Government of **Western Australia**
Department of **Health**
Office of the Director General

Senator Rachel Siewert
Chair
Senate Community Affairs Committee
Post Office Box 6100
Parliament House
CANBERRA ACT 2600

Dear Senator Siewert

INQUIRY INTO HEARING HEALTH IN AUSTRALIA

I refer to your letter dated 15 September 2009, addressed to the Premier of Western Australia, inviting a written submission addressing issues relevant to the Inquiry into Hearing Health in Australia.

Please find attached a submission from the Western Australian Department of Health.

Details of a contact officer to advise on the contents of the Department's submission will be provided prior to the 9 December 2009 sitting of the Senate Community Affairs Committee.

Yours sincerely

DR PETER FLETT
DIRECTOR GENERAL

4 December 2009

Att:

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INQUIRY INTO HEARING HEALTH IN AUSTRALIA

SUBMISSION BY THE WA DEPARTMENT OF HEALTH TO THE SENATE COMMUNITY AFFAIRS COMMITTEE

Extent, Causes and Costs of Hearing Impairment in Australia

Population based studies have estimated the prevalence of hearing loss in Australia will reach 25% by 2050. Prevalence rates vary according to age, from less than 1% for children under 15 years to 75% of people over 70 years [Access Economics 2006]. It is clear that hearing loss is and will continue to be a major disability for a significant proportion of our society.

The causes of hearing loss are many and varied. Congenital hearing loss is most commonly sensorineural and genetic in origin, with other causes including, but not limited to intra-uterine infection and birth complications. Childhood hearing loss is usually infectious or inflammatory in nature, eg acute or chronic otitis media and otitis media with middle ear effusion.

Adult hearing loss is mainly sensorineural and generally progresses with age. The major causes are noise-induced hearing loss and age-related loss [presbyacusis]. It is estimated that the overall incidence of hearing loss in the Australian community is 1 in 6 [Access Economics 2006].

Costs associated with hearing loss were calculated at $11.75 billion by the above study. The major costs included loss of productivity, carers and medical costs. It should be noted that these were conservative estimates based on the better hearing ear and ***DID NOT*** include costs associated with otitis media, which as stated previously, make up a significant proportion of childhood losses. A recent study [Access Economics 2008] calculated the top down cost burden of otitis media at $391 million for Australia as a whole and $39 million for Western Australia.

The overall costs related to wellbeing in the 2006 study were calculated at a further $11.3 billion.

The social costs of hearing loss are well documented and include speech and language delay, poor educational performance, loss of vocational opportunities, social withdrawal and depression.

The Implications of Hearing Impairment for Individuals and the Community

As described above, the implications of hearing impairment are wide range for both the individual and the community. Aside from the economic cost, hearing impairment has significant impacts throughout all stages of life. With respect to the paediatric population, there are significant impacts on speech and language development with either conductive or sensorineural hearing loss. There was increased access and requirement for medical services as well as hearing rehabilitation ranging from Speech and Language Therapists to the provision of hearing aids and complex audiology.

Educational assistance with respect to teachers of the deaf as well as hearing aids in a classroom setting is often required.

In indigenous communities it is well recognised that chronic ear infection and hearing loss result in poor school performance, truancy and reduced vocational opportunities. With respect to adult hearing loss, the major community implications are related to loss of productivity, medical costs related to assessment, treatment and provision of hearing assistance [including hearing aids]. These are then combined with the added social implications of social withdrawal and in extreme cases, behavioural changes such as depressive disorders.

It would therefore seem evident that early detection of hearing loss, prompt education and health prevention strategies as well as access to medical and allied health input would be critical in reducing the impact of hearing impairment in both the individual and community setting. The added benefits in productivity, individual patient wellbeing and community benefit are to be expected.

