

## Equal opportunities for children with hearing loss by means of early identification

Inequality in health care is a pervasive challenge that is often most pronounced in the case of disabled individuals.<sup>1</sup> Infant hearing loss is a case in point. It is often referred to as the silent, overlooked epidemic of developing countries because its invisible nature prevents detection by means of routine clinical procedures.<sup>2</sup> It is referred to as an epidemic because of its high prevalence, being the most common birth defect.<sup>2,3,4</sup> Even though it is not a life-threatening condition, failure to intervene in time renders it a severe threat to critical quality of life indicators such as education, employment and societal integration.<sup>2,3,4</sup>

A growing body of evidence supports the view that investing in early childhood has an enormous impact on children's health and their ability to learn and can result in important long term economic returns which may be much higher than investment in formal education.<sup>1</sup> Since differences in cognitive development start to widen from a very early age, early childhood development initiatives for all are central to create more equal opportunities.<sup>1</sup> This is even more pronounced in the case of children born with a disability such as childhood hearing loss, since numerous studies have demonstrated the cognitive, social-emotional, vocational and financial constraints on their development compared to those without the disability.<sup>1,5,6</sup> The adverse effects of hearing loss on language and cognitive development, as well as on psychosocial behaviour are widely reported against the established benefits of early intervention.<sup>5,6</sup> Late identified hearing loss affects an individual's ability to obtain, perform in and keep a job, and it causes individuals to be isolated and stigmatised during the entire course of their lives.<sup>5,6</sup>

This stands in stark contrast to current evidence which indicates that infants enrolled in universal newborn hearing screening programmes are detected earlier and the subsequent intervention leads to linguistic, speech and cognitive development that is comparable to normal hearing peers.<sup>5,6</sup> Early hearing detection and intervention programmes can effectively address the inequalities caused by the developmental constraints associated with infant hearing loss.<sup>5,6</sup> Children in such programmes are afforded the opportunity to develop to their maximum potential, allowing them to become active participants and contributing members of their communities.

These facts have led to early detection and intervention for infants with hearing loss rapidly becoming the standard of care in developed countries, with a country like the USA already screening 95% of all newborn infants using highly accurate physiological techniques (otoacoustic emissions and/or auditory brainstem responses). No other type of screening programme has demonstrated the same efficacy as universal newborn hearing screening programmes to reduce the age of hearing loss identification and to produce such positive outcomes.<sup>6</sup> Unfortunately the momentum for implementing such widespread screening programmes has not spilled over to developing countries where two thirds of the world's children with hearing loss reside.<sup>2</sup>

The initial detection of hearing loss in South Africa is primarily passive as a result of parental concern about observed speech and language delays, unusual behaviour or the complications of otitis media. The detection of hearing loss often takes place after two years of age and even during adolescence. These realities exacerbate the impact of hearing loss on young children and consign them to a secluded life with limited access, if any, to education and employment opportunities. From an ethical and

human rights perspective narrowing avoidable disparities in healthcare, such as those evident between children with early identified hearing loss and those without, is an important and pressing imperative. The World Health Organization's definition of health is not just the absence of disease but the complete physical, mental, and social wellbeing of an individual and therefore health beyond survival for those infants with hearing loss can only truly be accessed through early identification and intervention.<sup>7</sup>

The South African government recognises the importance of early intervention for children in the preventative approach proposed in the White Paper for the Transformation of the Health System in South Africa. This prevention also includes preventing secondary complications, such as developmental delays in language for infants and children with hearing loss. The White Paper on an Integrated National Disability Strategy<sup>8</sup> furthermore calls for "early identification of impairments and appropriate interventions" within the primary healthcare system, while it also announces "free access to assistive devices and rehabilitation services... to all children under the age of six". It is clear that South African governmental policy guidelines favour the philosophy of screening for hearing loss in infants – it is only the implementation of such policy that is left wanting.

Equal opportunities for children with hearing loss are therefore attainable and justifiable through effective early hearing detection and intervention programmes and a growing body of evidence suggests long-term economic benefits to initial investments in such programmes.<sup>1,6</sup> These facts raise a moral obligation to pursue ways of implementing widespread newborn and infant hearing screening in South Africa.

### REFERENCES

1. World Bank. World Development Report 2006 Equity and Development. New York: The World Bank and Oxford University Press, 2005.
2. Olusanya BO, Luxon LM, Wirz SL. Benefits and challenges of newborn hearing screening for developing countries. *Int J Pediatr Otorhinolaryngol* 2004; 68: 287-305.
3. Mehl A, Thomson V. Newborn hearing screening: The great omission. *Pediatrics* 1998; 101:1-6.
4. Swanepoel D, Hugo R, Louw B. Infant hearing screening at immunization clinics in South Africa. *Int J Pediatr Otorhinolaryngol* 2006; 70:1241-1249.
5. Moeller MP. Early intervention and language development in children who are deaf and hard of hearing. *Pediatrics* 2000; 106: 1-9.
6. Yoshinaga-Itano C. Levels of evidence: universal newborn hearing screening (UNHS) and early hearing detection and intervention systems (EHDI). *J Comm Disord* 2004; 37: 451-465.
7. Olusanya BO. State of the world's children: life beyond survival. *Arch Dis Child* 2005; 90: 317-318.
8. White Paper on an Integrated National Disability Strategy. Office of the Deputy President T.M. Mbeki. Cape Town: Rustica Press, 1997.

**Swanepoel DCD**, PhD

Department of Communication Pathology, University of Pretoria  
**Delpoort SD**, MBChB, MMed (Paed), PhD

Department of Paediatrics, Kalafong Hospital and the University of Pretoria

**Swart JG**, MBChB, MMed, MD

Department of Otorhinolaryngology, University of Pretoria

### Correspondence to:

Dr De Wet Swanepoel, e-mail: dewet.swanepoel@up.ac.za