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Doctors in Training Grant

PRELIMINARY REPORT

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East African Diploma in Tropical Medicine and Hygiene

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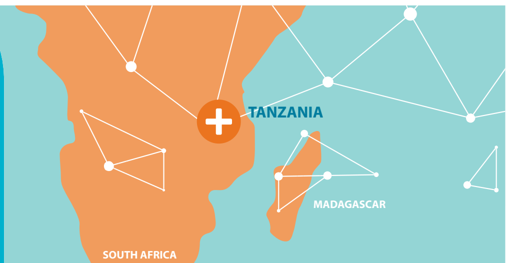

Reviewing health care records.

A week learning about NCDs in rural Tanzania

When most people think about "tropical medicine" or "medicine in Africa", no doubt the image that comes to mind is of all the weird and exotic: malaria and other parasite diseases, extreme traumas, advanced pathology and uncontrolled HIV. However what most may not realise is that in addition to these undeniable challenges, there is also an unrecognised and growing epidemic of non-communicable diseases (NCDs).

By their very name NCDs are defined by what they are not, but in general are considered diseases of long duration and slow progression. The four major NCDs named by the World Health Organisation (WHO) are cardiovascular disease (including hypertension), cancer, chronic respiratory disease and diabetes.

NCDs are leading causes of death in Australia, and indeed around the world: of the 56 million deaths worldwide in 2012, 68% have been attributed to NCDs. Of these deaths, three-quarters occurred in low- and middle-income countries.[1] So there is now a growing body of evidence that these diseases, classically attributed to Western lifestyles and excess, are an increasing problem in sub-Saharan Africa as well.[2, 3, 4]

In 2016, I undertook a Diploma of Tropical Medicine and Hygiene. The course is run by the London School of Hygiene and Tropical Medicine, but to put our learning in perspective and provide a clinical aspect to the program, we were based for three months (the duration of the course) in East Africa. Our time was split between a regional hospital in Tanzania, and the national referral hospital in Uganda. In addition we completed two rural placements, to further our understanding of the challenges of providing health care in these locations.

In Tanzania, my rural placement took me to Muheza, a town in the north-eastern corner of the country. There we spent the week learning about and attempting to quantify the burden of NCDs, and the preparedness of the local health services to deal with them. It was a challenging week but ultimately one of the most enlightening experiences of my time in East Africa – I had not previously recognised or even considered the problem of NCDs in these settings.

Muheza is a small town on the main road that travels across the north of Tanzania, about 45 minutes drive from the coast. The Muheza district has a population of just over 200,000, 90% of which live in rural areas. The district is served by a single hospital, St Augustine's, which has just nine doctors on staff. In addition there are four health centres and 39 dispensaries around the district. The health centres and dispensaries are typically staffed by clinical officers (diploma-trained to diagnose and prescribe certain conditions, and the backbone of health care in Tanzania and much of East Africa).

We had ambitious aims for our week in Muheza; to collect baseline data about the burden of NCDs in the district, to review outcome measures for evaluation of health system preparedness, and to assess the relative importance ascribed to NCDs by healthcare workers in the district. While a week is by no means enough time to get to know a health service or to understand the true depth of the issues at hand, by using several methods we were able to gain a snapshot of the current burden.

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Using audit data collected by the District Medical Officer, we found that in the first six months of 2016, a quarter of presentations to all health care facilities in the district were for NCDs. If hospital data is considered separately, this number rises to almost 50% of presentations.

Additionally, these presentations were largely for cardiovascular disease, hypertension and diabetes – respiratory disease and cancer is almost certainly under-diagnosed and therefore not reported. We were also able to spend time on the wards at the district hospital, where we were able to observe the patient case mix and the relevant facilities and services available.

The next component of our work there was to assess health system preparedness for managing NCDs. This was an absolutely eye-opening experience. To do this, we used a WHO-validated tool called the Service Availability and Readiness Assessment questionnaire, which we modified for our purposes. The questionnaire covers a range of aspects to service preparedness, including equipment and medication to diagnose and manage conditions, and appropriate facilities, guidelines and training. We then completed the questionnaire with senior staff members at the hospital, one healthcare centre, and one dispensary.

It is beyond the scope of this report to cover all that we found, but the results were shocking for all of us, despite having all spent time volunteering or working in similar facilities previously. The hospital alone had equipment available to diagnose and monitor diabetes. While all facilities were able to diagnose hypertension, only the hospital had a first line treatment option available (and only one). Guidelines for management were not available at any of the health centres we visited, and there was no regular training for staff.

Finally we surveyed healthcare workers about their attitudes towards NCDs. Unsurprisingly, the majority of healthcare workers believed that more community education is needed to prevent NCDs, that more resources should be allocated to prevention and management, and that more training regarding NCDs should be available.

Our findings highlighted the high burden of NCDs in the Muheza district, and the currently poor access to diagnostics, medications and other factors required to manage these common conditions. Additionally, we believe the true burden of NCDs to be even greater than what we found, due to under-diagnosis and under-recording. This is the result of a system that is poorly equipped to deal with these issues, especially when there are so many other challenges to meet, and a lack of community awareness about these conditions.

My time in Muheza was a truly eye-opening experience. I had never before given much thought to the burden of NCDs in low resource settings, or how they would be managed. Our attention is so often drawn to the big name causes of malaria, tuberculosis and HIV – and while these are of course all very worthwhile causes, the focus on them to the exclusion of other issues means that we have a growing NCD burden that we are clearly ill equipped to manage. I have no doubt my experiences in Muheza and the lessons I learnt there will stay with me for a long time, and I look forward to working on this issue more in the future – the importance of horizontal health system strengthening is clear.

1. World Health Organisation. Global status report on noncommunicable diseases 2014 [Internet]. 2014 [accessed 2016 Sept 20]. Available from: http://www.who.int/nmh/publications/ncd-status-report-2014/en/

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3. Twagirumukiza M, De Bacquer D, Kips JG, de Backer G, Stichele RV VBL. Current and projected prevalence of arterial hypertension in sub-Saharan Africa by sex, age and habitat: an estimate from population studies. J Hypertens. 2011;29(7):1243–57

4. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. PLoS Med [Internet]. 2006 Nov [accessed 2016 Sept 20];3(11):e442. Available from: http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.0030442

1. Adult medical ward, Muheza District Hospital
2. Members of the study team
3. Outpatients department, Muheza District Hospital

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