Activity Report following AAGBI International Committee Grant to support work in Zambia, September 2012 – March 2013

Report 1

29 September 2012

Andrew Wood

Photographs used with patient/parental consent.

As described in my proposal, my time in Zambia has been divided into three strands of voluntary work:

1) Intensive care at University Teaching Hospital (UTH), Lusaka.
2) Anaesthetic support for outreach surgical projects in regional hospitals.
3) Medivac work with the national aeromedical rescue agency.

Since arriving in Lusaka 2 weeks ago on 15 September, I have begun the process of starting life and work in a new and unfamiliar country. From establishing a residence and transport, to negotiating medical registration, work permits and permission to practice in the hospital, to meeting local people and learning about the their languages, customs and culture. I can't even begin to thank my supervisor here, Craig Oranmore Brown, his wife Rae and their charity organisation 'Mercy Flyers'. Without their help, my smooth and rapid integration into Zambian life would not have been possible.

UTH Lusaka

My time in the 10 bed intensive care department at UTH got off to a lively start. Within 10 minutes of arrival in the department, I found myself attending to a critically unwell 8 year old child, who required emergency intubation (with neck immobilisation) following a road traffic accident.

I have spent the first few weeks shadowing the ICU consultant on ward rounds, whilst I get to know the unit's staff, facilities and procedures. From the beginning of October I will be begin conducting my own ward rounds.

The unit, which is primarily nurse led, receives approximately 300-400 patients per year and accept surgical and medical patients. Resources are limited but improving. Relatively modern ventilators and monitors are available for most of the beds. ECG, Oxygen saturations and automated blood pressure recordings are taken and documented along with temperature and fluid balance. Central lines are rarely used, and central venous and arterial blood pressure monitoring is unavailable. A 24 hour lab is available for standard blood tests including arterial blood gas measurement is available, however daily tests are not routinely performed.

Part of my role here is education, and I am involved in providing weekly teaching in the form of seminars and lectures to the training intensive care nurses . The programme is due to start on 1 October. I have attached an example of the some materials I have prepared for my teaching, including a Paediatric Resuscitation guide and a lecture on ICU Care Bundles.

I am also carrying out a pro/retrospective audit looking at morbidity and mortality rates from the unit.

Outreach

I took part in my first outreach project between 24- 26 September. Our team, which comprised Craig (Pilot and lead Anaesthetist), AB, a support volunteer with Mercy Flyers and myself flew 150 miles south to Zimba, a town near the Zimbabwean border. The relatively short flight was a cool relief from the haze of the Zambian plateau, which at the end of the dry season, is dusty and hot.

In Zimba there is a small mission hospital adjacent to which International Vision Volunteers (IVV), a group of North American Ophthalmologists, have built a specialist eye clinic. IVV run an outreach service several times a year at Zimba, when a team is based at the clinic for around a month performing clinics and surgery. We joined a team of three Canadian surgeons at the clinic who had been in Zimba for several weeks carrying out clinics and performing local procedures.

We attended to provide a general anaesthetic service over 2 days for cases unsuitable for local blocks (these are performed by the surgeons); these included major surgery (eviscerations and enucleations) on paediatric and adult patients.

As there is no equipment at the clinic for administering anaesthesia we had to bring most of our equipment and drugs with us.

The general anaesthesia was delivered using a draw over technique. The breathing circuit included an Oxford Miniature Vaporiser connected to a facemask via tubing, a self-inflating bag and a series of one-way valves. An Ayre's T piece was used for infants. Oxygen was supplied via on oxygen concentrator with a back-up oxygen cylinder available in case of power failures.

Anaesthesia was induced using a combination of inhalational technique with sparing use of Propofol (which is scarce) and maintained via inhalational anaesthesia. Anaesthetic agents available included Halothane and Sevoflurane.

Monitoring included an oxygen saturations probe and pulse rate monitor (donated by Lifebox) as well as a manual sphygmomanometer and a stethoscope. End tidal measurements of gas concentrations were not available and depth of anaesthesia was determined by close observation of clinical signs.

With no specific recovery area and no ancillary nursing staff, we recovered patients in the operating theatre before they could be transferred to the ward.

We treated a varied case mix, ranging from a 4-week-old baby to a 77 year old with Hypertension and Diabetes Mellitus. There were no adverse incidents that affected patient care. Of note, all three members of our team suffered from food poisoning at the end of the trip, fortunately this occurred at such a time that our clinical duties were not affected.

This is the first of many planned outreaches between now and next March, with the next trip, which will be an Orthopaedic outreach, planned for the end of October. We plan to return to Zimba to continue our work with IVV in November and February.

Medivac

With Craig I share on call duty for the national aeromedical rescue service, which repatriates unwell patients to either UTH in Lusaka or to a tertiary hospital usually in Johannesburg, however I am still awaiting my first mission.