PROCEDURE

Cover test

Scope (Staff):	Community health
Scope (Area):	CACH, WACHS

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this disclaimer

Aim

To detect the presence of ocular misalignment or vision impairment (manifest strabismus) in preschool and school-aged children.

Risk

Undetected or unmanaged vision impairment can have a significant effect on a child's health, psycho-social development, educational progress, and long term social and vocational outcomes.[1, 2]

Background

The Cover Test (CT) is used to detect ocular misalignment which is commonly called strabismus. The CT is based on the refixation movement of a deviated eye when the fixing eye is covered[3]. Strabismus can occur in one or both eyes and in any direction.[4] It can be primary or as a result of poor vision in one eye.[3]

The CT's accuracy as a standalone test is limited and therefore, it should always be used in combination with other vison screening tests[3].When performing the CT, one eye is occluded and then the occluder is removed reestablishing binocular vision. If an eye moves when the other is covered, this indicates that they eye was not fixing before the cover was introduced [3]. Movement indicates that a manifest (obvious or clear) strabismus is present in the uncovered eye. This is called a tropia.[5] The CT is performed on both eyes while the child fixes on a target [6].

A latent (hidden or concealed) strabismus will drift into a deviated position when the eye is uncovered after a period of occlusion. After it is uncovered, the abnormal eye must then return to correct fixation. If movement is detected in the eye that was

uncovered, this indicates a latent strabismus in the newly uncovered eye. This is called a phoria. The uncover test should be performed on both eyes.[5]

Strabismus is a common childhood disorder that can cause psychosocial distress and permanent functional disability. Large deviations may be detected by family, friends or lay people, small deviations may go unnoticed, leading to suppression of visual information form the deviated eye[3]

For further information on vision refer to the Vision and eye health guideline which includes information on development of vision, normal vision behaviours, common vision concerns including strabismus and amblyopia, and the rationale for vision screening.

Key points

- The CT forms part of a comprehensive baseline vision and eye health assessment along with the corneal light reflex (CLR), Red Reflex (RR) and testing for visual acuity, as age appropriate
- Universal screening using the CT should be offered at the School Entry Health Assessment, unless there is evidence of the child being under the care of an optometrist or ophthalmologist.
- Targeted assessment should be offered to children aged 3 years and older if there is relevant family history or strabismus is suspected by parent/caregiver, teacher, or health professional, or where there is another vision concern.
- Vision screening must only be performed by community health staff who have undertaken the CACH Community Health Nurse Orientation or WACHS recommended training and have been deemed competent in the procedures.
    - After receiving training and prior to achieving competency, staff must work under the guidance of a clinician deemed competent.
- All nurses will refer to the Nursing and Midwifery Board AHPRA Decision-making framework in relation to scope of practice and delegation of care to ensure that decision-making is consistent, safe, person-centred and evidence-based.
- For cultural considerations when caring for Aboriginal* children and families, refer to Related resources to assist service provision to Aboriginal clients
- Nurses need to provide a culturally safe service delivery which demonstrates a welcoming environment that recognises the importance of cultural beliefs and practices of all clients.
- Community health nurses must follow the organisation's overarching CAHS Infection Control Policies or WACHS Infection Prevention and Control Policy and perform hand hygiene in accordance with WA Health guidelines at all appropriate stages of the procedure.

Equipment

- Small toy to attract child's attention.
- Occluder, if available, (palm sized piece of card, such as symbols card from LEA symbols distance vision test may also be used).
- Optional - Chair for child and/or examiner.

All equipment must be cleaned before and after each use

  - CACH see *Medical Devices: Single Use, Single Patient Use and Reusable,*
  - WACHS see *Infection Prevention and Control Policy*.

