WORLD HEALTH ORGANIZATION GUIDELINES FOR HEARING AIDS IN DEVELOPING COUNTRIES

In September, 2001, AUDINEWS referred to the World Health Organization (WHO) “Guidelines for Hearing Aids And Services For Developing Countries,” and indicated a future issue would focus on them. This then, is a three part presentation: 1) Key points from the “Executive Summary”; 2) A review of the discussions when the guidelines were launched; and 3) A report from one of the non-profit manufacturers of aids for the developing world. Part 1 is factual. Part 2 is a report as seen through the eyes of your editor who attended the meeting. Part 3 is information from a manufacturer with, we hope, all sales references deleted in order to maintain the objectivity of ISA and its members.

1) Key points from the “Executive Summary of the WHO Guidelines for Hearing Aids and Services For Developing Countries”*

Current production of hearing aids is one-tenth the global need and only one quarter of these are distributed to developing countries. There is an urgent need for appropriate and affordable hearing aids and services for developing countries, taking into account the scarcity in resources, skills, training, and finances in those countries. The guidelines set out minimum requirements and recommendations for such hearing aids and services, and are particularly targeted at manufacturers, distributors, policy makers and service providers at all levels. It is intended that the hearing aid requirements given here would enable manufacturers to produce aids at low cost and in bulk with currently available technology. Priority for hearing aids and services should be given to children with an average hearing impairment in the range 31 to 80 dBHL in the better ear in the frequency range 500Hz to 4kHz, followed by adults with an average hearing impairment in the range 41 to 80 dBHL in the better ear in the same frequency range. Behind the ear hearing aids are the preferred option, but body aids may still be required. Manufacture or assembly, and servicing, should be feasible in developing countries.

*Copies of the full Guidelines may be obtained by writing to Dr. Andrew W. Smith, Prevention of Blindness & Deafness (PBD), WHO, Geneva, Switzerland (smithaw@who.ch)
Key Points From WHO Executive Summary - A.W. Smith - continued from Page 1

Batteries should be 675 size zinc air or rechargeable type. Availability of a reliable supply of batteries is essential.

Earmolds should be made by a two stage syringe technique in locally established static laboratories. Universal or stock earmolds should only be used as a temporary measure. Provision should be made to replace earmolds at recommended intervals.

Services to accompany hearing aid fitting should include awareness campaigns, identification programs at the primary health care level, and accurate assessment by trained skilled individuals using proper equipment.

Provision of a hearing aid includes supply, pricing, distribution, delivery, and fitting as well as reliable sources for aids, batteries, earmold materials, spare parts and repairs. These elements require adequate systems for importation, storage, stock control and delivery. Costs should be kept low through bulk purchase. Hearing aids and services should be provided to the user at a price they can afford or, in certain cases, they may be provided free. Hearing aid services should be designed and implemented as a low cost sustainable, community service. The performance of the whole program for provision of hearing aids should be monitored and evaluated using performance and outcome indicators for achievement of specified targets. A system of quality assurance should be set up and utilized.

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Student Scholarships For Phoenix ISA Congress

President Sharon Fujikawa has announced there will be six registration scholarships to the next International Congress of Audiology. These will be awarded by the ISA Scientific Committee to students in audiology for the Congress to be held in Phoenix, Arizona, USA, from September 26-30, 2004. In addition, Dr. Ted Glattke who will preside over the Congress has arranged for housing for the students. We are also seeking funding for air transportation for these future audiologists. Awards will be granted for submissions based on the results of basic and clinical research. Awardees will be asked to present their research either in a platform session or poster. Please ask your students to indicate their interest in this program by submitting the following information to my e-mail address: sfujikaw@uci.edu.

Name ________________________________ E-Mail ________________________________
Research area________________________ Country of residence________________________
School______________________________

DID YOU KNOW?
The International Society of Audiology is chartered in Switzerland and legally operates under Swiss law, even though day to day operations are located in the Netherlands.
2) Report from the meeting which launched the Guidelines for Hearing Aids and Services for Developing Countries (July, 2001) (George Mencher)

The purpose of the meeting was:
1) to raise awareness of the size of the problem of deafness and hearing impairment in developing countries;
2) to propose the solution of providing sufficient appropriate and affordable hearing aids for developing countries;
3) to stimulate manufacturers and service providers to address the problem on a large scale.

