3.7 Vision and hearing

3.7.3 Hearing

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Background

The relationship between congenital or acquired hearing loss in early childhood and a number of lifelong deficits in health and wellbeing has long been established.\(^1-4\) While delays in speech and language acquisition, poor educational outcomes, social maladjustments and emotional difficulties can all be attributed to hearing loss, early identification via surveillance of developmental milestones and addressing parental concern at scheduled contacts, coupled with universal screening at critical life stages can prevent or reduce many adverse consequences.\(^4,5\)

A key function of the Western Australian Child Health Services Birth to School Entry Universal Contact Schedule and the Enhanced Aboriginal Child Health Schedule is to identify early health issues, disabilities and delay which impact on the health, development and wellbeing of the child.\(^2\) The contact schedules provide an ideal opportunity to assess children through the use of standardised, evidence-based screening tools.\(^2\)

Underpinned by the principals of access and equity, screening is intended for all members of an identified target population who do not display symptoms of the disease or condition being screened for.\(^3\) Ultimately, the minimally invasive methods used in early childhood to reduce individual risk, or to improve early detection of common conditions, will reduce the burden of the condition in the wider community.\(^3\)

Figure 1 below outlines the principles of early disease detection as defined by the World Health Organisation (WHO).

<table>
<thead>
<tr>
<th>Condition:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The condition should be an important health problem.</td>
</tr>
<tr>
<td>• There should be a recognisable latent or early symptomatic stage.</td>
</tr>
<tr>
<td>• The natural history of the condition should be adequately understood.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• There should be a suitable test or examination.</td>
</tr>
<tr>
<td>• The test should be acceptable to the population.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• There should be an acceptable treatment for patients with recognised disease.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Screening Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>• There should be an agreed policy on whom to treat as patients.</td>
</tr>
<tr>
<td>• Facilities for diagnosis and treatment should be available.</td>
</tr>
<tr>
<td>• The cost of case-findings should be economically balanced in relation to possible expenditure on medical care as a whole.</td>
</tr>
<tr>
<td>• Case –findings should be a continuing process and not a ‘once for all’ project.</td>
</tr>
</tbody>
</table>

Figure 1: WHO principals of early disease detection.\(^6\)
Development of the auditory system and hearing behaviours

Development of the auditory system has its own defined sequence, with the anatomy of the ear the first to develop in utero. Anatomical parts of the cochlea are well formed by 15 weeks and are functioning by 20 weeks gestation. From about 24 weeks gestation, the foetus is able to detect and interpret sounds heard in the womb. Around 25 weeks, a loud noise in utero will provoke an autonomic response in the foetus; heart rate, blood pressure, respiratory pattern, GI motility and oxygenation can all be affected. The neural connections required to receive, recognize and react to a range of sounds, such as language and music, are functioning between 28-30 weeks’ gestational age. Development of the auditory system is distinctive in that it requires stimulation in order to develop correctly, a process which must begin during the final 10-12 weeks of gestation and continue for several years after birth.

In the final trimester, the foetus is able to detect and interpret sounds heard in the womb such as a mother’s voice and heartbeat, music or common environmental sounds. The hair cells of the cochlear start ‘tuning’ for specific frequencies, beginning with low frequency sounds, upon exposure to them. Infants who have not been adequately exposed to a range of frequencies in utero will experience two months of language delay due to insufficient tuning of hair cells.

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A child gradually learns how to integrate hearing into their developing language. Children must be exposed to speech at close proximity at a very young age for normal language acquisition to occur. Through this exposure, infants learn about a wide range of different sounds adding greatly to their understanding of their environment and capacity to interact with it in a meaningful way.

The sounds an infant makes are also affected by what they hear. During the first months of life, infants develop a range of sounds, but by about eight months, they define this, and make only the sounds of their home language. By 12 months they begin to develop real words (e.g. mum, dad, ta) and will understand some simple requests (e.g. ‘put it in the bin’, ‘where’s Nan?’). By the time the child is three years old, they can converse easily with others, and by age six, their language is mostly adult like. Further information regarding speech and language development can be found in the ‘How children develop’ resources listed in the Related policies, procedures and guidelines section at the end of this document.

