

**CHALLENGES OF ANAESTHESIA IN DEVELOPING COUNTRIES:  
A SURVEY OF THE QUALITY OF ANAESTHESIA CARE FOR  
OBSTETRIC PATIENTS IN EAST AFRICA**

**BY**

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## ABSTRACT

**Introduction:** Access to safe surgery and safe anesthesia is a basic human right for health. However, it is far from being achieved in many low- and middle-income countries (LMICs) where lack of trained providers and poor infrastructure, utilizing a variety of often poorly maintained donated equipment, contributes to unacceptably high morbidity and mortality rates. Reports from Sub-Saharan Africa (SSA) describe anaesthesia mortality ranging from 1:133 to 1:1900 for adult and pediatric practice. These rates are closer to those seen in high-income countries more than fifty years ago and while the rates in these high income countries reflect a one hundred-times improvement in anesthesia safety, little has changed in the intervening period in many LMICs. Safe anaesthesia and safe surgery are an essential but neglected element of good maternal outcomes. We therefore set out to assess the main referral hospitals in the East African Community (EAC) to obtain a snapshot of the capacity to provide safe anesthetic care for mothers and babies in this region.

**Objective:** To determine the quality of anaesthesia care offered to obstetric patients undergoing surgery in the National Referral Hospitals of the East African Region.

**Methodology:** The study was a cross-sectional survey conducted at the main referral hospitals in East Africa – Mulago - Uganda, Kenyatta - Kenya, Muhimbili - Tanzania, Center Hospitalier Universite de Kigali (CHUK) – Rwanda and Centre Hospitalier Universitaire de Kamenge (CHUK) - Burundi. Using a questionnaire based on the (WFSA) World Federation of the Societies of Anaesthesiologists guidelines for safe anaesthesia, we assessed demographic, administrative, pre-anesthetic, intra-operative, post-anesthetic variables by interviewing anaesthetists in these hospitals, key informants from the Ministry of Health and the heads of the National Society of Anaesthesia in each country.

**Results:** Results from the 85 anesthetists interviewed were analyzed and 58% of the anaesthesia providers had heard about the WFSA international guidelines for safe anaesthesia. Only 25% regularly used the pre-anesthetic surgical checklist mainly because it was not available. Although Muhimbili hospital had a locally designed checklist, 54% said it was not available for use. Using the WFSA checklist as a guide, 4 % of the anesthetists were able to provide safe obstetric anaesthesia, 19% provided intermediate and 78% provided poor quality anaesthesia.

**Conclusion:** This study of anaesthesia capacity in the EAC identified shortages of personnel and equipment needed to provide safe anesthetic care for obstetric surgical cases.