There were 45 persons invited, each representing a program, group of manufacturers, society, NGO, agency, government or organization which would either produce hearing aids, fit and distribute them, pay for them, or use them. The WHO Guidelines for Hearing Aids and Services for Developing Countries were presented and became an official document. They have now been widely distributed. The key points of the discussion were:

1) The WHO definition of “Disabling Hearing Impairment” begins at 41 dB or greater over 15 years of age, but at 31 dB or greater for those under 15. This is based on average hearing threshold levels at .5, 1, 2 and 4 kHz. This definition may be unsatisfactory as a child with a temporary conductive loss at .5 kHz might be classed as having a “Disabling Hearing Impairment”. There was also discussion about the role of long standing conductive losses in such a definition. An assigned task force will determine if .5 kHz should be deleted from the definition. In the interim, many present indicated they would not be comfortable using the WHO definition in reporting data to their governments.

2) WHO estimates there are 250 million persons in the world with disabling hearing impairment (3.6%). Of those, 6 million will not benefit from a hearing aid. There are approximately 5.6 million hearing aids now in use. Thus, there are over 238.4 million persons \(250 - (5.6 + 6) = 238.4\) who could use a hearing aid who do not have one. The greatest number of aids are in North America and Europe with a sales per capita of 1:197 persons who need an aid. In the developing world, the number is considerably less, with a sales per capita of 1:3476. WHO has a free computer based epidemiological database program being utilized by many countries to determine the incidence and prevalence of hearing loss within their borders and to gather information about hearing aid usage.

3) Cochlear implants are more “attractive” and generate more publicity. In the more developed sectors of the developing world, there is great pressure to invest health dollars into implants. However, there are no educational, audiological, or follow-up services in place and large sums of money are being spent on a limited number of children for the publicity. This is having a negative impact on a huge number of patients and their communities by draining needed resources away from the general population of hearing impaired.

4) The price for hearing aids for the developing world must be kept very low. However, there is a significant question of the longterm value of such a product in terms of durability, response characteristics, repairs, etc. In the most likely scenario, such an aid would not be repaired, but would be cheap enough to be replaced. Aids will most probably be solar powered and rechargeable. There were two manufacturers of such aids present, both non-profit companies. One produces a body aid in Mexico and the other a BTE in Zimbabwe, both retailing for about $75 USD.

5) There was considerable discussion about ethics of having someone minimally trained fit hearing aids and not having support services for audiological, medical or educational follow-up. This might be the case in rural areas. A resolution passed stating it was only acceptable to fit aids if the fitter was properly trained, and if “some” (undefined) of the necessary support services were available.

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6) There was also discussion about the role of WHO compared to both NGOs and the private sector. WHO can only offer guidelines and work with NGOs to ensure that projects are funded and carried out. It does not wish to compete with the private sector. However, where the private sector is not able to satisfactorily meet the needs of those living in the developing world, WHO does have a mandate. In recent times WHO has been working with the Lions Clubs, Rotary, Christian Children’s Funds and the Christoffel-Blindenmission to treat blindness and provide glasses to those living in the developing world. Those organizations (including WHO) are now willing to channel considerable resources toward serving the hearing impaired as well.

7) A Task Force appointed from within the group is to work with WHO to formulate a plan for systematically developing programs and services for the hearing impaired, including training of staff, construction of an inexpensive hearing aids meeting WHO guidelines, and clinical follow-up. This effort is to be accompanied by demographic research into the actual incidence and prevalence of hearing loss in the developing world.

*Funds for Dr. Mencher to attend the meeting were provided in part by Canadian International Hearing Services*
3) Report from Godisa: Manufacturer of Hearing Aids for the Developing World

Godisa is a nonprofit organization in Botswana employing mentally and physically challenged young adults who manufacture a low cost solar powered hearing aid and solar charger for under $70US. Its objective is to develop practical technologies for third world countries and to create employment and training opportunities for hearing disabled people. This report submitted by Howard Weinstein, a Canadian volunteer working as General Manager.

In 1992, the SolarAid Workshop was started in collaboration with the Botswana Technology Centre to manufacture solar rechargeable hearing aids that could be used by the hearing impaired living in Africa and other parts of the developing world. Recently, SolarAid changed its name to Godisa in line with the broadening of its product base. Godisa means “To do something that is helping others to grow”. Its objective is to develop practical technologies for third world countries and to create employment and training opportunities for hearing disabled people. Godisa aims to meet the needs of people with disabilities by offering vocational training, employment, and where necessary, accommodation and social support. Rehabilitation is also provided for certain people with a view to eventually finding them employment in the outside community. A range of working environments and levels of social support are provided so that people with different types and degrees of disability can find a suitable working role.

