PROCEDURE

Otoscopy

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

This document should be read in conjunction with this DISCLAIMER

Aim
To examine a child’s external auditory canal and tympanic membrane as a component of a broader ear health assessment.

Risk
Non-compliance with the procedure may result in ear conditions such as infections not being identified and treated effectively, and therefore impacting on long term hearing loss.¹

Background
Otoscopy enables examination of the external auditory canal and the tympanic membrane. Normally the canal is pink with a small amount of fine hairs and orange to brown cerumen.² Deviations from normal include inflammation, infection, lesions, scaling, scratches, swelling, occlusion, drainage, discharge, foreign bodies, offensive odour and excessive or impacted cerumen.²

The tympanic membrane is assessed for colour, translucency, anatomic landmarks, light reflex, contour (position) and for the presence of perforations. Normally the tympanic membrane is pearly grey to light pink and peripheral blood vessels may be evident.² There should be no signs of scarring, opacity or lesions.² Anatomical landmarks include identifying the long process of the malleus, the cone of light reflex reflected from where the long process of the malleus connects to the tympanic membrane, and the short process of the malleus.¹ These landmarks may become distorted or absent when fluid has accumulated behind the membrane.² The contour or the tympanic membrane is normally neutral or concave and will be intact.² The presence of grommets will also be identified through otoscopic examination. There should be no bulging, retraction, evidence of fluid behind the membrane or perforations.²

Key Points
- Comprehensive baseline ear health screening includes otoscopy and may include video otoscopy, audiometry and tympanometry.
- Otoscopy will be performed by staff who have undertaken appropriate training.
- As a component of the Universal contact 4 years (School Health Entry Assessment), enhanced or targeted services, all children will have an otoscopy examination prior to audiometry. Where there is evidence that the child is under the care of a relevant health professional, an otoscopy and audiometry is not required.
• Otoscopy is a component of the Enhanced Aboriginal Child Health Schedule. For more information refer to the *Enhanced Aboriginal Child Health Schedule 0-5 Years Summary Sheet*.

• When a child is not willing to have the procedure and when staff have concerns, the child will be referred to a General Practitioner.

• Staff will adhere to infection control and hand hygiene practices in accordance with WA Health policies.

• To reduce the risk to clients associated with transmission of micro-organisms, disposable specula should always be used.

**Equipment**

- Otoscope and spare batteries and/or charging unit.
- Disposable specula – the largest size to fit comfortably into the auditory canal.

**Process**

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| **1. Engagement and consent**        | When obtaining a history enquire about recent illness (including colds and respiratory infections), recent surgery, fever, ear pain or discharge, ear tugging, any changes observed in the child’s ability to hear and exposure to swimming or other water-based activities where water may have entered the ear canal.¹  
When parent/caregivers are present, encourage involvement with the procedure, where possible. |
| Prior to performing an otoscopy examination obtain a history from the parent/caregiver. |                                                                                       |
| Explain the procedure to the child and to the parent/caregiver, if present. Allow sufficient time for discussion of concerns. |                                                                                       |
| Ensure either written or verbal parental consent has been obtained prior to proceeding with examination. |                                                                                       |
| **2. Preparation**                   | Check the otoscope for adequate light projection, as inadequate light may cause inaccuracy in findings.  
Otoscope batteries become flat very quickly and may leak, if left in the otoscope.  
Switch the otoscope off between uses, or remove batteries when the otoscope is not required for a period of time. |
| Infants and toddlers must be held or wrapped securely to prevent unexpected movement. Infants and young children should sit on parent/caregivers lap. |                                                                                       |
| Ask the parent/caregiver to hold the child’s head securely against their chest and use their other arm to secure the child’s arms and body to stop any sudden movement. |                                                                                       |
| Older children may prefer to stand or sit. |                                                                                       |
| To prepare the child for the sensation associated with the examination, show |                                                                                       |
### Steps

- the child the otoscope and shine the otoscope light on their hand.

### Additional Information

3. **Otoscopy examination**
   - Prior to otoscopy inspect the outer ear (pinna and lobe) for deviations from normal.
   - Choose the largest speculum that will fit comfortably into the external auditory canal.
   - Hold the otoscope in such a way that you can brace your little finger against the child’s head or cheek, to prevent any potential damage as a result of sudden movement by the child. A ‘pencil grip’ at an upward angle ranging from 11 o’clock to 1 o’clock from the child’s ear, is often recommended.
   - Gently insert the speculum into the canal opening to the first canal turn, and just past the hairs. Inserting the speculum any further may cause pain and possible bleeding.
   - For infants gently pull down and back on the ear lobe to straighten the canal and for children, gently pull the pinna up and back.
   - After the examination, check that there is no damage to the external auditory canal.
   - If discharge from the first ear examined has contaminated the speculum, use a clean speculum before repeating the otoscopy for the second ear.

