

Outside 'your normal four walls': volunteering in Ghana

Roanna Mitford

Roanna spent a year at Royal Lancaster Infirmary as part of her MBChB, and intercalated in the Liverpool School of Tropical Medicine; and will be completing her fifth year in Liverpool. She is the winner of the 2009 MBMJ prize for best article by a junior doctor/student ('Audit into the effectiveness of self-help groups', published in Spring 2009, Volume 5 Number 10), and has recently spent her summer volunteering in Ghana. Here, she writes about her experiences there.

INTRODUCTION

A career in medicine is generally challenging and stimulating, yet there may be times when new horizons would invigorate and inform normal routine. There are many experiences to enrich practice and apply skills in other environments for short periods. This article outlines an opportunity I was given, and explores ways others may be found.

I was keen to make the most of time I had available this summer and made enquiries around my department. It is surprising what is available when you start investigating. I was fortunate to assist with research in Okomfo Anokye Teaching Hospital in Kumasi, Ghana.

MY RESEARCH EXPERIENCE

In Ghana there is routine screening for HIV, hepatitis and syphilis of blood intended for transfusion. However, despite the fact that it is endemic in Ghana, malaria is not currently screened for in donated blood.⁽¹⁾

Malaria causes 300 million new cases and two million deaths each year in Africa, affecting children especially.⁽²⁾ The majority of cases occur when the disease is transmitted by mosquito bites. However, as this is a blood-borne condition, transfusion is an additional transmission route, and a significant number of malaria cases could be caused this way.⁽²⁾ The research I was involved with in Ghana investigated how effective screening would be in preventing deaths by malaria, and which would be the best screening method.

Immuno-compromised patients (with HIV, cancer or malnourished), children and pregnant women are at an increased risk of developing malaria,⁽³⁾ so the study was restricted to these. Patients were

excluded if they were unable to consent, unable to come for follow up, if they had had a transfusion within a month prior to the start of the study, or had malaria parasites in their blood on admission.

Most of the work involved monitoring a patient's vital signs during the transfusion and for three days afterwards for transfusion reactions and signs of malaria. Microscopy, rapid antigen testing and ELISA (Enzyme Linked Immunosorbent Assays) tests were carried out on blood taken from each transfused bag to compare the different screening methods. Patients were followed up on days one, three, seven and 14 after transfusion. This was to check for signs and symptoms of malaria, obtain a blood sample and check they were not taking anti-malarial medication. I was able to take an active part in all of this, both on the wards and in the laboratory.

From the data collected so far, ELISA is the most sensitive screening method and also has an advantage over microscopy (the gold standard) in that it is less time consuming. However, ELISA is more expensive. Cost-benefit analysis is important in any hospital setting. In hospitals such as Okomfo Anokye where resources are scarcer, it is vital. This could affect which screening method is eventually adopted, if any. DNA testing will be used at the end of the study to determine whether patients with malaria contracted this from the blood transfusion or from mosquitoes whilst in hospital.

Pending the results of the study (which is continuing), decisions will be made as to whether it is better to throw away blood containing malaria parasites or to give prophylactic treatment



Okomfo Anokye Teaching Hospital

for those patients most at risk instead. We are usually taught prevention is better than cure, but when blood for transfusion is limited (at times there may be no blood at all in the blood bank in Kumasi), and often needed urgently, it may be in the patient's best interest to give the transfusion first, and treat with anti-malarials after, if parasites are found to be present. This is an improvement on the current situation – as donated blood in Africa is not screened for malaria, infected blood is being transfused. If it is decided that screening is not appropriate, decisions will also have to be made whether to routinely provide prophylactic malaria treatment, and for which groups this should be provided.

OTHER ACTIVITIES

In addition to the fascination of being actively involved in useful research, I also benefitted from getting to know members of the medical and laboratory staff. The medical students were preparing for examinations and it was interesting to compare the cases presented for their practical exams to ours. In addition, the interactions between different members of the hospital hierarchy were different in some ways to those I have experienced in the UK. Laboratory staff were keen to show me round Kumasi itself and their friendship and enthusiasm were extremely welcoming. Traditionally, everyone shares their food so lunchtimes were very varied. It took me a little while to realise I should be sharing my sandwiches, but I was able to make up by baking cakes and scones. These were 'interesting' as I had no scales and no fresh milk, and I mistook plain flour for self-raising flour. Nevertheless everything was eaten enthusiastically.

