

Study reveals major funding shortfall and high death rates for emergency laparotomy

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Anaesthetists have identified a major shortfall in funding for emergency laparotomies in England and have called for a national database to establish a more accurate picture of outcomes and costs. Figures published in the May issue of *Anaesthesia* suggest a shortfall of £300 million per year for emergency midline general surgical laparotomies, 32% of the total cost of care.

The study also found that [emergency](#) laparotomy, which involves a large midline incision in the abdomen, had a high death rate, with 14% of patients dying in hospital and a further 11% dying within 30 days of surgery. Patients over 70 years of age were three times as likely to die as patients under 70.

"There has been considerable interest in trying to improve surgical outcomes after emergency operations, particularly among sick, elderly patients" says Dr Stuart M White, Consultant Anaesthetist at the Royal Sussex County Hospital, Brighton, UK.

"Although there has been recent political and professional attention focused on the management of hip fractures, there has been relatively little interest specifically aimed at improving the management of elderly patients undergoing emergency laparotomy, despite the costs involved and the effect this operation has on patients' lives. This will hopefully improve with the recent formation of the Emergency Laparotomy Network by the Age [Anaesthesia](#) Association."

The authors studied 768 patients who had received emergency laparoscopy surgery between 2009 and 2010 in order to estimate the annual incidence of emergency laparotomy in England and whether there was adequate funding for the number of procedures carried out. They were also keen to analyse age-related death rates from the emergency procedure and the cost differences between younger and older patients undergoing the procedure.

All patients who underwent emergency midline laparotomy for a general surgical procedure were included. However patients undergoing emergency appendicectomy, vascular, endoscopic and gynaecological procedures were excluded, unless these were performed as coincidental surgery.

Key findings of the study include:

- 768 patients underwent 850 emergency laparotomies, an average incidence of one emergency procedure per 1,082 patients, in line with Government figures for the period. The most common procedures were bowel surgery, accounting for 34% of the total.
- 21% of the operations were carried out on the day of admission and 39% out-of-hours (between 5pm and 8am). Median operating time was three hours and 36% of patients were admitted to the critical care unit, where they stayed for a median of five days. The median post-operative hospital stay was 13 days.
- The patients ranged from 16 to 102 years of age, with a median age of 68, and 46% were 70 years or more. These older patients were three times as likely to die in hospital after surgery than [patients](#) under 70 (21% versus 7%) and three times as likely to die within 30 days of surgery (18% versus 6%). They also stayed in hospital longer.

- The average cost of an inpatient stay with emergency laparotomy was £13,000, more than £6,000 higher than the amount the hospital was paid for each patient. This was equivalent to an estimated shortfall of £300 million across the National Health Service in England.

"We believe that our study supports the need for a [national database](#) of emergency laparotomies, similar to the one established for hip fractures in the UK" says Dr White.

"The National Hip Fracture Database has collected data on more than 130,000 cases over the last four years and is already providing an immensely powerful audit tool. By highlighting variations in clinical and organisational quality it will enable us to learn from hospitals that perform well and help hospitals that do not perform as well.

"In the absence of a similar database for emergency laparotomies, we would urge anaesthetists to collect and analyse data from their own hospital and contribute to the Emergency Laparotomy Network established by the Age Anaesthesia Association."

More information: Incidence and estimated annual cost of emergency laparotomy in England: is there a major funding shortfall? Shapter et al. *Anaesthesia*. 67, p474-478. (May 2012).
[doi:10.1111/j.1365-2044.2011.07046.x](https://doi.org/10.1111/j.1365-2044.2011.07046.x)

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