



Submission to the Review of Funding for Schooling

Support for students who are deaf and hearing impaired

September, 2010

About First Voice

A newly formed entity, First Voice acts as the national voice for member organisations whose primary focus is the provision of listening and spoken language therapy services in Australia and New Zealand. Evolved from The Alliance for Deaf Children, First Voice represents six of the largest early intervention organisations in the region – caring for more than 520 children in Australia (which is 40% of infants aged 0 to 4 years seen by Australian Hearing).

Member organisations

Hear and Say Centre, Queensland

The Cora Barclay Centre, South Australia

The Shepherd Centre, New South Wales and Australian Capital Territory

Taralye, Victoria

Telethon Speech and Hearing, Western Australia

The Hearing House, New Zealand

1. Background

a. First Voice

First Voice is an Australian and New Zealand advocacy organisation that represents the importance of early intervention services for children who are deaf or hearing impaired. Part of its role is to provide accurate information and expert advice to governments, educational institutions, service providers and the general public in relation to deafness and hearing impairment. *First Voice* is focussed on research, technologies and health and educational therapies and programs designed to maximise hearing and listening, and speech and language in children who are deaf and hearing impaired.

Centres associated with *First Voice* provide a range of services and programs designed to maximise listening skills, speech and language in children who are deaf and hearing impaired through multi-disciplinary early intervention auditory verbal and oral therapy and other related programs, including cochlear implant clinics. Health and education professional staff include auditory verbal therapists, teachers of the deaf, speech pathologists, audiologists, psychologists and family counsellors. Three centres – the Cora Barclay Centre (Adelaide), Hear & Say (Brisbane) and Telethon Speech & Hearing (Perth) provide support services to school students who are deaf and hearing impaired.

b. Hearing impairment in Children

- More than 90 percent of children who are deaf and hearing impaired are born to hearing parents. (Quigley, S.P., & Kretschmer, R.E., (1982). *The education of deaf children: Issues, theory and practice*. London: Edward Arnold).
- Approximately 79 per cent of deaf and hearing impaired children have no other disability and therefore have the potential - with appropriate technology (eg hearing aids and cochlear implants) and intensive speech and language early intervention services - to learn to listen and speak as well their hearing peers (Dornan, D., Hickson, L., Murdoch, B., Houston, T., & Constantinescu, G. (submitted 2010). Is Auditory-Verbal Therapy Effective for Children with Hearing Loss? A longitudinal study of speech perception, speech, language, reading, mathematics and self esteem outcomes. *The Volta Review*).
- A significant proportion of deaf and hearing impaired children with other disabilities can also learn to listen and speak and that this is the wish of their families.
- The acquisition of spoken language is highly significant in brain development and is therefore influential in the development of intellectual and educational capability and outcomes. (Sharma, A., Dorman, M.F., & Kral, A. (2005). The influence of a sensitive period on central auditory development in children with unilateral and bilateral cochlear implants. *Hearing Research*, 203(1-2), 134-143).

c. Diagnosis and required treatment pathways & transition to school

- Over the past five years Australian states and territories have progressively introduced universal newborn hearing screening programs for the early identification of hearing impairment. These programs now cover most of the Australian population and the Commonwealth and State/Territories governments are committed to achieving full population coverage by 2012.
- International protocols¹ for childhood deafness and hearing impaired focus heavily on early identification and intervention. They aim to achieve:
 - Identification at birth through newborn screening *before 1 month of age*
 - Confirmed diagnosis *before 3 months of age*
 - Access for all to high-quality technology and the fitting of hearing aids as early as possible after diagnosis, preferably *by 3-4 months of age*
 - Commencement in a family centred, multidisciplinary early intervention (re)habilitation program *before 6 months of age*

¹ Refer American Speech-Language Hearing Association Joint Committee on Infant Hearing (JCIH), 2007
© First Voice

