The Journal of Laryngology & Otology
November 2001, Vol. **115,** pp. 869–873

Review Article

Community ear care delivery by community ear assistants and volunteers: a pilot programme

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Abstract
Hearing impairment is a major public health problem in Nepal. The present service delivery, however, is mainly hospital based and is limited to large towns. Those people residing in rural areas lack many basic needs including ear care services. The collaborative community volunteer-based ear care pilot programme implemented in Banke, Nepal aims to reach out to those rural areas by establishing sustainable primary ear care services, empowering and utilizing local resources. The focus of the programme is to promote multi-sector improvement in sanitation, nutrition, immunization, breast-feeding and timely care and support to ear patients to help prevent hearing impairment mainly from the sequelae of otitis media.

Key words: Hearing Disorders; Ear Disease; Primary Health Care

Introduction

Nepal, one of the least developed countries of the world, faces many hurdles in its path of development principally because of limited resources, the fight against illiteracy, communicable diseases and socio-political problems.

Ear disease in the community is neglected. As it rarely creates an emergency situation people do not rush to the health centres and, moreover, those living in the rural areas invariably do not have access to good medical centres where appropriate ear care can be given.

There are around 40 ENT surgeons in Nepal most of whom are based in the Kathmandu valley and in other large centres either associated with private medical schools or with towns bordering with India. Government health posts in rural areas are run by health workers who have little skill in treating ear disease.

Of the many ear diseases chronic otitis media (COM) is considered the main cause of hearing impairment in development countries, in contrast to otitis media with effusion (OME) in developed countries. The ear survey conducted in 1991 by the Departments of ENT and Community Medicine of the Tribhuvan University Teaching Hospital and the Britain Nepal Otology Service (BRINOS)[1] estimated a prevalence of 16.6 per cent hearing impairment in the country (equivalent at the time to 2.17 million persons) and 7.4 per cent (1.48 million) of the population studied had eardrum pathology. Of hearing impairment in the school age group, 55.2 per cent was associated with otitis media or its sequelae. Most individuals who reported current ear pathology (61 per cent) had never attended a health post and of those 39 per cent who received ear drop treatment, 84 per cent still had serious pathology. The survey report recommended that to reduce hearing impairment in Nepal, particularly in the school age group, a priority should be the effective treatment of otitis media.

A primary care programme conducted by the ENT department of the Tribhuvan University Teaching Hospital in collaboration with BRINOS and IMPACT (An International Initiative Against Avoidable Disability) took place in the Kavre district in the eastern end of the Kathmandu valley over a period of four years (1993–1997).[2] This programme involved training government health workers in the management of ear disease. The programme was in part successful but the major problem was that the health workers did not devolve their knowledge to village level. Consequently, relatively few patients

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Accepted for publication: 1 September 2001.

attended the health post complaining of ear disease simply because they were not aware that the health worker would be able to assist them.

Ear care services in mid- and far-western regions of Nepal

The 150-bedded Bheri Zonal Hospital (BZH) in Nepalgunj receives patients from two of the five development regions in Nepal. It has, over the last 10 years, been staffed by a senior ENT consultant. As most of the people living in rural areas are not aware of the consequences of ear disease, this service has not been given maximum use. BRINOS provides a twice-yearly surgical service in Nepalgunj but only operates for a limited period. Traditional health care services have been available for many years but the practice of the traditional healers, medicine sellers and wax removers may create problems as they use ototoxic drugs, unhygienic herbs, oil, animal urine and unsafe instruments to relieve itching and to remove wax from the ear.

The existing government health care network, principally delivered through health posts, does not have manpower trained to deliver ear care.

The need for community ear care

Rural people suffering from COM have to struggle against the more serious life-threatening problems such as communicable diseases and poverty which are a routine part of their lives. COM initially rarely creates alarm; discharge and gradual hearing loss are neither recognized nor considered important. Parents in the rural areas are less concerned with the academic performance of their children. A child with ear disease easily performs household tasks, works on the farm with their parents, takes cattle for grazing and also helps to look after their younger siblings. This scenario has prompted us to consider the need for an effective way to prevent deafness in the community.

The annual per capita income of Nepalese people is still around 150 to 200 US$ and it is estimated that the government spends 1 US$ per year on health care.[3] These figures alone explain their socio-economic situation and level of awareness of health issues. In such a context surgical activities will not make sufficient inroads to combat ear disease and it is, therefore, important to make people aware that prevention is better than cure. This underlines the need for a community care programme to prevent deafness and ear disease.

A number of ear disease screening camps have been conducted in Bardia, Banke and Surkhet districts by the ENT surgeon from the BZH in collaboration with the Swiss Red Cross (SRC) Community Programme. The impression gained from these camps of the need for primary ear care was discussed by SRC, BRINOS and BZH authorities and it was proposed to launch a community volunteer-based primary ear care programme using a similar model to the highly successful SRC community eye care programme.

