

# Report on activities funding by the AAGBI International Relations Committee

## Zambia Anaesthetic Development Program

### “Perioperative Mortality in Zambia - 25years on”

Thank you so much for agreeing to fund our project looking into Perioperative Mortality at the University Teaching Hospital (UTH) in Lusaka, Zambia.

The UTH is the only tertiary referral centre in the country and has 1600 beds and 250 baby cots serving a population of 13.8 million people. It hosts the nation’s only Medical School producing 50-60 doctors per year and carries out more than 18,000 surgeries a year.

The goal of ZADP is improved patient safety at the UTH while supporting the MMED program training Zambian anaesthetists. The MMED program started in July 2011 and is the first anaesthetic training program in Zambia for physicians, relying completely on UK faculty for academic support and funded by the Department for International Development (DFID). Up to now anaesthesia in Zambia is largely carried out by non physician anaesthetists called clinical officers, who undergo a 2 year training program to become practicing anaesthetists.

The UTH has no current perioperative data, the last study of this kind was collected in 1987<sup>1</sup>-which reflected an overall mortality rate of 7.55/1000 and a high avoidable mortality rate of 3.3/1000 within 7 days of theatre. In view of this the ZADP has proposed an Anaesthetic and Surgical review of perioperative mortality. These statistics will provide a measure of comparison (over time and internationally), an indicator of the impact of the MMED program but most importantly a means to direct limited resources thus improve patient care.

To be able to advocate any change at the UTH and then measure its impact, one needs statistical evidence.

#### Our aims and objectives are:

To develop a data collection strategy: There is currently no database of perioperative mortality, and we have identified sources of data collection which will be accurate, reproducible and unintrusive to hospital process.

To establish accurate perioperative mortality data.

To compare current perioperative mortality data with a previous study at UTH<sup>1</sup>, and similar recent international studies<sup>2,3,4</sup>

To quantify and classify perioperative mortality at UTH, Lusaka as an indicator of progress and as a tool for clinical governance. Our data collection can then be published and replicated. This is all aimed at raising standards, focusing limited resources thus improving patient care.

The study will be a retrospective review of inpatient deaths between induction of anaesthesia and the 6<sup>th</sup> postoperative day (the day of operation being day 1)<sup>1</sup>. Folder numbers of all in hospital deaths will be acquired from paper based mortuary records. These folders will be retrieved from the medical records department, to determine which patients demised within 7 days of theatre. These medical notes will be reviewed by both a designated specialty surgeon and anaesthetist to classify avoidability<sup>5</sup>, causality as surgical, anaesthetic, administrative or a combination thereof (in keeping with the 1989 study)<sup>1</sup>. Information regarding seniority of anaesthetist and surgeon involved in the primary procedure will be collected. Patient and medical staff will be anonymised.

We expect perioperative mortality to be high, but the absolute number is unknown, this study will allow the UTH to focus limited resources, as well as assess the impact of the MMed program and focus teaching expertise.

<sup>1</sup>Heywood AJ, Wilson IH, Sinclair JR. Perioperative Mortality in Zambia. *Ann R Coll Surg Engl* 1989 Nov;71 (6): 354-8

<sup>2</sup>McKenzie AG. Mortality associated with anaesthesia in Zimbabwean teaching hospitals. *S Afr Med J*. 1996 Apr;86 (4):338-42

<sup>3</sup>Hansen D, Gausi SC, Merikebu M. Anaesthesia in Malawi: complications and deaths. *Trop Doct*. 2000 Jul;30 (3):146-9

<sup>4</sup>Ouro-Bang'na Maman AF, Agbetra N, Egbohou P, Sama H, Chobli M. Perioperative morbidity and mortality in a developing country: experience of Lome teaching hospital. *Ann Fr Anesth Reanim*. 2008 Dec;27 (12):1030-3

<sup>5</sup>McDonald PJ, Royle GT, Taylor I, Karran SJ. Mortality in a university surgical unit: what is an avoidable death? *J R Soc Med* 1991 Apr;84(4):213-6