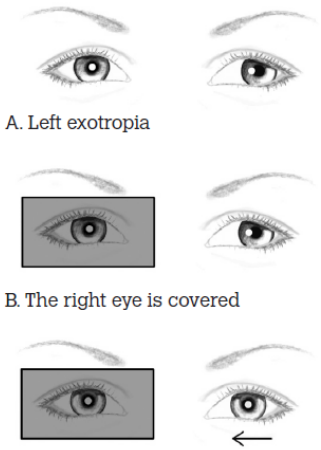
Process

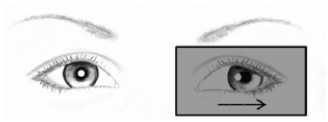
Steps	Additional Information
1. Engagement and consent • Identify the child as per Patient/Client Identification Protocol (CACH) or Patient Identification Policy (WACHS). • Encourage parent/caregiver to support and be involved with the procedure where appropriate. • Explain the procedure to the child and parent/caregiver if present. Allow sufficient time for discussion of concerns. **Child Health:** • Obtain verbal parental consent prior to proceeding with testing in accordance with the *CACH Consent for Services Policy* or *WACHS Engagement Procedure*. **School Health:** • Ensure written consent has been obtained prior to proceeding with testing in accordance with the *CACH Consent for Service Policy* or *WACHS Engagement Procedure*.	• It is the responsibility of the clinician to ensure informed consent to treatment has been obtained. • Consent should always be informed, current and relevant to the treatment in accordance with CAHS Consent for Services Policy or WACHS Engagement Procedure. • Section 337(1) of the *Health (Miscellaneous Provisions) Act 1911* authorises nurses specified in the schedule to examine a child without parent/caregiver consent if required. In this case Consultation with the Clinical Nurse Manager must occur prior to examination, the school principal or delegate to be advised as appropriate.

Steps	Additional Information
2. Preparation • Note significant history from *CHS409-1 SEHA Parent Questionnaire* (for school health) • Consider surveillance questions, risk factors and red flags listed in the *Vision and eye health* guideline (Child health and school health). • Electronic recording systems (e.g., CDIS/CHIS) should be accessed for any documented history of vision concerns already identified.	• Any noted family history of retinoblastoma, congenital, infantile, or juvenile cataracts, glaucoma, or retinal abnormalities should be referred as per local process regardless of the outcome of the CT test.

3. Prior to Vision Assessment (Child)
• Sit or stand the child comfortably.
• The examiner should:
  ○ sit or stand in front of child.
  ○ be approximately 50 cm away.
  ○ face the child square on.
• Observe the child's eyes, head posture and alignment while child is in a relaxed state (as per Physical assessment 0-4)
• Note any abnormalities with the child's eyes as per *Vision and eye health* guideline.
	• When performing the assessment, examiner considers own posture to minimise any risk of musculoskeletal injuries.
	• Abnormal head posturing may indicate visual difficulty, including strabismus.
	• The child's and the examiner's eyes should be at approximately the same height.
	• When undertaking observation of the eyes recognise indicators for child abuse

4. Assessment **Right eye:** • Direct the child's attention to a target (small toy) held 50 cm from their eyes. • Cover left eye with card/hand or an occluder.	• The object used to attract the child's attention should remain still. • The child must be able to keep their head still and maintain constant fixation on a target for this test to be valid. • If using hand to occlude:

Steps	Additional Information
• Cover the eye for approximately two to three (2-3) seconds.[7] • Observe the uncovered right eye closely for any shift in fixation as the left eye is covered.[5] [6] • The hand, card or occluder is then removed, and both eyes are observed for any movement.[8] • Repeat the procedure three times to confirm findings. Pause briefly between repeats. **Repeat with the left eye.**	○ Hold hand in stop sign position. ○ Ensure fingers are held close enough to obscure vision (no gaps between fingers). • Cover the eye by approaching from the side of child's face, not from in front. • The occluder (hand or card) is to be held close to the eye, but not touching the eye. • Occlude the eye long enough for uncovered eye to take up fixation approximately 2-3 seconds.
4. Interpreting Results • If an eye moves when the other is covered, this indicates that the uncovered eye was not fixing before the cover was introduced. • Recheck of the CT, CLR and visual acuity is required if CT reveals movement (positive result) in a child's eye/s on the initial screen. This should be done as soon as practical, within 3 months.	Cover test results[5]  A. Left exotropia B. The right eye is covered Uncover test results:[5]