- While programs based on such protocols provide the best basis for acquiring normal speech and language, this does not alter the fact that hearing-impaired children have a permanent and significant sensory disability and that even the best hearing aids and bilateral cochlear implants do not provide hearing anywhere near equivalent to normal hearing. (A G Bell Academy of Listening and Spoken Language. (2010). *Auditory-Verbal Therapy*. Retrieved 13 August, 2010, from <http://nc.agbell.org/NetCommunity/Page.aspx?pid=360>.)
- The explicit aim of auditory verbal therapy early intervention services is for children who are deaf and hearing impaired to achieve “age-appropriate” speech, language and comprehension by the time the child goes to school. This is quite commonly attained.
- Whether it is attained or not, all children who are deaf and hearing impaired need access to continuing support throughout their schooling in order to be able to achieve their full academic potential. Supports include:
 - the most appropriate technological equipment for their individual hearing loss
 - acoustically optimised classroom and other environments
 - continuing advice and support to students, families and school staff in relation to the above technologies and immediate maintenance of such equipment
 - ongoing monitoring and diagnostic assessments of the student’s speech, language and speech perception skills
 - social, emotional and psychological supports especially during the teenage years.

2. Education equity for students who are deaf and hearing impaired

a. Philosophical position

- It is a fundamental educational principle that all students should have access to all aspects of school, academic and other programs in order to achieve their full potential. This principle applies regardless of social, economic, geographic, racial, religious, cultural and other factors including health status and any disability.
- Students with hearing loss, of any degree, should have access to the services and supports required to maximise their prospects of overcoming their disability and fulfilling their potential.
- Students who are deaf and hearing impaired should continue to be entitled to receive services and supports appropriate to their disability even if they attain and maintain age-appropriate speech, language and comprehension and are performing well academically. This approach is known as the Potential Model. It is markedly different from the so-called Failure (or “Deficit”) Model - evident in both public and private schooling systems - in which supplementary funding, services and support are largely restricted to students who have failed to attain age-appropriate benchmarks and are performing poorly at school (usually at a defined, measurable degree below the average for their age matched peers).
- The analysis and recommendations in this submission are based on the principle that all students in Australian schools who are deaf and hearing impaired should be entitled to services and supports designed to mitigate their hearing loss and to enhance their participation in school programs and activities, regardless of their performance relative to their peers with normal hearing.

b. Justification for Specialist Support for School Students with Hearing Loss

- There is compelling evidence of the adverse affects of hearing loss of all types and degrees on school students’ academic performance.

- There is also considerable expert opinion and evidence of the benefits of a number of the actions that can be taken in remediation, in regard to both acoustic environments and support services for students and teachers.
- Students with mild and unilateral hearing losses fail a grade at ten times the rate of students with normal hearing (Cole and Flexer, 2007). In 30 to 40 percent of cases of children with mild or unilateral hearing losses, the student will experience difficulty with one or more of the following; speech production, speech and language proficiency, psychosocial outcomes (Australian Hearing, 2010).
- The majority of students currently at school were born prior to newborn hearing screening and most were not diagnosed until between the ages 18 and 30 months. As a result of their late diagnoses they have suffered varying degrees of auditory deprivation with associated delays in their audition, speech and language development.
- Children up to fourth grade rely on listening to access 90 percent of the curriculum because their reading and writing skills are immature. This creates a particular challenge for children with hearing loss. (Traxler, C.B. (2000). The Stanford Achievement Test, 9th Edition: National forming and performance standards for deaf and hard-of-hearing students. *Journal of Deaf Studies and Deaf Education*, 5, 337-348).
- Hearing clearly remains critically important right through to the end of school as the predictive part of the brain (to feel in what has been missed and not unheard) is not fully developed until around 20 years of age.
- Many deaf and hearing impaired children in the school system have not experienced the benefits of an auditory-verbal approach in their early years, creating further challenges to accessing the curriculum through listening in the early years of school. Also a percentage of children who have been in auditory-verbal programs do not enter school with age appropriate skills in speech, language and audition.
- The quality of early intervention programs is critical to the speech, language, auditory and socio-emotional outcomes of children with pre-lingual hearing loss. Currently, there are no national standards, or even state standards regulating the quality of programs, including the professional qualifications and minimum competencies required by EI service personnel. Unless educators of the deaf, speech pathologists and other personnel providing EI programs have a thorough knowledge of early childhood development and of speech, language and auditory development in relation to hearing loss, then they are not appropriately equipped to guide and coach parents in the facilitation of their children's habilitation. Consequently, there is significant variation in the language and listening skills of children who are deaf and hearing impaired at the time of school entry.
- There is no uniformity either at EI level or of school aged children with hearing loss in the assessment of speech, language or auditory skills; or at school age of their literacy skills. Thus, there is no evidence basis for comparing systems, settings, or modalities of communication in terms of projected outcomes, either for parents or for educators.
- Up to 40 percent of students with hearing loss experience additional disabilities, providing a further challenge to their ability to access the curriculum.
- Adults with hearing losses continue to read, on average, at grade four level (Traxler, 2000). Additionally, a significant percentage of students with hearing loss who have attained age appropriate speech and language skills experience literacy delays, including in the areas of reading comprehension and written literacy.