Methods

Preliminary planning

SRC, BRINOS and BZH appointed a health worker, with one year of community health training after high school, as the first community ear assistant (CEA). During his training period he visited a range of individuals and institutions within the community in order to understand their perception of deafness and hearing impairment, to assess the current ear care provision and to collect information on knowledge, attitude and practice. Those visited included health workers, traditional healers, traditional birth attendants (TBA's), female community health volunteers (FCHV's), school teachers, local leaders and non government organization (NGO) development workers.

This exercise served to highlight the lack of ear care and the need to bring together all the main authorities concerned with education, health and development. An orientation/advocacy workshop was held to stress to these authorities that the prevention of deafness and ear disease has a public health significance and plays an important role in personal development. This workshop emphasized the particular concern for children as hearing impairment has a long-term effect on early communication, language development, auditory processing, psychosocial and cognitive development, and education progress and achievement. It became clear from the workshop that even very senior community leaders were astonished to learn of the consequences of hearing impairment and ear disease. Among the attendants were representatives of local village development committees (VDCs), district health office authorities, the Nepalgunj Medical College (a new private medical school), the Zonal Hospital, the district education office, and NGOs working for child welfare. These institutions agreed to lend their support by allowing the use of their current networks to disseminate and implement activities within the community.

The SRC, BRINOS and BZH pilot community-based ear care programme was started in the Banke district in March 2000 and involved five VDCs with an overall population of 60,000. These VDCs have a dominant Tharu community. The Tharus are the indigenous (tribal) community of the Terai and are considered to have the least developed socio-economic status.

The programme aimed to maximize the use of existing community resources and to promote awareness that many ear problems are avoidable or treatable. It identified the formal and informal health resources available in the VDCs and the various indigenous community organizations and provided the necessary training input to improve their knowledge and skills in primary ear care. These training sessions were organized at community level, usually at health posts, VDC offices, or in schools. As a policy, women were encouraged to become volunteers as their role is paramount in family life and childcare. Self-learning techniques were used, as far

as possible, especially in the mobilization/motivation of indigenous personnel such as traditional healers, FCHVs, TBAs and community volunteers.

This phase of the programme also concentrated on:

(1) collection and analysis of community needs for ear health care;
(2) support to increase community awareness of ear health issues (these included techniques such as working with non-formal education classes, mother's groups and schools);
(3) dissemination of information concerning preventative ear health care;
(4) training of local health care providers, including health post personnel;
(5) primary clinical care in the management of COM by the CEA.

At each stage the existing health post staff were involved in the programme in order to gain their necessary assistance and share ear care skills with them, thus encouraging a sustainable service delivery.

Training of the community ear care assistant (CEA)

The community ear assistant was given one month of training by the ENT consultant which covered the following areas, 1) basic anatomy and physiology of the ear, 2) basic ear examination procedures, 3) diagnosis and primary management of common ear diseases e.g. wax, foreign bodies, otitis externa including otomycosis, OME, acute otitis media (AOM) and COM and its complications, 4) diagnosis and causes of sensorineural hearing loss (SNHL), 5) skills to assess hearing levels (whispered and conversational voice tests, tuning fork tests and the use of the field of audiometer), 6) awareness and prevention of the use of ototoxic drugs and sources of noise-induced hearing loss, 7) protocols for referral to the ENT surgeon.

Prime emphasis was given to the diagnosis and primary management of COM. The CEA also received a specially condensed course on the design of training packages and on the communication skills necessary to deliver these packages to community workers. By joining a number of primary eye care mobile camps by the BZH and SRC, the CEA gained the experience of how community mobile camps are managed.[4,5]

The following additional activities were implemented by the CEA with support and monitoring from the ENT consultant and the SRC programme manager:

(1) helping the community to select their volunteers for ear care;
(2) providing basic training on ear care to the volunteers;
(3) providing refresher training and continuing education for the volunteers through meetings and mobile primary ear care camps;
(4) holding school ear health programmes, mainly at primary school level;
(5) helping to upgrade skills and knowledge on primary ear care among health workers in the existing health posts;
(6) providing support with ear health education within the community by mobilizing trained volunteers and school teachers;
(7) developing a primary ear care booklet and other educational material.

Working with volunteers

In Nepal, voluntary work is respected in all communities. Services to others, especially the disadvantaged or vulnerable is considered a prestigious and responsible contribution to the community. The programme utilized this concept to mobilize community resources to improve ear health. The volunteers who provide free services were nominated by the VDC authorities in co-ordination with other community institutions. At present there are 45 volunteers serving the 60 000 population of the programme area.

These volunteers were provided with basic training which involved:

(1) informing the community families about the socio-economic impact of hearing impairment/deafness;
(2) promoting understanding of the disease process in order to bring about changes in the existing fatalistic attitude by sharing their knowledge of primary ear care, and by informing people about the service delivery of ear care by the CEA, health posts, hospital ENT departments and ear surgery camps;
(3) communicating appropriate health education to prevent ear diseases;
(4) promoting breast-feeding, immunization, adequate nutrition and improved personal hygiene;
(5) referring ear patients, especially those with COM, initially to the CEA or the health post.

