

Project Evidence Brief #1

How to include people with ear and hearing conditions in the healthcare system

Lessons from the PrevENT project, Zambia



Project partners: Beit CURE Hospital Zambia
CBM UK & CBM Zambia
Funding partners: Scottish Government



Overview

The provision of primary care services for ear and hearing conditions can reduce the burden on central health facilities and allow timely interventions. However, training with appropriate equipment is essential for care providers to carry out their duties well.

Collaboration between health care professionals and community volunteers can play a key role in effective local implementation. Community-based volunteers can help in raising awareness of ear health issues and signposting to services, while also helping to reduce stigma that discourages people to seek treatment.

Introduction

Hearing loss is both a cause and consequence of poverty in Zambia, and as much as 6% of the population are estimated to experience hearing loss, with more again estimated to have diseases affecting the ear.

Adults with hearing loss are disproportionately at risk of unemployment, face communication barriers and reduced access to information and services, with consequent impacts on their health and socioeconomic wellbeing. Children with hearing loss face reduced language and cognitive development and educational outcomes, with studies indicating that most Zambian school classes include at least one child with a progressively disabling chronic ear infection.

Zambia is served by just a single audiologist and five ear, nose and throat (ENT) specialists (WHO, 2021a), against a population of 19 million. This is estimated to constitute just 1% of the workforce requirements to service the population needs for EHC provision (WHO, 2021b). Transport to and treatment in tertiary ENT services in Lusaka are costly, and late referrals worsen morbidity outcomes. Basic

understanding of hearing loss and ear care is currently low, representing a missed opportunity to promote beneficial health behaviours, promote prevention, early referral, and rehabilitation. The PrevENT project was designed to respond to this gap (refer to box above), and this Brief provides an outline of what the project approach can tell us about what works to improve ENT services in resource constrained settings.

Project: PrevENT, community ear and hearing health care and rehabilitation of disabling hearing loss

Location: Central Province, Zambia

Timeframe: 2017-2022

A partnership between:

- Beit CURE Hospital Zambia

The main objective of the project was to promote accessible, quality ear and hearing care to a wider number of underserved people with ear and hearing conditions, through strengthening primary health systems and raising awareness in the community.

The National ENT Plan was implemented, which utilised the World Health Organization (WHO) primary ear and hearing care model to support capacity development of Zambian health workers in the field of Ear, Nose and Throat (ENT) and Audiology.

The project trained 100 nurses/clinical officers in Primary Ear and Hearing Care (PEHC) including hearing loss identification, treatment of common ear diseases, referral pathways, health promotion and inclusion at Beit CURE Hospital, alongside concurrent procurement of equipment and supplies for the 106 selected primary health facilities. The health care workers were then also trained to disseminate health promotion training to community health workers.

Methodology

The evidence for this brief draws directly from the PrevENT project end review, conducted by independent evaluators from the University of Edinburgh. The team reviewed project documentation covering the project lifecycle and relevant wider literature. They conducted key informant interviews with CBM staff, Beit CURE Hospital staff, district health officials, hospital administration at Kabwe General Hospital, staff from Broadway Secondary School and the National ENT coordinator; as well as focus groups discussions with audiology technicians, nurses and clinical workers trained in Primary Ear and Hearing Care (PEHC), community-based volunteers and patients at community outreach clinics. The evaluation used the Medical Research Council (MRC) Process Evaluation Framework to build a Theory of Change from which to chart and evaluate how programme activities produced changes.

What the evidence tells us

1. Establishing primary ear and hearing services reduces the burden on central health facilities and increases the number of people able to receive appropriate interventions

With trained personnel and equipment in the primary health facilities, the burden of treatment for ear and hearing conditions in the central health facilities was significantly reduced, and many cases were treated in situ. While the issue of congestion at the central hospital was resolved, more patients who required further specialist care were referred through the established primary health facilities and they were then able to receive appropriate interventions at the central hospital.

"[Prior to the intervention], people have been suffering away from the facilities, not knowing where to get health care [for ear and hearing conditions]." - Head of Clinical Care at Kabwe General Hospital (central hospital)

2. Community-based volunteers can effectively raise ear health awareness and signpost communities to appropriate services

A range of stakeholders, including the volunteers themselves, reflected positively on their role in raising awareness of ear health issues. Community misconceptions around self-medication, for example "insertion of urine, cooking oil, tomato leaves and cannabis leaves", were corrected through the outreach interventions. Certain level of resistance from the community was noted at the beginning, but reduced over time through the efforts of ongoing campaigns. The communities served by the community-based volunteers were extremely large yet the messaging was successful, as evidenced by the long distances travelled by some patients to access ear care services.

3. Sensitisation reduces stigma in the community, but needs to be ongoing

Community stigma, for example the association of "bad things about people with hearing impairments", can potentially prevent people from seeking treatment. It takes time to address ingrained stigma issues but an overall reduction in stigma was noted even within timeframe of the project. Sensitisation work is an area for continued support to fully respond to established fears and negative associations within communities.

4. Training with the appropriate equipment is essential to allow health workers to effectively carry out their specific ENT service role

Different roles and professions within the service require training support, including health care workers, audiology technicians and community-based volunteers. Training in use of appropriate equipment is important to enable care workers to then immediately apply their acquired knowledge. The PrevENT project stimulated additional requests for training to develop further skills in ear and hearing care, illustrating an appetite for professional development and recognised gaps in service provision.