- Currently, there is insufficient longitudinal data to show whether early age appropriate audition, speech and language skills can be maintained when intervention is discontinued without the benefit of ongoing support in listening, language and speech.
- As with all students with disabilities, students with hearing loss experience a higher incidence of psychosocial problems than other students. (Prizant, B.M. & Meyer, E.C. (1993). Socioemotional aspects of language and social-communication disorders in young children and their families. *American Journal of Speech-Language Pathology*, 2, 56 – 71).
- This can affect their academic performance as well as their social and emotional development.

c. **Placement options for students with hearing loss**

- In the past twenty years the potential outcomes for students with pre-lingual hearing loss in relation to their auditory, speech and language development have improved dramatically. Contributing factors include:
 - Early identification and diagnosis thanks to universal neonatal hearing screening.
 - Greatly improved hearing aid technology and the invention and application of cochlear implants to children with severe and profound hearing loss – thus making the full speech range accessible to the even deafest children.
 - The widening application of evidence-based family-centred practice early intervention, which optimises the outcomes potential for children with disabilities.
 - Auditory-verbal therapy (AVT), an oral intervention methodology which allows children to develop speech and language in their parent tongue, along normal developmental trajectories, using audition, in the same way as children with typical hearing (Hogan, S., Stokes, J., White, C., Tyszkiewicz, E., & Woolgar, A. (2008). An evaluation of auditory verbal therapy using rate of early language development as an outcome measure. *Deafness and Education International*, 10(3), 143-167).
 - A significant factor in the success of AVT is that it is the only (re)habilitation methodology which prescribes and enforces minimum competencies for all practitioners who are working with the families of young children with hearing loss.
- Notwithstanding documented impressive improvements in outcomes for some children, including those using auditory-verbal therapy, the average reading age of deaf adults remains at Grade 4 level (Professor John Lucknor, Lecture, Adelaide May 2010). Parental choice and the significant range of speech, language and auditory abilities of children/students with hearing loss necessitates that a range of school placement options is available.
- Not all school placement options are available in all education systems (State, Catholic, Independent) in all states of Australia. Options include:
 - Units for children with hearing loss in mainstream schools. These are usually staffed by a combination of specialist educators of the deaf and mainstream teachers. They may include reverse integration of students with typical hearing in the unit and/or placement of the students with hearing loss in the mainstream classroom for part of each day. This model is most commonly used when the family choice is sign language and/or when the child has a significant language delay which would limit their access to the curriculum in a mainstream classroom. The degree of access to choice of language, ie oral English and/or Australian Sign Language (Auslan) is a variable, also.
 - Mainstream placement with varying levels of support. The amount of support may be as little as consultancy in nature to expert one-on-one teacher of the deaf support to the student for one or more hours per week, with additional teacher or teacher assistant

support time. If the student uses sign language to access the curriculum, they would require a full-time language interpreter.

- The choices available across states and education systems are not uniform and consequently are **rarely evidence-based**. Reasons for the models include historical factors, preference of the architects of the particular model based on their underlying beliefs (about how deaf children should be educated) and the level of expertise, current philosophies and policies of governments and education departments.
- Equity demands that parents and their children should have access to evidence-based choices that will best meet their individual needs in relation to choice of language (sign or oral), type of school setting (ie unit or mainstream), amount of specialist support and amount of additional curriculum support. Families should be able to choose any system, including state education, Catholic or other independent education systems and have the same choice of evidence-based support available to their child with hearing loss. This is not the case in Australia today.

