Introducing the principles of Enhanced Recovery to a fractured neck of femur pathway – 5 years results and experience

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Introduction

There is great potential for the principles of Enhanced Recovery to be successfully applied to fractured neck of femur (FNOF) pathways and help to improve clinical outcomes

Aim

To present the 5-year results and experience from Poole Hospital of applying the principles of Enhanced Recovery to FNOF patients.

Method

A mixed-methods sequential explanatory design (QUAN emphasised) that consists of quantitative followed by qualitative data collected to evaluate the project. Quantitative outcome data were extracted from Hospital Episode Statistics for 2008/09 to 2013/14 and analysed using a relative risk methodology. Relative Risk is the ratio of the observed number of outcomes to the expected number of outcomes and is case-mix adjusted. The NHS England average is calculated and 95% confidence intervals are applied to determine statistical difference from unit performance to the equivalent case-mix. Qualitative data were collected via staff interviews.

Length of Stay – Relative Risk

Quarterly trend from 2002/03 Q1 to 2013/14 Q3
Reduction of LOS over the last 5 years highlighted in box

Relative Risk shows the ratio of the observed number of outcomes to the expected number of outcomes.
 $RR = [n(\text{observed}) / n(\text{expected})] \times 100$
The benchmark figure (the NHS England average) is 100
–Values greater than 100 represent performance higher than the benchmark
–Values less than 100 represent performance lower than the benchmark
95% confidence intervals are then applied to determine statistical difference to the same England case-mix.
The risk is calculated from the national dataset and case-mix adjusted for sex, age, deprivation, diagnosis group/procedure group, method of admission into hospital, co-morbidity index and for certain conditions (respiratory) the seasonal variation

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Length of Stay

Quarterly trend from 2002/03 Q1 to 2013/14 Q3
Reduction of LOS over the last 5 years highlighted in box

Results

A mean length of stay (LOS) of 12.3 days, a mortality rate of 5.7%, a 28-day re-admission rate of 10.2%, and a discharge home rate of 55% achieved in the last year of the project are lower than expected for hospital case-mix. Staff interviews highlighted that key factors for success were:

- 1. Collaborative practice across all teams
- 2. Input from the Department of Medicine for the Elderly
- 3. Changing the pre-operative mindset whereby instead of having to prove patients are fit for surgery, they are assessed as fit for surgery unless proven otherwise.

Conclusions

Enhanced Recovery can be successfully applied to FNOF patients in order to improve patient outcomes. However, implementation may be more challenging and take longer than for elective orthopaedic procedures.

Extract from 2014 National Hip Fracture Database (NHFD)

Poole Hospital NHS Foundation Trust (PHFT) submitted 855 cases to the NHFD. This represents a case ascertainment rate of 96.5% (estimated number of cases = 886).

NHFD Standard	Poole	National
A&E to orthopaedic ward in 4 hours	58.2%	47.4%
People with hip fracture have surgery on the day of, or the day after, admission	78.5%	71.7%
Assessment by geriatrician within 72 hours of admission	99.5%	81.6%
Abbreviated mental test score (AMTS) assessment performed	99.6%	93.7%
Specialist falls assessment	99.9%	94.6%
Bone health medication assessment performed	99.9%	96.1%