PROCEDURE

Cover test

Scope (Staff): Child Health, School Health
Scope (Area): CACH, WACHS

This document should be read in conjunction with this DISCLAIMER

Aim

To detect a manifest strabismus in preschool and school-aged children.

Background

Alignment of the eyes during the early years of life is considered critical for development of binocular vision. Amblyopia is a condition that occurs when there is altered visual input or abnormal binocular interaction resulting in diminished vision in one or both eyes. Strabismus is the most common cause of amblyopia and is the term used to describe any anomaly of ocular alignment. It can occur in one or both eyes and in any direction. Amblyopia is unique to children but is preventable if the child receives adequate treatment in childhood. The prevalence of amblyopia is approximately 1% - 4% of preschool children.

Vision development is said to be complete by the time the child is eight years of age, however some aspects of visual development will already be complete by the time the child reaches school age.

The National children’s vision screening project conducted in 2008, recommended that a vision screen should be conducted for all children at around 4 years of age, with an allowable range from 3.5 to 5 years.

The Cover Test (CT) forms part of the overall vision assessment along with the Corneal Light Reflex Test (CLR) and testing for visual acuity (VA), as age appropriate.

For further information on vision refer to Community Health Manual (Internet link or HealthPoint link):

- Vision Guideline, which includes information on development of vision; normal vision behaviours; vision problems; common vision defects, including strabismus; common eye disorders, including amblyopia; visual acuity tests; and rationale for vision screening.
Universal assessment using the CT should be offered to all children from the age of 3.5 years as a component of the School Entry Health Assessment, unless there is evidence of the child being under the care of an optometrist or ophthalmologist.

Targeted assessment using the CT should be offered to children aged 3 years and older where strabismus is suspected by parent/carer, teacher or health professional, or where there is another vision concern.

**Key points**

- This test should be undertaken by staff with appropriate training only.
- Prior to performing the test, it is important to obtain a history from the parent/carer. Refer to the risk factors and red flags listed in the Vision Guideline. The CHS 409 - School Entry Health Assessment Record and the Enhanced Aboriginal Child Health Schedule all contain questions which aim to highlight parental concerns about their child’s vision.
- In children 3 years of age and over, the CT and CLR Test should be performed prior to the VA testing and contribute to the overall assessment of the eye.
- The CLR Test may not detect an intermittent deviation. If the history is suggestive of an intermittently occurring strabismus, a CT should be performed.
- Community health staff should practice overarching infection prevention and management. Hand hygiene is to be performed at all appropriate stages of the procedure.

**Equipment**

- A bright target such as a toy to gain a young child’s attention.
- For the older child, an interesting target to be placed in the distance (up to 6 metres away).
- Occluder if desired. Using the hand is acceptable as long as there are no gaps between the fingers.
## Procedure

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<td><strong>Engagement and consent:</strong>&lt;br&gt; - Explain the procedure to the child where relevant, and parent/carer if present. Allow sufficient time for discussion of concerns.&lt;br&gt; - Ensure either written or verbal parental consent has been obtained prior to proceeding with testing.&lt;br&gt; - Refer to ‘Special circumstances’ section in Universal contact schedule 4-5years (school entry health assessment) guideline if screening is indicated and consent not able to be obtained for a school aged child.</td>
<td>Encourage parent/carer support and involvement with the procedure if appropriate.&lt;br&gt; If obtaining verbal consent, discuss with the parent/carer whether they consent to sharing of information with relevant school staff.&lt;br&gt; Section 337(1) of the Health Act 1911 authorises nurses specified in the schedule to examine a child without parent consent if required.</td>
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<td><strong>Preparation:</strong>&lt;br&gt; - Sit the child comfortably on the parent's lap. An older child may prefer to stand.&lt;br&gt; - The examiner should stand in front of child, facing the child square on, about an arm’s length (30-50 cm) away from the child.&lt;br&gt; - Observe the child's eyes, head posture and alignment while child is in a relaxed state.</td>
<td>The child and the examiner should be at approximately the same height.&lt;br&gt; Note any abnormalities with the child’s eyes.&lt;br&gt; Abnormal head posturing may indicate visual difficulty, including strabismus.</td>
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3. Testing strategies:
- Ask the child to fixate on the interesting object held 30-50cm (arm’s length) from the child’s eyes.
- The examiner then covers one eye with their hand or other occluder (e.g. a palm-sized piece of plain cardboard) and observes for any movement of the uncovered eye.
- The eye should be briefly covered at least 3 times for each eye.
The direction that the uncovered eye moves to pick up fixation on the target indicates the direction of misalignment.

The child must be able to keep their head still and maintain fixation during the procedure.
The examiner should not actually touch the child’s face.
Counting ‘1 and 2 and 3 and’ as with the ‘waltz’ (each number representing the time the eye is covered) is one method of timing how the eye should be covered.
It is important to note that when there is no movement it may be because the child has limited or no vision in the uncovered eye.

4. Repeat with the other eye.
The process may be repeated several times for both eyes to obtain clarity of findings.

5. Explain results to parent/carer (if present) or inform parent by telephone or in writing.
For outcome and referral pathway see below.

6. Documentation:
Document findings according to local processes.
Documentation may include electronic records.

Outcome
Children who have positive cover test on initial screen should have the Cover Test, CLR and VA rechecked within 3 months.

If any other anomalies are observed during the assessment, Community health staff should use their clinical judgement and either follow the child up or refer e.g.: ptosis of the eye.

It is recommended that staff use the correct terminology when discussing any vision results with the parent or carer. The use of the term ‘lazy eye’ can be misleading as it can relate to several different eye conditions. A squint is a more accurate description.
Referral pathway

Children who have a positive CT on re-check should be referred to a medical practitioner for referral to an ophthalmologist. Results of all visual parameters should be included in the referral.

Referral documentation from Community Health Services should be used to refer to the child’s medical practitioner or follow local service referral pathways to ophthalmology services. The CHS 418 - Information to Ophthalmologist from Community Health form may be completed for the parent to give directly to the child’s ophthalmologist. These forms will facilitate monitoring of referral and outcome data. Use of a reply paid envelope may help facilitate referral feedback.

Where ophthalmology services are limited or infrequently available, initial referral to an optometrist may be used to expedite assessment, treatment or prioritising for ophthalmology services. Always obtain parental consent for referral.

Referral feedback

It is recommended that when there is no feedback received from the medical practitioner and/or ophthalmologist that the referral should be followed-up with the parent or carer and outcomes carefully documented.

Related internal policies, procedures and guidelines

The following documents can be accessed in the Community Health Manual:

- Internet link or HealthPoint link
- Vision guideline
- Physical assessment 0-4 years guideline
- Universal contact schedule 4-5 years (School entry health assessments) guideline
- Corneal light reflex test procedure
- Distance vision testing (using Lea Symbols Chart) procedure

References


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