d. Specialist requirements of school students who are deaf and hearing impaired

- *Every person with any degree of hearing loss will experience difficulty accessing the speech of others. This is exacerbated when there is background noise competing with the speaker's voice. Classrooms are notoriously hostile acoustic environments for all students but the difficulties are intensely magnified for students with hearing loss.*
- In order to address the challenges experienced by students with hearing loss the following services are required:
 - The most appropriate technological aids and equipment for their individual hearing loss. This will usually include the use of hearing aids or cochlear implants, as well as personal FM systems. Australian Hearing has responsibility in this area.
 - Acoustically optimised classrooms. This generally requires modifications to all classrooms used by students with hearing loss to reduce reverberation, background noise and the effects of the sound dissipation due to the distance between the teacher and the student with hearing loss. Sound field systems (teachers with voice microphones transmitting to wall-mounted speakers) are now widely accepted as state of the art requirements in the majority of classrooms where students with hearing loss are placed. Research demonstrates that all other students in the classroom also benefit from improved clarity and amplification especially students with other disabilities including Autism Spectrum Disorders, Auditory Processing Disorder, Attention Deficit Disorders and the like.
 - Careful and comprehensive transition planning at each point of transition including pre-, primary, middle and senior school transitions and transition from school to further education and initial employment when this occurs direct from school. Preschool and school transitions should include parents and families, current health and education services providers, and relevant teachers in one or both schools (as applicable). Informed family decision-making and support for the child should be central to the process. It is widely perceived that current processes tend to be professionally dominated.
 - Continued provision of early intervention education and training programs (including both auditory-oral and signing programs) for the child at school where this is desired by parents. These may be reduced in frequency and duration as schooling progresses.
 - Specialist in-servicing and consultative support to mainstream teachers who have students with hearing loss in their classrooms. Training in areas such as maintaining and maximising technological equipment; new and varied teaching strategies; resources and student positioning are examples of information and training that can be implemented to

up-skill the classroom teacher. This support is necessarily ongoing because students with hearing loss (as are all students) regularly experience regular changes in teaching personnel, classroom placements etc.

- Regular diagnostic assessments of the speech, language and speech perception skills to ascertain how the student is performing compared to their peers with typical hearing and importantly, to promote a program of individual support tailored to the individual student's needs. Further assessments may be required in relation to social/emotional status.

3. Conclusion and recommendations

The ability to hear is critical to accessing the school curriculum and to active participation in school activities.

School students with hearing loss have a number of special needs. In some areas there are tried and proven mitigation and remediation strategies, for example individual hearing aids and devices, classroom acoustic environments and sound field system technology. These should be universally implemented in Australian schooling systems and schools.

Hearing aids and devices for children are universally available through Australian Hearing at no cost to families. However there is a long way to go in regard to improving classroom acoustic environments through physical facilities improvements and sound field technology. Such developments benefit all children in the classroom and represent a sound capital investment.

The South Australian Department of Education and Children's Services has already adopted acoustic standards in its schools building codes and has had an active program of investment in sound field systems in schools with hearing impaired children over the past five years. Their approach may be of interest to other states and territories.

The way forward is less clear in relation to:

- the nature and level of service and support that should be provided to school students with a hearing loss during their schooling;
- in-service education and training requirements for mainstream teachers; and
- roles and responsibilities of qualified and registered teachers of the deaf, and their ongoing training and development requirements.

Service models vary significantly across Australia. Some of these appear not to have kept up with the advances of the past 20 years in new technologies (hearing aids and cochlear implants), early identification and diagnosis, parent and student involvement in decision-making, and evidence-based early intervention programs focusing on listening, speech and language for infants and young children.

Unfortunately there is little available research that objectively compares speech, language, comprehension, cognitive development, academic and other relevant outcomes of different approaches and different systems. This makes it difficult to move forward quickly with confidence. Comparative outcomes research is urgently required to inform decision-making.

In South Australia the Cora Barclay Centre – which from 1945 to 1989 was the SA Oral School and Kindergarten – provides auditory-verbal to 126 primary and secondary school students. In Western Australia Telethon Speech & Hearing Centre provides services in 7 units based in schools. Education Departments in some States provide special units in schools for either or both signing students or oral students with special needs. It would be instructive for an outcomes-focussed cost-benefit analysis to be carried out on these different models. Access Economics and other independent studies indicate that there would be huge financial benefits to the country where deaf and hearing impaired children are able to complete secondary schooling, obtain normal employment and avoid a life on disability benefits.

