



Information about the Victorian Infant Hearing Screening Program for professionals involved in the care of newborns

The Victorian Infant Hearing Screening Program (VIHSP) aims to screen all infants born in Victoria in order to identify those with a permanent hearing loss that can interfere with development.

Pre-discharge hearing screening is the international standard of care, and is supported by the National Framework for Neonatal Hearing Screening¹ and by professional bodies internationally². There is strong evidence that babies who are identified with permanent hearing loss (of moderate to profound degree) in the first six months of life, and provided with immediate and appropriate intervention, have significantly better outcomes than later-identified infants and children¹. Accordingly, VIHSP has established key performance indicators aligned with optimal timing of detection and intervention, namely hearing screen completed by 1 month of age, diagnostic audiology in process before 3 months of age, and early intervention commenced by 6 months of age.

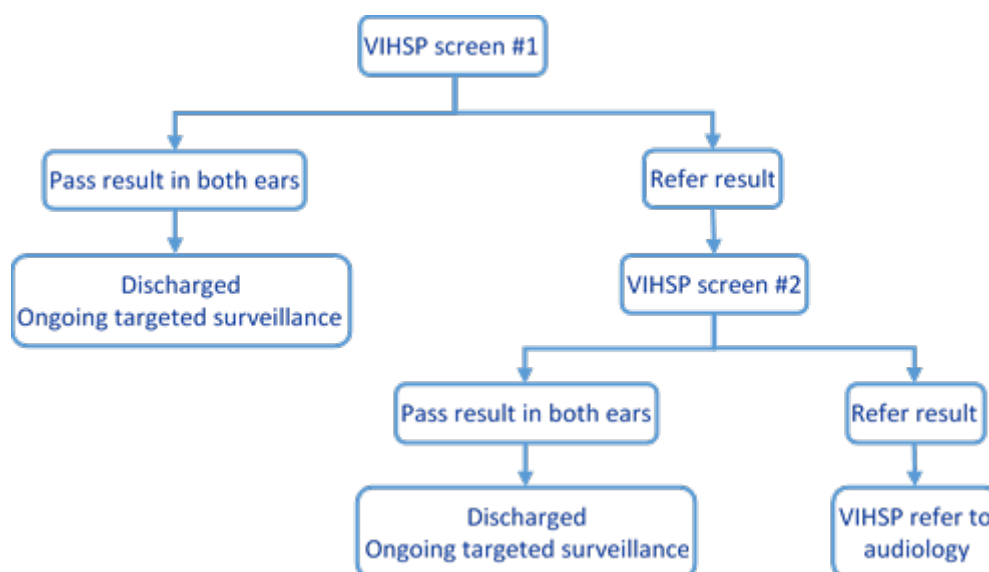
What is the age range for newborn hearing screening?

Babies who are at least 34 weeks corrected gestational age, and no more than six months of age (corrected) can be screened. However, in practice it can be difficult to successfully complete the screen for babies above the age of 3 months.

Screening Criteria

Eligible: screen immediately	Eligible: delay screen	Direct Refer (to audiology)
<ul style="list-style-type: none"> Any well baby >34 weeks corrected GA and <6 months (corrected) Settled, quiet and calm, preferably asleep. 	<ul style="list-style-type: none"> Medically unwell Compromised skin integrity On respiratory support (CPAP / high-flow) Infants on CNS stimulants 	<ul style="list-style-type: none"> Microtia or atresia of the ear

The VIHSP screening protocol



What do I do if a baby has not had a hearing screen and is due for discharge?

Contact the hearing screening team or VIHSP Area Manager (see www.rch.org.au/vihsp/contact_us) to query if a hearing screen can be performed prior to discharge. If the baby is being transferred to another hospital, VIHSP provides statewide coverage for all maternity services across Victoria. If a hearing screen cannot be completed prior to discharge home, the VIHSP team will contact the family to arrange an outpatient appointment.

What happens when a baby has a refer result on the final hearing screen?

The VIHSP Hearing Screener will explain the hearing screen result to the family and provide the VIHSP brochures: *Your baby needs further testing* and *Early Support Service*. The VIHSP Area Manager and Early Support Service (ESS) will contact the family within three days after a 'Refer' to audiology result to provide further information and arrange the referral to audiology.

What does DIRECT REFER mean in the *My Health, Learning and Development Record*?

A direct refer is a deviation from standard practice, and occurs when a baby should be medically excluded from newborn hearing screening. These babies do not complete a hearing screen and are referred to audiology without completing newborn hearing screening. Medical exclusion indicators for a VIHSP Direct Refer are microtia or atresia. If microtia and/or atresia is present, the VIHSP Area Manager will make a referral to audiology without completing the hearing screen. In some cases, a medical specialist (paediatrician, ENT, etc.) will request a referral to audiology due to other indicators. In these instances, VIHSP will still offer a hearing screen to the family prior to the audiology appointment.

Targeted Surveillance – risk factors for progressive hearing loss

The VIHSP Hearing Screener records any risk factors identified at the time of the screen in the My Birth Details section of the baby's *My Health, Learning and Development Record* (green book). This alerts parents and health professionals that the baby, based on the presence of certain risk factors, is at risk of progressive or acquired hearing loss, even though they may have passed their hearing screen. These babies will need follow up with an audiologist, usually arranged by the Maternal and Child Health Nurse (MCHN).

In the Birth Details section (page 2), risk factors for hearing loss are classified into two categories; those requiring referral to audiology immediately and those to be followed up at 8-12 months of age.

Risk factors indicating immediate referral	Risk factors indicating referral at 8-12 months
<ul style="list-style-type: none">• Significant head injury• Congenital abnormality of the head/neck*• Meningitis/encephalitis/HIE (hypoxic-ischemic encephalopathy)• Congenital CMV (cytomegalovirus) <p>*Down Syndrome is recorded as both a syndrome known to be related to hearing loss and a congenital abnormality of the head/neck</p>	<ul style="list-style-type: none">• A close relative born with a permanent childhood hearing loss.• Parental concern regarding the child's hearing• Neurodegenerative disorder• Syndrome known to be related to hearing loss• Maternal TORCH infection during pregnancy• Ventilation > 5 days (excluding CPAP)• Ototoxic medication for three or more consecutive doses• Severe jaundice at exchange transfusion levels

When hearing loss risk factors occur after the hearing screen, e.g. meningitis, recording and follow up is managed by the health professional that diagnosed the event in conjunction with the family.

Do babies with a hearing loss ever pass the screen?

Yes, as with any screening test it is possible to have a false negative result, meaning that a baby may pass the screen when they have a hearing loss. This possibility is very slim, 0.01% at most. The screen is designed to detect losses of moderate degree or greater. This means that babies with a mild hearing loss may pass the screen, as may those with a progressive loss which is not present at detectable levels at birth.

For further information about VIHSP visit www.vihsp.org.au.

For further information about screening, diagnosis, and early intervention visit <http://infanthearing.vihsp.org.au/>

Key references

1. <http://www.health.gov.au/internet/main/publishing.nsf/Content/neonatal-hearing-screening>
2. American Academy of Pediatrics, Joint Committee on Infant Hearing. Year 2007 position statement: principles and guidelines for early hearing detection and intervention programs. *Pediatrics*.2007;120(4):898– 921