Listening is the learned use of hearing, which does not come naturally. In some children, particularly the hearing impaired, it must be taught as a specific skill.
Listening skills include the ability to discriminate between the frequency, duration and rhythm of different sounds, hearing in the presence of background noise, accurate interpretation of the meaning of the sound and the ability to concentrate or pay attention.\(^9\) Parents can enhance the development of listening skills by reading and talking to their child from a very young age, encouraging the child to sit quietly, focus their attention and listen, relative to their age and ability.\(^9\)

Table 1 outlines expected auditory responses in young children.

<table>
<thead>
<tr>
<th>Age</th>
<th>Expected hearing responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6 weeks</td>
<td>Eye widening, eye blink, stirring or arousal from sleep, startle.</td>
</tr>
<tr>
<td>6 weeks – 4 months</td>
<td>Eye widening, eye shift, eye blink, quieting, beginning rudimentary head turn by 4 months</td>
</tr>
<tr>
<td>4 – 7 months</td>
<td>Head turn on lateral plane toward sound; listening attitude</td>
</tr>
<tr>
<td>7 - 9 months</td>
<td>Direct localisation of sounds to side, indirectly below ear level</td>
</tr>
<tr>
<td>9 – 13 months</td>
<td>Direct localisation of sounds to side, directly below ear level, indirectly above ear level</td>
</tr>
<tr>
<td>13 – 24 months</td>
<td>Direct localisation of sounds to side, above and below</td>
</tr>
</tbody>
</table>

Table 1: Expected auditory responses in young children.\(^{10}\)


Hearing loss and disorders of the ear in early childhood

Hearing loss is one of the most common disabilities in the world, and is often referred to as ‘the hidden disability’.\(^{11}\) The World Health Organisation estimates that in 2005 there were 278 million people globally with a disabling hearing impairment, with the loss beginning in childhood for children.

Figure 1: Hearing loss in Australian children by severity, 2005 (n= 10,268)\(^7\)

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Date Reviewed: Aug 2014
Next Review: Aug 2016
NSQHS Standards: 1.7.1, 1.8.1
almost one quarter (24.5%) of those.\textsuperscript{11}

In Australia that same year, around 3.55 million people had some degree of hearing loss.\textsuperscript{12} It has been reported that around 39 in every 10,000 children have some form of hearing loss by the age of 17, with roughly 45% of those suffering a congenital loss and the remainder, acquired.\textsuperscript{12}

Research from the National Rural Health Alliance Inc. indicates “Aboriginal and Torres Strait Islander people experience some of the highest levels of ear disease and associated hearing loss in the world, with rates up to ten times more than those for non-Aboriginal Australians.”\textsuperscript{13} Aboriginal\textsuperscript{1} children and adolescents are particularly susceptible to ear infections, the most common of which is otitis media (OM) (see Table 2). These children, whether living in urban, rural or, particularly, remote areas are more likely to suffer from OM at a younger age, more frequently, with greater severity and with increased likelihood of further complications than their non-Aboriginal counterparts.\textsuperscript{14}

Hearing loss can generally be described as congenital or acquired and is then further categorised in to conductive, sensorineural or mixed, depending on which part of the auditory system is affected.

Conductive hearing loss is caused by disorders of the external or middle ear, resulting in the inability for sound to be conducted to the inner ear correctly even though function of the auditory nerve is normal.\textsuperscript{15} The degree of hearing loss is often in the slight to moderate range (see Figure 3), and most of these disorders can be treated and corrected by medical management. However, sometimes the structures of the outer or middle ear may have been permanently damaged, and in these cases the person may hear best using a hearing aid.\textsuperscript{15-17} Although conductive hearing loss is usually acquired (e.g. foreign object in ear canal, middle ear pathology etc) it may also be due to congenital anomalies of the pinna, tympanic membrane, external ear canal or ossicles.\textsuperscript{15}

Sensorineural hearing loss is caused by damage to, or malfunction of, the cochlear (the sense organ) or the hearing nerve (the neural structure).\textsuperscript{16} It is considered to be permanent because the nerve endings have been damaged, and can range from slight to profound impairment (see Figure 3). The main treatment for children with sensorineural loss is through the use of a hearing aid.\textsuperscript{16-18} Congenital causes include