Student outcomes and benefit to the community both warrant further evidence-based investment in Australian schools. The Australian schooling system requires the development and implementation of a national evidence-based approach to the provision of specialist support for students with hearing loss in Australian schools. In developing such an approach consideration could be given to a number of principles and processes including:

- A needs-based funding model with a minimum level of funding for every student with a formula for incremental increases dependent on categories of need. Categories of need could be determined objectively using (among other measures) norm-referenced, standardised assessments of each student's speech, language and speech perception abilities. A longitudinal assessment protocol could be implemented regardless of results in order to monitor ongoing performance. This protocol should include assessments of reading competency because of the strong links between literacy and academic competence. Students with hearing loss who have age appropriate language do not necessarily have age appropriate reading skills (Geers, 2008).
- Consistent levels of funding and specialist teaching expertise regardless of the state, schooling system or educational placement option. Students with disabilities should not be penalised if their parent chooses a non-government school.
- Targeted funding for more intensive levels of one-to-one support in the early primary years.
- Targeted funding for planned transition to school, and between primary/ middle/ and senior schooling and, perhaps, to tertiary education or initial post-school employment.
- Targeted national funding for schools to provide adequate listening and learning environments. Schools should have access to a disability supplementary fund to provide resources such as loop systems, wall pilot technology for FMs, noise reduction materials in building and support for an adaptive curriculum strategy - for example, ensuring that all deaf students can be included in media driven learning sessions by having captioned DVDs available etc.
- Ensuring that parental choice regarding education system and modality of language intervention is respected and adhered to. An independent arbitration process could be available to parents who have concerns regarding, but not limited to, the choice of setting or language modality available to their child, appropriateness of the level of funding available to support their child, or how the funding is used. Ideally, the arbitration process would involve a panel which includes a parent nominee from a parent (deafness specific) advocacy group, a special educator or academic with a broad-based view of the spectrum of choice regarding deafness education and a third person from general education, with specialist extra qualifications, as necessary.
- Urgently reviewing the availability of specialist teachers of the deaf in all states and regions of Australia and implementing necessary changes with regard to teacher training programs for teachers of the deaf. After a defined period, all teachers working with students who are deaf and hearing impaired should be required to meet the 'Competencies for Teachers of the Deaf' published by the National Association of Australian Teachers of the Deaf. Where teachers are using a specific modality, such as Auslan or auditory-verbal intervention, defined minimum competencies should be required by the teacher practitioners.
- Minimum acoustical standards should be identified and implemented for all classrooms where there are students with any degree of hearing loss, regardless of the system or geographical location of the student's classroom.
- Funding for the full cost of in-service education of mainstream teachers should be available to non-government organisations taking responsibility for the professional development of

mainstream teachers in non-government schools. Schools should be funded for the release of mainstream teachers for the purposes of such professional development.

- The full cost of provision of services to staff and students in mainstream schools by NGOs to be covered, so that service availability is not dictated by financial constraints. This is an equity issue which is *one* of the fundamental reasons for the ad hoc nature of current provision of services to students with hearing loss.
- Levels of service for school students should be tailored to their individual needs. All services are provided in the student's school and may be on a weekly, fortnightly or monitor basis, with a minimum of two visits per year.
- Support may be offered in auditory, speech, language, cognitive and/or social skills development depending on each student's unique requirements.
- The social emotional needs of students are reviewed with funding allocated to promote group activities and social networking between students with hearing loss in different schools.

APPENDIX A

Role of First Voice organisations in providing transition and education support services to children who are deaf and hearing impaired

The provision of support services for hearing impaired students entering the education system across the country varies from State to State/Territory. All First Voice member organisations provide a specialist early intervention program for newborns, infants and pre-schoolers, age zero to five/six years (depending on the age of school entry).

Some member organisations provide services to hearing impaired students throughout the primary and secondary school system, and others assist with the provision of classroom technologies.