For the next five years, solar rechargeable hearing aids will be at the heart of most technological development by Godisa. Most poorer countries have a hearing deficiency rate that is more than double that of first world countries. This is because of disease that often goes untreated and higher noise pollution in several employment sectors. In its more severe form, this deficiency is keeping otherwise healthy children from going to school and and adults from working as they are considered deaf, even if they are not. Low cost hearing aids and free second hand hearing aids are currently available, but none are designed for the living conditions of developing countries, where batteries are hard to find and expensive. That is one of the main weaknesses of many of the well minded programs from abroad which bring hearing aids and distribute them, but leave without providing a support program for repairs, batteries and replacements.

Our BTE X30, solar powered hearing aid will be available in July, 2002, with a charger for about $65.00 USD. Called the X30, the aid will use a 13 rechargeable battery. The charger can be fit with 2 AA batteries which will charge the #13 in about 4 hours, or it can operate directly from the sun and recharge the #13 in about 10 hours. Obviously, the greater the demand for our product the lower the price we will have to charge, and so the $65.00 is seen as a maximum price.

Howard Weinstein can be reached at: Godisa, Technologies for a Developing World, P.O. Box 142, Otse, Botswana. mwb@info.bw
As you know, a significant change has taken place among scientific journals in audiology with the merger of *Audiology*, *Scandinavian Audiology*, and *the British Journal of Audiology* into the *International Journal of Audiology* (*IJA*). Beginning with its first issue in January 2002, the *IJA* has started to appear while the previous three journals have become part of the past. The first issue of *IJA* carries Volume Number 41, following the numbering of the oldest of the three predecessors, *Audiology*. However, all three journals had been published for an impressive time with the *British Journal of Audiology* at Volume 35 and *Scandinavian Audiology* at Volume 30 at their final appearance.

To regulate cooperation between the three owner societies – the International Society of Audiology (ISA), the British Society of Audiology (BSA) and the Nordic Audiological Society (NAS) – a publication agreement has been adopted. There is also an agreement with BC Decker, the publisher. A council has been elected with two representatives from each of the owner societies for the purpose of determining general policy relating to the management of the *IJA*. The Council elects the Editor-In-Chief, normally for a period of four years which may be renewed once. However, during this first transition period, my office as Editor-In-Chief is for two years, after which Dr. Ross Roeser of Dallas, TX, will take over.

For members of ISA, subscription to *Audiology* was included in the membership, and so, from 2002, membership includes *IJA*. It is my hope that ISA members will soon feel as familiar with *IJA* as they were with *Audiology*. The fact that *IJA* will appear more often than *Audiology* should help in this process. The members of BSA also had their journal included with membership in their society, and I certainly hope they will also feel at home with *IJA*. NAS is a receipt of *Scandinavian Audiology*. It is my sincere hope that in spite of differences in membership, organization and history among the three owner societies, their members will feel a joint proud partnership of the new journal.

For its survival, a journal needs high quality contributions and interested readers – for obvious reasons there is a strong correlation between these two. In order to facilitate reviewing submitted manuscripts, we are in the process of recruiting a group of Section Editors to assume special responsibility for different sectors of *IJA*. Those appointed will gradually become active during mid-2002. Until then, the Editors-In-Chief of the predecessor journals – Jean-Marie Aran, John Bamford and Agnete Parving - remain on board as Associate Editors.

We anticipate that during a part of 2002, the new journal will contain manuscripts which were originally processed by the original journals. However, gradually manuscripts intentionally sent for publication to the *IJA*, and which have been reviewed by *IJA*’s process will take over. It is my hope that you as ISA members will consider submission to the *IJA* of your scientific reports and thereby contribute to our ambition to keep quality high and make it a leader in the field. As of mid-April 2002, the inflow of original manuscripts has been good – close to 60 manuscripts have been received, ranging from Letters To The Editors to Review Articles.
Editorial

This is the final part of a two-part report of the 1966 work of Drs. Moe Bergman and Agnete Parving. The initial effort appeared in the April, 2002, AUDINEWS, also as an Editorial on the President's Page. The emphasis in that initial work was types of personnel in Audiology involved in diagnostic, assessment and management of the communication problems. A part of the discussion concerned the different roles of the medical and non-medical practitioners. In the second part of their work, as reported here, they discuss the education and practices of audiologists around the world, helping to provide further insight into the rather broad field we call “Audiology”.

