



FEATURE

The BMJ Awards 2018: Anaesthesia and Perioperative Medicine Team of the Year

Shortlisted teams are thinking outside the box and using patient centred approaches to drive improvements in care, reports **Nigel Hawkes**

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Emergency laparotomy bundle

Laparotomy for acute bowel problems has a mortality rate as high as 25%. But research in 2013, in which Royal United Hospitals Bath collaborated with three other centres, showed that adhering as closely as possible to a “bundle” of seven precepts can greatly reduce that figure, says Lesley Jordan, consultant anaesthetist and patient safety lead at the trust.

They include preoperative risk assessments, goal directed fluid therapy, consultants performing both surgery and anaesthesia, critical care postoperatively, and getting the patient into theatre as fast as possible, within a target of two to six hours.

“As a result of this research we knew the bundle worked,” she says. “But by 2015 I wasn’t sure we were really following it any longer. The person who led the project had been seconded out and the data wasn’t being collected very accurately or in a timely fashion. Mortality had increased.”

A renewed focus on the bundle turned the situation around. Data were recorded by a team member at the time of surgery and entered into the National Laparoscopy Audit. “We can use it to feed back promptly on any area where we’re missing targets. Since April 2017, 80% of patients get the full bundle of care. Mortality is now 6.5%, about half the national average, and length of stay is down by two days on average. It’s now routine practice and we estimate we are saving ten lives a year.”

Managing complex surgical pain

Some patients are more prone to postsurgical pain than others. Anxious before surgery, they are often slower to mobilise afterwards, says Elaine O’Shea, consultant anaesthetist at Royal Bournemouth and Christchurch NHS Trust, where 1200 knee and hip replacements are performed every year.

The team set out to identify the patients most likely to suffer these symptoms and offer them a preoperative psychological intervention to improve their mood and give them realistic expectations. Suitable patients were selected based on their score for the Kalkman preoperative prediction of severe

postoperative pain. Those who scored in the top two categories were offered the intervention, consisting of up to three one hour sessions of cognitive behavioural therapy, mindfulness, and relaxation techniques.

“Some say no when it’s offered, but about three quarters agree,” O’Shea says. Comparing those who had the therapy with others with similar scores who did not, showed that length of stay was reduced in the intervention group by 29 hours (111 v 140 hours). Patients were pleased: “After two sessions my worries eased and after the third I felt no real worries about my surgery,” said one.

Initially funded by a £75 000 (€84 959; \$104 717) grant from the Health Foundation, the scheme has now become a routine part of care at the trust, and may be extended to other surgical specialties. One plus for the trust is that, by making length of stay more predictable, the scheme allows better patient flow.

Preop fasting in children

Young children coming into hospital for an operation are often fretful and hard to handle because they have been starved. “Parents say that trying to keep their children happy is one of the worst aspects of the whole experience,” says Mark Thomas, consultant paediatric anaesthetist at Great Ormond Street Hospital in London.

The rules of giving nil by mouth before anaesthesia are hallowed by long practice, but are they necessary? They are often poorly explained and parents are reluctant to wake their children up for a drink at the last opportunity. An audit found that, on average, the fast time for children at Great Ormond Street was more than six hours.

The team remedied this by providing more accurate information to parents and, more radically, by giving every child a sweet drink immediately on arrival. This still allows at least one hour clear before the first patient is anaesthetised, and was based on evidence from a study carried out in Uppsala, Sweden. It has proved perfectly safe.

"We did a national survey and found only two hospitals trying to tackle this issue. But after we published our results, the practice has spread and there are now 11," Thomas says. "It's very cheap to implement, just a drinks trolley and daily drink stocks, no extra salaries. Persuading colleagues it was safe was a challenge, but data on 6000 cases since the policy was introduced shows the vomiting and aspiration rate is no higher. There were only two cases out of 6000 and they had fully recovered and went home the same day."

