Letters to the Editor

To the Editor:

Globalization of Infant Hearing Screening: The Next Challenge before JCIH?

Since its formation in 1969, the Joint Committee on Infant Hearing (JCIH) has been a key player in promoting early detection and intervention for childhood hearing loss in the United States. The historic 1994 Position Statement (Joint Committee on Infant Hearing, 1995) and subsequent state legislative initiatives have stimulated progress toward universal newborn hearing screening (UNHS) across the USA. Early hearing detection and intervention have now evolved as a measure of best practice in public health-care delivery. A similar trend is evident in the rest of the developed world through various national initiatives. However, infant hearing screening has yet to gain recognition in developing countries for varied reasons. In the few countries such as Brazil, Mexico, Malaysia, South Africa, Saudi Arabia and more recently Nigeria where infant hearing screening programs have been introduced, they are not yet incorporated into routine public health-care and are therefore restricted to a tiny segment of the target population. Evidently, the current focus has shifted beyond the traditional debate on the feasibility of infant hearing screening in this region.

Prioritizing Interventions in Developing Countries

Public health-care programs in the developing world are influenced by the priorities of United Nations agencies and their funding partners. These priorities often reflect the views of various advocacy and interest groups with the exception of the threat or occurrence of major or fatal epidemics that constitute "emergencies." Saving lives and treating acute illnesses usually places overwhelming demand on the available scarce resources. However, the functional well-being of the survivors especially in the early crucial years of development is increasingly recognized as an important component of child health care (United Nations Children's Fund, 2002). Since childhood hearing loss is non–life threatening and perceived as least among the broad range of "serious" diseases in the developing world, it would be difficult to generate sufficient national momentum for the introduction of early hearing detection and intervention programs without external support. The most successful programs in terms of coverage and sustainability are those that have been worked into a global or regional agenda such as Childhood Immunization Program, the Baby-Friendly Hospital Initiative, the Roll Back Malaria Program, the Measles Initiative, and the Polio Eradication Program.

Current Framework for Action

In May 1995 the World Health Assembly passed a Resolution (WHA 48.9) on the prevention of hearing impairment urging member states to "prepare national plans for the prevention and control of major causes of avoidable hearing loss, and for early detection in babies, toddlers and children, as well as in the elderly, within the framework of primary health care" (World Health Organization [WHO], 1995). The resolution further requested member countries "to consider the setting-up of mechanisms for collaboration with non-governmental organisations for support to, and coordination of, action to prevent hearing impairment at country level, including the detection of hereditary factors, by genetic counselling." The WHO has since taken crucial steps primarily aimed at the prevention and control of hearing impairment. These include obtaining epidemiological data on the prevalence and profile of hearing impairment and a bold attempt to establish the global burden of this condition in all age groups. However, the collection of accurate data on infants and toddlers is not readily achievable without UNHS. Notwithstanding, the WHO has been proactive in formulating guidelines for building country-level capacities for intervention services that are essential for the success of any infant hearing screening programs. For instance, it is already working in partnership with some manufacturers and nongovernmental organizations to produce affordable hearing aids. Some of the devices utilize solar-powered rechargeable batteries in place of the conventional disposable batteries to reduce

running costs.

Similarly, within the current early childhood development policy thrust by the United Nations Children's Fund (2002), which seeks to give every child the best start in life, resides another window of opportunity for introducing early detection and intervention programs for hearing impairment. Any program for optimal early childhood development should necessarily include an infant hearing screening component. Otherwise, it would be akin to attempting to drive a car without a fully functional engine within the context of today's communication age. So, the required framework to promote infant hearing screening as a global program clearly exists within the two leading UN agencies for child health care. What seems to be needed now is a systematic and well-coordinated advocacy by professional and consumer groups in partnership with WHO and UNICEF to drive the entire process into pragmatic action plans as with other successful global child health intervention programs.