A high level overview of these activities follows below. More detailed information on any aspect of this report can be provided on request from the relevant organisation (contact details follow).

Hear and Say, Queensland

- Hear and Say offers early intervention or diagnostic services for more than 420 children in six centres, and a telemedicine outreach program for rural and regional children in Northern Territory, Queensland and northern New South Wales. The education approach used is Auditory-Verbal Therapy, which is the simultaneous education of parents and children with hearing loss to enable the children to use new hearing technology (cochlear implants and digital hearing aids) to develop listening and spoken language and integrate into the hearing world with speech and language similar to children with normal hearing.
- The centre's aim is to include all children in mainstream education settings at the earliest possible age. More than 92% of "graduates" (at school entry age of 6 years) attend regular schools and research shows that 79% are age appropriate in their language skills. These results show that children who are diagnosed and receive intervention early, and who wear appropriate modern hearing devices, are able to progress at the same rate as a matched group of children with normal hearing of the same initial language age. Reading, mathematics and self esteem outcomes show no significant differences in results between both groups (Dornan, D., Hickson, L., Murdoch, B., Houston, T., & Constantinescu, G. (submitted 2010). *Is Auditory-Verbal Therapy Effective for Children with Hearing Loss? A longitudinal study of speech perception, speech, language, reading, mathematics and self esteem outcomes. The Volta Review*).
- Hear and Say visits all pre-school children in their education setting once per school term, and confers with teachers on the preparation of an Individual Education Program (IEP).
- The centre also offers assistance with transition to and integration in school. After this, children with cochlear implants continue to be enrolled at Hear and Say for MAPping and trouble shooting of their hearing device, while children with hearing aids are supported by the school system. Catholic school children and State Education school children in Queensland are supported by Advisory Visiting Teachers, and Hear and Say children with cochlear implants continue to be monitored in partnership with Education Queensland and Catholic Education.
- The level of education of Advisory Visiting Teachers in Queensland is variable and varies from district to district and from teacher to teacher, which is undesirable. There are currently no specialist professional training courses for professionals other than that provided by Hear and Say WorldWide in conjunction with University of Southern Queensland at the postgraduate level.
- Full audiology services are available at Hear and Say with education given to teachers regarding the child's hearing device, and classroom acoustics.

- In addition, comprehensive self esteem and social skills programs are held for different ages (Launch Pad, Comet, Rocket Star, and CICS), which supplement the child's education process and assist in inclusion in education activities.
- Education support programs are overseen by a team of audiologists, speech pathologists (Listening and Spoken Language Specialists, Certified Auditory-Verbal Therapists), and teachers of the deaf, with access to social workers.

Cora Barclay Centre, South Australia

- Cora Barclay Centre started out as the SA Oral School and Kindergarten (1945 -1989) before evolving into the current speech and language centre with the 'integration' of children with disabilities from special schools to mainstream schools in the 1980s and 1990s. The organisation provides speech and language services to children in mainstream schools on a weekly/fortnightly or on a review basis as needed.
- The centre undertakes classroom acoustic audits; supplies, fits and maintains sound field systems to classroom and halls (about 190 units in SA last year); educates classroom and special education teachers on hearing loss; and generally supports and manages deaf students at school (cochlear implants, hearing aids and FM systems).
- The estimated cost to Cora Barclay Centre of supporting a "high level" need child in the classroom is about \$12k-15K per student per annum, which includes a weekly therapy visit and curriculum support/planning etc. The State Government has a disability funding structure where it allocates \$22K per annum to a school for each student who is assessed to have a "high level" need, and lesser amounts for lower levels of need. This is to cover the cost of a classroom assistant (which provides support in the class generally) and other needs, including technology.
- Sound field systems are highly beneficial and make a huge difference to all students in the classroom, not only those who are deaf, hearing impaired or who have autism spectrum disorders, attention-deficit hyperactivity disorder and other conditions. Once a soundfield system is installed into the classroom environment, the teacher's voice is distributed into the room via four strategically placed speakers, giving a much improved 'field of sound' to the students. The teacher can move around the classroom with complete freedom, communicating with much improved clarity to the students. They cost about \$3.3K per classroom for a four-speaker fitted system. They result in less strain on teachers' voices, and as a result, less sick leave and relief teacher costs.
- Personal FM systems are also critical technology aids for hearing impaired students in the classroom, as they relay sound direct to the student. FM systems transmit sound from the speaker's microphone to the listener's receiver via radio waves. The speaker wears a compact transmitter and a microphone, while the listener uses a portable receiver with headphone or earphone. They are ideal for classroom use and work well both indoors and outdoors. This can be independent of or hooked into a sound field system.

