



An insight into the realities of life and health care in Tanzania

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Introduction

Tanzania is a country in East Africa with a population of approximately 50 million people. The average life expectancy is 61 years and the Gross Domestic Product per capital is \$1700 USD.¹ I chose Tanzania as my elective destination as I wanted to experience the challenges of practicing medicine in a developing country and to gain exposure to diseases I would not encounter in New Zealand. Tanzania has a reputation for being a peaceful and safe country and the opportunity to do a safari made Tanzania an ideal elective location. I did internal medicine (infectious disease) and emergency medicine at Muhimbili National Hospital in Dar es Salaam. This hospital is the biggest national referral hospital and receives complex patients from throughout Tanzania. I did obstetrics and gynaecology at Amana Regional Hospital, also in Dar es Salaam, the maternity department is incredibly busy with an average of 50 deliveries per day. Finally, I spent a week at Kidodi Rural Healthcare Clinic, which is situated eight hours south-west of Dar es Salaam and serves a catchment of 40,000 people.

My elective was an incredible and eye-opening experience on both a personal and professional level. I was challenged with resource limitations and cultural differences in the Tanzanian health-care system and I experienced conditions I had never seen in New Zealand. Reflecting on my experiences made me appreciate the resources and opportunities that we have in New Zealand.

Country profile

Tanzania is considered a developing country with a life expectancy of 61 years. Communicable disease accounts for the primary disease burden, however, the incidence of non-communicable diseases is increasing, resulting in a double burden of disease. Box 1 lists the most common causes of death in 2012, according to the World Health Organisation.²

Emerging concerns

A lack of health-care funding is the most obvious concern regarding the health care system in Tanzania. Tanzania spends only \$44 USD per capita on health care, with 48% of the total expenditure on health being supported by donor aid.³ Health care is not free in Tanzania, which substantially limits access. Patients must pay a significant proportion of their health care expenditure and only 12% of the population are covered by health insurance.³ This has created significant problems for

Box 1 The most common causes of death in Tanzania in 2012.²

- 1) Human immunodeficiency virus (HIV) acquired immune deficiency syndrome (AIDS) (18.2%)
- 2) Lower respiratory infections (8.7%)
- 3) Diarrhoeal disease (5.2%)
- 4) Malaria (5.2%)
- 5) Stroke (3.6%)
- 6) Birth asphyxia and birth trauma (3.3%)
- 7) Preterm birth complications (2.8%)
- 8) Ischaemic heart disease (2.7%)
- 9) Road injury (2.7%)
- 10) Diabetes mellitus (2.3%)

health care implementation as health care is often not provided until a patient can pay and patients often miss out on best practice due to an inability to afford health care.

The increasing burden of non-communicable disease is further pressuring the health system of Tanzania. A lack of funding is evident in the poorly maintained and overcrowded hospital infrastructure. Some government initiatives are proving successful, such as free anti-retroviral treatments for patients suffering from HIV, which has helped reduce the morbidity and mortality from HIV.³ Training enough health care professionals is a challenge, as is retaining them. Understaffing is at 50-70% across all levels of health care.³ The average income for a doctor is very low, talking with the staff as little as \$350 USD a month and the hours are very long.

This means many doctors are considering entering the private sector or travelling overseas and there is generally a rather low morale.

Determinants of health

Economics and employment

A lack of health-care spending is a significant challenge for the health system. Tanzania is ranked 152 out of 186 countries in the United Nations Development Programme Human Development Index.¹ Unemployment is approximately 12% with widespread underemployment. These economic woes stem from colonisation, a failed experiment with socialism in the 1960s and a lack of international aid. Bureaucratic inefficiency permeates society, as does corruption, which limits economic development significantly.¹

Education, culture and access

Overall the quality and standard of education in Tanzania is relatively low. Drop out rates are high and the teacher to student ratio is approximately 54 to one at the primary school level. Only 15% of the population finish secondary school and less than 2% enrol in university.¹ Due to poor education, health literacy is also low. In rural areas, girls are often married young and are burdened with many children at a young age, further diminishing education and employment opportunities.

Misconceptions are rife regarding different diseases and many patients seek the care of traditional healers. We had the opportunity to visit a traditional healer who explained that he can heal disease and thus some people only visit him rather than seeking care at a hospital. There is also a culture of accepting one's fate and people do not engage in the preventative health care to the same extent as people in New Zealand. Unsafe sex is a major concern and this contributes to 80% of the heterosexual transmission of HIV.² To some extent the concept of safe sex is encouraged, however, there is a long way to go regarding this, as sex is a taboo concept.