Choice of Coalition Partners

Although several groups have been identified with the development of UNHS in the USA, the JCIH stands out perhaps as the most appropriate to assume this role by its enviable track record and also given the fact that its primary constituency is already well served (Joint Committee on Infant Hearing, 2000). Its effectiveness as an advocacy group is largely derived from its multidisciplinary composition spanning pediatrics, audiology, otolaryngology, speech/language therapy, and special education, reflecting the multidimensional profile of any successful intervention program. Apart from its shared vision to mainstream every child with hearing impairment as a fundamental human right, it is also well equipped to form a synergistic alliance with other stakeholders for optimal early childhood development. The recent admission of the Alexander Graham Bell Association for the Deaf and Hard of Hearing (a prominent support group for parents of children with hearing loss) to the JCIH will undoubtedly enhance its impact on any global program on childhood hearing loss. The Center for Disease Control (CDC) is also a potential JCIH collaborator. This governmental agency is quite experienced as technical partner for public health interventions in the developing world and would certainly add significant value through its Early Hearing Detection and Intervention (EHDI) program.

Global programs are often more successful in securing partnerships with donor agencies and have the unique and critical advantage of economies of scale, which could translate to lower pricing of essential equipment and consumables. In a sense, "when the tides increase, all boats rise." Therefore, both the developed and the developing countries should benefit from cheaper hearing screening and diagnostic equipments, cheaper consumables, and better pricing for amplification devices. A possible takeoff point could be to initiate and support pilot programs across the region to guide subsequent national programs on early hearing detection and intervention. Experience has also shown that even where regional or country offices of both WHO and UNICEF are sympathetic toward a deserving cause, the system is not sufficiently flexible to respond except if it falls within an existing global program. A global mandate for infant hearing screening in the developing world is therefore urgently needed.

The Clarion Call

Most of the current global health programs are conceived and propelled from the developed world. The estimated 665,000 babies born yearly with hearing loss across the globe, of whom 90% reside in disadvantaged and marginalized communities around the world, cannot speak for themselves or defend their rights (Olusanya, 2005). And neither can their custodians in the developing world. They need advocates among the most powerful. And by one definition, to advocate is to "give power to the powerless" (Royal College of Pediatrics and Child Health, 2000). Independent special task forces or international sections within the relevant professional associations are unlikely to have the capacity to fulfil this role effectively. And since there is no wisdom in reinventing the wheel, the JCIH is being called upon to consider taking up this challenge as a moral obligation, beyond the cursory reference to developing countries in the 2000 position statement (Joint Committee on Infant Hearing, 2000).

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Reply to Olusanya et al:

The Role of the JCIH in the Global Expansion of Newborn Hearing Screening

Olusanya, McPherson, Swanepoel, Shrivastav, and Chapchap suggest it is a moral obligation for the Joint Committee on Infant Hearing (JCIH) to take up the challenge of creating a "global mandate" (especially in developing countries) for infant hearing screening. This suggestion warrants serious consideration given that it is made by seasoned professionals who have helped thousands of deaf and hard of hearing infants and young children in developing countries.

Given the important role the JCIH has played in promoting early identification of hearing loss in the United States, it makes sense for their work to be considered as part of a broader coalition that works to expand newborn hearing screening to other parts of the world. Having said that, it is unlikely that the JCIH would be successful in responding to this "clarion call," unless they were to approach the task very differently than what they have done in the past. For the JCIH, as it is currently organized, to take the leadership role in this initiative would be very difficult for the reasons noted below.

However, before deciding how the JCIH might contribute to the expansion of newborn hearing screening in developing countries, it is important to consider the priority of newborn hearing screening in relation to other health-care issues in these countries. As Olusanya et al noted, "saving lives and treating acute illnesses usually places overwhelming demand on the available scarce resources" in developing countries. And it should. As important as newborn hearing screening is, there are other legitimate health-care issues on which developing countries may choose to expend scarce resources before money is spent on newborn hearing screening. As one of many examples, the Centers for Disease Control and Prevention (CDC, 2006) notes that "measles remains a substantial cause of global childhood mortality, particularly in developing countries … [causing] 454,000 deaths in 2004." Effective vaccinations that could completely eliminate this scourge are inexpensively available—-and yet, governmental and private sources have not yet been able to identify resources to do it. Edejer et al (2005) show that the cost of vaccinating children for measles is less than 50¢ per child. Thus, if a developing country with one million annual births had $500,000 to spend on unmet health-care needs, does it make more sense to screen for hearing loss at $10 per baby[1] or vaccinate for measles at 50¢ per baby? Vaccinating all one million babies would cost $500,000 and would save at least 156,000 lives (Nandy et al, 2006). It would require the same $500,000 to screen just 50,000 babies for hearing loss, and only 150 of the 3,000 children in the birth cohort with permanent hearing loss would be identified (this assumes a prevalence of 3 per 1,000).

