

South East Thames Society of Anaesthetists (SETSA) Travel Grant Report**Name of Project:** Zambia Anaesthesia Development Project (ZADP)**Location of Project:** University Teaching Hospital, Lusaka, Zambia**Date of travel:** October to December 2015**Value of Grant received:** £200**Project Background**

ZADP was established four years ago to support the training and education of Zambian physician anaesthetists during their Masters of Medicine (MMed) in Anaesthesia programme with a UK faculty, addressing the shortage of trained anaesthetic personnel, with the ultimate aim of providing a sustainable, self sufficient training programme and provision of safe anaesthesia. The first intake of students was in June 2011, and my time there saw their graduation from the programme as Zambia's first home-grown anaesthetists.



Graduation of the first Zambian MMed Anaesthetists from UNZA (University of Zambia), December 2015

The project is based at the University Teaching Hospital (UTH) in the capital Lusaka. It is the only referral centre for Zambia's 15 million population, with over 18,000 surgical interventions reported in 2012, ranging from minor surgery to cardiac and neurosurgery¹. Anaesthetic equipment, medical supplies and drugs are all in limited supply², with even basic resources like water and electricity being inconsistent. Currently there are 16 active theatres and a 10-bed Intensive Care Unit. Anaesthetic provision is delivered by the 23 trainee MMed Zambian anaesthetists, 4 Uzbekistan expatriot anaesthetic consultants and a host of anaesthetic clinical officers (non-physicians).



The University Teaching Hospital, Lusaka

My role

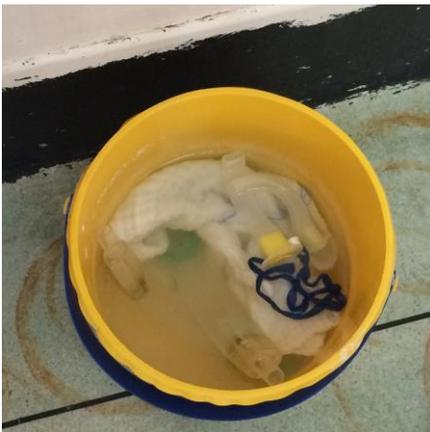
I joined the project as a junior clinical fellow. Other ZADP UK faculty there at the time were a full time consultant Dr Papari Deka, and two senior registrars Dr Pete Hart and Dr Emma Coley, as well as another junior clinical fellow, Dr Chandni Parikh. My time was divided into clinical and non-clinical duties.

Clinical work



Working in gynaecology theatre

My role in theatre was to observe and assist the MMeds in both elective and emergency cases, providing teaching and training. I also had the opportunity to practise anaesthesia myself in this setting, with local supervision. I got exposure to a range of surgical specialities from caesarean sections to paediatrics to complex maxillofacial cases. I felt there was a two-way learning exchange between myself and the MMeds. For example, I was able to teach them about anaesthesia for laparoscopic surgery during the weekly list, something that is common in the UK but only a burgeoning specialty in Zambia. From them I learnt the nuances of drugs I previously had no exposure to such as pancuronium and halothane. It was an honour to work alongside these doctors in such a resource poor environment, as they faced challenges of reusing equipment, managing drug shortages and often overwhelming demands on their service.



Cleaning of equipment to re-use



Paediatric airway equipment

I also regularly attended ICU with Dr Hart during his weekly session, reviewing patients on ward rounds and helping the MMeds with day-to-day jobs. Regular challenges faced on the ICU included nursing staff shortages and a lack of ventilators and monitors, along with difficulties obtaining basic diagnostic tests and imaging. However, the first end tidal CO₂ monitor was installed when I was there, and pending staff training should hopefully lead to this vital monitor being a regular feature in the future.

Non-clinical work

Another part of my ZADP role was to participate in research and clinical governance relevant to the local department's needs that will improve patient safety and the quality of anaesthetic practice. I assisted in data collection on an ongoing project led that was investigating blood transfusion practice and protocols at UTH. A retrospective review of perioperative deaths at UTH in 2012 by Lillie et al found that the timely availability of appropriate blood products was the most common 'systems of care failure' attributable to avoidable mortality².

I focused on three aspects. I prospectively reviewed transfusion triggers in adult elective theatres over a week long period. Along with Dr Parikh I conducted a retrospective audit of the quality of the

computer database kept by the blood bank. I also conducted a week long review of the outcome of all the units of blood issued by blood bank along with Dr Hart and Dr Coley. This required us tracing every patient for whom blood was requested. This was the most challenging element of my data collection. In the face of a high demand for blood products, this required manpower hours and was complicated by the obstacles of locating patients in a large hospital plus the administrative delays with no computer records systems available. The results of this data collection are still being analysed, but the project aims to produce new guidelines encouraging appropriate prescribing of blood that is such a vital resource in Zambia.

Teaching

As well as informal teaching in theatre, I attended and facilitated regular teaching for the MMed students, including providing simulation-based teaching.

One of the most rewarding aspects of my time was teaching the first year anaesthetic clinical officers. These are non-physician healthcare personnel who provide the majority of anaesthesia across Eastern/Southern African countries. Since the development of the MMed programme they have been training and working alongside the physician anaesthetists at UTH, and it is the responsibility of ZADP trainees to supplement this training. I delivered weekly teaching sessions along with Dr Coley.



Clinical Officer Teaching

Reflections

This was a fantastic opportunity to participate with ZADP. It was a privilege to work alongside the MMed students and it has given me insight into the challenges faced in delivering safe anaesthesia and safe surgery in a resource-poor environment. The clinical and non-clinical skills I have learnt will be invaluable in the next stage of my career.

Acknowledgements

I am very grateful to SETSA for providing me with a travel grant of £200. This contributed towards my flights to Lusaka.

I am also indebted to the ZADP faculty who supported me during my time in Zambia.

References

1. Lillie EMMA, Holmes CJ, O'Donohoe EA, Bowen L, Ngwisha CLT, Ahmed Y, Snell DM, Kinnear JA, Bould MD. Avoidable perioperative mortality at the University Teaching Hospital, Lusaka, Zambia: a retrospective cohort study. *Can J Anesth/J Can Anesth* (2015) 62:1259–1267 2.

2. Jochberger S, Ismailova F, Banda D et al. A survey of the status of education and research in anaesthesia and intensive care medicine at the University Teaching Hospital Lusaka, Zambia. Archives of Iranian Medicine 2010; 13(1): 5-12.