\textsuperscript{1}Within Western Australia, the term Aboriginal is used in preference to Aboriginal and Torres Strait Islander, in recognition that Aboriginal people are the original inhabitants of Western Australia. No disrespect is intended to our Torres Strait Islander colleagues and community.
infections present in the mother while pregnant, genetics and low birth weight, while acquired causes include exposure to loud noises, head trauma, infection and some antibiotics used to treat infections e.g. gentamycin.

Mixed hearing loss occurs for some children as a result of a combination of conductive and sensorineural hearing loss. These children require management of

Figure 2: Spectrum of hearing impairment.

the cause of the conductive loss, and will probably use a hearing aid as well.

Risk factors

Risk factors for hearing loss vary, depending on whether the condition is congenital or acquired. The following are considered ‘red flags’ which may assist in determining the need for referral to an audiologist:

Birth to 28 days old: ¹, ⁴

- Family history of congenital, sensorineural hearing loss (SNHL).
- In utero infection associated with SNHL (e.g. rubella, herpes, CMV etc.).
- Craniofacial anomalies.
- Respiratory distress.
- Low Apgar scores: 0-3 at 5 min; 0-6 at 10 min.
- Exchange transfusion for serum bilirubin level greater than 350 micromols/L.
- Features associated with other syndromes known to include SNHL (e.g. Down Syndrome).
29 days to 24 months:¹,⁴

- Parental concern about hearing, speech or developmental delay.
- Recurrent or persistent otitis media with effusion (OME), lasting at least 3 months.
- Head trauma with fractured temporal bone.
- Infectious diseases associated with SNHL (e.g. measles, mumps, rubella etc.).
- Poor environmental/living conditions, exposure to smoke etc.

Aboriginal people are vulnerable to ear disease and hearing disorders due to a number of complex factors, which reflect a combination of historical, cultural, social and economic factors.¹⁹ There is a clear relationship between the current health status of Aboriginal people and the social inequalities they experience; OM in particular, is thought to be more prevalent in Aboriginal populations largely due to poverty, crowded living conditions, poorer nutrition and inadequate access to water for hygiene use.¹³,¹⁹ This, coupled with cultural barriers and reduced access to appropriate medical care can produce a cycle of recurrent infections and increase the risk of hearing loss going unidentified and unmanaged.¹⁹

Hearing screening and assessment

The universal child health schedule enables early detection of hearing concerns by the use of parent questions to identify hearing risk factors and behaviours.

Tympanometry may be performed to assess the function of the middle ear and is part of the Enhanced Aboriginal Child Health Schedule, commencing from 12 months of age (refer to procedure 6.3.3 Tympanometry).

From around the age of three, staff may also perform screening audiometry in order to rule out a significant hearing loss (refer to procedure 6.3.2 Screening audiometry).

If a child fails the screening, or in the presence of any of the concerns listed above, they must be referred to an audiologist for full audiological assessment, in order to determine the level and nature of any hearing loss, and for clinical management.

For further information see Detection and Management (page 15 and 16).

The impact of hearing loss depends on a range of factors such as the age of onset, age of identification, and the type and degree of loss. The specific impact of hearing loss in early childhood is seen in a child’s speech clarity as well as the complexity of their language and sentences. Speech clarity is mostly affected by the child not hearing the high tone speech sounds – such as s, f, t, and th. Their sentences also tend to be immature and simple.²⁰ This deficit in speech development will have flow on effects in other domains such as academic achievement and social functioning.²⁰
For Aboriginal children who suffer hearing loss, in addition to the social and educational disadvantages associated with hearing impairment, a link has been identified between early onset hearing loss and increased engagement with the criminal justice system.\textsuperscript{19}