At the village clinic it was great to see a large emphasis on preventative medicine. We vaccinated many children and provided nutritional supplements and worming tablets. One of the nurses has also instigated a cervical screening programme; it is not cytology based but instead detects visible lesions with acetic acid, which are then treated immediately with cryotherapy. There has been a good uptake of this. The methadone clinic at Muhimbili has also treated thousands of patients with opioid addiction, and a needle exchange programme has been established. Family planning is also encouraged and contraception is free.

The culture of inefficiency in the health system is significantly contributing to poorer health outcomes. The 'pole, pole' (slowly, slowly) culture has an adverse impact on patient care by reducing timely access to health care. There is also a lot of needless bureaucracy, which hinders efficient health-care delivery. Access to health care is significantly limited by the geographical distribution of health care. We had patients walking over 20km to access the rural health clinic in Kidodi. When speaking with a patient in Muhimbili, it had taken her over 16 hours by bus to reach the national hospital. Most people do not have access to a car and public transport is expensive for many.

Ethnic inequalities

There are over 120 tribal groups living in Tanzania, with a relatively small Arab, Indian and Asian population. Approximately 95% of Tanzanians are of Bantu origin. Tanzania is the only country in Africa who has indigenous inhabitants from all of the continent's main ethnolinguistic families.¹ Tribal structures are relatively weak due to the abolishment of local chieftaincies following independence. No one tribal group has dominated politically, culturally or economically, which has meant there is no significant inequity between different groups in society. Therefore, ethnic inequalities are not

significant in Tanzania and there is not a marginalised indigenous group.¹ From my experience, the difference in health care received was reflected by someone's ability to pay, rather than discrimination on the basis of ethnicity.

Culture

Julius Nyerere was the first president of independent Tanzania and he had a more socialist style of leadership. Nyerere's ideals of *ujamaa* (family-hood) that continue to permeate society have meant that religious and tribal tensions are minimal; Christians, Muslims and different tribes live peacefully side by side. This has created a peaceful and safe society, which I definitely experienced during my elective. An emphasis is placed on respect and politeness, which made Tanzania a pleasant place to live.

Clinical experience

During my time in infectious diseases I saw cases of malaria, HIV, tuberculosis and tetanus. Malaria is endemic in Tanzania, with an estimated 7.7 million cases of confirmed malaria annually and more than 26% of all outpatient clinic attendance related to malaria.⁴ The majority of malaria cases are due to *Plasmodium falciparum*, which is the most deadly subtype.⁴ It was routine to rapid test for malaria for anyone presenting with fever. Approximately 5% of Tanzania's population is positive for HIV.¹ I learnt a lot about HIV during my elective and I learnt that it is no longer a death sentence but rather a chronic condition that can be effectively managed. However, there is still a stigma associated with HIV due to fear of transmission, poor education and a perception that a diagnosis is a punishment.⁵ I encountered a number of patients with tuberculosis and I realised the significant burden tuberculosis has when combined with HIV.

Non-communicable conditions such as diabetes, hypertension and cardiovascular disease are becoming more prevalent in Tanzania, especially with increasing life expectancy.² People often present late with non-communicable conditions. The health system is not set up in a way that is conducive to continuity of care and most people do not have a general practitioner. Therefore people generally present to hospital only when they are seriously unwell. This is due to overstretched resources and underfunding. I noticed stroke and myocardial infarction were managed particularly poorly. These conditions are often diagnosed many hours after a patient presents to hospital and access to fibrinolysis and clot retrieval is almost non-existent, unless a patient can afford to go private and is located in Dar es Salaam. The reasons for this come down to financial, resource, and access constraints. Medications were very limited, they were often expired and had been donated by non-governmental organisations. Even the most basic lifesaving devices were in short supply, for example Kidodi Clinic did not even have access to a defibrillator. The main conditions I encountered during my emergency medicine attachment were end-stage heart, kidney and respiratory failure, cardiac arrest and trauma. At Kidodi Clinic I was engaged in preventative medicine such as weighing of children, providing nutritional supplementation and vaccinations.

