A heart surgery mission to Ghana: An Article written for the Society for Cardiothoracic Surgery in the UK and Ireland

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In February 2019 a team of 12 from James Cook University Hospital went on a heart surgery mission to Kumasi in Ghana. It was our first mission and we want to share some of our experiences so that if you are sitting there right now wondering if your unit should or even could do a heart surgery mission then this might be of some help to you.

Several things came together to make us want to go on a heart surgery mission. I myself had been to see Dr Emily Farkas, an American heart surgeon (who spends half her career doing missions) do a heart surgery mission in Enugu, Nigeria in September 2017, after she set up a new www.CTSNet.org volunteerism portal. I was shocked by the desperate need for such missions in Western Africa. Nigeria with a population of 190 million people has no functioning heart surgery unit at all anywhere in the country and this mission was confronted with lines of rheumatic patients aged in their 20s and 30s whose only chance of survival was heart surgery from an overseas mission.

I have honestly never performed an operation in my whole life that could not have been done a good deal better by someone else ! But here if the operation is not performed by the visiting team then that patient will not survive. It is as basic as that.

When I came back to the UK, the natural choice to discuss this with was our own Enoch Akowuah. He grew up in Kumasi, Ghana before coming to the UK aged 15 to continue his education, which led to university, medical school, cardiothoracic training, and eventually his consultant position here at James Cook, where he has been an outstanding colleague and a national leader in valve surgery, including the set-up of two RCTs in aortic and mitral surgery. But for him it had also been a lifelong ambition to go back to his home country, where he returns yearly to see his parents, but this time to help the Komfo Anokye Teaching Hospital.

Thus the decision was made to do the mission. That was the easy bit ! The next easy bit was to form a team. Every single member of our team who we asked to come were just perfect and seemed to embrace the challenge beyond our wildest expectations.

And now for the hard bits ! We had no idea what to expect. We didn't know what was out there, we didn't know what they had or didn't have, or their level of training. Luckily Enoch struck up a great relationship with Dr Isaac Okyere, the local surgeon and also we talked on the phone to missions who had been there before. Dr Farkas agreed to come and help us for the mission as a kind of 'mission proctor' which was great too.

But as surgeons we truly didn't appreciate the huge amount of preparation and equipment it actually takes to perform heart surgery which does sound a strange thing to say, but you will never understand this until you actually see 117 boxes meticulously put together by your fabulous team of scrub nurses, CICU nurses, intensivists, and by your perfusionist, all of which needed to be placed in a container on a 40 tonne truck and shipped 2 months before the mission. I certainly feel silly now, thinking that all we needed were our loupes !

The next thing was funding. It cost us £30,000 to put on this mission, and that was with many generous donations of bypass equipment, echo machines, valves and ICU equipment. We were very pleased to receive £11,000 from LivaNova, but again our team raised £20,000 by local events and fundraisers which was beyond our wildest expectations. We found that new missions and adult heart surgery missions are not as easy to fund as children's congenital missions by established groups and large companies often take a year to make decisions !

So then we went on the mission! The travel was easy. The welcome was warm, but walking into an empty room where our ICU was to be located was the first eye opener, shortly topped by air coming out of the wall in theatres when our perfusionist was expecting oxygen ! We basically created a whole ICU from an empty room in 12 hours and Kim resuscitated their perfusion machine to run off gas cylinders, and survive the daily power-cuts in a similar time. So many other things happened that we don't have space here to tell you but that is why we recorded a daily blog of the mission so that you can see what it is like to go on a mission. You can see it all here : https://www.ctsnet.org/article/daily-video-blog-medical-mission-ghana-february-23-march-1-2019

So every patient survived. We also performed pacemakers which was a great bonus and we all want to go back on the 19th of October 2019 to do it all again !

I personally think this was the most valuable and rewarding week of my life in surgery (and yes a better person than me did do all the operations out there and I just watched !) There is no other opportunity as stark as offering treatment to those without any other options. I also think that every unit in the country should strongly consider doing at least one mission a year, although having been on this mission I am delighted to hear that many units do indeed do many missions, but perhaps do not tell the world about it, and thus we should consider reporting this nationally every year via the SCTS and being proud of all this work that is being done charitably.

Furthermore the SCTS has 11 committees but not a single person on any committee with a role to promote, assist or coordinate overseas charitable missions which surely must be a mistake that is very easy to rectify, and could be paired with a regular SCTS annual meeting multidisciplinary session on mission experiences.

We at James Cook also strongly believe in the Cape Town Declaration (1), which states that the 'fly-in' single missions are not the way to address the scourge of rheumatic heart disease but we must build up the capacity of the local units towards independent practise, which is why we are attempting to build a group of 4-5 mission groups to be able to perform a series of quick-fire missions at Kumasi with the sole intention of bringing the local unit up to speed in order to perform their own safe surgery in the future.

I believe the time is right for us all to get together through the SCTS to build a united mission base in the UK that we can be truly proud of and that can be used to set up units in areas of the greatest need to provide their own independent heart surgery. I hope you agree !

Joel Dunning

1. Zilla P, Bolman RM, Yacoub MH, Beyersdorf F, Sliwa K, Zühlke L, Higgins RS, Mayosi BM, Carpentier A, Williams D The Cape Town Declaration on Access to Cardiac Surgery in the Developing World. Cardiovasc J Afr. 2018 Jul/Aug 23;29(4):256-259