Telethon Speech and Hearing, Western Australia

- Telethon Speech and Hearing Centre for Children offers school age support for hearing impaired children in partnership with seven mainstream private schools in Western Australia. These include a mixture of four pre-school and primary schools, one high school and two kindergarten to year 12 schools.
- Each of the centre's programs is inclusive, in that hearing impaired students attend mainstream classes and are withdrawn for specialist speech and language support based on need. Teachers of the deaf, who are located at each site, provide program coordination and direct intervention with the support of learning assistants in primary programs and note-taker/interpreters in high school settings. School based support programs are overseen by a Telethon Speech and Hearing Director of School Support, whose team includes a speech pathologist, audiologist and psychologist.

- Hearing impaired students who have graduated from the program in recent years have gone onto courses at the University of Western Australia, TAFE Colleges and workplace apprentices.

The Shepherd Centre, New South Wales and Australian Capital Territory

- The Shepherd Centre teaches deaf and hearing impaired children between the ages of zero to five years how to listen and speak so that they can reach their full potential in the hearing world. It helps more than 200 children and families in five centres in NSW and ACT, as well as families in rural and remote areas of Australia and overseas via its residential workshop and correspondence program.
- Its aim is that children will enter their local mainstream schools in a fully-integrated environment, which it achieves for more than 90% of children.
- The Shepherd Centre helps children and families achieve this goal through the delivery of three key programs – and early intervention program, a cochlear implant ‘first sounds’ program and residential family workshops.
- The centre provides a formal “transition to school” program for all students. This includes the provision of support to parents on how to assess resources and support that may be needed by their child on entering school. A full report on their child’s listening, speech and language development is provided for the parent to give to their child’s teacher or support person at school. The centre is also able to provide some in-servicing support to the school in the first term. If the child enrolls at a private school and is not be eligible for regular itinerant support (e.g. because they have a moderate hearing loss) a Shepherd Centre teacher is available for consultative support for up to two terms in the child’s first year of schooling.

Taralye, Victoria

- Taralye offers programs and services to families with young babies and children to allow them to have access to the world of hearing and spoken language. Its philosophy is to help hearing impaired children learn to listen and to speak like their hearing peers and to enable them to attend mainstream schooling so as to reach their full potential.
- Taralye operates an Audiology and Otology Clinic offering a full range of audiological facilities for newborns to 18 year olds. It draws on the experience of speech pathologists, psychologists, social workers and teachers of the deaf to assist parents in optimising the language development of their children.
- Taralye provides a range of early childhood groups which aim to prepare children for inclusion in mainstream schools alongside the hearing peers. These programs focus on developing speech and language, social and emotional skills and include early learning groups, kindergarten, book clubs and social groups such as Mother Goose.
- Taralye provides assistance in childrens’ transitions to schools through support of parents visits to potential schools, liaison with school staff, provision of inclusion workshops to teachers and through the Department of Education and Early Childhood “A Positive Start to School” initiative.

APPENDIX B

Further information

Further information on Australian services can be obtained by contacting:

Hear and Say

Dimity Doman, Managing Director and Founder, Tel: 07 38702221, Email: dimity@hearandsaycentre.com.au

Cora Barclay Centre

Michael Forwood, Chief Executive Officer, Tel: 08 8267 9200, Email: mforwood@corabarclay.com.au

Telethon Speech and Hearing

Paul Higginbotham, Chief Executive Officer, Tel: 08 9387 9888, Email: paulh@tsh.org.au

The Shepherd Centre

Anthea Green, Managing Director, Tel: 02 9351 7888, Email: anthea.green@shepherdcentre.com.au

Taralye

Therese Kelly, Chief Executive Officer, Tel: 03 9877 1300, Email: therese@taralye.vic.edu.au