



Zambia Anaesthesia
Development Program



Global Anaesthesia
Development Partnerships

AUGUST 22 - FEBRUARY 23

ZAMBIA

ANAESTHESIA

DEVELOPMENT

PROGRAM

MANCHESTER MEDICAL SOCIETY
Section of Anaesthesia



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MANCHESTER MEDICAL SOCIETY REPORT

August 2022 saw the return of two in-country Zambia Anaesthesia Development Programme (ZADP) fellows for the first time since the start of the pandemic in 2020. Following the last cohort of volunteers, there have been a number of changes in Zambia. The pandemic resulted in splitting of physician anaesthetists across two hospitals within the capital city of Lusaka; these being University Teaching Hospital (UTH) and Levy Mwanawasa hospital. This has lead to an ongoing effect on anaesthetic workforce and training, compounded by the effects of the pandemic itself. The ZADP model had to evolve during this time with the addition of the remote fellow cohort, providing teaching online from across the globe.

The brief as in-country fellows was to consider how to best position ourselves in response to these changes, and to prioritise activities that lend themselves best to direct contact – namely in-theatre teaching and simulation.

After discussion with residents and senior faculty in Zambia, and working with my other in-country colleague, Dr Helen Williams, the following four areas were identified as key priorities for focus and training.

Wellbeing and Morale **Regional Anaesthesia**

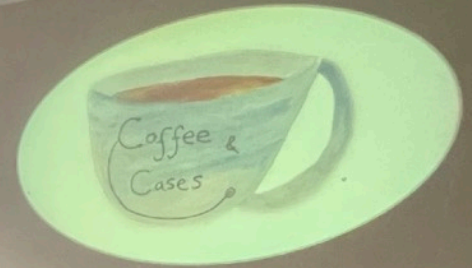
Simulation training **Intensive Care Medicine**

KEY PRIORITIES FOR IN-COUNTRY FELLOWS



WELLBEING AND MORALE

This was identified early as an area of significant need. In common with the anaesthetic workforce in the UK, and worldwide, there were high levels of fatigue and signs of burnout amongst residents and seniors.



COFFEE & CASES

A new forum was established for the residents to have protected time outside the working day in which they could socialise, informally debrief and discuss difficult cases over coffee and breakfast provided by the fellows. This now runs fortnightly in person at UTH with some sessions offering a remote link to allow residents in Ndola to participate.

73

days of in-country teaching given

“FIGHTING FATIGUE”

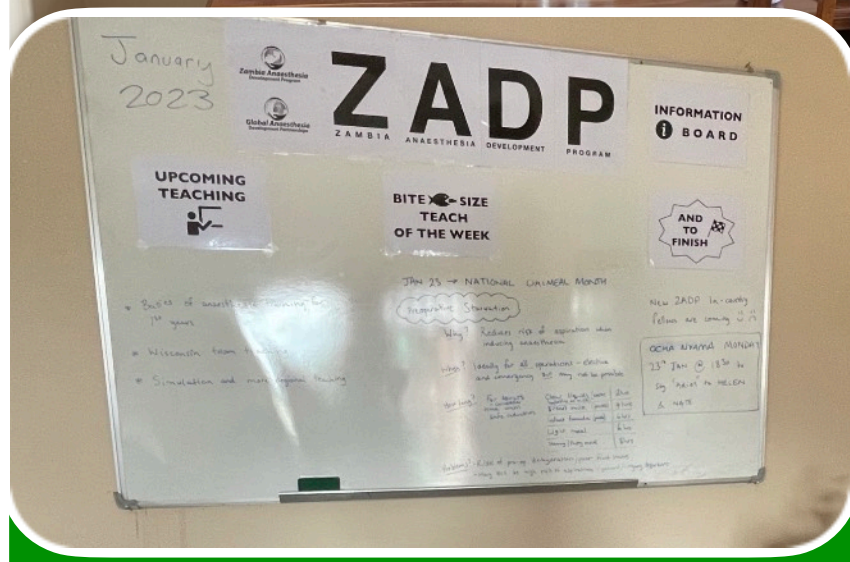
During the first Coffee & Cases session it was discovered that the residents had lost their protected rest space for use during on-calls, and consequently had been forced to either stay awake or sleep in their cars. A sofa bed was acquired and “drinks station” created for the anaesthesia seminar room to allow residents access to a private and protected rest space within the hospital. This has been accompanied with educational resources and teaching based on the Association of Anaesthetists’ “Fighting Fatigue” campaign. They are now displayed in the seminar room which supports healthy and safe practices around out-of-hours work.

