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International surgical guidelines launched to reduce SSI & AMR

25 March 2020 | News

It aims at saving lives in Benin, Egypt, Ghana, Guatemala, India, Malawi, Mexico, Nigeria, Pakistan, Philippines, Rwanda, South Africa, Zambia



An international collaboration funded by the NIHR led by the University of Birmingham sets out nine essential recommendations that should be implemented as a priority across all hospitals world-wide in the fight against Surgical Site Infection (SSI).

SSI is the most common complication following abdominal surgery, affecting 9% of patients in high-income countries and 17% of patients in low- and middle-income countries (LMICs) - causing patients to experience pain and delays return to normal activities such as work.

At least 4·2 million people worldwide die within 30 days of surgery each year, and half of these deaths occur in LMICs. This number of postoperative deaths accounts for 7·7% of all deaths globally, making it the third greatest contributor to deaths, after ischaemic heart disease and stroke.

More people die within 30 days of surgery annually than from all causes related to HIV, malaria, and tuberculosis combined (2·97 million deaths). It is estimated that failure to improve surgical care will cost the world economy $12.3 trillion in lost GDP by 2030.

Additional SSI-related health costs can cause financial hardship, particularly for the most vulnerable patients in LMICs. SSI is associated with a three-fold increase in the risk of death after surgery. Treatment of SSI is increasingly challenging due to the rise of antibiotic resistance, which occurs in up to 46% of LMIC patients. This places a strong focus on preventing SSI from occurring in the first place

Published in the British Journal of Surgery, the new Global Surgery Guideline for the Prevention of Surgical Site Infection will support surgeons in putting into practice key interventions that are proven to reduce the SSI risk.

Expert surgeons representing 14 countries across Africa, Europe, Latin America, and South Asia identified nine evidence-based interventions which can be feasibly implemented worldwide at low cost.

Aneel Bhangu, Consultant Surgeon and Senior Lecturer at the NIHR Global Health Research Unit on Global Surgery at the University of Birmingham commented, “We’ve estimated that around 20 million patients develop surgical site infections worldwide each year following abdominal surgery, including 14.7 million LMIC patients.

“The Global Surgery Guideline for the Prevention of Surgical Site Infection has identified practical steps that all hospitals should urgently take to both reduce avoidable infections and the spread of antimicrobial resistance”, he added.

Dr. Adewale Adisa, Senior Lecturer in Surgery at the Obafemi Awolowo University in Ile-Ife, Nigeria and co-lead author commented: “High rates of SSI and antimicrobial resistance are a real worry for surgeons, particularly in LMICs. Although guidelines for prevention of SSI have previously been published, they were developed in high income countries with little thought for the specific needs of LMIC patients. Many of their recommendations were impractical for resource-limited hospitals, and few LMIC surgeons put them in to practice. This is the first guideline to have been led by LMIC surgeons and I believe our recommendations can be implemented immediately to benefit all patients across the world.”

The recommendations encourage medical professionals to boost patient safety by:

- Ensuring patients have had a full body wash with clean water and soap before operation.
- Selecting antibiotic prophylaxis according to published antibiotic prescribing guidelines.
- Administering antibiotic prophylaxis to all patients undergoing clean-contaminated, contaminated or dirty surgery.
- Administering antibiotic prophylaxis intravenously within 60 minutes before skin incision.
- Administering a repeat dose of antibiotic prophylaxis if the duration of operation is longer than the half-life of the antibiotic given.
- Not routinely continuing prophylactic antibiotics beyond 24 hours after operation.
- Ensuring scrub teams decontaminate their hands before surgery using antiseptic surgical solution.
- Preparing the skin at the surgical site immediately before incision, using antiseptic preparation
- Providing supplemental oxygen during surgery under general anaesthetic

In addition, a further three ‘desirable’ recommendations are made in the guideline. It is recognised that worldwide some hospitals may lack the necessary resources to immediately implement these interventions, in which case they should plan strategies to introduce these interventions in the future.