EMILY ROYCROFT
GENERAL MEDICINE

Describe the pattern of disease/illness of interest in the population with which you'll be working and discuss this in the context of global health

I spent my time during my elective at Teule Hospital, which is the district designated hospital for Muheza district in the region of Tanga in The United Republic of Tanzania. Tanzania is the largest country in Eastern Africa and has a population of approximately 400,000,000 million. The majority of the population live in poverty, surviving on less than $2 per day. Its status as a developing country contributes significantly to the pattern of disease found there. Another contributing factor is its geographical location. Tanzania is located just south of the equator. Its tropical climate means that many tropical diseases are endemic in the area.

In the UK as in the rest of the developed world, non-communicable diseases contribute the greatest to the burden of disease in the country. Unlike the UK, in Tanzania, communicable diseases make up the greatest proportion of the disease burden. Whilst often endemic in the UK, communicable diseases often carry a much lower risk of significant morbidity or mortality than they do in Tanzania, where people generally present later, investigations are less sensitive which makes diagnosis harder, and treatment options are limited both by cost and availability.

Vaccination programmes in the UK have in some cases totally eradicated diseases and in other cases have reduced the burden of them. I found that in Tanzania many of the diseases against which we are vaccinated still cause many problems to large proportions of the population. Whilst vaccination programmes are in place in Tanzania, often children do not receive the vaccines that they require and herd immunity is low.

Tropical diseases are prevalent in Tanzania. Malaria is the best example of this as it is the leading cause of morbidity and mortality. The tropical climate enables the Anopheles mosquito to prosper, which act as the vector for malaria. The global distribution of Anopheles mosquitoes correlates directly with the global spread of malaria. There is great seasonal variation in the prevalence of the disease. I was in Tanzania towards the end of the rainy season – a time during which mosquitoes breed and consequently malaria cases rise dramatically.

HIV is a huge problem in Tanzania. Approximately 8% of the population is infected and consequently many of the patients I saw at Teule Hospital were suffering from complications of AIDS. HIV is more prevalent than the UK and it is managed much less effectively and individuals develop AIDS much quicker on average than they would in the UK.

Malnutrition contributes greatly to the disease burden. On the paediatric ward at Teule I saw many children with Marasmus and poor growth. During my time spent in surgery I saw a girl with a goitre which had been caused by iodine deficiency (the leading cause of goitre in Tanzania).

Genetic differences mean that the profile of congenital diseases is also different. Sickle cell disease for example affects a much larger proportion of the population than it does in the UK.

As in the UK, non-communicable diseases are also prevalent. Hypertension, heart failure, stroke, diabetes and cancer are all commonly seen at Teule hospital.

How is the healthcare system organised in Tanzania and how accessible are services for those who most need them? How does this differ from the UK?

The National Health Service (NHS) in the UK aims to provide free healthcare to all. For the majority of medical conditions patients do not have to pay for investigations and treatment costs for patients

are minimal. This is especially true for emergency medicine. This free access to healthcare is not so widely available in Tanzania, and patients are required to pay for many aspects of their medical care. Teule Hospital is fairly typical of a district hospital found in Tanzania. It receives a large amount of its funding from the Anglican Church and charities also contribute towards certain aspects of care (for example the Diana Centre – set up with money donated by the Diana memorial fund provides palliative care for free). The government also contributes to certain initiatives within the hospital. ARVs are free for example to individuals with a CD4 count of less than 250 and TB investigations and treatment are also funded by the government. The majority of treatments however have to be funded by patients and their families. Often if they are unable to pay they do not receive treatment. Frequently costs include investigations, equipment and medications.

There is often great disparity between the resources available in different hospitals as well as disparity between the items that patients are required to pay for. Patients are however limited by transport costs.

The ability of patients to pay was considered constantly and often things would only be recommended if they are considered vital for care. In the UK for example all tumours are sent for histology. However, I found that at Teule this would only be done if the outcome would affect the treatment.

Primary care is very different in Tanzania. Many people seek help from Witch Doctors before accessing healthcare. They have very different health beliefs and education is required to prevent the harmful effects of Witch Doctors and delaying treatment. Pharmacies offer most medications without a prescription and people will often have tried many different treatments before they see a health professional. Whilst this system means that many patients receive the treatment they need at home it also means that patients tend to be a lot sicker when they do finally come to hospital. The system in the UK is good as primary care means that people present earlier, it enables patients to be educated and to make changes to any risk factors for certain diseases that they may have. Delaying seeking help often proves to be a false economy as treatment at a later stage is more expensive.

<u>Use case studies to help understand common diseases in Tanzania and to understand the impact of these conditions on individuals and the community</u>

- 40 year old man had fallen from a coconut tree 6 months ago and fractured his femur. Whilst the hospital surgeons were able to perform many different types of surgery they could not do orthopaedic surgery. Visiting orthopaedic surgeons attend the hospital roughly once every 6 months to perform surgery. I was there when the surgeons came. The man who had fallen from the tree had been unable to walk for 6 months. His leg had wasted. He had been unable to work at all during that time. He had not been able to afford the cost of travelling to another hospital to have the operation and therefore waited 6 months to be treated. The orthopaedic surgeons performed an internal fixation on his femur. I found it incredible that he had to wait so long to have surgery. The impact not being able to walk or work had on his life during this time was huge and it was shocking to me that if he'd been able to afford transport he would not have had to wait for so long.
- 43 year old woman with cervical cancer. Had ascites and liver mets. Had very bad pain. The palliative care team was able to visit her every 2 weeks in her home and provide morphine and other treatment to her for free. Money was provided by the Diana Princess of Wales Foundation. Was good to see that people were being supported so well towards the end of their life as I had previously thought that this aspect of care would be overlooked.
- 48 year old man with HIV. CD4 count of 304. He lived near to one of the patients visited by

the palliative care team. Unable to afford transport to get to the hospital to get regular CD4 counts (once below 250 ARVs are free) he couldn't however get to hospital. As the palliative care team were aware of him they visited him frequently however many other people in his position are not known about and don't receive the treatment they need.

Gain experience working within a different healthcare system & improve my clinical skills in an environment where limited tests are available

The experience I gained from working within a completely different healthcare system was invaluable. It has given me a much greater appreciation of the quality of care that we receive in the UK and the value of our National Health Service. The NHS is free at the point of use which means that individuals, irrespective of who they are, or their ability to pay, are able to gain access to the care that they require. It seemed very unfair to me that some individuals receive treatment in Tanzania whilst others do not, simply because they can't afford to pay. Often tests or treatment, which seemed inexpensive to me, would be beyond the means of individuals and their families and they suffered as a consequence. People were particularly not keen to pay for treatments when the effects could not be immediately seen. It was particularly interesting to see the many different health beliefs that were held by patients.

Before I went to Tanzania I envisaged that I would greatly improve my clinical skills as the clinicians are limited by the tests that they are able to do and consequently examination of the patients is incredibly important. I was however slightly disappointed as I did not feel that this happened. Often patients were not well examined by clinicians. I thought this was perhaps because treatment wouldn't be any different as treatment options were so limited anyway. The surgical clinics did however give me a great opportunity to see and examine many interesting surgical patients and my ability to differentiate hernias has for example improved.