

Strategies to combat ear and hearing disorders in a poor African country, the Malawi National Plan



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Abstract

There are no global guidelines for establishing locally relevant strategies in poor resource settings. This paper presents an approach that was followed in Malawi and may be relevant in similar settings. Faced with high burden of ear and hearing loss, Malawi which is among the poorest nations in the world has laid the foundations for a comprehensive national ear and hearing care program. The ear nose and throat unit has been built and equipped at the referral hospital in the Southern Region of Malawi. The ear nose and throat unit is being built at a referral hospital in the Central Region. 29 ENT Clinical Officers have been trained. 3 Audiological Officers have been trained. We believe the keys to such success were based on sound local situational analysis, wide consultations with relevant stakeholders, international technical assistance, development of specific objectives that are locally relevant and achievable, and an effective fund raising strategy for key result areas such as local training of ENT Surgeons.

Keywords : Ear; hearing; Disorders; Strategies; Poor-settings; Malawi

Background

Disabling hearing loss effectively means either difficulty with or inability to communicate using speech and language. In 2013 the World Health Organisation (WHO) released estimates based on 42 population-based studies which suggest that there are 360 million persons in the world with disabling hearing loss which is 5.3% of the world's population. Of these thirty-two million are children and the prevalence of disabling hearing loss in children is greatest in South Asia, Asia Pacific and Sub-Saharan Africa [1]. The problem of addressing ear and hearing care is compounded by the paucity of both human resources and of programmes to address ear diseases and hearing loss. This applies particularly in Sub-Saharan Africa. There is a shortage of personnel trained for identification of hearing loss. In most of these countries there is a severe shortage of personnel (audiologists) trained for assessment and management of hearing disorders [2]. Equipment and facilities in which or from which to deliver support services are few and far between. Hearing aid provision relies largely on charitable donation. Education, if available, is usually provided in the few existing "Deaf Schools". Equally lacking are medical personnel trained for management of ear disease (especially ENT surgeons).

Malawi is one of the poorest nations in the world. Its 2008 Malawi Population and Housing Census had estimated that 4% of the population had some form of disability and of these people with disabilities; self-reported hearing impairment represented 16.5% [3]. Among children aged less than 18 years, hearing loss was the most common form of disability (23%). There were only 2 schools where 300 deaf and hard of hearing children were educated along with 2 resource centers where 50 children were being helped. A total of 30 teachers were being trained in the education of children with hearing impairment at Montfort Training College in Blantyre. Visiting ENT Surgeons from various African and European countries provided some ear and hearing care training to medical students and undertook a limited number of mostly minor surgeries. In 2007 an externally trained Malawian ENT surgeon was appointed as the country's first full time ENT surgeon at Queen Elizabeth Central Hospital (QECH) to spearhead the establishment of an ENT department and the development of ENT and Audiology services to the country [4]. There are no global guidelines for establishing locally relevant strategies in poor resource settings. This paper presents an approach that was followed in Malawi to achieve successful outcomes and may be relevant in similar settings.

Methodology

In Malawi, despite high burden of ear and hearing disorders there was no strategic plan to combat these diseases before 2012. A team from Queen Elizabeth Central Hospital ENT Department and its international collaborators prepared for the first 4 year Strategic Plan to predominantly develop infrastructure and train personnel to initiate and lay the foundation for future development of services. To design the plan international collaborations were important for technical and financial assistance. The Hearing Conservation Council (HCC) in the UK and CBM International provided support for the development and implementation of the first four-year National Plan for Ear and Hearing Care [5]. A Consultant was hired to review policy documents and other National Plans and conduct interviews with Key Informants. The policy documents that were reviewed included the Malawi National Policy on Equalization of Opportunities for People with Disabilities (2006-2011), Malawi Poverty Reduction Strategy Paper (MPRSP), Malawi Economic Growth Strategy (MEGS), Malawi Growth and Development Strategy II (MDGS II), Malawi Health Sector Strategic Plan (2011-2016), and Millennium Development Goals (MDGs). A total of 7 Key Informants were interviewed by the consultant.

