



Healthy Hearing Program

A Universal Newborn Hearing Screening Program



Information for General Practitioners and Child Health Nurses

Introduction

The Queensland Healthy Hearing Program is a Universal Newborn Hearing Screening Program funded by Queensland Health. The program aims to detect Permanent Hearing Loss (PHL) in babies before they reach three months of age, as well as ensuring appropriate diagnosis and early intervention with those babies found to have a hearing loss. Newborn hearing screening commenced in October 2004 and was progressively rolled out across the state. All Queensland birthing hospitals (public and private) now offer newborn hearing screening.

Background

Every year as many as 100 Queensland babies may be born with sensorineural hearing loss. Permanent Childhood Hearing Loss is a common congenital anomaly occurring up to 20 times more frequently than the conditions typically included in metabolic screeningⁱ. Emerging evidence supports the viewpoint, long held by clinicians, that late identification of hearing loss greatly increases the risk of substantial delay in the acquisition of language and communication skills, with a consequent longer-term risk to education achievement, mental health and quality of lifeⁱⁱ.

Prior to the commencement of newborn hearing screening in Queensland the average age of identification of hearing deficit was approximately 30 months, with the average age for intervention being two years. The Healthy Hearing program aims to identify hearing loss in babies before they are three months of age. If hearing problems are detected early, and treatment begins before babies are six months old, they have a stronger chance of heading off future communication, health and learning problems.

The Hearing Screen Process

The screening process utilises Automated Auditory Brainstem Response (AABR) equipment, which takes an electrophysical measure of the auditory system's response to sound. The baby must be more than 34 weeks gestation to be screened.

The screen is non-invasive and carried out by a nurse trained in hearing screening. Small sensor pads are placed on the baby's head and soft clicking sounds are played into the ears via earphones. The sensor pads record the response as the sound travels from the ear through the auditory nervous system to the brain.



The results are known immediately and are either a "pass" or "refer" for each ear. If the result is a "refer" on either ear, a second screen is repeated soon after. If the "refer" result is again recorded, the baby is referred for diagnostic audiology. A "pass" result means that there was a strong response from both of the baby's ears at the time of screen. As a child's hearing may not stay the same over time however, parents should always monitor their children's hearing.

The results of screening are recorded in the baby's Personal Health Record.

Capture Rates

As with all universal screening, the Healthy Hearing program's effectiveness depends on testing most if not all of the population targeted. In order to optimise 'capture rates', screening ideally takes place prior to the baby's discharge from hospital. The program currently achieves a >98% capture rate and exceeds its aim of screening babies by the age of 3 months and to offer or refer for intervention by the age of 6 months.

If a baby is discharged before being screened parents can contact any birthing hospital in Queensland to arrange for their baby to be screened as an outpatient up till the age of 3 months. Similarly, any homebirth babies can contact the local hospital for an outpatient screening.

Augmentation such as hearing aids can be fitted from birth and candidacy for a cochlear implant determined by the age of 12 months. Early Intervention to develop communication should begin with the child as soon as possible after diagnosis.

Targeted Surveillance

The program incorporates targeted surveillance for babies born with known risk factors for progressive hearing loss. These babies are offered an audiology appointment to monitor their child's hearing at around 9-12 months of age.



Support from General Practitioners

General Practitioners can support and promote the importance of healthy hearing by:

- Encouraging parents whose baby did not receive a hearing screen in hospital, to arrange to have their baby's hearing screened as an outpatient.
- Emphasising the importance of attending outpatient appointments for a second screen if the baby has received a "refer" result on the first screen.
- Emphasising the importance of attending a diagnostic audiology appointment if a baby has received a second "refer" result.
- Encouraging parents of babies who have been identified within the targeted surveillance program to attend their audiology appointment at 9-12 months.
- Assisting all parents to monitor their child's hearing. This is important for all babies, but particularly so for those who receive a "refer" result at screening. Even if the baby then goes on to pass the next screening test or is not diagnosed with a hearing loss, there is some evidence to suggest that this baby will be at higher risk of otitis media in childhood.
- Advising families about the range of services available to them – eg. free fitting and provision of hearing aids from Australian Hearing.

Support for Parent's

The Queensland Hearing Loss Family Support Facilitators Service (QHLFSF) is a state-wide service established to provide family-centred support and counselling to families of children diagnosed with a PHL. This service assists parents access a wide range of different professionals and services available to children with a PHL. The service is available to all children diagnosed with a PHL from birth through to completion of Grade 1. This includes children who access either public or private medical and habilitation services.

QHLFSF Contact Information: Phone: (07) 3250 8555

Contact Details

If you would like further information about this program please contact:

Ms Shirley Glennon, Statewide Coordinator, Healthy Hearing
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Or one of the three Zonal co-ordinators:

Central Zone Ms Delene Thomas. Ph: 36361484 or Delene_Thomas@health.qld.gov.au
Northern Zone Ms Katrina Roberts. Ph: 4796 2995 or Katrina_Roberts@health.qld.gov.au
Southern Zone Ms Lorraine Girle. Ph: 32998532 or Lorraine_Girle@health.qld.gov.au

Or visit the Healthy Hearing Website
<http://www.health.qld.gov.au/hearing/default.asp>

ⁱ Mehl AL and Thomson V. (1998) Newborn hearing screening: The great omission. *Pediatrics*, Vol 101 (1), pp1-10.

ⁱⁱ Davis A, Bamford J, Wilson I, Ramkalawan T, Forshaw M, and Wright S. (1997) A critical review of the role of neonatal hearing screening in the detection of congenital hearing impairment. *Health Technology Assessment* 1997, Vol 1: No 10.