Urambo District Hospital, April-June 2017

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Thanks to the help of FUM, Dele, Jane and I arranged to undertake our medical elective at Urambo District Hospital (UDH), Tabora, Tanzania. I chose to spend my medical elective in Tanzania primarily because I wanted my elective experience to feel unfamiliar compared to my experiences in UK hospitals.

Tanzania is a low-income, resource-poor country with a rapidly growing rural population. Both the absolute and relative number of health professionals and trained health workers in Tanzania is decreasing. This shortage is particularly apparent in the primary care dispensaries and the district hospitals, where in 2006 there was a shortage of approximately 20,000 and 15,000 health workers respectively (United Republic of Tanzania Ministry of Health and Social Welfare, 2008). Absolute numbers of healthcare workers decreased by one-third during the 1990s when the Tanzanian government both cut the healthcare workforce and halted further employment (Maestad, 2006). The impacts of these shortages on professional healthcare coverage in Tanzania have been crippling. 2007 World Health Organisation (WHO) figures found that on average there was fewer than one doctor to cover every 10,000 population – putting this into perspective in the UK in 1997 there were 23 doctors to cover every 10,000 population (World Health Organisation, 2016). Staff shortages, coupled with an increasing population size, have left the Tanzanian healthcare workforce vastly inadequate for the overall population.

Before work begins at the entrance to Urambo District Hospital

The situation at UDH is no exception to the inadequacies of healthcare in Tanzania. Despite Urambo District having a population of 192,781 people (Tanzania National Bureau of Statistics, 2012), UDH serves a population of just over half a million people. This is because UDH still provides secondary care services to the newly formed district of Kaliua, which will be without its own district hospital until 2018. This immense pressure on UDH was compounded by staff shortages; there were only four medical officers (doctors) instead of a recommended 23 at UDH for most of our placement. Thankfully towards the end of our placement three newly qualified doctors from Uganda began working at UDH. These 'new doctors' were of a very high standard and were also very keen to provide us with teaching during our placement. I believe that they will be a great asset to UDH.

UDH is a small government owned hospital. Inpatient facilities at the hospital include a male ward, a female ward, a paediatric ward, a labour and delivery ward, a new postnatal

care facility and two operating theatres. Outpatient facilities include a bustling outpatient department, a maternal and child health centre and a sexual health clinic. The hospital also has a laboratory that can carry out basic blood analysis, HIV monitoring, TB diagnostics and point of care testing of HIV and malaria. The imaging department at the hospital is basic, although both x-ray and ultrasound services are available. There is currently a construction project underway at the hospital to build two, much needed, operating theatres. Whilst we were at UDH, the walls of the building had been constructed, but the project had come to a standstill due to the project's sponsor having stopped the funding stream.

During my time at UDH, I was surprised most by the lack of basic medical equipment at the hospital: equipment that is taken for granted in our own NHS. For example, before we arrived there were only two working pulse oximeters in the whole hospital. Pulse oximeters are a key piece of equipment that are used to measure levels of oxygen in the blood. Even the anaesthetist did not have access to a pulse oximeter to measure the blood oxygen levels of his patients once they had been anaesthetised for surgery. Thankfully, before travelling to Tanzania, Dr Iain Chorlton had provided us with three new pulse oximeters to take with us to UDH. During our placement, these were invaluable in the monitoring of sick patients. Unfortunately, there were not enough pulse oximeters to distribute to every ward. This became a problem when some patients became sick and staff had to run around the hospital

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trying to find this basic equipment that should be available on every ward. Furthermore, the hospital was short of other basic monitoring equipment including sphygmomanometers (for blood pressure monitoring) and thermometers.

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Another issue encountered during our placement was the lack of supplementary oxygen that could be provided to sick patients. In UK hospitals, if a patient requires oxygen then a face mask or nasal cannula is plugged into the oxygen tap found behind every patient bed and the oxygen is simply turned on. At UDH there is no central oxygen supply so oxygen concentrators are used to deliver filtered oxygen from room air to patients. Unfortunately, UDH only had access to three oxygen concentrator machines. With one permanently kept in theatre for surgical patients and one permanently kept on the labour ward for neonates, this left only one machine for the rest of the hospital. There were many times when very unwell patients requiring supplementary oxygen had to go without because the oxygen concentrator was required for someone else who was acutely unwell. I remember one occasion when a semiconscious patient with cerebral malaria who had oxygen saturations of 78% (normally should be greater than 94%) had his oxygen supply removed because the oxygen concentrator was needed for a patient who was having a severe asthma attack. Furthermore, only the oxygen concentrator in theatre had an accompanying face mask. The other oxygen concentrators had only accompanying nasal cannulae. The problem with nasal cannulae is that they can only effectively deliver lower levels of oxygen, for example 1-4 litres/minute. Due to the shortage of face masks, acutely unwell patients were being given higher levels of oxygen through nasal cannulae. Not only does this not deliver the higher levels of oxygen effectively, but also it can cause harm to tissue inside the

International Nurses Day/ Florence Nightingale Day celebrations

patient's nose. I found it frustrating knowing that oxygen face masks cost only a few pounds in the UK and patients at UDH were not being treated with appropriate equipment due to a resource shortage.

