Jeeano Paul – Elective in Dar Es Salaam, Tanzania (2017)

Describe the history and pattern of health distribution in the population of Tanzania, and how it compares to the United Kingdom.

Tanzania, located on the Eastern coast of Africa, is a Swahili-speaking nation. It is bordered by Kenya and Uganda to the north, Rwanda and the Republic of Congo to the west, and Zambia, Mozambique and Malawi to the south. The Indian ocean borders its eastern front. According to UN estimates, it has a population of approximately 56.7 million people, with a median age of 17.4 years old. Thus, the population is less than the UK's 65.5 million, and has a remarkably lower median age than the UK's median age of 40.1 years old. When considering Tanzania's proportional mortality, 58% of mortality is due to communicable, maternal, perinatal and nutritional conditions, whilst 31% of mortality is due to non-communicable diseases (cardiovascular, chronic respiratory, cancer and diabetes). 11% of total mortality is due to injuries.

Tanzania is plagued by various infectious diseases that are also present in the UK, but on a monumental scale. It faces an HIV epidemic amongst its population. Approximately 1.4 million people live with HIV in Tanzania, with an adult prevalence rate of 4.7%. This is in stark comparison to the UK's adult HIV prevalence of 0.16%. In other words, there is a 30 times higher prevalence in Tanzania, compared to the UK. In addition to this, the increased annual death rate of 36,000 AIDS-related deaths in Tanzania, compared to 600 AIDS-related deaths in the UK (60 times more deaths per year), has a strong correlation to the percentage of adults on antiretroviral treatment; only 53% of the HIV population in Tanzania, compared to 96% in the UK.

In addition to HIV, there is also a high prevalence of Tuberculosis (it is often found in patients who are already HIV positive). Tanzania has a TB incidence rate of 306 per 100,000 population at any time. This is 30 times worse than the UK, which has an incidence rate of 10 per 100,000 people. However, in the UK, 89% of TB patients are identified and treated, compared to only 37% in Tanzania.

Finally, Tanzania has a high prevalence of Malaria; this was something that I saw daily whilst on my placement. It is the leading cause of death for Tanzanian children (under-five mortality). There were 4.24 million cases reported last year, all with 100% *Plasmodium Falciparum* species. That accounts for almost 7.5% of the population having malaria last year.

Describe the pattern of health service provision in Tanzania, and how this differs to the NHS in the UK. This will include an analysis behind the funding of the health service in Tanzania.

It is important to consider firstly the geographical access to healthcare. Healthcare is more dominantly available in urban areas. In the UK, 81.9% of the population is based in urban areas. This compares to only 32.2% of the Tanzanian population located within urban areas.

To be able to compare Tanzanian healthcare provision, we need to first elaborate on UK health provision. In the UK, health provision is by the publicly funded National Health Service (NHS), or private hospitals that can be accessed through out-of-pocket payments or health insurance schemes. The NHS is 98.8% funded by national insurance and taxation and spends 9.9% of its GDP for its total healthcare expenditure at around £190 billion. UK residents are not charged for use of the NHS, other than a fixed charge for prescriptions.

On the other hand, Tanzania has adopted an insurance-based healthcare system, with large-scale inequality due to lack of access to healthcare. Its current spending as Total Health Expenditure is at 7% of its GDP. Its Total Health Expenditure is funded from 26% public revenues, 35% private revenue and 40% as donations from external organisations (such as USAID). With such grossly inadequate public expenditure on its

healthcare system, Tanzanian health facilities often lack the necessary staff and resources required to offer affordable, efficient and good quality care.

The population can enlist onto 4 different healthcare insurance schemes: National Health Insurance Fund (NHIF), National Social Security Fund (NSSF), Social Health Insurance Benefit (SHIB) and Community Health Fund (CHF). However, these insurance schemes have been extremely poor in providing Universal Health Coverage, as only up to 12% of the population are covered by these schemes. Thus, many people are unable to access appropriate healthcare as they cannot afford the Out-of-Pocket payments required to finance their healthcare. This is vastly different from the UK, as no one is turned away from our hospitals, whereas I often watched many Tanzanians discharging themselves after emergency admissions (these costs are often covered by the Social and Welfare department), as they cannot afford the rest of the costs of treatment.

The Tanzanian Health service is facing huge problems with access, and so many patients in the population often see a traditional healer or a "medical assistant", before being able to get access to any form of regulated health service. How can the provision of healthcare be increased in Tanzania, and what role do traditional healers play in health service provision?

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Access to healthcare is a huge problem in Tanzania, due to the shortage of resources available. This includes infrastructure, physical resources, such as hospitals and equipment, and human resources, including doctors, nurses, medical assistants and other healthcare workers. There is an estimated shortage of 90,000 healthcare workers now.

In addition to this, the geographical accessibility of healthcare is also a huge problem. Only an estimated average of 45% of people live within 1km of a health facility and 72% within 5km of a health facility. The health system follows patients going through various levels. Initially, they may start by seeing a traditional healer. This is often the case with many Tanzanians in rural villages, far from urban areas, and those who are culturally influenced to do so (for example, many Tanzanian's who belong to the Maasai often believe in seeing a traditional healer first, before seeing other healthcare workers). If they have already seen a traditional healer, or is someone who doesn't believe in one, they can then present to a dispensary.

