

Editorial Review

WHO and its role in the prevention of deafness and hearing impairment

The World Health Organization (WHO) is a specialized agency of the United Nations which was set up in Geneva in 1948. The constitution of WHO establishes it as 'the directing and coordinating authority on international health work'. It is responsible for helping all peoples to attain 'the highest possible levels of health'. The central structure of WHO includes a policy-making body termed the World Health Assembly (WHA). The WHA consists of delegates of all member states (meeting yearly), an executive board of 32 individuals elected by the assembly, and a secretariat, consisting of a director-general assisted by technical and administrative staff.

The World Health Organization has produced, or been associated with the production of, a number of documents. Perhaps the three that are best known to the medical profession in general are the *International Classification of Impairments, Disabilities, and Handicaps (ICIDH): A manual of classification relating to the consequences of disease* (World Health Organization, 1980), the *International Statistical Classification of Diseases and Related Health Problems* (World Health Organization, 1992), and the *State of the World's Vaccines and Immunization* (World Health Organization and United Nations Children's Fund, 1996). Although it is now being revised, the first document has been used extensively in areas such as anthropology, demography, economics, education, legislation, policy, rehabilitation, sociology and statistics.

In relation to hearing, there is a need to distinguish between the terms 'impairment', 'disability' and 'handicap' as they are used by WHO (and in the UK) and as they have been used in the USA. In respect of hearing, the WHO considers 'impairment' to be a measure of defective auditory function; 'disability' is the auditory problem experienced and complained of by the individual; 'handicap' encompasses the non-auditory consequences (e.g. occupational, sociological, psychological, economic) of hearing impairment and hearing disability (Stephens and Héту, 1991).

Current terminology recognizes the necessity for addressing both individual needs (for example, in respect of rehabilitation and technical aids) and the shortcomings of society (various obstacles to participation). Stemming from the International Year of Disabled Persons, 1981 and the World Programme

of Action (concerning Disabled Persons)¹ 'handicap' has been further specified as a function of the relationship between persons with disabilities and their environment (United Nations, 1994).

A 1985 World Health Assembly resolution in relation to the prevention of deafness and hearing impairment had pointed out that much deafness and hearing impairment is avoidable or remediable and that developing countries had the greatest need for the prevention and remediation of hearing problems. A 1995 WHA resolution had estimated that there were 120 million people with 'disabling hearing difficulties' worldwide and urged member states to set up National Programmes for the prevention of deafness and hearing impairment. It was envisaged that technical assistance to such countries should be provided by WHO.

'Prevention' encompasses primary, secondary and tertiary prevention. *Primary prevention* of hearing impairment signifies the prevention of hearing impairment by preventing a disease that causes hearing impairment either occurring or reaching the stage where an impairment results. *Secondary prevention* signifies preventing an impairment progressing to a disability. *Tertiary prevention* signifies preventing a disability progressing to a handicap (tertiary prevention may be considered to overlap with rehabilitation).

Since 1985, the World Health Organization has had a programme for the 'Prevention of Deafness and Hearing Impairment', usually referred to as the PDH programme. The PDH programme (PDHP) is overseen and evaluated by members of the WHO's Expert Advisory Panel on Prevention of Deafness and Hearing Impairment. These experts met recently in Geneva (World Health Organization, 1997). The 17 participants included four members of the staff of WHO and three representatives of IMPACT. HI (Hearing International), IALP (International Association of Logopaedics and Phoniatrics) and IFOS (International Federation of Otolaryngological Societies) were also represented. The seven other participants came from Denmark, Egypt, Ghana, Japan, Russia and the UK.

WHO has defined what it terms a 'disabling hearing impairment'. For adults this is defined as a permanent unaided hearing threshold level of 41 dB or greater. It will be noted that a quarter of a century ago, the British Association of Otolaryngologists 'suggested that the level of hearing loss appropriate to the requirements of the Industrial Injuries Act

¹Adopted by the UN General Assembly by its resolution 37/52 of 3 December 1982.

would be an average of 40 dB or more over the 1,000, 2,000 and 3,000 Hz frequencies' (Department of Health and Social Security, 1973). *Plus ça change, plus c'est la même chose.*

For children under the age of 15 years, a disabling hearing impairment is defined as a permanent unaided hearing threshold level of 31 dB or greater.

For both children and adults, the 'hearing threshold level' is to be taken as the better ear average hearing threshold level for the four frequencies 0.5, 1, 2 and 4 kHz. At the moment, more than 180 million adults (individuals aged 18 years or more) in the world are estimated to have a disabling hearing impairment; by the year 2000, the number will exceed 200 million (Davis, 1997a). Staggering though these figures are, are they underestimates? The National Study of Hearing showed that '26 per cent of adults report great difficulty with speech in noise' (Davis, 1989). However, difficulty hearing speech in a background of noise is a question of degree; provided that the noise level is sufficiently high, everyone will have difficulties.

Deafness and hearing impairment are major causes of disability in developing countries. Unfortunately, they are generally neglected in comparison with other disabling conditions. The reasons for this neglect are multiple. Principally, this is because, as in more developed countries, deafness and hearing impairment produce unseen disability. In developing countries, more so than in more developed countries, there is a lack of awareness of the possibilities for prevention as well as uncertainty about the most appropriate methods for treatment and rehabilitation. In developing countries, in particular, there is ignorance of the true size and nature of the problems and a conspicuous lack of resources to tackle these problems.