The local dialect in Kumasi is Twi, so although the national language is English, those patients who had not been to school were more difficult for me to communicate with. Therefore, I worked with Ghanaian students who were able to translate when necessary. They also helped me learn some Twi, which was much appreciated by the patients. The children on the paediatric ward were especially engaging. It also meant that when out in Kumasi itself I was able to get to know the local people and their points of view.

Kumasi is in the Ashanti region, in the centre of Ghana. The Ashanti king plays an important part in politics and decision making in Ghana, and is probably the second-most powerful person after the president. Okomfo Anokye hospital itself is home to the Okomfo Anokye sword. Okomfo (a 17th-century priest who helped establish the Ashanti culture) was said to have placed this dagger in the ground. No one since has been able to remove it. As succeeding in this is supposed to herald the demise of the Ashanti kingdom, I decided not to try for myself.

During weekends, I was able to use local transport to travel to neighbouring places of interest. Often the journeys were quite an adventure as when the tro-tro (minibus) broke down and we needed rescuing. On each journey there was always a song to sing along to, food being passed around to share and many friendly, caring individuals whose life stories I was able to listen to.

My time in Ghana coincided with the football World Cup, which was an incredible experience as the Ghanaian national team performed so well. The atmosphere intensified the further they progressed, and their disappointment in the quarter finals was hard for them to bear. Football is important

in the UK, but for a country where the sport represents a possible escape from poverty if you have the talent, football is part of everyone's hopes and dreams. Young boys spend all the daylight hours of their free time playing.

OPPORTUNITIES IN VOLUNTEERING

I realise how privileged I have been to visit such a friendly and vivacious country, but medical professionals generally are in an excellent position to extend experiences beyond their normal four walls. For yourself, you may find some of the following suggestions a useful starting point for broadening your horizons:

- Remember, the UK offers many opportunities. Try contacting the organisers of music festivals, and of the Olympics who are already recruiting for 2012 (sportsmedicine@london2012.com).
- Ask amongst your colleagues for prospective research opportunities, or occasions when your medical skills could be used. Even if you are not intending a career in academia, you probably still have useful research and data handling skills.
- Use the internet to research charities to which you could offer help. In Google, a search on 'doctors volunteer' brings up more than five million entries. Many are well known, such as Mercy Ships which gives placements from two weeks upwards (www.mercyships.org.uk/) and Médecin Sans Frontières, which works in very challenging conditions (www.msf.org.uk/), but there are many small charities who would welcome your help (I spent an amazing time with the Nepal Leprosy Trust (www.nlt.org.uk/) on an elective for instance). AMREF UK even offers flying doctor opportunities in Africa (uk.amref.org/what-we-do/flying-doctors/volunteer-physician-programme/).
- Voluntary Service Overseas (www.vso.org.uk) offers worldwide opportunities for people able to commit to longer time spans, and give financial support.
- If you wish for a longer time, consider when in your career you could take a break (after you qualify, finish your Foundation Year Two year, or retire for instance).

There can be difficulties finding time to fit such opportunities around a professional life, but the benefits are so profound that negotiating the time off can make it immensely worthwhile.

REFERENCES

1. Rahman, M, Akhtar, GN, Rashid, S, Lodhi, Y. Risk of malaria transmission through blood transfusion and its detection by serological method. *Pak J Med Sci* 2003;19:106-10
2. Diop S, Ndiaye M, Seck M, *et al.* Prevention of transfusion transmitted malaria in endemic areas. *Transfus Clin Biol* 2009;16:454-9
3. Bloland PB, Wirima JJ, Steketee RW, Chilima B, Hightower A, Breman JG. Maternal HIV infection and infant mortality in Malawi: evidence for increased mortality due to placental malaria infection. *AIDS* 1995;9:721-6