The examiner eyes should be at the same level as child’s ear.

Whilst this is not an exhaustive list, consider the following when documenting the results of the examination:

- Normal external ear
- Normal external auditory canal
- Normal tympanic membrane
- Excessive cerumen
- Occlusion or impacted cerumen
- Lesions
- Discharge
- Inflammation
- Scaling
- Scratches
- Scarring
- Swelling
- Foreign body
- Grommets
- Offensive odour
- Distorted or absent anatomical landmarks

4. **Video Otoscopy (if used)**
   - Refer to step 3 for undertaking an otoscopy examination.
   - The external auditory canal must be dry, so that the video otoscopy lens does not fog up.
   - The external auditory canal must be

Video otoscopy may be conducted in some settings by staff who have undertaken appropriate training. It allows an image of the tympanic membrane to be displayed on a computer and viewed by children and their parents/caregivers, or it can be used as a component of telemedicine.²

Refer to a General Practitioner if removal
### Otoscopy

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| free from occlusions so the tympanic membrane can be viewed.  
• Situate the video otoscope so that the handle is in a vertical downward position at approximately 5 – 7 o’clock.  
• View image on the computer screen.  
• Capture image by pressing the camera button.  
• Label images with the client’s name, and store in client’s record and/or accordingly to local processes. | of occlusions is required.  
Additional client consent may be required, when images are shared and/or in a videoconferencing format. Refer to local processes.  
Refer to the manufacture instructions for operational and calibration details. |

### 5. Explain results

- In the child health setting and/or where otoscopy is undertaken as part of enhanced or targeted services, the outcomes will be discussed with parents/caregivers.  
- In the school health, enhanced or targeted service settings and where concerns have been identified, telephone the parents/caregivers to discuss further, where possible.  
- Regardless if contact has been made, send all parents the *School Entry Health Assessment Results for parents (CHS409-6A)*, or relevant results documentation according to local processes.

### 6. Referral and review

- For deviations from normal, refer to a General Practitioner.  
- For staff working in enhanced or targeted services, deviations from normal may be reviewed in 4 – 6 weeks.

Staff will act on professional judgement to determine if follow up with parents/caregivers is required, to enquire if the child has been seen by a General Practitioner.  
When initiating referrals complete the Child and Adolescent Community Health Clinical Handover/Referral Form (CHS 663) and/or documentation according to local processes.

### Documentation

Community health staff will document relevant findings according to local processes.
### References


### Related internal policies, procedures and guidelines

The following documents can be accessed in the Community Health Manual via the HealthPoint link or the Internet link

- Aboriginal child health
- Audiometry
- Enhanced Aboriginal Child Health Schedule contact guidelines
- Hearing
- Physical assessment 0 – 4 years
- Tympanometry
- Universal Contact 4 years (School Entry Health Assessments)
- Vulnerable populations

### Related internal resources and forms

The following resources and forms can be accessed from the HealthPoint CACH Intranet link

- Consent for Ear Health School Screening – Aboriginal Health Team (CHS719)
- Ear Health Assessment Results – Aboriginal Health Team (CHS423) – Under review
- Enhanced Aboriginal Child Health Schedule 0-5 Years Summary Sheet
- Hearing Surveillance Screening for Universal Contacts
- Physical assessment 0 - 4 years
- School Entry Health Assessment Results for parents (CHS409-6A)
### Useful external resources

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<tr>
<td><strong>Commonwealth Department of Health and Ageing, Recommendations for clinical care guidelines on the management of otitis media in Aboriginal and Torres Strait Islander populations.</strong></td>
<td>Menzies School of Health Research, 2010.</td>
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This document can be made available in alternative formats on request for a person with a disability.

| Document Owner: | Director Clinical Services Community Health |
| Reviewer / Team: | Clinical Nursing Policy Team |
| Date First Issued: | 2007 |
| Last Reviewed: | 30 October 2018 |
| Approved by: | CAHS-CH/WACHS Community Health Clinical Nursing Policy Governance Group |
| Endorsed by: | Executive Director, Health Service Management, CAHS-CH |
| Date: | 30 October 2018 |
| Standards Applicable: | NSQHS Standards: 1.7, 1.8 |

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