Setting health-care priorities when resources are inadequate is an extremely difficult task, and one that should be made primarily by local decision makers. Although I emphatically agree with Olusanya et al that "any program for optimal early childhood development should necessarily include an infant hearing screening component," many developing countries are not close to having "optimal" systems and must make hard choices and compromises. As important as it is to screen babies for hearing loss, it is more important to save their lives, and virtually everyone would choose vaccinating for measles instead of screening for congenital hearing loss if money were not available to do both—-and this is often the case in developing countries.

The urgent need to provide the most basic health care to millions of babies born annually in developing countries should not obscure the fact that there are some developing countries and some

regions within many developing countries where the health-care system is sufficiently strong that the implementation or expansion of newborn hearing screening should be vigorously pursued. In those cases, the suggestion by Olusanya et al that a "possible takeoff point could be to initiate and support pilot programs across the region to guide subsequent national programs on early hearing detection and intervention" is eminently sensible. In such cases the JCIH may be able to assist, but it is unlikely that they would be able to provide effective leadership because the factors that have contributed to the JCIH's effectiveness in the United States do not exist in these developing countries.

There are at least two reasons why the JCIH position statements have been influential in the United States. First, past JCIH recommendations have not only argued for the importance of early identification of hearing loss, but they have also documented best practice with regard to such things as screening and diagnostic protocols, involvement of other health-care professionals, and coordination with early intervention programs. These procedural recommendations have been highly specific to the health-care and education system in the United States. Because the recommendations have been made by experts who are intimately familiar with the system in which babies in the United States are being screened, diagnosed, and treated, the recommendations have been sensible, evidence-based, and consistent with clinical experience of many practitioners—thus, they have been influential.

However, it is unlikely that recommendations made by American professionals would be appropriate for hospitals in Kenya, Bangledesh, or Belize, and just as unlikely that JCIH members would feel comfortable making such recommendations. Given its current organization, it would be appropriate for the JCIH to make a strong statement about the need for and benefits of newborn hearing screening and intervention for children all over the world, and past and ongoing work of the JCIH might be helpful for people in a particular country to consider and decide how applicable it is to their situation. It is unlikely, however, that the JCIH in its current form could be effective in taking the lead in implementing such programs or recommending how they should be implemented.

Second, members of the JCIH represent eleven different professional organizations that must formally approve each JCIH statement. Thus, hundreds of thousands of members of those organizations are more likely to give credence to these recommendations because they are an official policy of the organization to which they belong. This has been a powerful force for moving newborn hearing screening forward in the United States but would not have nearly the same impact in other countries where these JCIH organizations have few, if any, members.

In summary, the JCIH has served and will continue to serve an important role in documenting and stimulating best practice for early hearing detection and intervention in the United States. There are many countries whose children would benefit from expanded newborn hearing screening and intervention. Many of those countries have already benefited from the dedicated and creative efforts of people like Dr. Olusanya and her colleagues. JCIH can and should use the experience and influence of its members to be a part of "a systematic and well-coordinated advocacy by professional and consumer groups in partnership with WHO and UNICEF" to expand the benefits of newborn hearing screening and intervention to infants and young children in areas of the world that are ready for such programs. But, unless it were to be structured very differently than it is now, the JCIH is probably not the most appropriate group to be the first responder to this "clarion call."

NOTE

1. Even though the cost per baby of newborn hearing screening in the United States is closer to $30 in the United States (Kezirian et al, 2001), a deliberately low estimate has been used to emphasize this point.

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