Current Practice In Education/Training Of Non-Medical Audiology Personnel

Under our charge we sampled the roles and training of non-medical personnel for audiology in various countries and geographic areas.

1. European Federation of Audiological Societies (EFAS):

Recent surveys of member societies by working groups were summarized by Verschuure and Schoneveld (Jan. 1995). Four models emerged, as follows:

1) Audiological services are supplied by ENT doctors, with none or limited training in audiology. Supporting (non-medical) personnel does not exist.

2) Audiology is an extension of ENT, with additional personnel (audiometricians, technicians, audiology assistants) having received “extensive but not always formalised” training.

3) Audiology is a separate entity, with audiologists who head a team. The audiologists are often “science trained people (physicists, engineers) with additional training”, although “the training often is not formalised.” Supporting personnel (audiology assistants, audiometricians) are “mostly without a formalised training programme”, although “some form of formal training exists in Finland, the Netherlands and the United Kingdom.”

4) Audiology is a separate entity and personnel are trained (in audiology and speech/language pathology) at the university level, to the degrees of B.A. and M.A., although a small proportion have non-medical doctoral degrees (Israel).

2. Mexico:

In Mexico major centers in which audiology is practiced are also devoted to speech and language problems and even learning disabilities. Two training programs exist in Mexico City, each with three-year programs in audiology and phoniatry for medical personnel as well as training programs for non-medical personnel. The latter includes curricula for post-B.A. graduates, a new Master’s level program in pathology of hearing and language and a licensure for therapy of hearing, voice, oral language and writing disorders. Both programs are geared to attract medical practitioners of various previous training or specialization, while providing college-degree level non-medical personnel as well.

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3. Japan

Audiology in Japan draws mostly from the medical specialty of ENT. Medical audiologists study by doing clinical as well as basic research in their departments. “Educational audiology” is done by graduates of schools of education working in the schools or institutions for the deaf. Speech therapists do the audiological examinations of children, while audiometrists, who are trained in short courses but without earning any degrees, conduct audiometry in hospitals and in offices of ENT Drs.

4. Thailand

Thailand has a mixed picture of medical and non-medical audiologists, with ENT physicians receiving 3 years of training and nonmedical audiologists completing a two-year course leading to the Msc degree. In addition they have audiology technicians who receive a certificate after two years of training and audiological assistants who have one year of non-degree training at the university.

5. Australia

Audiologists, in Australia, have to undergo a 1 to 2-year training in audiology after college graduation and must pass written and practical examinations. Full membership in their national society requires an additional 2 years of experience working under the supervision of an audiologist. Most of the audiologists come from a background in psychology or physics and engineering, as well as from the “social” sciences. Since most audiologists in Australia are employed by the government-operated Australian Hearing Services and even non-AHS audiologists and hearing aid dispensers are required to pass an examination to be accredited to the AHS as providers there is an assurance system for specific standards and practice.

DID YOU KNOW?

Audiology, the official journal of ISA which became a part of the new International Journal of Audiology this year was first edited by van Dishoeck (Netherlands), then by Ewertsen (Denmark), Trenque (France), Konig (Switzerland), and for the last 18 years by Jean-Marie Aran of France. Stig Arlinger, our current editor is from Sweden and Ross Roeser, our next editor, is from the United States.

The International Journal of Audiology - (Arlinger) Continued from Page 6

Scandinavian Audiology had a long-standing tradition of producing supplements in addition to regular issues. A total of 54 supplements have appeared during the journal’s 30 years. A majority were proceedings from conferences or symposia, but included among them were special issues on selected topics, and large review articles. It is our intent to continue with that tradition in the IJA! We hope to be able to publish two such supplements within the near future.

Thus, in conclusion, as the new year 2002 has started, it is my pleasure to welcome all ISA members as readers of the International Journal of Audiology. I hope that you will find the change that has taken place positive, and that the IJA will become a natural choice for you when submitting your scientific manuscripts for publication. I also hope that you will be willing to support the journal by assisting in the process by reviewing submitted manuscripts. I know that it takes time but also that is an extremely essential part of our efforts to make the IJA a scientific publication of high quality standards. If you are willing and interested, please feel free to contact me: Stig.Arlinger@oto.liu.se
Birth of Hearing International - Continued from April, 2002 Issue

Editors Note: Dr. Suchitra Prasansuk, President of Hearing International continues her article on the history, development and activities of the organization. ISA members receive the Hearing International Newsletter. We encourage you to join this worthy organization.

