Utility of quality statements for the emergency department (ED) management of patients with hip fractures: Retrospective analysis of administrative data

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BACKGROUND

Hip fractures are one of the most serious injuries experienced by older adults.

- Approximately 30,000 Canadians experience a hip fracture each year
- Following hip fracture, older adults are more likely to experience loss of independence, institutionalization and even death.

Because most people who experience a hip fracture present to the ED and spend a large portion of the pre-operative period in this setting, it is important to examine the care received and establish quality statements.

Quality statements:
- Explicate what constitutes quality care
- Provide criteria for monitoring & evaluating current practice
- Supports efforts to improve healthcare delivery and patient outcomes

QUALITY STATEMENT DEVELOPMENT

Step 1 - Evidence synthesis (Umbrella Review) of clinical practice guidelines conducted to appraise quality and synthesize recommendations for the pre-operative period*.

Step 2 - 7 Quality Statements sensitive to nursing intervention in the ED developed based on synthesized recommendations addressing 5 priority categories:
- Timely Surgery
- Multidisciplinary Approach to Care
- Identify & Treat Correctable Co-Morbidities
- Pain Management (2)
- Measures to Prevent Common Complications (2)

PURPOSE

Examine feasibility of using the developed quality statements to monitor & evaluate care received by patients with hip fractures in the ED.

METHOD

Retrospective analysis of electronic clinical data from facility identified as ‘Centre of Expertise’ for orthopedic surgery in one Atlantic province for the fiscal year of 2016-2017 in order to:

- Generate frequencies to determine proportion of cases in which quality statements were met individually and as a set
- Conduct multiple logistic regressions to examine if those who were younger (< 80 years), male, assigned a more acute triage score (CTAS 2 or 3), and arrived on a weekday-day shift were more likely to attain the quality statements.

RESULTS

Sample Characteristics

Characteristics of 191 patients admitted through the ED with a diagnosis of hip fracture who were 18 years of age or older with CTAS 2 to 5:

- Median age 81 years (range 51 to 101)
- 75% female
- 97% received surgical intervention
- 67% arrived on a weekday
- 53% arrived during evening/night shift
- 58% triaged as ‘Urgent’ (CTAS 3)

Time Spent in the ED

- Length of ED stay ranged from less than one hour to almost 30 hours
- Half of patients spent over 7.5hrs & 4 spent over 24hrs

DISCUSSION

Care received in the ED is an important area of research.

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Quality Statement Attainment

Large variability in percentage of attainment for the quality statements

A patient presenting to the ED with a suspected hip fracture will:

- receive surgery within 48 hours2 (n = 185) 74.6%
- have a complete set of vital signs within 30 minutes2 88.0% (highest)
- have a capillary blood glucose within 30 minutes2 2.6%
- be assessed for pain within 30 minutes2 52.4%
- be assessed for pain 30 minutes after receiving analgesia (n = 142) 4.9%
- receive analgesia within 60 minutes2 29.8%
- have a cognitive status assessment in the ED 0.5% (lowest)

Benchmarks could then be established in collaboration with ED nurses

Patients triaged as more acute were more likely to have an initial pain assessment in < 30 minutes and to receive analgesia in ≤ 60 minutes

CONCLUSION

This study makes a unique contribution because it examined a set of quality statements that are sensitive to nursing intervention.

It is the first known Canadian study to move beyond targets for timely surgery in an attempt to examine the quality of care patients with hip fracture receive in the ED.

Establishing feasibility of creating evidence-based quality statements and evaluating their level of attainment in the practice setting is an important first step in improving ED care for this vulnerable population.