

Ruth Stewart

SSC 5c Elective Report

Elective Placement: Mulanje Mission Hospital, Malawi

Elective Subject: General and Tropical Medicine

Dates: 7/4/14-16/5/14

Objectives:

- Describe the healthcare provision at MMH.
- Describe the pattern of common diseases in Malawi and MMH, and discuss some of the challenges faced in managing these.
- Describe some of the challenges of working in paediatrics in the context of poverty and a resource-limited setting.
- Gain confidence in clinical decision-making and patient management

Mulanje Mission Hospital (MMH) is set in a rural area of Southern Malawi, which serves a population of around 80,000 and has a combination of in-patient wards, an out-patient department for triaging and clinics including palliative care, and primary healthcare services. In comparison to the local government hospital, it was well equipped with x-ray and ultrasound imaging, a number of blood tests, and voluntary counselling and testing (VCT) for HIV. Patients accessed the hospital through a number of avenues - predominantly the out-patient department - though also via clinics and teams working in the community such as at the nutritional assessment unit for children, where acutely unwell patients could be identified and transferred to hospital. The hospital was staffed by about 2-4 doctors, clinical officers, interns, nurses and healthcare assistants. I learnt that around 90% of Malawi's healthcare is sourced from Western donor funding, such as from NGO's, the World Bank and UN; thus Malawi is very dependent on external funding for health. A drop in input from abroad would be detrimental to service provision and the health of the population. As a result of independent funding, MMH was less subject to political instability than the local government hospital where money and resources were inconsistently supplied, resulting in influxes of patients to MMH when drugs, blood, and equipment such as cannulas ran out at the district general hospital. This was particularly apparent as we were present during the election period when money was being siphoned off by the government for political campaigns; this provided an interesting insight into the government's priority setting and political agenda.

The majority of donor funding in Malawi is poured into HIV/AIDS, TB, malaria and maternal healthcare - the more 'in vogue' areas that international organisations favour. These diseases do put considerable strain on health facilities, with adult HIV prevalence in Malawi being one of the highest globally at 10.8 in 2012 (Unicef, 2013; World Bank, 2014). Some treatment was delivered free such as ART and healthcare for those less than 5 years old; this was dependent at a national level on the Ministry of Health's decisions, and locally at the hospital management's discretion. I saw first-hand the burden of these diseases during my time at MMH. It was fairly common to have patients presenting with HIV/AIDS complications such as cryptococcal meningitis, oral candidiasis, PCP, and tuberculosis. The large maternal and female departments at the hospital saw women with complications of pregnancy and labour, and gynaecological malignancies. Both in palliative care and

on the wards there were fairly frequent presentations of advanced malignancy, the commonest being Kaposi's sarcoma, which is the cause of 34.1% of cancers in the population. Cervical cancer and oesophageal form the second and third most common at 25.4% and 12% respectively (WHO, 2013). I was humbled by the holistic care provided by the palliative care team at MMH, who were completely committed to improving the quality of life of the patients in their care. Although medications to provide palliation were available, including vincristine injections, morphine and anti-emetics, it was the genuine and sensitive addressing of emotional and social issues by the staff which was so striking. I was also surprised to learn that there is a hidden epidemic of non-communicable diseases in Malawi such as diabetes and hypertension. In fact, it is estimated that around 5.6% of adults age 25-64 have diabetes, and 33% are hypertensive (WHO, 2013).

I observed that there were constant challenges faced by the hospital in delivering care. An example being that whilst at the hospital there was a change in the guidelines for commencing ART treatment, with the threshold being moved to a higher CD4 count, increasing the number of people eligible. Challenges, which would be far less problematic in the UK, arose such as how to contact those already on the register who would likely now need active treatment. In such a poor country where around 84.2% live rurally (Unicef, 2013), with little access to transport, working out the logistics of identifying and treating these patients was by no means a simple task. Despite the obvious positive intentions of this change in guidelines, it had huge implications for already stretched healthcare facilities.

Secondly, patients commonly presented late with end-stage disease or were severely clinically unstable. Both financial and education factors played a role in this, but I was shocked to hear, anecdotally from a staff member at the hospital, that around 70% of patients would seek advice from traditional healers before approaching a healthcare facility. I was surprised to learn that it was less about cost and more to do with absolute conviction that it would be curative. I found that it was easy to be judgemental from an educated Westerner's perspective, rather than seek to understand people's engrained ideas and health-seeking behaviours. The challenge to respect cultural and spiritual beliefs in the face of often brutal and seemingly damaging practices, whilst educating people about basic healthcare, is a real issue there. I was informed that only about 30% of households in Mulanje have one person who has completed primary level education, a figure which has huge impacts both economically and in terms of people's understanding of health. Lastly, patients would frequently discharge themselves early when they were unable to pay to be an in-patient or the guardian could not afford more time off work. This was at times frustrating, as it meant that patients did not always complete courses of medication or went home unstable. A case I saw in paediatrics involved a boy with probable nephrotic syndrome that we had started on high dose steroids. His family requested discharge after about 2 weeks due to costs, and it was difficult to ascertain whether they had understood the critical importance of continuing the steroids and not stopping them suddenly at home. Although asking them to return for review in a week minimised the risks associated, I still felt nervous to think that such a patient would be receiving quite intensive monitoring in the UK.

