Perioperative Quality Improvement Programme

Introduction to Pilot Programme

PQIP
Perioperative Quality Improvement Programme

The Royal College of Anaesthetists

NIAA National Institute of Academic Anaesthesia
HSRC Health Services Research Centre

The Health Foundation
Inspiring Improvement

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Overview

The NHS is committed to improving the quality of patient care. However, we know that standards and outcomes can vary between organisations – which means that while some providers may be struggling to deliver best care, others are achieving great results, and we can all learn from how they do this.

The Perioperative Quality Improvement Programme (PQIP) is a novel system which will measure and improve patient outcomes after major surgery. Using an innovative but evidence-based approach, we will support clinicians in delivering high quality perioperative care, through the use of data and shared learning.

PQIP is a collaborative programme, being led by the National Institute for Academic Anaesthesia's Health Services Research Centre (NIAA HSRC) on behalf of the Royal College of Anaesthetists. We have the support of a wide range of academic and professional organisations representing patients and the public, anaesthetists, surgeons, and allied health professionals. Importantly, our pilot programme is being supported by the Health Foundation, who are funding a study to develop and implement novel interventions aimed at enhancing clinicians' use of quality data to facilitate improvement.

This booklet provides an overview of the background and plans for PQIP. Please contact us at pqip@rcoa.ac.uk if you want to find out more.

We look forward to working with you on this exciting project.

Dr Ramani Moonesinghe
National Lead, Perioperative Quality Improvement Programme

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Background

Trusts participating in the PQIP pilot will lead a unique programme of work which aims to reduce complications and improve patient experience and quality of life.

To improve outcome, we must first measure it

Several established national clinical audits already examine processes and mortality after a number of different operations, including cardiac surgical procedures, joint replacements, emergency laparotomy and bowel cancer surgery. Existing audits predominently use short-term (between 30 and 90 day) mortality as their primary outcome measure. While mortality is clearly important, measuring and understanding morbidity provides greater opportunity to improve the quality of care.

The case for measuring postoperative morbidity

Mortality is relatively uncommon in most (particularly elective) types of surgery. This means that large sample sizes are required to detect clinically important variations in outcome between healthcare providers. This knowledge has led to reservations being raised about the current reliance on mortality as a quality indicator and recommendations that a more common outcome – such as morbidity – would provide more useful information for clinicians and patients.[1] Furthermore, there are a plethora of data to demonstrate that measuring mortality within a month or two of surgery does not fully describe the quality or impact of perioperative care. There is a clear relationship between the development of postoperative morbidity and reduced longer-term survival: importantly, this association is independent of preoperatively identified patient comorbidities.[2,3,4,5] Based on this evidence, we believe that postoperative morbidity is a vital metric and a crucial target for improvement.

‘MAJOR COMPLICATIONS
are up to 10 times more common than death in hospital after surgery.’

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Improving outcome after surgery is a team endeavour

When death does occur in relation to an operation, it is usually several days or weeks after the surgery, and may occur as a result of clinical deterioration from several different types of complications (e.g. wound infection, pneumonia, thromboembolic disease, renal impairment). The prevention and management of different complications require different treatment strategies and demand input from the entire multidisciplinary team. Therefore, measuring and understanding the rates and reasons for postoperative morbidity is important for hospitals, so that they may target interventions aimed at addressing particular local issues (for example, adherence to sepsis bundles if there is a particular problem with infection rates). Furthermore, there may be issues related to hospital structure and processes which explain variation between institutions in mortality rates after postoperative complications have developed. This 'failure to rescue' (FTR) phenomenon was first recognised in the US,[5,6] and understanding whether this is a problem in your institution is a first step towards improving quality of care and patient outcomes; however, without morbidity data, this is impossible.

Patient-centred outcomes are not systematically measured or considered

Patient reported outcome is a key quality indicator.[6] However, it is currently measured comprehensively in only a few pockets of NHS perioperative care. Increasingly we are aware that improved physiological support during hospitalisation can reduce the risk of death after surgery, but patients who survive may have much reduced quality of life. Systematically measuring outcome from patients' perspectives and learning how patient-reported outcome relates to perioperative risk factors and postoperative complications, will help us to improve outcomes for future patients.

