Standardizing fragility hip fracture care using an electronic health record approach

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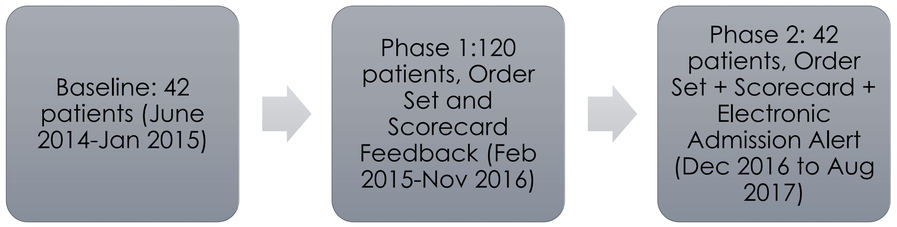
Objectives

- To standardize the care for patients with fragility fracture
- To provide feedback to providers on the quality of their hip fracture care as defined by pre-determined metrics
- To notify specific providers when a patient is admitted to the hospital

Program Description

- Implemented a forced function hip fracture order set containing evidence-based interventions including treatment for osteoporosis, anticoagulation to prevent venous thromboembolism, early physical therapy
- Implemented an electronic score card to provide quarterly feedback to providers, including orthopedics and internal medicine
- Designed an electronic alert to targeted providers notifying them of patients admitted with fragility hip fracture to allow for follow up for these patients.
- This program was for patients >65 years of age admitted with hip fracture to a single academic medical center.

Figure 1. Project Phases



Measures of Success

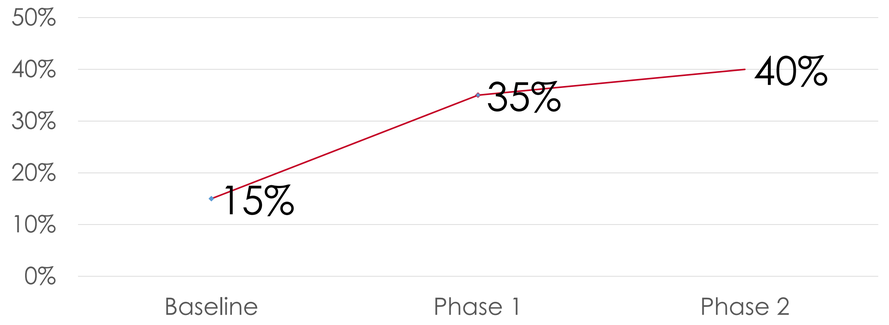
- Adherence to components of the order set, readmissions, mortality, length of stay and total direct cost for patients before and after our program.
- Perfect care = the patient received all components of our order set

Table 1. Patient Characteristics

Outcome	Baseline	Phase 1	Phase 2	P-value*
Number of visits, n	39	120	42	
Perfect care, %	15	35	40	0.03
Osteoporosis meds, %	69	89	88	<0.01
OR 24 hrs, %	72	72	76	0.84
DVT meds, %	100	99	100	0.71
Post Op CAM, %	26	47	50	0.04
Mortality, %	3	2	5	0.75
30-d readmission, %	10	17	12	0.53
Total Direct Cost, mean (SD)	1 (0.59)	1.05 (0.46)	0.99 (0.42)	0.26

**P-values are based on chi-squared and Kruskal–Wallis tests*

Figure 2. % Patients with Perfect Care



Lessons for Dissemination

- Implementation of a hip fracture care improvement program to standardize care is feasible in a single academic medical center.
- However, this program did not improve the outcomes of mortality, length of stay or readmission in our cohort.
- Future studies with larger sample size will be needed to determine if better adherence to perfect care will be associated with improved mortality, length of stay or readmission.
- Outcomes such as delirium incidence, mobility, or return to home may be more sensitive to assess the benefits of "perfect care."
- While this method may be reproducible, the benefit of dissemination remains untested.

References

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