I spent most of my placement in paediatrics, which was both emotionally and clinically challenging. Around 46% of Malawi's population is under 15 years owing to a persistently high fertility rate at around 5.5 - a decrease from 7.0 in 1990 (Unicef, 2013). This was reflected in the population accessing the hospital – the majority of patients were obstetric and paediatric. Malaria accounts for

around 40% of hospitalisations of children under 5 years in Malawi (WHO, 2013). However, from my experience at MMH this figure seemed to be much higher at about 80%, and on an average day there would be around 8-10 admissions with malaria. Children often presented with co-existent complications such as severe anaemia, dehydration, or sepsis, and it was relatively common to see children with an Hb of around 3-5g/dL secondary to the haemolysis associated with malaria. As such, blood transfusions on the ward were an almost daily occurrence – something I have rarely seen during my medical training. There were challenges involved in this, as often blood was not available, and relatives or staff would be urged to donate. Furthermore, many children suffered a 'double jeopardy' in that often they had co-existent iron deficiency evidenced by a severe microcytic anaemia and malnutrition, and therefore a superimposed haemolysis was extremely dangerous. In one particular case, a seriously ill baby of around 2 months presented with lethargy, cold extremities, and an Hb of around 3.0g/dL; despite transfusion they sadly passed away the next day.

I had intended to spend some time observing the different branches of the PMTCT programme, to appreciate the success and of its implementation in Malawi. I saw various facets of this including the provision of ART to pregnant women with HIV in the community and antenatal clinics, family planning, and under 5 clinics. However, what struck me most when working in paediatrics was seeing first-hand the impact of vertical transmission on child mortality. The under-5 mortality rate is high in Malawi at 71/1000, in comparison to the UK where it is only 5/1000 (World Bank, 2014). There has been a decrease from 89/1000 in 2009, likely due to child immunisation, nutritional programmes, and PMTCT. One case I saw was that of a 12 year-old girl, sero-status reactive and not yet started on ART, who presented with severe and worsening dyspnoea. On examination her chest sounded reasonably clear, though she was saturating at around 85% on air, and about 90% on oxygen; as such, she was too unstable to be taken to have an x-ray. Throughout the day, her clinical condition worsened and she was beginning to develop oedema in her peripheries and her dyspnoea had not improved despite treatment. I discussed the possibility of starting her on salbutamol and furosemide with the clinician, and as this was about to be administered she began to convulse on the ward. Due to her sero-status, there was the possibility of a pericardial effusion, chest sepsis due to PCP, or a cerebral infection; it was hard to see such a young girl so critically ill, knowing that the intensive care she probably required just wasn't available. A second case I saw was that of a 7 year-old girl, sero-status reactive, who had recently started ART and presented with cough, dyspnoea and painful swallowing. On examination, she looked malnourished and cachexic, pale, had oral candidiasis, clubbing of her finger and toe nails, and massive hepato-splenomegaly. Heart sounds were normal, with no evidence of a murmur. She was de-saturating at around 85% on air and had coarse crackles on the left side of her chest. Her x-ray showed cardiomegaly, fluid in the horizontal fissure, and left sided consolidation in the middle zone. She had a WCC of 11, and a macrocytic anaemia (with an MCV of 135). Cardiac USS showed a 19mm pericardial effusion. Although she was MRDT positive and likely had pneumonia, her probable low CD4 count meant that PCP or TB were also likely candidates. I learnt that this type of presentation is extremely complex, as the anaemia could have been secondary to the malaria, malnutrition or a leukaemia, the hepato-splenomegaly could have been related to heart failure or malaria, and the clubbing possibility a result of chronic suppurative lung disease. A decision was made to empirically start co-trimoxazole treatment to cover for PCP. It was difficult and frustrating to see these children with such severe complications of HIV, and hard to accept that the outcome may not be great.

This placement allowed me to gain confidence assessing patients independently and initiating management plans, within a supportive environment. I found that I learnt a huge amount from the clinical officers I was working with as they had a great depth of knowledge about, for example, the varying presentations of tropical diseases such as malaria and HIV/AIDS and management of malnutrition and severe anaemia, and had considerable experience performing practical procedures and surgery – an area that is more lacking in our curriculum. However there were times when the breadth of teaching and knowledge I had acquired from medical school meant I could suggest other diagnoses; the different skills and experience we had allowed us to work as a team and learn from one another.

References

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