BJA

British Journal of Anaesthesia, 119 (1): 115–24 (2017)

doi: 10.1093/bja/aex136
Quality and Patient Safety

Continuous monitoring and feedback of quality of recovery indicators for anaesthetists: a qualitative investigation of reported effects on professional behaviour

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Abstract

Background: Research suggests that providing clinicians with feedback on their performance can result in professional behaviour change and improved clinical outcomes. Departments would benefit from understanding which characteristics of feedback support effective quality monitoring, professional behaviour change and service improvement. This study aimed to report the experience of anaesthetists participating in a long-term initiative to provide comprehensive personalized feedback to consultants on patient-reported quality of recovery indicators in a large London teaching hospital.
Methods: Semi-structured interviews were conducted with 13 consultant anaesthetists, six surgical nursing leads, the theatre manager and the clinical coordinator for recovery. Transcripts were qualitatively analysed for themes linked to the perceived value of the initiative, its acceptability and its effects upon professional practice.
Results: Analysis of qualitative data from participant interviews suggested that effective quality indicators must address areas that are within the control of the anaesthetist. Graphical data presentation, both longitudinal (personal variation over time) and comparative (peer-group distributions), was found to be preferable to summary statistics and provided useful and complementary perspectives for improvement. Developing trust in the reliability and credibility of the data through co-development of data reports with clinical input into areas such as case-mix adjustment was important for engagement. Making feedback specifically relevant to the recipient supported professional learning within a supportive and open collaborative environment.
Conclusions: This study investigated the requirements for effective feedback on quality of anaesthetic care for anaesthetists, highlighting the mechanisms by which feedback may translate into improvements in practice at the individual and peer-group level.

Key words: perioperative care; patient safety; quality improvement; quality indicators; quality of recovery; patient-reported outcomes; patient satisfaction

Editorial decision: April 11, 2017; **Accepted:** Month 0, 0000

Editor's key points

- Compelling evidence shows that providing clinicians with feedback on their performance can result in professional behaviour change and improved clinical outcomes
- This project describes a continuous quality improvement initiative based upon quality of recovery indicators
- Anaesthetists are keen to support such quality improvement initiatives

In the UK, the processes by which quality of care are monitored and reviewed have received considerable attention following well-publicized failures to deliver acceptable standards of care.[1–3] In anaesthesia, as in other areas, the requirement to monitor quality of care delivered at the level of the individual practitioner has received considerable attention as part of the implementation of clinician revalidation in the UK (the process by which all licensed doctors are required to demonstrate that they are fit to practice).[4] There is a need to define criteria by which practicing anaesthetists can monitor and review their own performance.[5]

Significant research effort has been committed to defining valid and reliable quality indicators.[6–8] The majority of perioperative quality indicators, however, lacks sensitivity or specificity for anaesthetists.[9] Measurement scales such as the Quality of Recovery score have been developed to quantify the important dimensions of recovery from the patient's perspective.[10] Patients report a preference for freedom from pain and postoperative nausea above other potential outcomes.[11]

Feedback in a healthcare context has been described as 'any summary of clinical performance of healthcare over a specified period of time, given in a written, electronic or verbal format'.[12] Considerable uncertainty remains around the optimal employment of feedback from quality indicators within a quality improvement or professional development framework.[13 14]

Previous studies and systematic reviews have demonstrated that providing clinicians with feedback on their performance can result in professional behaviour change and improved clinical outcomes.[12 15–17] A number of characteristics increase the effectiveness of feedback: the perceived relevance and validity of the data; the credibility and specificity of the data; its source and timeliness; the way in which it is benchmarked; the avoidance of individual profiling; and the persistence of the feedback over time accompanied with additional components (e.g. clinical reminders/educational meetings) to support improvement.[12 17–23] Analysis of the predictors of perceived usefulness of data on quality of care for anaesthetists has shown that the most important characteristics for effective feedback are: (i) the local relevance of quality indicators, and (ii) the perceived credibility of the data.[24]

Evaluations of feedback have been conducted in other clinical areas but not in a perioperative unit using personalized, individualized feedback for anaesthetists, based on quality indicators measured in the recovery room.[23 25–27] We implemented and evaluated one such intervention in the anaesthetics department of a large teaching hospital, demonstrating a positive impact upon the rated quality of feedback available to anaesthetists, in addition to patient-reported quality of recovery indicators.[28] The aim of the qualitative study reported here was to analyse participants' perspectives concerning the value of the initiative, identify practical considerations in designing effective feedback for quality improvement in anaesthesia, and to understand the practical, social and psychological mechanisms by which provision of feedback results in change in professional practice.

Methods

Setting and intervention

The intervention comprised a quality monitoring and feedback initiative at a large London teaching hospital in the UK with an annual surgical case load of over 14 000 patients, including acute and elective general surgery, trauma and orthopaedics, along with gynaecology and a number of specialist surgical services. Anaesthetists within the hospital have mixed sub-specialty practices.

Quality indicators were monitored in recovery for all surgical patients, including patient temperature upon arrival in recovery, patient-reported pain and nausea, patient-experienced quality of recovery and patient flow.[9 10 29] In the UK, national guidance on the prevention of inadvertent hypothermia specifies that patients should have a core temperature maintained to exceed 36°C before, during and after surgery.[29] The objective was to enable monitoring and regulation of professional practice at individual and peer-group levels through compliance with normothermia guidelines, appropriate use of analgesics and antiemetics, providing data to describe variations in patient experience during recovery and reduction of delays in transferring patients to surgical wards. Monthly anonymous, personalized data reports for individual consultant anaesthetists were developed and the design iterated over time using a continuous quality improvement approach. The pilot phase of the programme was implemented in September 2010 with several subsequent iterations following feedback from anaesthetists. As a result of low numbers of trainee cases, rapid rotation patterns and difficulty in isolating the performance of trainees from supervising consultants, trainees did not receive personalized feedback.

The feedback reports contained a detailed breakdown of individual-level data, trends over time and comparisons with anonymized peers and unit averages. The programme was run by a consultant in the department who facilitated the emergence of standards and norms for practice, through case mix sub-group breakdown and peer-to-peer discussions around the data as part of the intervention.

Evaluation

Ethics

This study was approved at the host organization as a service development project following advice from the National Research Ethics Service. Informed consent was gained from all participants, the right to withdraw was explained and the data obtained were treated as confidential.

Participants

Forty-four consultant anaesthetists participated in the initiative and were invited (by the clinical lead and the research team) to be interviewed as part of the evaluation during the March–June, 2012 period. Participants had been receiving feedback for a period of approximately 18 months when the interviews were conducted. In addition to the consultant anaesthetists, the research team interviewed surgical nursing leads, the theatre manager