Dispensaries are the most common medical facility in Tanzania. They serve a population of 10,000 inhabitants, and there are 3000 present in Tanzania. They often comprise of a medical assistant, who can provide advice and vaccination support, working alongside nurses. If a dispensary does not provide adequate care, an individual may then visit a health centre.

Health centres serve populations of 50,000 people, and there are 330 currently present in Tanzania. These centres comprise of 1 doctor, medical assistants, midwives and nurses. They are the main centres for preventative care, particular for screening and vaccinations. They also provide rural mother-child clinics, and may have in-patient beds for up to 20 patients. However, if this care does not suffice, the doctor here may tell a patient to visit a small district hospital.

District hospitals serve 100,000 to 200,000 people, and according to how many people they serve, there is approximately 1 bed per 1000 people. Although there are no speciality departments present here, a team of 4-5 doctors will oversee patients who are not able to be treated in a health centre. The majority of patients in Tanzania will only ever be able to access up to a district hospital due to geographical and financial reasons. However, if their medical illness is untreatable in a district hospital, which often may not have X-ray facilities, or sufficient medical equipment, they will get referred to a regional hospital.

A regional hospital serves a region, accounting for approximately 1 million people. There are 21 regional hospitals which may take referrals from 95 district hospitals. These are hospitals that comprise of

experienced teams of general doctors, with speciality departments, and will have basic imaging present, such as an X-ray machine and ultrasound.

However, for the most specialised care in Tanzania, a patient may be referred to a Consultant (National) hospital. There are currently 4 of these hospitals in Tanzania, and these have specialist departments that are relatively better resourced that district hospitals, and are often also teaching hospitals for medical students. These are the hospitals that also have more advanced imaging capabilities (such as CT scanners).

With regard to the structure of the health provision mentioned above, the problem lies within the funding of each level. There is an unequal distribution of financial, human and physical resources to each level. 85% of heal expenditure is provided to regional and consultant hospitals with only 15% given to district hospital care and below. This is particularly concerning, as regional and consultant hospitals access only 10% of the Tanzanian population. Thus, only 15% of health expenditure is focussed on healthcare that is meant to care for 90% of the Tanzanian population. This is a gross inequality in distribution of finances and resources and therein lies a huge problem in the accessibility and provision of health in Tanzania. In addition to this, although there in an increasing drive towards recognition of preventative care, with increasing vaccination and screening rates, there is still a lack of education amongst poorer, rural communities about preventative healthcare and prompt admission to health centres. Thus, part of the healthcare budget should also be used to focus on healthcare education to children and young adults, so that health awareness is promoted and fostered from a young age.

As a Doctor, I will be ultimately responsible for the care of many patients, and this requires me to build good rapport with my patients. It is important to have a good approach to dealing with patients with all sorts of problems, and with Tanzania in mind, appropriately identity any social, cultural or religious factors that may also be affecting a patient's views and resultant difficulties that they present with.

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Tanzania proved to be a massive cultural shock to me. I was able to identify a number social, cultural, and religious factors that affected the way patients were treated, and also their expectations from us, as medical professionals.

Tanzanians can be of many different religions, and particularly on the coastal areas, where we were located, there was a high percentage of Muslim Tanzanians. This often proved difficult when we had female patients, as they completely refused all contact with male healthcare professionals. It was an insightful experience however, as we had to communicate with a Swahili translator to try and get a history from these women, so that we could then tell the native medical students what further examinations they had to do in order to try and elicit signs that would confirm and deny various clinical expectations in concordance with their history.

In addition to religion, there were also some social factors that affected patient perceptions. Often, patients from rural areas, from low socioeconomic backgrounds, did not want to have a say in their own medical treatment. To them, doctors were perceived like Gods. Miracle-workers. Even as a medical student, they showed me utmost respect, and rather than know what the options were, they wanted to know how we were going to "cure" them, and prayed to us on a regular basis. This was interesting, but also very inappropriate from my end, as we are strictly professionals just doing our jobs to save and prolong life, and as part of that, ALL patients should be offered choice and autonomy.

Finally, a cultural shock that I had during my placement was when I met patients who were Albino or had vitiligo. These patients were actively hunted by rural Maasai tribes in northern parts of Tanzania. They were targeting because their pale, non-pigmented skin was sacred to traditional healers – they were thought to enhance one's soul and make an individual wealthy when their body parts were mixed into charms. This horrific cultural practice was still present, as we saw a patient whose vitiligo patches had been skinned off

his lower limbs, leaving just quadriceps and calf muscle to see. Although these practices are illegal and decreasing in incidence, it was a stark reminder that these cultural beliefs were still present in very rural, Maasai villages in North-Western Tanzania, and so it made me particularly weary of all patients who had albinism, as I wanted to ensure that they were not having social issues or at harm.