is a more cost-effective alternative to the ED for patients with fractures requiring procedural treatment and low-acuity patients managed on an outpatient basis. These observed trends may also signal opportunities for utilization of telehealth as an alternative to the orthopaedic urgent care for low-acuity patients and to divert appropriate patients to lower-intensity settings such as I-Care to reduce unnecessary visits, streamline referrals, and improve value of care.