“We work well with the volunteers, without them we couldn’t manage our work as health care workers, we rely on their support, they know who has a problem and it is they who are able to communicate with them and bring them to the facilities”.

- A nurse in the project

5. Collaboration between different professions enables effective provision of primary and central care services

Collaboration between volunteers, nurses and audiology technicians is a notable contributor to improved services. Good integration between health care workers also supported effective referral pathways, such that cases which could not be well-managed at the primary level were referred to technicians with the additional training required to provide more specialist services. One audiology technician also commended an additional multiplier impact that improved integration had on wider health services: “the relationship has been great, and we receive so many clients through this process. Additionally, we have successfully integrated their roles into work they are doing with other programmes, such as HIV, which has worked very well”.

“The health facility we work with support us tremendously, especially in our outreach programmes...the relationship with health care workers is good and smooth, as they understand us well and respect us and the work we do”.

- A volunteer in the project

Learning from experience

- 1. Primary care services are effective at reaching people with ear and hearing care, reducing the burden on central health services.**
- 2. Community-based volunteers can play an important role in raising awareness of ear health issues and available services.**
- 3. Sensitisation by community-based volunteers is an effective way to reduce stigma, but needs to be ongoing.**
- 4. Training with appropriate equipment is essential to allow different roles to carry out their duties effectively.**
- 5. Collaboration between different professions should be enhanced to allow effective implementation of the project**

Recommendations

1. The PEHC model should be extended to other Zambian Provinces and elsewhere.
2. It is important to ensure continuity of services for sustainability. This will be achieved through a gradual increase of government support, as support from CBM and BEIT CURE declines.
3. A mechanism to establish collective accountability for the delivery of the services is needed until the government assumes full ownership from the project partners.
4. Establish a National ENT Coordinating Committee to engage with government on resourcing long term provision of ENT services and national roll out.

Conclusions

This evidence brief outlines some key strategies to facilitate access to health services by underserved people with ear and hearing conditions. Establishing primary care services is a priority, allowing timely interventions while effectively reducing the burden on central health facilities. Training relevant professionals and volunteers with appropriate equipment is essential for them to carry out their respective duties well.

To support the implementation of services, it is important to raise awareness of ear health issues and available services, and reduce stigma through working with community-based volunteers. Collaboration between different health care workers and the community volunteers is also critical for effective service provision and smooth referral pathways.

In Central Province Zambia, the intervention package provided through the PreVENT project led to positive change: an increased awareness of ear health issues; reduced community stigma; and improved access to appropriate services for people with ear and hearing conditions. It is important to capitalise upon this success through ongoing government maintenance and extension support, establishing a national ENT Coordinating Committee is recommended to embed the lessons for continued improvement in ear health services.

References

Smith, C. and Grant, L. (2022). PreVENT: Community ear and hearing health care and rehabilitation of disabling hearing loss Final evaluation report June/July 2022.

WHO. (2021a). [Making ear and hearing care accessible for all in Zambia](#)

WHO. (2021b). [World Report on Hearing 2021](#).

Acknowledgements

This evidence brief summarises the independent evaluation by consultants from the University of Edinburgh. We would like to express our gratitude to all the contributing researchers, participants and authors and reviewers. We are particularly grateful to the healthcare workers, community-based volunteers and patients who shared their personal experiences of the project through focus group discussions and interviews.

Sincere thanks are due to CBM Zambia and BEIT Cure Hospital Lusaka for their invaluable contributions to this project.

Lastly, we would like to thank the Scottish Government for funding the PreVENT project.

For further information please contact Advocacy@cbmuk.org.uk

Promoting accessible and inclusive Primary Ear and Hearing Care

Lessons from the PrevENT project, Zambia, 2017-2022

In Zambia, there are significant challenges to implementing Primary Ear and Hearing Care (PEHC):

1 audiologist and 5 ear, nose and throat (ENT) specialists serve a population of 19 million

High transport and treatment costs are a barrier to treatment

Late referrals worsen morbidity outcomes

Low understanding of hearing loss and ear care as well as stigmatisation

How can we include people with ear and hearing conditions in health care systems in low resource settings?



RAISING AWARENESS

Awareness raising of existing services and referral mechanisms in communities as critical signposts to treatment



STIGMA REDUCTION

Ongoing sensitisation and stigma reduction of ear & hearing conditions emboldens people to seek treatment



PRIMARY SERVICES

Establishing PEHC services reduces the burden on central health facilities and enables more patients to be treated locally



EQUIPMENT & TRAINING

Training with the right equipment is essential to allow health workers to effectively carry out their PEHC roles



TEAM COLLABORATION

Collaboration between community volunteers, nurses and audiology technicians improves coordination between health services



Without a united approach like this, which develops comprehensive services, you can overdevelop outreach without services, and it cannot work. This model needs to be recognised as a success.

Dr Mwamba, Project Partner



We work well with the volunteers. Without them we couldn't manage our work as health care workers, we rely on their support. They know who has a problem and it is they who are able to communicate with them and bring them to the facilities.

Nurse, PrevENT Project



Stigma does exist, most people are subject to vulgar comments and exclusion. But the response to the programme has been positive, and over time, stigma has reduced.

Community Volunteer