Adequacy of Access to Hearing Services, Assessments Support Services, and Hearing Technologies

Access to Hearing Services

Western Australia, by virtue of its geography provides distinct challenges in the provision of health services. As a significant proportion of the regional population is indigenous, often in remote communities, this challenge is even greater. There are certainly limitations in access to appropriate specialist care, including medical and audiological services. These difficulties are related both to lack of proximity to services, availability of adequately trained professionals and cultural issues regarding health-seeking behaviour. The particular issues facing hearing health in Western Australia can be summaries under the following headings:

Neonatal Hearing Screening

It is widely accepted that universal neonatal hearing screening is the preferred standard of care in the detection and prevention of hearing loss and its sequelae in the perinatal setting. Western Australia was one of the pioneering states in the institution of a neonatal hearing program however changes to funding structures have resulted in limitation of the programs rollout. There is indeed no provision of screening services for rural or remote centres. Within the Perth metropolitan area not all hospitals provide a hearing screen. The efficacy and cost benefit analysis of neonatal hearing screening is well proven and given the current status of cochlear implantation, most children with congenital sensorineural hearing loss of any degree can be adequately rehabilitated. The Ear, Nose and Throat Advisory Group strongly feel that it is critical that a state wide neonatal hearing-screening program is adequately funded, resourced and provided to the population of Western Australia. This would include education programs, training of rural and community health workers, access to audiology and otology services and adequate funding of hearing rehabilitation including cochlear implantation.

Recommendation:

- That a state-wide neonatal hearing-screening program is adequately funded, resourced and provided to the West Australian population.

Cochlear Implantation

The management of severe to profound sensorineural hearing loss has been revolutionised in the last two decades with the advent of cochlear implantation. Successful implantation restores adequate speech discrimination for language development in children and for social and occupational function in adults. With improvements in implant technology, the spectrum of patients who benefit from this technology is ever broadening. The advent of bilateral implantation has improved speech and understanding in noise as well as in crowded environments. At present, the gold standard is bilateral implantation in children to obtain these aims. Unfortunately there is a distinct private/public divide in that there is no public funding for bilateral implantation of children in Western Australia.

The other area of concern is an implant rehabilitation services. Cochlear implant rehabilitation is a time and labour intensive process and with ever increasing numbers presenting for this technology, the workload of audiology and speech and language clinicians is likewise increasing. The present funding levels for rehabilitation services at Princess Margaret Hospital area clearly lacking given the increasing demand for its services. There exists a clear need for further training of audiologists in this field and their provision in both the public hospital and community setting.

Recommendation:

- Public funding is made available for bilateral implantation of children in Western Australia.
- There is greater provision of 'cochlear implant rehabilitation' in public hospital and community settings, including further training in this area for audiologists.

Assessment and Support Services

Whilst provision of a neonatal hearing-screening program will detect children at birth, there is also a distinct need for ongoing childhood surveillance given that some hearing loss may well be progressive throughout early childhood and therefore missed if screening is purely performed at birth. Guidelines are currently being developed through the health networks process for a childhood hearing surveillance program. This would involve community audiology, hospital and community otolaryngology services and child health nursing agencies. There is a need for community education regarding the possibility of ongoing and progressive hearing loss as well as the facilities available for its identification, monitoring and treatment. Once again, these programs will need adequate resources for staffing by child health nurses, audiologists and otolaryngology services.

Recommendation:

- Establishment of a childhood hearing surveillance program, including adequate resourcing for child health nurses, audiologists and otolaryngology services.
- Improved community education highlighting the possibility of ongoing and progressive hearing loss, the facilities available for its identification, monitoring and treatment.

Hearing Technologies

In addition to cochlear implantation, there are further evolutions in hearing implant technology for patients with end stage conductive hearing loss, moderate sensorineural hearing loss and in those who have failed conventional hearing aids. The impact of these technologies is ever increasing and is certain to provide further avenues for hearing rehabilitation in both paediatric and adult hearing impaired populations. Whilst it is difficult to quantify the need for these devices as there is still a significant proportion of the hearing impaired population who are not candidates for cochlear implantation but who are having difficulty with conventional aids, it is clear that the demand for these newer devices will be great.

