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More die after surgery than from HIV, TB, and malaria combined – study

Around the world 4.2 million people die every year within 30 days after surgery - with half of these deaths occurring in low- and middle-income countries (LMICs), a new study in The Lancet reveals.

There is also a significant unmet need for surgery in LMICs and researchers believe that if operations were provided for all patients who need them the number of global post-operative deaths would increase to 6.1 million per year.

Researchers at the University of Cape Town (UCT) and University of Birmingham published their analysis on the numbers of people dying within 30 days of surgery in a research letter to The Lancet. They estimate that more people die each year within 30 days after surgery than from HIV, tuberculosis, and malaria combined (2.97 million).

The Lancet Commission on Global Surgery identified that 313 million surgical procedures are performed each year, but little is known about the quality of surgery globally, as robust postoperative death rates are available for only 29 countries.

Bruce Biccard, Professor and Second Chair of UCT’s Department of Anaesthesia & Perioperative Medicine and President of the South African Society of Anaesthesiologists (SASA), commented: “It is estimated that approximately five billion people globally are unable to access safe surgical treatment, and nearly 95% of these people live in low-and middle-income countries. Expanding surgical services to address unmet needs would add another 1.9 million post-operative deaths in LMICs each year. To avoid millions more people dying after surgery, planned expansion of access to surgery must be complemented by investment in to improving the quality of surgery around the world.”

Researchers at the University of Birmingham’s NIHR Global Health Research Unit on Global Surgery analysed available information to estimate how many people around the world die after operations - based on surgical volume, case-mix and post-operative death rates adjusted for country income.

Professor Dion Morton, Barling Chair of Surgery at the University of Birmingham and Director of Clinical Research at the Royal College of Surgeons of England, added: “Surgery
saves lives and can transform patients’ quality of life, but this study shows that a large number of patients die in the immediate postoperative period. As efforts continue to increase access to surgery around the world, there is also an urgent need for research to improve the quality and safety of surgery.”

Based on 4.2 million deaths, 7.7% of all deaths globally occur within 30 days of surgery. This figure is greater than that attributed to any other cause of death globally except ischaemic heart disease and stroke.

Read the Global burden of postoperative death study [here](#).

**Notes for editors**

For the current 2019 fiscal year, the World Bank defines low-income economies as those with a GNI per capita, calculated using the World Bank Atlas method, of $995 or less in 2017; lower middle-income economies are those with a GNI per capita between $996 and $3,895; upper middle-income economies are those with a GNI per capita between $3,896 and $12,055; high-income economies are those with a GNI per capita of $12,056 or more.

**Issued by: UCT Communication and Marketing Department**

**Nombuso Shabalala**

Head: Media Liaison  
Communication and Marketing Department  
University of Cape Town  
Rondebosch  
Tel: (021) 650 4190  
Cell: (076) 473 5882  
Email: nombuso.shabalala@uct.ac.za  
Website: [www.uct.ac.za](http://www.uct.ac.za)