“ THIS IS THE FIRST TIME WE HAVE SPENT TIME TOGETHER AS A COHORT SINCE BEFORE THE PANDEMIC. ”

Feedback given at Coffee & Cases from Zambian Trainee

THE ZADP BOARD

One whiteboard in the seminar room has been used to display information about upcoming ZADP teaching sessions and planned social activities to make trainees feel included and informed. This has also included the development of a “Who’s Who” photo board; operating theatres at UTH are busy places with large numbers of learners (medical students, clinical officer students, anaesthesia residents and others), so this board enables the residents (and visiting fellows) to identify each other as well as visiting and remote fellows.



28
Wellbeing sessions delivered

SOCIAL ACTIVITIES

A number of social events were organised to facilitate the anaesthetists relaxing and spending time together outside work. These included

a braai (barbecue) afternoon, a “World Anaesthesia Day” social, an outing in honour of Zambian Independence Day with the residents in Ndola, and a number of informal gatherings for food and drinks outside the working day.

The hope is that this culture change will not only benefit current morale, but also encourage recruitment and retention to ensure sustained numbers in the anaesthesia workforce.



SIMULATION TRAINING

Prior to the pandemic there was a well-established programme of simulation running at UTH. This has unfortunately suffered in recent years as various spaces and equipment had fallen into disrepair and disuse. Previous ZADP cohorts had developed a 'simulation passport' – a logbook for simulation activity completed and a guide for future learning. More copies of this were made and distributed to all current residents. A new 'in-situ' simulation space was established in theatres providing a realistic in-situ environment and benefited from being close to where residents were mainly working during the day.



7
New starter anaesthetists put through Initial Assessment sim training

Organisation and timing of sessions were not without challenges – coordinating teaching and clinical cover was difficult with only two fellows. Sessions became more ad-hoc to fit around clinical activity. Initial scenarios were run on a one-to-one basis to allow residents unfamiliar with simulation to gain experience without the pressure of performing in front of peers. Subsequent sessions were run with larger groups, allowing more complex scenarios with a focus on teamwork and leadership skills. This gave other residents opportunity to observe and provide feedback on the scenario. One of the most rewarding sessions had the residents leading the post-scenario debrief and learning conversation, with great enthusiasm and positive feedback from the residents in attendance.

Future developments to ensure sustainability of the programme include training current seniors and senior residents to become simulation facilitators themselves, e.g. through train-the-trainer.



21
Simulation sessions run



 REGIONAL ANAESTHESIA

With the arrival of in-country fellows it was felt there was a great opportunity to expand and develop regional anaesthesia (RA) practice in Zambia. RA is a helpful tool in the practice of anaesthesia - both for post-operative pain relief and for awake surgery. This is particularly useful in a setting where general anaesthetic resources are limited.

36
RA sessions delivered

7
"PLAN A" - nerve blocks focused on



In consultation with the local Zambian RA lead it was felt that a stepwise and structured approach should be utilised to introduce these skills. Physicians and residents were first taught about the theory of ultrasound including how to scan, nerve block options and associated anatomy, safety principles and consent for RA. A focus was made on what is known as the "Plan A" blocks (set out by the organisation RA-UK), as competency in these blocks will allow an anaesthetist to include RA in their peri-operative plan almost always. Orthopaedic and other appropriate lists were targeted to teach trainees the theoretical and practical skills associated with these blocks. The training was well received and it was normal for the residents to call the in-country fellows to request observation of a block with feedback on performance.