PDHP is already addressing these issues by developing a standardized 'ear disease assessment protocol' to enable countries to conduct national surveys rapidly. The protocol has been used already in pilot studies in several countries (Botswana, India and Saudi Arabia) and in a joint full-scale national survey of blindness and deafness in Oman. The full protocol, including computer software for data analysis, will be available for distribution by the middle of this year.

PDHP is formulating integrated strategies to prevent deafness and hearing impairment. By convening technical meetings, the auditory adverse effects of ototoxic drugs and chronic otitis media (Smith, 1996) are already being addressed by the programme. Guidelines will be produced shortly. Current planning by the programme concerns noise damage to hearing and the provision of appropriate affordable hearing aid services for developing countries. Future plans encompass the production of guidelines and training manuals for primary ear care (including human resource development), guidelines for courses in Public Health Otology/Audiology, and guidelines for the formulation and management of National Programmes for the prevention of deafness and hearing impairment.

The PDHP not only encourages but also provides technical assistance to countries so that they can develop their own national plans for the prevention of deafness and hearing impairment. PDHP has already assisted Oman to undertake a national prevalence, causes and needs survey; it has assisted Jordan in planning such a survey. It is also assisting Turkmenistan to develop its own national plan.

Until such time as all the national plans can be completed, assessment of the prevalence of hearing impairment and deafness and of the rehabilitative requirements must needs be estimated. In cases where national data are not yet available, the data, for example, from the UK National Study of Hearing can be used to provide estimates (Davis, 1997b). Many countries do not have the wherewithal to mount their own national studies of hearing so they will have to rely on data from other countries, ever aware of the uncertainties which are associated with such extrapolations. Nevertheless one should continue to press for the epidemiological studies that are required to provide the accurate, population-based data on which the extent of the problem can be determined. Accurate data are needed for governments to determine priorities within health programmes, to select and monitor preventive strategies, to predict treatment and rehabilitation needs and to determine the individual and societal costs of hearing impairment as well as the benefits of prevention.

Additional to epidemiological studies, integrated strategies for the prevention of deafness and hearing impairment need to be developed. In this field of major public health importance one needs to address the problems which are amenable to intervention, giving priority to the poorest developing countries. Governments need to be persuaded to implement satisfactory programmes for the prevention of deafness and hearing impairment. This persuasion will need to be particularly so in developing countries. Here the need is greatest. In many cases, there has been little activity and no national programme.

However, there has been an increasing awareness by some governments, international organizations, NGOs and charitable donors that deafness and hearing impairment may be significant contributors to poverty and hence a brake on economic and social development. But the inter-relationship between socio-economic factors and the health of the body in general, or of the ears in particular, is complex. Nevertheless the 1995 London Declaration, which arose out of a conference organized jointly by Action in International Medicine and WHO, called on all institutions and associations of health professionals to urge the political leaders of their country to make public commitments to reduce poverty and improve the health of their populations (Smith, 1997).

WHO's PDHP is in a strong position to address these problems because it has new resources and is expanding. The WHO system of Regional Offices and country representatives enables it to talk directly to governments and to give them technical assistance to formulate appropriate plans. Moreover, WHO's

network of collaborating centres provides the academic and technical backup and linkages which are so essential to the success of the PDHP. At present there are four collaborating centres (located in Bangkok, Copenhagen, Liverpool and Malmo), with more in the pipeline. Furthermore, links with non-governmental and other organizations provide access to additional resources which strengthen PDHP's capabilities and enhance the implementation of its policies and guidelines. However, further resources are needed if the programme is to continue to expand.

Neither WHO nor its PDHP wish to be isolated from the world at large; indeed to be so would be inconsistent with their *raison d'être*. As the Director-General of WHO wrote recently: 'To foster health development and international health action in a spirit of respect, solidarity and equity, WHO's first responsibility must be to promote a genuinely open dialogue involving all peoples, cultures and health-related groups and institutions. All partners concerned, both within and outside the Organization, should feel authorized to speak and be heard with respect and attention.' (Nakajima, 1996.)

WHO is not alone in its endeavours. Having been founded in 1924, IALP is probably the most senior of the organizations concerned with the prevention and rehabilitation of hearing and speech disorders at all age levels. IMPACT, which is associated with the name of Sir John Wilson, was established in 1981 under the triple umbrella of UNDP, UNICEF and WHO. Although IMPACT has been said to be the acronym for *l'Intervention mondiale pour l'action contre des traumatismes*, like ISO, IMPACT was not intended to be an acronym. The full name for this organization is the 'International Initiative Against Avoidable Disablement'. It co-ordinates a global campaign against all avoidable disabilities. The aims and objectives of a new global agency, HI (Hearing International), with which PDHP has close links, were set out in the Graz Resolution (Kapur, 1996). IAPA, IFHOH, IFOS, IMPACT and ISA are all members of the governing body of HI. HI's journal (with same name), which has been edited by Jun-ichi Suzuki (now President of HI), is dedicated to 'Networking the Centres for the Prevention of Deafness and Hearing Impairment'. Major non-governmental organizations such as the *Christoffel-Blindenmission* (CBM) are expanding in order to undertake further work in the prevention of deafness and hearing impairment. CBM has already made a substantial contribution to PDHP; IFOS and Hearing International have also given support.

Three years ago, following a critical analysis of the role of the World Health Organization, the Assistant Editor of the *British Medical Journal* concluded with

the words: 'WHO says that it has three main functions: to set normative standards; to provide technical advice and assistance on medical matters; and to advocate changes in health policy. During its 46 years history the first two functions have been a constant and uncontroversial backbone through which WHO has earned its reputation for scientific excellence.' (Godlee, 1994.)

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