

Mortality risk for elderly UK emergency surgery admissions has improved by 40% in last 15 years

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An article recently published in the *International Journal of Surgery* highlights some of the challenges that England's NHS faces regarding emergency care for elderly patients.

As [life expectancies](#) in the UK increase, there is an increasingly elderly population with a greater burden of chronic disease. Emergency surgery for the elderly is challenging in terms of decision making, managing pre-existing illnesses and post-operative rehabilitation with higher morbidity and [mortality](#). To optimize service design and development, it is important to understand the changing pattern of emergency surgical care for this group.

The study investigated the outcomes of emergency surgical admissions of 105,002 patients aged 70 and older between 2000 and 2014. The results show that overall outcomes for elderly surgical patients are improving, but that [elderly patients](#) are becoming more frail and that the weekend effect is present when operations are undertaken on Saturdays and Sundays.

During the past 15 years, the mean age and risks from pre-existing disease increased. Operative intervention was undertaken in a similar proportion of patients in all age groups (13%), with more patients undergoing operations over time, of which 50% were within 48 hours of admission. Overall in-hospital mortality decreased significantly as did

length of hospital stay. Factors associated with increased 30 day in-hospital mortality were increasing age and level of pre-existing disease, admissions directly from clinic, patients admitted earlier in the study period and operation performed at the weekend which had a 25-30% greater mortality than the rest of the week.

Lead author of the study Mr Paul O'Loughlin, Consultant Colorectal Surgeon, Department of Colorectal Surgery, Queen Elizabeth Hospital, commented: "The aging UK population has long been predicted to cause significant strain on health services. This study demonstrates the effect within trends and outcomes for elderly acute surgical patients over the last 15 years within the Northern region of England. The data shows a shift from primary care towards A&E becoming the prime route of admission to hospital and indicates the increasing complexity and amount of pre-existing illness of the acute elderly general surgery admissions. Despite this the study shows significantly improved overall outcomes for both mortality and length of stay. Whilst the study has identified a risk adjusted mortality increase for surgery performed at the weekend, it cannot provide comparison between the types of surgery or specific risk profile of patients undergoing surgery at the weekend. The study shows mortality has improved variably for specific conditions and highlights areas that may still need improvement. The study will allow for useful benchmarking of future interventions and service improvements targeting the growing issue of the ageing population for health services."

The Editor-in-Chief of the Journal, Professor David Rosin, commented, "The authors of this paper are to be congratulated on analysing the outcomes of [emergency surgery](#) in the elderly in such a comprehensive manner. There were approximately 7,000 admissions a year (135 per week) in patients over 70 and within 20 years this number will double with people living longer. The messages from this study are that greater than half of the emergency laparotomies performed, are in the elderly

with a mortality of 20% at 30 days which is six times more than in those [patients](#) under 50 with an increased length of stay in hospital. Outcomes are worse especially if that operation is carried out during a weekend. Emergency surgery in general & emergency surgery in the elderly in particular have been neglected for too long. Together both the Government & the Profession must take action immediately. It is just a matter of time before we are all [elderly](#)."

More information: Ross C. McLean et al. A 15-year retrospective analysis of the epidemiology and outcomes for elderly emergency general surgical admissions in the North East of England: A case for multidisciplinary geriatric input, *International Journal of Surgery* (2016). [DOI: 10.1016/j.ijssu.2016.02.044](https://doi.org/10.1016/j.ijssu.2016.02.044)

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