Despite the challenges at UDH of providing healthcare with limited resources, I was amazed at the dedication and enthusiasm that the staff at UDH had for their work. I remember Dr Ongati carrying out the Monday ward rounds for all the inpatient wards in the hospital after spending the weekend being the only doctor covering the whole hospital. I also remember Peter, a recently qualified midwife, just about to leave the hospital to go home then run back to the delivery ward to deliver three new-borns. I could tell that all the staff in the hospital were very proud of their work. This was demonstrated during the celebrations to commemorate International Nurses Day and the anniversary of Florence Nightingale, the founder of modern nursing. Knowing that this date is not significantly commemorated by healthcare workforces in the UK, I was surprised to find out that there would be a 'celebration' at UDH to mark this occasion. I was completely amazed on the day when I was taken on a procession around Urambo with most of the hospital staff, that culminated in the handing out of drinks and soap to all the patients in the hospital. This was followed by a celebration that included dancing, singing and a huge feast of Tanzanian food. It was incredible to be a part of this celebration and to see all the staff thanking each other for their hard work throughout the previous year.

To finish my report of UDH, I wanted to reflect on one of my first experiences at UDH. On our first day at UDH, Dr Kanani, the chief medical officer at UDH, took us on a tour of the hospital. Whilst showing us around the paediatric ward, he pointed to a side door which was the entrance to the paediatric intensive care unit. Inside, the room was about half the size of a normal ward side room in a UK hospital. The room contained nothing more than two small beds with a mosquito net covering each. There were no LCD screens displaying advanced physiological parameters that are common place in UK hospital intensive care units. Moreover, the intensive care unit did not have a dedicated nurse for monitoring any deterioration in the sickest patients that are occupying the intensive care room. The

Teaching the students of Urambo FDC how to correctly use a mosquito net

differences between this intensive care unit and an intensive care unit in the UK were stark. I was so surprised by these differences that I had barely noticed that there were two young girls laying in the beds in the room. Furthermore, I had missed that one of the girls was unresponsive and had stopped breathing. Dr Kanani began performing CPR on the young girl, but it quickly became apparent that the girl could not be saved. Dr Kanani then covered the girl with a blanket and said, 'Let's go to see the male ward now.' We were all silent and completely shocked as we walked over to the male ward. This was supposed to be a quick tour of the hospital and none of us had expected for a patient to pass away in front of us.

The young girl who died had sadly suffered from cerebral malaria. This was my first experience of malaria both in Tanzania and in my medical training. It quickly highlighted to me how lethal this infection can be. Malaria is the top cause of inpatient admissions at UDH. During our placement, we saw hundreds of patients who had contracted it. Malaria was particularly prevalent during our placement because we visited Urambo towards the end of the wet season when mosquito numbers are high. Urambo FDC became a bit of a hotbed for malaria during our stay. I remember one weekend when between us we took five FDC students to the hospital for malarial treatment.

During my placement, I learnt a lot about malaria which is an infection that is uncommon in UK hospitals so it was very beneficial for me to see such a high turnover of patients with malaria and related complications. Seeing that malaria was such a big health problem, we decided to take the opportunity to provide some teaching to the students at Urambo FDC about prevention of malaria and the symptoms to look out for if someone contracts the infection. The students were already very knowledgeable about malaria, but hopefully the training will help reduce some of the malaria burden at Urambo FDC.

Again, I would like to thank FUM for their support before and during our placement at UDH. I would especially like to thank Rod Smith, Nick Vinall, Jo Taylor and Iain Chorlton for all the help that they provided us. My thanks also go to Mr Nestory (Urambo FDC Principal) and all his staff at Urambo FDC for being the most generous of hosts during our stay in Devon House. Finally, I would like to thank Dr Kagya (Urambo District Medical Officer) and all the staff at UDH for allowing us to work alongside them in their hospital and for making us feel so welcome at the hospital.

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Maternal and Child Health

Jane Lim reports from Urambo District Hospital

Urambo District Hospital has a maternity and delivery block with three delivery beds, midwives, nurses and doctors on call round-the-clock. With such a vast area to serve, the hospital itself sees patients from the population who live around the hospital referred to them due to complications.

Most maternal healthcare, deliveries and post-natal care in Urambo, however, actually take place in the community in Dispensaries.


Mother and baby

Dispensaries and Mother and Child Health Clinics are nurse-led clinics that vary in capacity. Each has one delivery bed and a set of delivery instruments, a room for vaccinations as part of post-natal care, and a consultation room for antenatal care. During my visit, I did not see a great deal of antenatal care (mostly because my attention was more focused on in-patient management and deliveries), but was told that antenatal care consists of testing for infections (such as HIV) and monitoring growth and foetal heart rate. Expectant mothers arrive at the MCH clinics when contractions start or when their waters break – they are examined by the nurse on arrival and the progress of their labour is monitored.

Most deliveries are straightforward – nurses are trained to deliver babies and stitch mothers afterwards – but those who may present with a complication (such as mothers whose labours do not progress or who may require caesarean sections) are sent to the hospital. I say 'sent to the hospital', but it is by no means a blue-light ambulance that brings them there – most mothers are expected to find their way to the hospital on their own. This presents a few issues – most dispensaries are far from the hospital (most are easily an hour away); cabs (either car or bajaji) are usually well over what a family can afford for such a long journey; the dirt roads are bumpy and not lit at night. The mothers who do make it to the hospital tend to have arrived on the back of a motorcycle, usually after much delay. It is usually at this point that doctors are called to see the patient and any emergency treatment is given.

Urambo is well-served by doctors and nurses who make such a big difference in the healthcare of the community with their tireless work. It was in this environment that I found myself thinking about a lot of things that I take for granted practising medicine in a developed country – transport, paved roads to connect services, having more than one bed, oxygen that comes out of a wall (the hospital only had two machines to deliver higher concentrations of oxygen), and even having the equipment to sterilise tools. A little (to us!) goes a long way in Urambo!