Treatment and outcome improvement with implementation of a system-wide comprehensive plan of care for management of isolated hip fractures

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1Orthopedic Trauma Service; 2Mission Medical Associates, 3Trauma Service, & 4Emergency Service; 5Mission Hospital, Asheville, NC.

What is the problem or challenge you identified?

- Nearly 300,000 Americans sustain a fragility hip fracture each year. An average of 21% of hip fracture patients die within the first year after hip fracture.
- In late 2007, clinicians at Mission Hospital (MH) noted increasing volumes of patients with hip fractures, as well as increasing lengths of stay.
- Initially, the orthopedic physician was responsible for admitting the hip fracture patient for care, but medical consultations were only obtained when complications occurred.
- Patients were assigned hospital beds throughout the hospital, resulting in inconsistencies in nursing care and variations in discharge planning.
- Patients did not receive education regarding fall prevention, balance training, or treatment of osteoporosis.
- These variables resulted in fragmented care for the geriatric hip fracture patient.

Describe the intervention you developed/change you implemented to address the problem:

- MH is an HCA Healthcare Facility in Asheville, NC.
- Western NC’s tertiary care referral center
- Level 2 trauma center.
- 22 orthopedic surgeons
- 4 orthopedic traumatologists are on staff.
- In 2009, a geriatric hip fracture program was implemented to standardize hospital care, reduce complications, reduce length of stay, and improve patient education and follow-up care.
- At MH, the preoperative process was streamlined, with a concentrated effort to achieve fracture fixation in less than 24 hours.
- Orthopedic surgeons and hospitalists began to collaboratively manage patients throughout their hospital stay.

How did you measure the effects of the change?

- CPMs systematize treatment processes across services and practices, improving consistency as well as effectiveness.
- The hip fracture CPM is readily available to all MH personnel via the intranet (Mission on Demand). Additionally, Mission Analytics provides a dashboard with real-time data describing compliance with the CPM and current cross-cohort measures.
- Patients with osteoporosis receive referral to the fragility fracture clinic to learn injury prevention strategies and for implementation of a comprehensive bone health program.
- Collaborative management of patients with fragility hip fractures among orthopedists, traumatologists, and hospitalists resulted in a high-functioning team that led to sustained improvements in patient care.
- A comprehensive, evidence-based plan of care for management of hip fractures resulted in improved treatment parameters decreased length of stay, and decreased mortality.

How did you sustain the change?

- Door to OR within 24 hours
- Anticoagulant reversal
- Fascia iliaca block
- Medical clearance criteria for anesthesia
- Surgical site infection prevention
- Venous thromboembolism prophylaxis
- Multimodal & opioid-sparing pain management
- Reduce operative blood loss with Tranexamic acid (TXA)
- Early mobilization
- Prevention of delirium
- Osteoporosis management
- Patient education and family involvement

References


Key Interventions

- Hip Fracture: Door to OR
  - Involvement
  - Pre-operative
  - (Pre-operative)
  - Consultation
  - Post-operative
  - Preventing delirium
  - Reducing medical complications
  - Pain management
  - Follow-up osteoporosis treatment

Demographics

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