The basic training took place over four days. Three days were spent understanding the fundamentals of ear care and the last day was linked to a primary ear camp. Here the volunteers were able to practise ear health education and counselling and gained practical skills in cleaning discharging ears using specially designed harmless cotton ear wicks. They also taught these skills to mothers.

Linking a primary ear camp with the training programme was found to be a valuable activity for both the volunteers and the community as this provided an opportunity for the volunteers to express their learning to the community members thus giving them an introduction to the community as ear care volunteers and recognizing their future responsibilities.

A health post worker from each of the programme areas was also trained in primary ear care at the BZH in order to standardize service delivery for patients referred by the volunteers. The health post personnel were invited to each of the volunteer training programmes in order to provide teaching on service delivery in the health posts and education on immunization, breast-feeding and nutrition.

Following the initial training, the CEA regularly conducted mobile camps with the volunteers during which there was a continuing educational programme.

Results and achievements

The first community volunteer-based ear care programme in Nepal has been in operation for just over 18 months. During this time it has successfully informed the community and government authorities of the need to combat ear disease and has gained their cooperation. The CEA has held 20 mobile primary ear camps and found 951 (46 per cent) of the 2076 patients to be suffering from COM.

The programme has ably demonstrated the need to empower the community to effect their own health care. As a result of the programme there has been a 20 per cent increase in the number of patients from rural communities attending the ENT department of the BZH. On many occasions the volunteers escort the patients to hospital. The patients are identified by a card as coming from the areas covered by the programme. This action is considered one of the motivating factors for voluntary service to the community. As the community has responded well to the programme further CEAs have been appointed to cover five more VDCs in the Banke district and, with the support of the Nepalgunj Medical College, another assistant is being trained to cover seven VDCs in the Bardia district. The King Mahendra Trust for Nature Conservation have incorporated community ear care into their ongoing community health programme and have sent two senior health workers for a one month primary ear care training course at the BZH. They are also supporting a CEA to cover seven further VDCs in the Bardia district.

Future plans

Working on the experience gained from the Kavre primary care programme (1993–1997) conducted by the ENT department Tribhuvan University Teaching Hospital in association with IMPACT and BRINOS and the Banke community volunteer-based ear care pilot programme in association with the BZH, SRC and BRINOS it is now time to consider the development of a nationwide community volunteer-based ear care programme. Using the skills of around 40 ENT surgeons in Nepal, who together belong to the Society of ENT Surgeons of Nepal, it is proposed that each surgeon starts a primary ear care project by appointing a CEA to develop a local service that will eventually cover all the VDCs in the area in which the ENT surgeons works. It is suggested that not only government ENT surgeons should be involved but also those working in academic establishments. Using the experience gained and the facilities offered by the Tribhuvan University Teaching Hospital it is suggested that a meeting of the stakeholders in ear care in Nepal is held:

(1) to explain the method of delivery of primary ear care by using community ear assistants and volunteers;
(2) to advocate the significance and necessity of a nationwide expansion of primary ear care and the need for government input to make it sustainable;
(3) to describe the training programme for the CEA and community volunteers;
(4) to confirm that the CEA(s) will be trained centrally with a programme agreed by the Society of ENT Surgeons of Nepal and that they will then receive their continuing education and training from their mentors, namely the local ENT surgeons;
(5) to encourage the ENT surgeons to advertise, hold interviews and appoint their own CEA(s);
(6) to discuss the process of follow-up of the project by perhaps six monthly or annual meetings held by rotation in different centres around the country attended by the ENT surgeons, managers, CEA(s) and other ENT personnel involved in primary ear care.

The same process of involvement of the local people as described in this paper cannot be overestimated. This process may be helped by the use of videos and photographs of primary ear care activities performed in the Banke community pilot scheme.

Ideally, the salaries of the CEAs should be found from within Nepal. Discussions should be held with the local authorities, such as District Development Committees, Municipalities, VDCs, and District Health Officers to seek their cooperation and contribution. Additional local contributions could be sought from Lions' Clubs, Rotary or Jaycee's. The training costs and provision of simple instrumentation including field audiometers could be met by donations from NGOs.

Conclusion

This programme has successfully shown the value of empowering people within poor communities with skills and knowledge to improve their health through preventative measures. It has been considered important to combine this with education on other public health issues such as general health, sanitation and nutrition. The value of training community volunteers has already increased the awareness of the local population that something can be done for their ear problems and that there is a well-planned route for ear care delivery. The programme has already expanded within the 18 months since conception and the time is now ripe to extend the programme to other parts of the country.

Acknowledgement

We wish to give special thanks to Mr Arnie Boulter, Swiss Red Cross Delegate for Nepal who was instrumental in the conception and planning of this programme and for his valuable guidance in its promotion.

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Mr N. Weir takes responsibility for the integrity of the content of the paper.
Competing interests: None declared