



Hearing Screening

This document describes hearing screening processes that utilise defined pass-refer audiological test procedures to identify individuals who require further audiological assessment from the screened population. All hearing screening processes need to be part of a comprehensive screening programme that considers all the steps in the screening pathway.

In the future screening for auditory disorders also may include other non-audiological tests such as blood screens for genetic and acquired forms of hearing loss.

Expected Outcome(s)

Hearing screening identifies those persons most likely to have auditory disorders that may interfere with their education, health, development or communication.

The screening should result in a defined outcome for all cases screened.

Cases that “refer” from the screening test should be referred for the appropriate audiological and other assessments recommended in the hearing screening programme protocols. This should include the various types of intervention and rehabilitation services where appropriate.

Clinical Indications

Individuals of all ages are screened as needed, requested, or mandated or when they have conditions that place them at risk for hearing loss or other auditory disorders. The screening programme should clearly identify the population and the condition for which the person is being screened.

Clinical Process

Hearing screening procedures should be age appropriate and should comply with local guidelines and protocols.

The current population based screening programme in New Zealand is the National Vision Hearing Screening Programme. The target populations are all 3 year olds for screening Tympanometry and all 5 year olds for screening Pure Tone Audiometry and Tympanometry. Full protocols are available for this programme and are referenced in this standard.

A National Universal Newborn Hearing Screening Programme will begin to be rolled out in New Zealand on July 1st 2007. The first three regions to be involved will be Gisborne, Hawkes Bay and Waikato. The development of the nationally coordinated Programme has come under the control of the Ministry of Health’s National Screening Unit and the Ministry of Education. Full protocols will be available from these organisations in due course.

Currently Newborn Hearing Screening is being carried out in these and some other regions using Otoacoustic Emissions (OAEs) and Automated Auditory Brainstem Response screening (AABR). Other regions still utilise a targeted screening approach that identifies infants who are “at risk” of having hearing loss from birth for reasons such as a family



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history of hearing loss. These children are then tested, usually using Auditory Brainstem Response Testing. This method of identification is no longer recommended.

There are currently no whole population based government funded hearing screening programmes for adults. Adult hearing screening is often carried out in workplaces as part of Hearing Loss Prevention Programmes. They usually use pure tone audiometry techniques and guidelines are available.

Clients/patients who refer from the screening should go on to have timely assessment and provision of intervention services. These assessment and intervention services should be appropriate for the referred population and meet the prescribed quality guidelines.

Setting/Equipment Specifications

Hearing screening is conducted in a clinical or natural environment conducive to obtaining reliable, valid screening results. This environment should however comply with the quality standards laid down in the hearing screening protocols.

All staff involved in screening programmes should be appropriately trained.

Currently there are no international standards for calibration of Otoacoustic Emission and Automated ABR machines used for screening nor for the ambient noise levels. The screening equipment should be calibrated according to the NZAS Calibration Standard.

Documentation

Documentation should comply with the appropriate hearing screening protocol which should outline precisely the information that is necessary to comply with the programme standards.

Related References

- *Hearing Screening Advisory Group, Ministry of Health. A report of the Universal Newborn Hearing Screening Advisory Group to the National Screening Unit. October 2005 at www.moh.govt.nz*
- *New Zealand Audiological Society Guidelines for Newborn Hearing Screening 2005 at www.audiology.org.nz*
- *National Audiology Centre and Ministry of Health, Protocols for the national Vision and Hearing Screening Programme, 2004 at www.moh.govt.nz*
- *New Zealand Audiological Society, Calibration Standard, in progress*
- *New Zealand Audiological Society, Infection Control Standard 2007 www.audiology.org.nz*
- *Project Hiedi, Improving outcomes for children with permanent congenital hearing loss. Auckland, New Zealand, November 2004, at www.nfd.org.nz*