Obstetrics and gynaecology was an especially eye-opening experience. Women have very limited access to antenatal and post-natal care. Most women do not have an ultrasound and it is largely unknown if there will be complications during delivery. I attended several antenatal clinics that involved measuring fundal height, listening to the foetal heart rate with a fetoscope and giving iron and folic acid supplementation and malaria prophylaxis. The delivery room at Amana Hospital was very chaotic. The room was overcrowded and several women deliver at the same time. I witnessed a woman die during labour, which was attributed to hypoglycaemia (which did not make sense but I was given no other information), as well as an unanticipated stillbirth. Neonatal resuscitation attempts are poorly coordinated and the correct equipment is not available. The neonatal resuscitation trolley was out of order during my attachment and I witnessed several babies having an extended period of hypoxia.

Clinical and communication skills

Communication

English is not widely spoken in Tanzania. My ability to engage with patients was limited by my lack of Swahili. I tried learning some Swahili, but I did not have the Swahili competency necessary for a full conversation regarding medical matters. In an effort to build rapport I would introduce myself and my role in Swahili, ensure I had a smile and warm and open body language. Staff and medical students were often too busy to play any role in translating, so I unfortunately had limited ability to take a history from patients. Medical records were all recorded in English, however, these were generally very brief. Most medical staff spoke English.

Patient assessment and management

A lack of thorough patient assessment and management was something I struggled with throughout my elective. I would try and prompt staff with additional questions to be asked when appropriate. I found history taking was often conducted in a very brief and undirected manner in contrast to the significant emphasis we place on history taking in New Zealand. Patients were often referred from other hospitals with a simple referral letter on a piece of paper stating their diagnosis. Medical staff would generally accept this diagnosis and treat accordingly, rather than asking more information and considering other diagnoses. When a history was conducted it would generally be a few brief questions. Systems enquiries were not done and a patient's past medical history was rarely considered.

Physical exams were also conducted quite poorly and I noticed a lack of a systematic approach. The presenting system was generally the only focus for the exam and other systems were not reviewed. A lack of equipment also limited the ability for a comprehensive exam. During my obstetrics and gynaecology attachment they only had a fetoscope, there was no Doppler, cardiotocography or ultrasound. This meant when women went into labour, we were blind to potential complications and had limited ability to risk stratify women. I was very surprised after I delivered my first baby independently, when I got asked if I palpated to determine if there was a twin. I was just so used to women having ultrasounds in New Zealand to determine if there is a multiple pregnancy that an unexpected twin never crossed my mind. There was very little emphasis on taking vital signs regularly. It seemed that observations were only recorded once when the patient was admitted and then very sporadically, if at all, after this. A lack of early warning scores had a detrimental impact on patient care. A lack of resources and cost constraints limited the ability to carry out laboratory and radiological investigations.

Clinical decision making

A lack of thorough history taking and physical examination really limited clinical decision making, as did a lack of access to investigations. I found doctors would often run through a list of differential diagnoses and just select the most likely option, which would often lead to confirmation bias, as other diagnoses were not considered. This was most evident in the emergency department. Emergency medicine as a speciality has only been present in Tanzania for the last eight years, which means a systematic way of managing patients and clinical decision making is still being established. I tried to get engaged where possible and raise the possibility of other differential diagnoses. For example, I saw an 80-year-old patient who presented with shortness of breath, who had been seen in clinic a few days earlier. I suggested that we review his clinical notes to determine the most likely diagnosis. However, I got firmly told that this would be a waste of time. He was treated for asthma without considering other causes in the context of his age and lack of past history of asthma.

There was also a noticeable lack of multidisciplinary team input. The different disciplines seemed to work in silos rather in the collaborative environment that I am used to in New Zealand. This is largely due to

poor development of other disciplines such as social work, occupational therapy and physiotherapy, and these disciplines were only really present at Muhimbili Hospital. Therefore, there was limited ability for different disciplines to contribute. This reduced the ability to provide holistic care, which I believe an essential component of good quality health care.

Clinical decision making and management plans were based around resource availability rather than best practice and evidence-based guidelines. Doctors also had the role of tallying up the cost of the health care being received. This took valuable time away from their role in clinical decision making as well as being ethically questionable. This made me appreciate being removed from the financial aspects of health care in New Zealand, as money does not confound our decisions. I often felt that money in Tanzania was given higher priority than a human life. For example, after being involved in a failed resuscitation of a 21-year-old female, the family were unable to see her body until after the bills had been paid. This was a particularly shocking experience and I tried to uncover the reasons for this by discussing this case with one of the junior doctors involved. Due to resource constraints, preventable deaths occur so often that staff become emotionally detached for their own well-being. Financial restrictions are also so pressing that the doctors have to prioritise recovering costs if they want to have the resources to treat future patients.