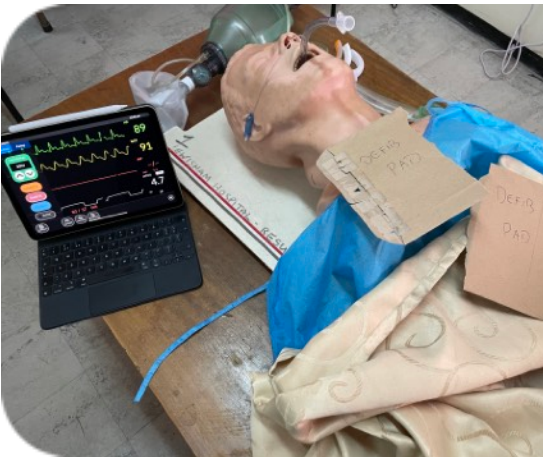


Nerve blocks performed following this training are being recorded via an online form. This will measure both the training that is occurring and what blocks are being performed and where. There is a need to increase practice and sustainability by developing RA trainers in both UTH and NTH. Currently a local lead quality improvement project is being planned that will measure how residents are being signed off as competent.

 **INTENSIVE CARE MEDICINE**

Critical care provision and training at UTH has been a challenge for a number of years, and the effect of the pandemic and workforce shortages means this continues to be an area of significant need. Whilst ZADP recognises it cannot address these problems alone, there remains a need to provide support and training to the resident physician anaesthetists in achieving the critical care components of their curriculum and improving their confidence in providing patient care in the critical care environment.

The shortage of senior anaesthetists means that there is not a consistent daily ward round, so opportunities for senior-led bedside teaching are variable. Having explored the option of bedside teaching rounds as fellows, this was deemed unfeasible due to governance issues around supervision, liability and ownership of patient care. Instead, the aim has been to deliver training through alternative means, such as lectures and critical-care focused simulation.



There has been collaboration with Zambian critical care nursing programmes, particularly in multi-disciplinary simulation of emergency scenarios. Given the variability of physician presence, the critical care nurses are vital to the safe running of the unit and strengthening partnerships between the anaesthetic and nursing workforce has the potential to greatly benefit patients as well as increasing the confidence of the residents themselves.



1
full afternoon multi-disciplinary simulation session given

Future plans which have been handed over to the new in-country team include a whole-day 'Boot Camp' for residents to practice critical-care related practical skills and further simulation in a protected environment.

NDOLA



Re-establishment of in-person support in Ndola teaching hospital (NTH) has been made possible with the reintroduction of ZADP in-country fellows.

Ndola is the third largest city in Zambia and is situated in the Copperbelt region of Zambia. With it's two main hospitals NTH and Arthur Davison Children's Hospital it serves the population of the city and the surrounding area.

Following consultation with the Anaesthetic lead in NTH the same four areas were highlighted as areas needing attention - these being RA training, simulation, intensive care teaching and wellbeing initiatives. During the two weeks spent at this site a similar training initiative to UTH was implemented with the introduction of Coffee & Cases sessions, RA drop in and ultrasound scanning both in and out of theatre.

A total of 4 simulation training episodes were organised with scenarios focusing on intensive care emergencies, for example post trauma blood product and hypotension (low blood pressure) management.

As with UTH the feedback from these interventions with trainees was positive with some expressing a desire to enrol again into the local training programme.

Fortunately one of the visits coincided with Zambian Independence Day giving the opportunity to organise a social event to celebrate. It was well attended and was commented that it was a lovely opportunity to develop friendships and relationships outside of the hospital setting.



IT WASN'T ALL JUST WORK...

From seeing the worlds largest mammal (bat) migration in Kasanka National Park to rollerskating in the illustrious Ndola roller rink there was time to experience and wonder at some of the amazing things Zambia has to offer. It is such an incredible place filled with wonderfully friendly people coupled with some epic sights, none more so than the Mosi-oo-Tunya Falls (Victoria Falls).



AND FINALLY

The work started with ZADP will continue and be built on as there has been handover to a set of new in-country fellows. Furthermore I have taken up a ZADP role back in the UK and will continue to support the work the programme is doing.



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THANK YOU

I would like to thank Sonia, Emma, Hazel and all of ZADP for this amazing opportunity and the support given both emotionally and financially. I would also like to thank friends, family and my partner for all the support and love they have shown from afar, particularly when times have been tough.

I would like to thank Manchester Medical Society for the financial support they have given. This has allowed me to take time out of training and given me the opportunity to develop skills that impact both Zambia and the NHS.

Thank you to the Society of Anaesthetists of Zambia (SAZ) and the UTH anaesthetic department for welcoming me. Because of this I have new life long friends and colleagues in Zambia who I will be able to support and share experience with for the rest of my career.

Finally, thank you Helen, not just for being great to work with but an awesome friend too.