Steps	Additional Information
	 A. Alighment appears normal  B. The abnormal left eye drifts into a deviated position when covered (In this case, a latent left exophoria)  C. The cover is removed and the newly uncovered eye is closely observed for corrective movement  • There may be no movement if the child has limited or no vision in the uncovered eye.[6] • If initial testing not felt to be reliable, staff should use clinical judgment to determine the timing of re-check/re-call within three months. For example: ○ If a child is resistant to covering one eye more than the other, they should be prioritised for rescreening or be referred if the assessment is unable to be completed.[9] • If any other abnormalities are observed during the assessment, staff should use clinical judgement and either review the child, or refer e.g., reluctance to have one eye covered.
5. Documentation • Results must be documented on *SEHA Results for Staff* and retained in the child's health records.	• Record findings: ○ movement detected in eyes or;

Steps	Additional Information
• CACH nurses must use a CDIS assessment screen to record the findings of cover test by selecting "no movement" or "movement" under vision assessment – cover test. • WACHS nurses document the results of the initial School Entry Health Assessment in CHIS: ○ If the initial check is documented over multiple appointments, use School Health: Targeted Assessment to document in CHIS. Manage recalls according to findings.	○ no movement detected in eyes. • Movement of the eye can be categorised as small moderate or large.[3] • CACH and WACHS nurses must use the relevant *Clinical Notes/Comments* field in CDIS/CHIS to record any factors that may have interfered with the accuracy of the findings as well as findings around the observation of the eye.

6. Communicate results with parent/caregiver
• If no movement noted:
  ○ Discuss results with parent/caregiver (if present) or inform by telephone according to preference noted on *CHS409-1 SEHA parent questionnaire*.
  ○ Provide results in writing using *SEHA* Results for parents or other relevant form.
• If movement is noted:
  ○ Contact parent/caregiver to discuss need for recheck/referral.
  ○ Provide results in writing using SEHA Results for parents or other relevant form.
• Provide a copy of the results to the school on completion of the health assessment using *SEHA Results for staff*.
	• Refer to CAHS Language Services policy for information on accessing interpreters.
	• Results should be given in a culturally safe environment, considering parent/caregivers health literacy.
	• It is recommended that staff discuss "movement" or "no movement" when discussing results with parents and refrain from making diagnosis such as "lazy eye" or "strabismus".
	• If a vision concern is detected, inform the classroom teacher. This may include recommendations on seating or other strategies to support the **child** in the classroom whilst awaiting referral follow-up.
	• If unable to contact a parent/caregiver to discuss a concern, follow CACH or WACHS processes to provide effective communication with the family.

Steps	Additional Information

6. Referral and follow-up
• Refer children with movement noted on CT re-check or children who show resistance to covering of one eye more than the other (i.e., occlusion behaviour), which should prompt a referral.
• If reliable initial testing shows eye movement, use clinical judgment regarding urgent referral rather than re-check/re-call within 3 months.
• Discuss and seek consent for referral from parent/caregiver.
• Include CT results in referral along with information about other vision assessments (LEA and CLR).
• For clients at risk, follow up must occur with parents/caregivers to determine if the referral has been actioned. This includes clients of concern, children in care, or those with urgent vision concerns.
  ○ For other clients, use clinical judgment to determine if referral has been actioned.
• Document plan for referral and follow up in CDIS or CHIS
	• Adherence to *CACH Clinical Handover* and *WACHS clinical handover of vulnerable children* procedure is required when handing over, or referring a client within, or outside of, the health service.
	• When assessing children at risk consider *Factors impacting on child health and development* guideline.
	• It is preferable to obtain express written consent when disclosing client information:
	  ○ Written consent must be captured on the *Consent for Release of Information* (CAHS) or *Consent for Sharing of information* (WACHS) form and filed in the client record;
	  ○ If verbal consent for referral is obtained it must be documented in detail in the client record.
	• **CACH Staff:**
	  ○ Refer to a medical practitioner. The medical practitioner will assess and consider referral to an ophthalmologist or optometrist for further investigation.
	• **WACHS nurses**:
	  ○ Follow local processes as required; this may involve referral to a medical practitioner or an optometrist for further assessment.

Documentation

Nurses maintain accurate, comprehensive, and contemporaneous documentation of assessments, planning, decision making and evaluations according to CACH and WACHS processes.