Clinical skills

I had the opportunity to enhance my clinical skills. One of the most valuable experiences from my elective was learning how to prioritise investigations and treatments. In New Zealand I am used to ordering all relevant investigations and prescribing treatments based on best practice and clinical guidelines. In Tanzania you have to factor in finances and consider the cost-benefit analysis, which added a new dimension to my clinical decision making and taught me the importance of avoiding wastage. I learnt how to 'go back to basics' by using my clinical knowledge and examination skills, rather than relying on radiological investigations or laboratory investigations. A clear example of this was when we did a pleurocentesis and determined the location of the pleural effusion by percussion as we did not have access to ultrasound.

Personal and professional skills

Professional qualities

In New Zealand there is a focus on efficiency and getting things done in a timely manner. An element I struggled with during my elective was everything was done 'pole, pole' (slowly, slowly). In some clinics I found there were often several people doing a job that could be efficiently done by one person. I also realised that there is no schedule. Ward rounds would start at sporadic times and meetings often began late or were cancelled.

There also appeared to be no sense of urgency – unwell patients would be left waiting a very long time. I strongly value empathy and providing adequate pain relief. I found this was not the focus during my elective. Patients were hastily seen, there was very little explanation given to patients regarding their condition and pain relief was almost non-existent. For example, labouring women have no pain relief and the midwives would often slap women on their leg if they were making too much noise. Privacy is also not prioritised – in the labour ward there would be several women lying naked without any screen covers or linen, with the windows wide open. I would try and be empathetic when possible, for example by holding a patient's hand or saying *pole sana* (I am sorry) and using empathetic body language. It is during these times I wished I had more knowledge of Swahili so I could do more to ease a patient's distress. These gestures went a small way to making patients feel better. There is also no concept of informed consent. Procedures are just done and local medical students engage in invasive procedures with very little informed consent or adequate supervision. Overall, I have a better



Figure 1 The poor state of hospital infrastructure, this photo is of the main ward at Kidodi Village Hospital.



Figure 2 The labour ward at Amana Hospital, this was an open ward with up to ten women labouring at a time.



Figure 3 The entrance to the General Medical Ward at Muhimbili National Hospital



Figure 4 The entrance to Kidodi Village Hospital.



Figure 5 Muhimbili Hospital

appreciation of attending to the humanistic needs of patients, as this can do a lot to relieve suffering, enhance recovery and build rapport.

Challenges

Choosing a developing country, I knew I would experience a culture shock and face some challenges along the way. I struggled with the lack of investment in the public health system. The buildings were in very poor condition, wards were completely overcrowded with no infection control and resources were severely lacking. I also struggled when people were not given adequate health care because they could not afford it. It was also upsetting seeing people present with late-stage diseases that could have been prevented with adequate access to preventative health care.

I found the overt poverty of Tanzania quite distressing and this experience made me reflect on my privilege. As a mzungu (European), people assumed you must have a lot of money, which I thought was amusing since I considered myself a poor student. However, I realised the ability just to travel halfway around the world is an unimaginable luxury for the majority of Tanzanians and the price of my lunch at Pizza Hut would equate to more than a junior doctor's daily salary. Daily life is a struggle for most citizens, with low wages, poor employment opportunities and poor-quality education, housing and health care. If you face misfortune, there are poor societal safety nets, such as social welfare. However, because of this, communities are strong and there is a culture of helping out your neighbour. I realised how lucky I am to have had access to a quality education, health care, and housing, as these factors have shaped where I am today. Coming back to New Zealand, I was so grateful to have access to resources that would enable me to provide best-practice care for patients. The hospital environment in New Zealand is so much more pleasant due to a clean and modern environment. These were things I took for granted before my elective.

Conclusion

Ultimately, the main objective of medical professionals in both Tanzania and New Zealand is to improve patient health outcomes and enhance health. The ability to do this in Tanzania is limited most significantly by resource constraints. The burden of health care in Tanzania is also heavily weighted towards communicable diseases. Poor access to the social determinants of health shapes the health outcomes of Tanzanians and their ability to access health care. I have realised the injustices of the world and that the right we have to health care is largely luck regarding the context into which we are born. I am so grateful for the resources we have in New Zealand. Ultimately, my elective has been a life changing experience and I would recommend Tanzania as an elective destination.

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