Many disorders of the ear encountered in childhood can be relatively short term and usually respond well to medical management, when detected and treated in a timely manner, further bolstering the rational for screening in early childhood.\textsuperscript{2,5} Left untreated, problems can become chronic or, at worst, result in permanent hearing loss. Table 2 highlights some of the commonly occurring disorders of the ear in early childhood, symptoms, causes and associated Community Health procedures or documents.
<table>
<thead>
<tr>
<th>Disorder</th>
<th>Main causes</th>
<th>Symptoms</th>
<th>Related procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deformities of the pinna or canal</td>
<td>Congenital anomalies.</td>
<td>Diminished sound conduction.</td>
<td>6.3.1 Otoscopic examination</td>
</tr>
<tr>
<td>External infection of the pinna</td>
<td>Infection as a result of trauma, (such as ear-piercing or injury), insect bite or eczema etc.</td>
<td>Itching. Pain. Redness, swelling.</td>
<td>3.8.6 Guide to completing a physical assessment of a child.</td>
</tr>
<tr>
<td><strong>Otitis externa</strong></td>
<td>Infection of hair follicle or gland. Poking with cotton wool or other objects. Humidity, contaminated water. Contact allergy. Pre-existing skin disease (eczema, psoriasis etc).</td>
<td>Itching. Scaling skin or scanty discharge. Severe pain and redness (acute cases). Oedema (severe cases). Conductive hearing impairment.</td>
<td>6.3.1 Otoscopic examination 6.4.2 Ear syringe 6.4.4 Technique for tissue spearing</td>
</tr>
</tbody>
</table>

**Table 2: Commonly occurring disorders of the ear in childhood.**

(Continues over 4 pages)
<table>
<thead>
<tr>
<th>Disorder</th>
<th>Main causes (^{17, 22-24})</th>
<th>Symptoms (^{17, 22-24})</th>
<th>Related procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Middle ear disorders</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cholesteatoma</td>
<td>Poor eustachian tube function coupled with middle ear infection.</td>
<td>Gradually increasing conductive or mixed hearing impairment. Discharge with foul smell, however there may be no discharge at all.</td>
<td>6.3.1 Otoscopic examination 6.3.3 Tympanometry</td>
</tr>
<tr>
<td>Abnormal benign skin growth behind the ear drum.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry perforation</td>
<td>Trauma. Previous infection.</td>
<td>Perforation of the tympanic membrane.</td>
<td>6.3.1 Otoscopic examination</td>
</tr>
<tr>
<td>Sometimes called ‘inactive CSOM’</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ear wax</td>
<td>Excessive wax forming a solid plug.</td>
<td>Occluded ear canal.</td>
<td>6.3.1 Otoscopic examination 6.4.1 Ear irrigation</td>
</tr>
<tr>
<td>Foreign bodies</td>
<td>Vegetable (e.g. seeds or beans) or non-vegetable (e.g. cotton wool bud, stones plastic parts etc).</td>
<td></td>
<td>6.4.3 Instillation of ear drops</td>
</tr>
<tr>
<td>Otosclerosis</td>
<td>Unknown.</td>
<td>Gradual hearing loss. Tinnitus. Dizziness.</td>
<td>6.3.3 Tympanometry</td>
</tr>
<tr>
<td>A form of bone overgrowth in the middle ear (very rare in children).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disorder</td>
<td>Main causes</td>
<td>Symptoms</td>
<td>Related procedures</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>----------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Otitis Media (OM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute otitis media (AOM) <em>Acute infection of the middle ear.</em></td>
<td>Upper respiratory tract infection. Infection through pre-existent perforation via contaminated water. Measles and scarlet fever.</td>
<td>Earache. Fever. Irritability. Redness and bulging of eardrum; discharge of pus if ruptured.</td>
<td>6.3.1 Otoscopic examination 6.3.3 Tympanometry 6.4.4 Technique for tissue spearing</td>
</tr>
<tr>
<td>(Otitis media with effusion) OME <em>Sometimes called ‘glue ear’, this is the accumulation of fluid or mucous in the middle ear.</em></td>
<td>Blockage of eustachian tube.</td>
<td>Conductive hearing loss. Feeling pressure, blocked ear. Tinnitus. Retracted eardrum, air bubbles, visible fluid.</td>
<td></td>
</tr>
<tr>
<td>(Suppurative otitis media) SOM &amp; (Chronic SOM) CSOM <em>Infection of the middle ear, with perforation of the ear drum. Chronic if more than 2-weeks.</em></td>
<td>OM which has not healed, with ear drum perforation. Inflammation from measles, scarlet fever or tuberculosis. Traumatic perforation with secondary infection.</td>
<td>Discharge of mucous and pus, sometimes with foul smell. Eardrum perforation. Conductive or mixed hearing impairment. Absence of earache.</td>
<td></td>
</tr>
<tr>
<td>Disorder</td>
<td>Causes</td>
<td>Symptoms</td>
<td>Related documents</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Inner ear disorders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viral infection</td>
<td>AOM or CSOM that spreads to the inner ear.</td>
<td>Facial palsy.</td>
<td>6.3.1 Otoscopic examination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dizziness, vertigo.</td>
<td>6.3.2 Screening audiometry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deafness.</td>
<td></td>
</tr>
<tr>
<td>Acoustic shock</td>
<td>Noisy machinery, loud music, explosions etc.</td>
<td>Mild to profound hearing impairment.</td>
<td></td>
</tr>
<tr>
<td>Trauma</td>
<td>Head injury or injury to the ear.</td>
<td>Mild to profound hearing impairment.</td>
<td></td>
</tr>
</tbody>
</table>
General principles

