



Safety checklist cuts risk of death after surgery in Scotland

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A simple safety checklist is being credited with reducing the risk of death after surgery in Scotland.

A study published in the *British Journal of Surgery* analysed the outcomes of 6.8 million operations carried out during 2000-14.¹ It found a 36.6% relative reduction in mortality (95% confidence interval -55.2 to -17.9) after Scotland's nationwide implementation of the World Health Organization's surgical safety checklist² in 2008-10.

The checklist was introduced in Scotland as part of a wider patient safety programme,³ but it was the only intervention specifically targeted at surgical patients.

The population cohort study looked at nearly 7 million surgical procedures in Scottish hospitals from 2000 to 2014. The time series analysis found that, in 2000, the mortality rate of patients having an operation was 0.76% (0.68% to 0.84%), and in 2014 it was 0.46% (0.42% to 0.50%). The results from the adjusted model showed a similar trend in overall mortality rates, falling from 0.75% to 0.52% over the same period.

Teamwork and communication

Atul Gawande, professor at the Harvard School of Public Health in Massachusetts, USA, who helped to introduce the WHO

checklist a decade ago, is a coauthor of the study. He said, "Scotland's health system is to be congratulated for a multi-year effort that has produced some of the largest population-wide reductions in surgical deaths ever documented."

Scotland's national clinical director, Jason Leitch, said, "Behind every one of these statistics is a life saved, demonstrating the impact that the Scottish Patient Safety Programme has had and continues to have on delivering safe, effective, and person centred healthcare for patients. I am delighted that this work, which has the support of Scotland's royal colleges and surgical societies, has been recognised in this way."

Correction: We amended this article on 17 April to clarify the title and the study findings.

- 1 Ramsay G, Haynes AB, Lipsitz SR, et al. Reducing surgical mortality in Scotland by use of the WHO surgical safety checklist. *Br J Surg* 2019. 10.1002/bjs.11151.
- 2 World Health Organization. WHO surgical safety checklist. <https://www.who.int/patientsafety/topics/safe-surgery/checklist/en>.
- 3 Scottish Patient Safety Programme. <http://www.scottishpatientsafetyprogramme.scot.nhs.uk>.

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