Results

The development of a National Strategic Plan took 6 months. One year later the plan was accepted and signed into use by the Ministry of Health in Malawi. There are six key objectives which were included into a National Plan [5]:

- a) To provide training to personnel to enable Ear (ENT) and Hearing (Audiological) Care.
- b) To provide health infrastructure, medical equipment and IT support.
- c) To improve procurement and supply of medical care and rehabilitation supplies.
- d) To reduce preventable and curable causes of ENT diseases and rehabilitate sufferers.
- e) To provide and maintain quality of ENT and Audiological care through research, monitoring and evaluation.
- f) To effectively implement and maintain management and supervisory systems.

After 4 years of implementation the progress made after the introduction of the National Strategic Plan the following achievements have been recorded:

Training

29 Medical Assistants have been upgraded and trained as ENT Clinical Officers and have been deployed. Cost of training is 5,000USD per individual. A second ENT surgeon has been trained externally in Nairobi, Kenya. The cost of this training is 30,000USD. 3 Audiologists received basic training externally in

Nairobi, Kenya at the cost of 16,000USD per trainee. 6 others received basic training at the African Bible College (ABC) in Malawi. Of these 3 are undertaking further training externally to become Audiology Specialists at a cost of 40,000 USD per trainee. 2 Nurses from Queen Elizabeth Central Hospital and 1 member of the Starkey Project staff are undergoing Hearing Specialist Training at Starkey Hearing Institute in Lusaka, Zambia. 155 Nurses and Clinicians have been trained in Primary Ear Care. Several curricula have been developed in areas of Primary Health Care, upgrading Medical Assistants to ENT Clinical Officers, Health Surveillance Assistants (HSAs), upgrading ENT Clinical Officers to Senior ENT Clinical Officers, ENT Specialist training for local doctors at MMed level and BSc (Audiology).

Health Infrastructure, Medical equipment and IT support

Several improvements in capacity have been achieved. An ENT unit has been established and equipped in Queen Elizabeth Central Hospital in Blantyre at a cost of 1,500,000USD, an Audiology unit at a cost of 300,000 USD, an Audiology at a private African Bible College (ABC) in Lilongwe and planning for both an ENT unit with clinic and theatre and an Audiology unit at a second central hospital (Kamuzu Central Hospital) in Lilongwe has been completed and its funding for construction has been secured.

Supplies for Medical Care and Rehabilitation

There has been an improvement in patient care and rehabilitation. Hearing aids have been introduced and routinely provided to patients with support from various partners such as Sound Seekers, Starkey Hearing Foundation and Hear the World Foundation. A total of 1,256 patients have been fitted with hearing aids. Medicines and equipment to ENT units are provided by the Malawi government through the Ministry of Health and partners such as CBM International.

Reduction of Preventable and Curable Causes of ENT Diseases and Rehabilitation of Sufferers

Outreach programmes for identification of people with ear and hearing problems are routinely undertaken. Prevention of disabling hearing impairments which receives little funding from government for hearing aid provision has been provided in agreements with NGOs such as CBM, Sound Seekers, Starkey Hearing Foundation and Hear the World Foundation. Assisted education for children with hearing loss remains a problem with only a limited number of places available in "Deaf Schools" and only a limited number of teachers being trained for deaf education.

Provision and Maintenance of high quality ENT and Audiological care achieved through Research, Monitoring and Evaluation

Feasibility study on integrating ear and hearing care into the primary health care system in Malawi was started in 2015 in five health centre catchment areas in Thyolo and is expected

to finish in 2016. Follow-up study on barriers to accessing referral services for ear and hearing care are to be undertaken in collaboration with London School of Hygiene and Tropical Medicine International Centre for Evidence in Disability in 2016.

Effective Management and Supervisory Systems implemented and maintained

With support from HCC a Project Manager was recruited in 2013 to coordinate implementation of the National Plan for Ear and Hearing Care in Malawi including mobilizing resources for the implementation of activities in the national plan. The National Steering Committee on Ear and Hearing Care Committee comprising the Directorate of Clinical Services in the Ministry of Health, College of Medicine and partners involved in ear and hearing care in Malawi was formed.

