



Sound Seekers providing the gift of hearing

Dr Courtney Caron reports on her work in Malawi with Sound Seekers who provide a comprehensive audiology service at Malawi's largest hospital

Hearing loss occurs in every country in the world. The World Health Organisation (WHO) estimates that there are 360 million children and adults in the world living with a bilateral moderate to profound hearing loss. Two thirds of those individuals live in developing countries where access to healthcare and audiology services is often limited or non-existent. Sound Seekers works to help address these challenges in some of the poorest countries in the world.

Malawi has a population of over 16 million and, if using the WHO estimate that four per cent of the population in Africa has a hearing impairment, the inference is that it has more than 650,000 people with hearing loss.

Hearing loss in Malawi comes from a variety of causes. These include ageing and noise exposure, both of which are common in Europe and the United States. However, there are some causes of hearing loss that we do not see in developed countries. Medications used to treat malaria, tuberculosis and HIV/AIDS can all cause hearing loss. Medications such as gentamicin, an antibiotic rarely used in Europe or the United States but very common in Malawi, also causes hearing loss. Furthermore, people usually wait until much later to seek medical attention for a problem than they would in the western world meaning that the outcome is often significantly worse. High fevers associated with conditions like malaria or meningitis can also cause significant hearing loss or much worse. Otitis media, a middle ear infection, often goes untreated causing the eardrum to burst and drainage to flow freely from the ear. The WHO reports that chronic middle ear infections are the leading cause of hearing loss in sub-Saharan African countries and are the cause of death in 51,000 children under the age of five in developing countries each year. Also, those that have contracted HIV/AIDS

are at a higher risk of developing chronic middle ear problems. Currently, there is an estimated HIV rate of 10% in Malawi.

Hearing loss is often something that is ignored or dismissed. There are many severe illnesses in Malawi, including HIV/AIDS, malaria, meningitis and tuberculosis that can cause serious complications or even death. Complications from or medications used to treat these can cause hearing loss as well – something that is too often overlooked. Even if people are fortunate enough to survive these illnesses, there are life-changing consequences with no real access to health care or education for those with hearing loss. Undiagnosed or untreated hearing loss can cause a multitude of problems such as social isolation, depression and reduced vocational or educational opportunities.

Prior to 2010, there were no audiologists in Malawi and the audiology services were extremely limited. In 2010, two Australian audiologists, Peter and Rebecca Bartlett, moved to Lilongwe to start the first audiology clinic in the country. During their five years in Malawi, they have trained six audiology officers (technicians) through a programme they established at the African Bible College (ABC). Sound Seekers has been working very closely with the audiologists in Lilongwe since 2012. In 2012 and 2013, Sound Seekers sponsored two nurses from Queen Elizabeth Central Hospital (QECH) to travel to Nairobi in Kenya to complete a year long course in audiology. These two nurses returned to provide audiology services at QECH. Sound Seekers recognised the importance of this training but knew more needed to be done to create any form of sustainable programme.

In July 2014, Sound Seekers started its largest undertaking to date. A four year project to build a comprehensive audiology service at Malawi's QECH, the country's largest public hospital. QECH is located in the southern region of Malawi, in Blantyre, which is the second largest city in the country. Dr Courtney Caron, an American audiologist, was recruited to help develop Malawi's first comprehensive audiology service, including implementing audiology provisions within the Ministry of Health and QECH. Sustainability is a key focus of this project, with a cornerstone of training locals to become audiology professionals. In September 2015, four Malawians started studying at the University of Manchester to complete an MSc in Audiology sponsored by Sound Seekers and Hear the World Foundation. Two nurses will travel to Lusaka, Zambia in February 2016



for a year long training course to become additional audiology officers at QECH. I will manage the service until I hand over to the Malawian nationals, which is planned for mid-2018. Training is vital to create a sustainable programme; however, these professionals will also need an adequate facility and equipment to perform their duties.

Construction began in early 2015 on a freestanding audiology clinic on the grounds of QECH. This building is set to be complete by the end of October 2015. Plans for the building were based on the Bartlett's clinic at ABC in Lilongwe with a few slight modifications and improvements. The building will be completed with a vast array of audiology equipment and furniture. Many services will be offered in the new clinic including comprehensive hearing assessments, hearing aid fittings, balance and dizziness assessments, earmould production, tinnitus counselling etc. These services will be available to patients of any age, from new-borns to geriatric patients. All services rendered at this clinic will be held to high international standards of care.

According to the World Bank, 84 per cent of Malawi's population live in rural areas while 50 per cent of the country is at or below the national poverty line. Seeking treatment for any illness is often delayed due to a lack of funds for transportation. Health centres in rural areas lack medical professionals, basic medications and supplies and there are no audiology services available. The only solution is to bring the clinic to the patients. For many years, Sound Seekers has provided outreach services to rural areas in Malawi and recently applied for a grant to cover the cost of a new outreach vehicle, a specialised trailer with two sound booths built into it and more portable equipment. This will allow for regularly scheduled outreaches to take place in the southern region of the country so that those who cannot travel to Blantyre will only have to travel to their local health centre to receive the audiology services they need.

Educational opportunities for those who have a significant hearing loss and are unable to use hearing aids are very limited. There are currently six schools for the deaf in Malawi where instruction is in sign language. All of these schools are overcrowded. Admission to a deaf school needs to occur before the age of six otherwise a child will not be admitted. So for children who lose their hearing later on in childhood, there are no educational opportunities. Innocent is 14 years old and suffered from severe malaria last year. He was given quinine, a medication known to cause hearing loss, as a treatment to save his life. Innocent developed significant hearing loss from either the malaria or the quinine to treat it. He attempted to return to school following his



release from the hospital but was unable to hear his lessons. Luckily, audiology services were available at QECH through Sound Seekers and two weeks later, Innocent had his hearing tested and was fitted with hearing aids in both ears. He returned to school and was able to hear his teacher and friends again and now has a chance to secure his future.

Prior to audiology services, including hearing aid fittings, becoming available in Malawi, children with lesser degrees of hearing loss were also admitted to deaf schools. This reduced even further the places available in deaf schools and you can't remove a child from a deaf school who only uses sign language to communicate. If these children had been identified when they first developed hearing loss and fitted with hearing aids, it is very likely they could have stayed in mainstream school like Innocent.

Sound Seekers' project in Blantyre is the beginning of helping to treat people with ear and hearing issues in Malawi. Once the services are turned over to the local audiologists, the ratio of audiologist to those with hearing loss will still be woefully under what is needed and even though there will always be challenges with the overwhelming amount of patients, each audiologist can only focus on one patient at a time. Developing the audiology profession in the country will make a huge difference to the lives, and future welfare, of many Malawians.

Dr Courtney Caron is an American audiologist from Las Vegas, Nevada. She received her Bachelor of Science degree from the University of Nevada Reno in Speech Pathology and Audiology in 2009 and her Audiology Doctorate from Arizona State University in 2013. In 2014 she started working with Sound Seekers to help set up a comprehensive audiology service in QEC Hospital in Blantyre, Malawi. In 2018 the service will be handed over to the first Malawian audiologists.