References

1. Lee EY, Sivachandran N, Isaza G. Five steps to: Paediatric vision screening. Paediatrics & child health. 2019;24(1):39-41.
2. Ambrosino C, Dai X, Antonio Aguirre B, Collins ME. Pediatric and School-Age Vision Screening in the United States: Rationale, Components, and Future Directions. Children (Basel). 2023;10(3).
3. Hull S, Tailor V, Balduzzi S, Rahi J, Schmucker C, Virgili G, Dahlmann-Noor A. Tests for detecting strabismus in children aged 1 to 6 years in the community. Cochrane Database Syst Rev. 2017 Nov 6;11(11):CD011221.
4. David K Coats EAP. Evaluation and management of strabismus in children [Internet]. 2023 [updated 2024 Jan; cited 2024 Feb 02]. Available from: https://medilib.ir/uptodate/show/6269.
5. O'Dowd C. Evaluating squints in children. Aust Fam Physician. 2013 Dec;42(12):872-4.
6. Lee EY, Sivachandran N, Isaza G. Five steps to: Paediatric vision screening. Paediatr Child Health. 2019 Feb;24(1):39-41.
7. Optometry Australia. Clinical Practice Guide - Paediatric Eye Health and Vision Care. Melbourne: Optometry Australia; 2016.
8. Loh AR, Chiang MF. Pediatric Vision Screening. Pediatr Rev. 2018 May;39(5):225-34.
9. Cotter SA, Cyert LA, Miller JM, Quinn GE. Vision screening for children 36 to <72 months: recommended practices. Optom Vis Sci. 2015 Jan;92(1):6-16.

Related internal policies, procedures, and guidelines

The following documents can be accessed in the CACH Clinical Nursing Policy Manual HealthPoint link or CACH Clinical Nursing Policy Internet link

- Clinical Handover - Nursing
- Corneal light reflex test
- Distance vision testing (Lea Symbols Chart)
- Factors impacting on child health and development
- Red Reflex
- Universal contact 0-14, 8 weeks, 4 months, 12 months, 2 years, School Health Entry Health Assessment
- Universal plus – Child Health, Universal Plus School Health
- Vision and eye health

The following documents can be accessed in the WACHS Policy Manual

Child Health Clinical Handover of Vulnerable Children Procedure
Consent for Sharing of Information: Child 0-17 years Procedure - Population Health
Fitness for Work
Hand Hygiene
Health Record Management
Home and Community Visits in Remote Community Setting
Infection Prevention Control
Management of Medical Equipment
Patient Identification
Work Health and Safety Policy
The following documents can be accessed in the CAHS Policy Manual
Child and Family Centred Care
Child Safety and Protection
Clinical Documentation
Communicating for Safety
Confidentiality, Disclosure and Transmission of Health Information
Patient/Client identification
Work Health and Safety
The following documents can be accessed in the CACH Operational Policy Manual
CDIS Client Health Record Management
Client Identification
Client Information – Requests and Sharing
Consent for Services
The following documents can be accessed in the CAHS Infection Control Policy
Hand Hygiene

Medical Devices: Single Use, Single Patient Use and Reusable
Toys, Books and Educational Material – Purchase Care Cleaning

Related external legislation, policies, and guidelines
Clinical Handover Policy
Clinical Incident Management Policy

Related internal resources (including related forms)
Clinical handover/Referral
Referral to Community Health Nurse
CHS409-6A SEHA Results for parents
CHS409-1 SEHA Parent Questionnaire
CHS409-2 SEHA Results for staff

Related resources to assist service provision to Aboriginal clients
The resources below can be accessed on CAHS-Aboriginal Health page via HealthPoint
Cultural Information Directory
Effective and appropriate communication with Aboriginal people
Keeping our Mob healthy: Strabismus,Trachoma
The following resource can be accessed from WACHS Aboriginal Resources
WA Aboriginal Health and Wellbeing Framework 2015–2030
WACHS Aboriginal Health Strategy 2019-2024

Related external resources (including related forms)
Cover Test Video (**Nurses should direct client's attention to object 50cm away, not "ten feet" as referred to in the video)
Raising Children Network: Lazy Eye or amblyopia, Blocked Tear Duct, Cleaning baby eyes, ears and noses, Colour Blindness, Conjunctivitis, Lazy eye, Long

sightedness, Ophthalmologist, Optometrist, Orthoptist, Short sightedness, Squint, Stye, Vision Impairment

This document can be made available in alternative formats on request.

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