A simple solution to improving risk assessment (pPOSSUM) scoring for laparotomy cases using quality improvement methodology.

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Introduction

Wide variation in mortality has been reported following emergency laparotomy. The National Emergency Laparotomy Audit (NELA) aims to improve the processes of care and outcomes through the collection of high quality data, which can be analysed at a local level and used to influence change. The EPOCH trial (Enhanced Peri-Operative Care for High-risk patients) promotes some Quality Improvement methods including the use of continuous measurement to provide evidence of benefit.

Targeting areas of quality are vital. It is important to be clear in your aim. To know what you are trying to accomplish, how you prove that change is an improvement and have a clear understanding of all elements of the process to plan change.

Analysis of data during the first 6 months of NELA in our large teaching hospital showed that formal risk assessment using P-POSSUM was rarely performed and poorly documented. Formal assessment and documentation of risk using P-POSSUM is a key element of the process of care for patients undergoing emergency laparotomy.

Stakeholders from various disciplines agreed the areas of focus and the need to improve risk assessment and documentation of P-POSSUM.

Methods

The run chart below displays P-POSSUM documentation in a continuous way by reviewing data every 10 patients, by date of admission. Statistically significant improvement is shown in November 2014 and June 2015 due to the changes, with the proportion of patients having formal risk calculated and recorded increasing from a median of 20% to 60% then 70% following the changes.

Discussion

Formal assessment of risk using P-POSSUM has become a key element of the peri-operative care of patients undergoing emergency laparotomy. It helps to inform consent for all patients and to ensure timely interventions and targeting of particular resources for higher risk patients. At our hospital, a number of simple interventions led to a significant improvement in P-POSSUM calculation and documentation. These were a change in the emergency theatre booking form, promotion of P-POSSUM to other trusts. Stakeholder input is vital throughout and empowerment of involved staff. We are aware that limitations might include increased reporting and the Hawthorne effect.

References