Prevention

According to the World Health Organisation (2006b), up to half of the burden of hearing loss can be prevented. Prevention strategies can be primary, secondary or tertiary in nature: Primary prevention works to prevent the occurrence of the disease (or any other factor) that leads to the incidence of hearing impairment. Secondary prevention includes actions to prevent a disease from causing hearing impairment, or to prevent the impairment from becoming a disability. Finally, tertiary prevention may be used to prevent a disability becoming debilitating. Table 3 gives a brief overview of the hearing impairment prevention strategies available for use during the prenatal, perinatal/ neonatal and childhood periods.

Exposure to pathogens in the inter-uterine or neonatal period may result in hearing problems or deafness. This may be from congenital infections such as rubella or syphilis or from neonatal infections such as measles, mumps, rubella or meningitis which may result in inflammation of the middle ear (OM) or deafness. Immunisation of children and adults can provide protection from these diseases. See West Australian Vaccination Schedule.

<table>
<thead>
<tr>
<th></th>
<th>Primary prevention strategies</th>
<th>Secondary prevention strategies</th>
<th>Tertiary prevention strategies</th>
</tr>
</thead>
</table>
breastfeeding. Smoke free environment.

Table 3: Example prevention strategies during early life.11

Detection

It is understood that the earlier a hearing impairment is identified and confirmed, the more likely it is that the child’s language potential will be maximised through appropriate hearing aid provision and auditory training.1, 2, 4, 5 As such, early detection via universal and targeted screening programs is central to reducing the burden of hearing loss for the individual and their community.3, 5

Early detection of hearing problems soon after birth is achieved by the Newborn Hearing Screening Program which is available to all babies born in Western Australia.

Birth to School Entry Schedule (BTSE) Universal Contact Schedule:

- All West Australian families are offered the Birth to School Entry Universal Contact Schedule in the community health setting.
- The Universal contacts occur at the key developmental ages of 0-10 days, 6-8 weeks, 3-4 months, 8 months, 18 months and three years. Risk factors and assessments for hearing and ear health are conducted at these times according to the physical assessment guidelines.
- Children with identified concerns are offered referral, liaison, advocacy and follow-up.
- All children are offered the School Entry Health Assessment (SEHA) at either kindergarten or pre-primary, which includes ear health screening including parent questions about ear health in the school health record, otoscopy and audiometry. For children with identified concerns, referral, liaison, advocacy and follow-up also occurs.

Enhanced Aboriginal Child Health Schedule (EACHS):

- Aboriginal families who are identified as having additional needs are offered access to the Enhanced Aboriginal Child Health Schedule.
- This incorporates a more comprehensive series of child health screening and surveillance assessments, with additional ear health screening opportunities, for children aged 0 – 5 years (up to 15 contacts).
- Screening for ear disease commences at 8 weeks of age and at every contact on this schedule to the age of 5 years.
- Community health and remote area nursing staff are trained in otoscopy and audiology and, in areas of high risk, tympanometry and video-otoscopy.
Where appropriate referrals are made to specialist services including:
  - Medical staff at Aboriginal Medical Services;
  - Audiology Services; and
  - Medical staff and ENT Specialists.