'REDUCING VARIATION
and improving patient outcomes after surgery are shared aims of PQIP and the RCoA's Perioperative Medicine Programme.'

Professor Monty Mythen
RCoA Council Member and Chair, RCoA Perioperative Programme

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What are we going to do?

Up to 25 hospitals across the UK will participate in the PQIP pilot in 2016–2017. PQIP will measure, analyse and provide feedback on data relating to the three elements of healthcare quality: structure, process and outcome.

Structure

At the beginning of the study, and on an annual basis thereafter, the lead investigator at each hospital will be asked to complete a questionnaire about their facilities and resources. Studies from outside the UK have previously identified some structural elements as being associated with better patient outcomes: we would like to better understand which structures are important for high quality perioperative care in the NHS.[7,8,9,10]

Process

Local teams will be supported in implementing quality improvement strategies if they find that their outcomes for a particular type of complication are not as good as expected. These will be provided as part of an improvement package to all participating organisations and can be modified for local use.

'THE SYSTEMATIC EVALUATION
of patient reported outcomes data, reviewed locally and benchmarked against established best practice will result in a measurable improvement in the quality of care afforded to patients.'

Dr J-P van Besouw, President, Royal College of Anaesthetists

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Outcome

PQIP will measure postoperative complications, patient reported outcome and survival. We will ask local investigators to prospectively measure postoperative complications while patients remain in hospital. After discharge from hospital, we will measure longer-term outcomes, including contacting patients for follow-up questionnaires about their health related quality of life. This information will help us understand the enduring effects of perioperative care on patients' health and well-being.

'THIS PROJECT IS AN EXAMPLE
of specialties working together to improve data on perioperative risk for the benefit of patients.'

Mr John Abercrombie
Council Member, Royal College of Surgeons (England)

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The Health Foundation Project

From measurement to improvement: developing novel, contextual approaches to using quality data for improvement in perioperative care

A challenge of any initiative such as this, is to actually **use** the data collected for the purposes of **improvement**. We know from work in the perioperative setting,[10] and wider research in healthcare,[11] that clinicians are exposed to millions of items of data, but whether we act on them depends on a number of factors. The types of data collected, who does the collection and feedback, how often and in what format: all of these issues and many more can influence the likelihood of whether data is used to improve the quality of care. The pilot PQIP is being supported by the development and testing of novel methods for supporting local teams in using data for improvement.

Furthermore, even if improvement efforts are evidence based, we know that local contexts may influence whether or not they are successful. Internal and external drivers, team interactions, resource availability and perioperative team culture are all likely to play a role. Therefore, in a sub-set of hospitals participating in the PQIP pilot, we will conduct an ethnographic study: researchers will spend time observing and talking to staff and patients in these hospitals in order to systematically study and develop an understanding of the barriers and enablers to improvement. This research will provide important learning both for the hospitals being studied but also for the wider NHS.

'DATA ARE ESSENTIAL TO QUALITY IMPROVEMENT
They enable measurement to demonstrate a change and analysis to check if this is an improvement. We are delighted to be supporting the innovative PQIP project.'

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What is happening right now?

The project team are working on several different areas in preparation for PQIP being launched. Dataset development, information sharing and discussion with patients and the public, and professional engagement across specialties and interest groups are all ongoing. A preliminary dataset has been developed and discussed with a small group of stakeholders; we are now working with our partners in surgery and internationally to refine this before circulating to potential pilot sites for their feedback. We have a working group of experts evaluating options for technological solutions for data capture, analysis and feedback. Academic work on developing the quality improvement interventions is progressing and research fellows have been recruited to support these efforts.

What do we need to do if we are a potential pilot site?

Please share this brochure with your colleagues. If you or anyone else have queries, we will be happy to talk to you. We envisage that there will be investigator meetings in late 2015/early 2016 and that data collection at participating hospitals will begin between April and September 2016. We will provide training on data collection and plenty of information prior to the programme starting. So for now, please discuss with your cross-specialty colleagues, local audit/governance teams and keep them updated with developments.

‘THERE IS HUGE ENTHUSIASM
for improvement amongst perioperative clinicians across the UK. We hope to capture this energy to support such an exciting new programme.’

Professor Mike Grocott, Director NIAA HSRC

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