Adequacy of Current Hearing Health and Research Programs

There is excellent research work being carried out at a number of centres in Western Australia however the challenges are still great and further areas of study are open for investigation. Current research programs include but are not limited to the pathogenesis of otitis media, tissue engineering and stem-cell research with respect to middle ear disease and sensorineural hearing loss, telehealth programs and clinical research with respect to hearing implant technology. Tele-otology and telehealth projects are of particular interest as they have ready-made clinical indications in rural and remote areas of Western Australia.

Pilot projects have confirmed the utility of a telehealth system in both allowing access for timely assessment via a community health worker, speedy review of clinical cases by local General Practitioners and improved triage of cases for review by Ear, Nose and Throat specialists. Telehealth would therefore appear to be a critical part of any hearing health plan to improve provision of access for assessment, diagnosis and management.

Public health education and awareness is the key to patient presentation and assessment. There will certainly be benefit in increasing public awareness in management options for congenital hearing loss, hearing loss prevention [particularly related to noise induced hearing loss] and hearing rehabilitation programs including cochlear implantation. These education programs are best facilitated through child health nurse agencies, schools and the general practice community. There is certainly a need for such programs particularly as there are evolving and widening research, screening and treatment facilities available in this state.

Recommendation:

- Ensure telehealth initiatives are embedded in any hearing health plan to improve access for treatment, diagnosis and management.
- Increase public health education and awareness of management options for congenital hearing loss, hearing loss prevention and hearing rehabilitation.

Specific Issues Affecting Indigenous Communities

The issues affecting the health of the indigenous community are well known and do not require repeating in this submission. Suffice it to say that the combination of reduced socio-economic conditions; in some cases remote access and poor service provision result in a vicious cycle of disability and disease. With respect to hearing, the rates of otitis media in the aboriginal population are significantly higher than in urban communities.

Management of otitis media in the indigenous population requires a holistic approach. The success of programs such as provision of swimming pools to remote communities is evidence that a community-based approach can have significant success. With respect to the West Australian situation, the vast geography of the state provides particular hurdles. The initial problem is that of appropriate education and awareness of treatment protocols for management of otitis media. The aboriginal ear health manual [Coates] has provided standardised guidelines for the identification, management and follow-up of both acute and chronic otitis media in aboriginal communities. The success of these programs is heavily reliant on a dedicated aboriginal health worker resident within the community for identification and treatment of children with otitis media. It is clear that engagement of the local health worker is critical for these programs to succeed. The other major factor limiting successful provision of services is inadequate access to audiological and otolaryngological services. There exists a clear need for improved provision of audiological services, particularly to the Kimberley and Pilbara regions.

This could either be on a visiting or permanent basis. Access to speech and language services are similarly limited. Whilst there are visiting Otology services, once again access to these is variable and certainly in areas such as the Pilbara can be overwhelmed. A committed health plan for improving indigenous ear health would therefore need to encompass all of these levels of care. The community health worker should be well versed in neonatal hearing screening, identification and management of childhood otitis media and ably supported by audiological and medical services.

Recommendation:

- Ensure community health workers are well versed in neonatal hearing screening, identification, and management of childhood otitis media, and ably supported by audiological and medical services.

Summary

It is clear that the cost to the community of hearing impairment, both economic and social are great. A coordinated hearing health plan requires attention to specific stages throughout life. There needs to be consideration for a universal neonatal screening program, childhood surveillance and adequate access to services, both diagnostic and therapeutic with respect to hearing intervention, rehabilitation and surgery. As research programs and technological advances continue, there will no doubt be increased ability to provide hearing solutions for the hearing impaired population. The challenge is to adequately provide these services for those who need them most.

Acknowledgements:

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