Management
Effective management strategies depend on accurate assessment. In most cases, prompt management can assist in prevention of serious long term effects. Some common management strategies are listed in Table 3, under ‘Tertiary Prevention’.

Role of community health staff
- Demonstrate and maintain competencies in a range of procedures which aim to detect early hearing deficits.
- Identify and use the best methods for raising awareness about ear disease and/or hearing problems.
- Communicate effectively with patients using visual and/or oral language skills.
- Use appropriate technology effectively and critically, showing responsibility towards the health of the patient.
- Be culturally sensitive across a range of social contexts.

Documentation
All relevant hearing and/or ear health assessment findings are to be accurately recorded in accordance with the individual procedures undertaken. Staff should use the appropriate child health record and/or electronic record systems according to local Area Health Service protocols.

Follow-up
Ear health assessment and intervention may be carried out by the Community Health Nurse (CHN), dependant on individual circumstances and the health setting, as outlined in the Community Health Policies, Procedures and Guidelines Manual (6.3 & 6.4).

Hearing impairment requires review and management by specialist services, however, re-testing the child in a controlled environment before referral is usually indicated to avoid inaccurate results. Follow up includes support for the child and their family through provision of CHN led education and reinforcement of healthy behaviours to prevent or manage the issue.

The following services are useful in provision of additional assessment, care and support for children with ear health and/or hearing issues.

Audiologist
Referral to an audiologist is usually the recommended referral pathway when a hearing disorder is initially detected. Audiologists are able to diagnose hearing loss and
assist in hearing rehabilitation. The audiologist can also determine whether a child requires medical intervention or hearing rehabilitation services. Referrals can be made by the CHN directly to audiology services located within a range of sites including the child’s local CDS service, using CHS 663 Referral from Community Health form or electronic data systems where available.

Medical practitioner

Where ear health or hearing abnormalities are detected, referral to a medical practitioner is also usually required. The medical practitioner may then refer to an Ear, Nose and Throat (ENT) specialist for further review and/or treatment.

The Australian Government Hearing Services Program (Australian Hearing) provides fully funded hearing aids and rehabilitation services to all children in Australia with a diagnosed hearing loss, up to the age of 26.

[ NB Australian Hearing does not do standard paediatric hearing assessments, children with a diagnosed hearing loss must be referred by an audiologist or doctor]

See Appendix 1 for Ear health referral and follow-up flow chart.

Related professional development

- Vision and hearing skills orientation study days – CACH WFD
- Clinical practice updates – child and school health – CACH WFD

Related policies, procedures and guidelines

- 3.7.4 Hearing behaviour development grid (BTSE)
- 3.8.5 How children develop (BTSE)
- 6.3 Hearing assessment procedures
- 6.4 Ear health procedures
- 4.4.2 School Entry Health Assessments
- 4.4.2.2 Assessments for identified concerns (How children develop)

Useful resources

- Newborn Hearing Screening Program
- West Australian vaccination schedule
- Universal Child and School Health Schedule
- Learning to talk
Communication skills (CDS resources)

<table>
<thead>
<tr>
<th>Policy Owner</th>
<th>Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director Statewide Policy Unit.</td>
<td>Birth to School Entry</td>
</tr>
</tbody>
</table>

References


Ear Health Referral and Follow Up

Risk factors requiring targeted assessment

Presenting condition

Ear health issue identified

Referral required?

Consent to referral?

Yes

No

Yes

Refer to CDS or other audiology services

Refer to GP

Follow up referral outcome and provide support as required

Issue resolved?

Yes

No

Continue with scheduled contacts

Child remains under care for ear condition

NSQHS Standards: 1.7.1, 1.8.1

Appendix A

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3 Birth to school entry
3.7 Vision and hearing
3.7.3 Hearing