Audiology in the developing world is gradually following the same developmental pattern as had occurred elsewhere. Much has yet to be learned. Hearing International encourages the formation of National Committees and National Chapters throughout the world. These have several functions, including raising funds for service provision through the regional centers as well as research and education. At each ISA Congress, HI usually presents a public information session. We are already looking at a variety of things which vary from region to region and country to country. All are welcome to join Hearing International.

Hearing International is particularly interested in:
(a) differences in disease pattern,
(b) differences in level of technological development and advancement,
(c) differences in resources and socioeconomic status
(e) differences in size and nature of the problem of hearing impairment.

TO JOIN HEARING INTERNATIONAL
CONTACT:
Yash Pal Kapur, MD, Treasurer
C/o Hearing International Office
Michigan State University
Oyer Speech and Hearing Building
East Lansing, Michigan, USA
Fax: 1 517 353 3176
Email: kapury@pilot.msu.edu
Cost: $50.00 USD

Hearing International has formed five volunteer Task Force Groups to work with developing countries to explore these differences:

1. Task Force on “Epidemiological Study”
To collect the existing data on ‘Prevalence of ear diseases and hearing problem’ in developing countries in different region of the world. To find the most cost-effective way of collecting data while providing services to those in need (‘Survey and Service’).

2. Task Force on “Rehabilitation & Management of the Hearing Impaired”
To study the most effective and efficient way of rehabilitation and management of ear disease and hearing disability in developing countries with different levels of technology and resources. Methods of provision and service for low cost affordable hearing aids is also under consideration.

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3. Task Force on “Education and Training for Manpower Development”
   To initiate manpower development at all levels (Primary, Secondary and Tertiary). Development of Training Packages at different levels, as well as a ‘Training of Trainers’ manual will be to written to ensure standards and the sustainability of programs.

4. Task Force on “Prevention - Awareness and Public Promotion”
   Since more than 50% of Ear disease and Hearing Impairment is preventable by primary prevention, the group is to develop and implement ‘Primary Ear and Hearing care’ at the community level via educational information and a manual dealing with simple disorders, and when and where to refer.

5. Task Force on “Fund Raising”
   Since Hearing International is a volunteer charitable organization and funds only come from its members, HI is not able to fund the centers. HI, in conjunction with ISA grants, does support projects in some countries. The purpose of this Task Force is to support fund raising events in each country and to develop fund raising strategies for HI itself.

TO: SIEMENS HEARING INSTRUMENTS — “THANKS!”

The Editor and the Executive of the International Society of Audiology would like to express appreciation to Siemens Hearing Instruments for their support of this newsletter. It is through their generosity that we are able to continue to bring you this publication. The next time you visit a Siemen’s booth or see a Siemen’s representative, please pass on words of appreciation.
The International Society of Audiology invites YOU to become a member

We are proud to be working with our colleagues in the British Society of Audiology and the Nordic Audiological Society in merging our journals to create the International Journal of Audiology. Membership of ISA costs just US $65 (Euros 72), or US $55 (Euros 61) per year for two years and includes a subscription to the IJA!!

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<td>- To facilitate the knowledge, protection and rehabilitation of human hearing, inclusive of the effects of pharmacological and surgical measures, but exclusive of matters relating to the technique of these measures</td>
<td>- International Journal of Audiology (8 times a year)</td>
<td>- 2004, XXVIIth Congress, 26–30 September, Phoenix, Arizona, USA (Dr. Ted. Glaatke). <a href="mailto:Glaatke@u.arizona.edu">Glaatke@u.arizona.edu</a></td>
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<td>- To serve as an advocate for the profession and for the hearing impaired throughout the world</td>
<td>- Audi Newsletter (Quarterly)</td>
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<td>- Full members have a university degree in Audiology or any related field and work in the field</td>
<td>- Hearing International Newsletter (Quarterly)</td>
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<td>- Associate members work in the field of Audiology, but do not fulfill the academic requirements for full membership</td>
<td>- Biannual Congresses – receive a significant discount at registration</td>
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SEND YOUR COMPLETED APPLICATION TO:

Dr. J. Verschuure, Audiological Centre University Hospital, Rotterdam, Dr. Molewaterplein 40, NL-3015 GD Rotterdam, The Netherlands or Fax it to: +31 10 463 4240
APPLICATION FOR MEMBERSHIP

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