PRIME clinic

Frail elderly patients undergoing surgery face greater risks than younger people, and as the population ages, their numbers increase. For some, the benefits of elective surgery are outweighed by the risks of morbidity, mortality, or discharge to an institution. Even if all goes well, postoperative length of stay is likely to be longer.

At Cambridge University Hospitals a systematic effort to identify such patients and provide assessment and counselling has paid off. The specialist PRIME (perioperative review informing management of the elderly) clinic was launched in October 2014. Consultant anaesthetist Fay Gilder says that patients with physical or cognitive frailty that exceeds a threshold are reviewed at the clinic, which is held twice a week and comprises a consultant geriatrician, a consultant anaesthetist, an occupational therapist, and a physiotherapist.

"We did an audit of our patients to establish a business case," she says. "Comparing data before and after showed that frail patients undergoing surgery of high or intermediate risk showed a median reduction of two days in length of stay." The saving was greater than the cost of running the service, and readmissions are lower.

The clinic also manages patients' expectations and 17% don't go ahead with the operation. "In one case a knee replacement was not needed, because the physiotherapist was able to help," she says. "In another, a 77 year old man had had a hole in his eardrum since, he said, 'the London fogs.' He was cognitively impaired but still managing to look after his wife. An operation wasn't necessary in his case and the risk too great. He might have been institutionalised and no longer able to care for his wife."

Surgical frailty programme

An audit at the Royal Marsden Hospital in London in 2015-16 found that patients classified as frail or vulnerable were almost seven times as likely to be in hospital two weeks after a cancer operation as were their non-frail counterparts. A very small group, 0.5% of patients, were responsible for 88% of the cases in which money was lost because the cost of caring for them exceeded the payment received.

Improving the care pathway for this group was challenging because, as a specialist hospital, the Marsden had no geriatricians on staff, says Nathan Kasivisvanathan, consultant anaesthetist and clinical lead for pre-assessment at the trust. "In an ideal world we'd have one," he says, "but there's a national shortage."

It was up to the staff to implement a programme which provides a package of care for all frail patients before they have surgery. "If you do more work before, you reduce the need for nursing care after," Kasivisvanathan says. An example might be a patient whose home needs a stair lift installing in advance. In around a fifth of patients it became clear that surgery was not in their best interests.

The work of the surgical frailty transformation group has reduced postoperative morbidity and shortened length of stay for these patients by five days, and stay in intensive care by one day. There was so significant increase in readmissions, and quality of life measures post surgery were better. "The net effect is to save money and the service is sustainable," he says. "The model is simple and it should be possible for all hospitals to replicate it."

The Belfast block room

At Belfast Health and Social Care Trust, the pathway for patients having upper limb surgery was complex, requiring a general anaesthetic and, in 60% of cases, an overnight stay. But such operations can be done under regional anaesthesia, avoiding the risks of general anaesthesia, reducing the need for preoperative assessments, and shortening recovery times.

Change was led by two anaesthetists who had experienced a different approach during fellowships in the US. Implementing a change to regional anaesthesia using a dedicated "block room" involved many meetings with staff, and a new approach to patients.

"We recognised that patient expectations had to be managed," says David Johnston, consultant anaesthetist at the trust. Any reluctance could, in most cases, be overcome if the procedure was explained in advance. This is now done in a group, allowing interactive discussion, and is followed by one-to-one meetings with an anaesthetist to review drugs and deal with any worries.

The pluses included eliminating recovery wards, a better use of theatre time, and reducing overnight stays and cancellations. Follow-up telephone calls 48 hours after the operation were made to the first 50 patients and all said that they would prefer regional anaesthesia. "Quite a few had had earlier operations under general anaesthesia, but all said they would in future prefer block," Johnston says.

The new approach means an extra 104 cases a year can be treated and 21 day-of-surgery cancellations prevented, with an overall saving of more than £300 000 a year.

The Anaesthesia and Perioperative Medicine Team of the Year award is sponsored by the Royal College of Anaesthetists. The awards ceremony takes place on 10 May at the Park Plaza Hotel, Westminster. To find out more go to thebmj.com/awards.

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