Conclusion

Our experience shows that although there are no global guidelines for establishing locally relevant strategies to combat ear and hearing disorders in poor resource settings, it is feasible to do so by following certain procedures. After putting in plan a successful 4 year plan in Malawi we believe the keys to such success were based on sound local situational analysis, wide consultations with relevant stakeholders, international technical assistance, development of specific objectives that are locally relevant and achievable, and an effective fund raising strategy for key result areas such as local training of ENT Surgeons.

Several elements required to provide comprehensive Ear and Hearing Care at various levels of health care in our resource constrained country came to the fore. At community level these included addressing disorder awareness, case identification, conducting Primary Ear and Hearing Care training, providing individual and parental support services (e.g. Support Groups and sign language training), integrated education, vocational training and prevention. At Second Tier level considerations included Advanced Ear (ENT) and Hearing (Audiology) Care services and support services for areas with deficiencies in provision of services (e.g. Deaf School Education). At Tertiary Tier level considerations included Specialised Ear (ENT) and Hearing (Audiology) Care services, technical support services, training services and research and quality evaluation. Adoption of the National Strategic Plan enabled inclusion of Non-Governmental Organisations (NGOs) and Private Practice in collective action against ear and hearing disorders in Malawi.

Following approval and the initial implementation of the Plan five stakeholders who were involved in the implementation identified significant barriers to implementation of such a plan. Such barriers included lack of financial support from the Malawi government, lack of clarity on risks and assumptions of adopting the National Plan, lack of will and vision from some implementers, lack of clear plan to retain trained staff, and lack of adequate numbers of like-minded implementing

organizations in the country. Lack of a plan to retain staff has not so far proved a problem since staff trained have for the most part been in salaried positions before undertaking training and have remained in their positions afterwards (often with an increased salary) meaning their training has resulted in career growths. Similarly there is no evidence that lack of will and vision from some partners has badly affected the process. Lack of financial support from the government remains a big challenge as funds raised from various organisations have mainly funded the processes of developing a National Strategic Plan and its implementation. Organisations with an interest in ear and hearing problems have largely joined the National Plan effort coordinated through the College of Medicine.

The first step in the provision and implementation of any intervention is conceptualizing and developing a policy document. The National Plan for Ear and Hearing Care as a policy document has provided a framework for the provision and implementation of ear and hearing care services in Malawi. While funding has been one of the major bottlenecks in the implementation of the National Plan for Ear and Hearing Care just like in any other intervention, partnership with likeminded organisations has played a pivotal role in bridging the funding gap including providing technical support in the development and implementation of the National Plan. Further efforts are required in scaling-up and sustaining the gains that have been registered so far including carrying out research to generate data and increase understanding of ear and hearing care Malawi.

Declarations

- a) Ethics approval and consent to participate (not applicable)
- b) Consent for publication (given by all authors: WM, RT, CP and TN)
- c) Availability of data and material (All quoted data can be found in Malawi Population and Housing Census -2008, Queen Elizabeth Central Hospital ENT Department, and Malawi National Health Development Plan for Ear and Hearing Care)
- d) Competing interests (We acknowledge the grants from CBM, Hearing Conservation Council, The Michigan State University Starkey Foundation, Sound Seekers, Beit Trust, Ear Inc Australia and other significant donors, that funded the development of National Strategic Plan and its implementation)

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References

1. Stevens G, Flaxman S, Brunskill E, Mascarenhas M, Mathers CD, et al. (2013) Global and regional hearing impairment prevalence: an analysis of 42 studies in 29 countries. *Eur J Public Health* 23(1): 146-152.
2. Fagan JJ, Jacobs M (2009) Survey of ENT services in Africa: Need for a comprehensive intervention. *Global Health Action*.
3. (2008) Population and Housing Census, National Statistical Office, Zomba, Malawi.
4. Mulwafu W, Nyirenda T, Fagan JJ, Bem C, Mlumbe K, et al. (2014) Initiating and developing clinical services, training and research in a low resource setting: the Malawi ENT experience. *Tropical Doctor* 44(3): 135-139.
5. (2013) Government of Malawi, Malawi National Health Development Plan for Ear and Hearing Care, 2013-2016. Lilongwe, Malawi. Ministry of Health.



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