

	<p style="text-align: center;">Nurse Practitioner Clinical Practice Guideline <b>Earache</b></p>	
	<b>Scope</b>	<b>Outcomes</b>
<b>Nurse Practitioner</b>	<ul style="list-style-type: none"> <li>• Patients presenting with ear pain.</li> <li>• Children &gt; 12 months</li> </ul>	Identify patients suitable for NP
<b>Nurse Practitioner +/- General Practitioner</b>	<ul style="list-style-type: none"> <li>• Severe ear pain not responsive to medication</li> <li>• Acute mastoiditis</li> <li>• Vertigo</li> <li>• Traumatic tympanic Rupture</li> <li>• Failed treatment of Otitis Externa/ Media</li> </ul>	Identify patients not suitable for NP guideline and refer to General Practitioner (GP) or Emergency Department (ED)
	<b>Initial assessment/ intervention</b>	
<b>Primary Survey</b>	<ul style="list-style-type: none"> <li>• Airway</li> <li>• Breathing</li> <li>• Circulation</li> <li>• Disability</li> <li>• Environment</li> </ul>	Abnormal primary survey identified: Refer to ED immediately
<b>History</b>	<ul style="list-style-type: none"> <li>• Time of onset: symptoms</li> <li>• Treatment given previously: including GP care, complimentary therapies, pharmacological agents used</li> <li>• Past medical history and medications</li> <li>• Allergies/ immunization status</li> <li>• Recent diving or air flights</li> <li>• Past ear infection/ problems</li> <li>• History of recent URTI</li> </ul>	Identify patients not suitable for NP guideline and refer to GP or ED
<b>Focused Clinical Assessment</b>	<ul style="list-style-type: none"> <li>• ENT Examination</li> <li>• Exclude mastoid tenderness (Refer to GP or ED)</li> <li>• Vital Signs</li> <li>• Temporomandibular joint (Tender refer to GP or ED)</li> <li>• Evidence of cellulitis (refer to GP or ED)</li> <li>• Assess level of hydration</li> </ul>	Identify patients not suitable for NP guideline and refer to GP or ED
<b>Pain Scale</b>	<ul style="list-style-type: none"> <li>• Determine level of pain</li> </ul>	Identify pain relief appropriate for patient.

	<b>Working Diagnosis and Investigations</b>	
<b>Imaging</b>	<ul style="list-style-type: none"> <li>• Not routinely required</li> </ul>	
<b>Pathology</b>	<ul style="list-style-type: none"> <li>• Not routinely required</li> <li>• MC &amp; S swabs reserved for severe and non responsive cases &gt; GP or ED</li> </ul>	
	<b>Interpretation of results and management decisions</b>	<b>Outcomes</b>
<p><b>Otitis Externa: (diffuse)</b> External ear canal inflamed/ odematous: Tragus pressure or pinna pull elicits pain.</p>	<ul style="list-style-type: none"> <li>• NP review:</li> <li>• Review analgesia</li> <li>• Effective ear toilet to remove debris: dry mopping/ consider need for wick</li> <li>• Topical antibiotics, steroids, anti-fungals</li> <li>• Severe pain refer to ED or GP</li> <li>• Surrounding cellulitis refer to ED or GP</li> <li>• Patient education and health promotion</li> <li>• Follow-up appt with GP for 'check for cure'.</li> </ul>	<p>Ensure patient understands problem and treatment.</p> <p>Ensure patient understands the problem and has access to GP for follow-up plan.</p>
<p><b>Otitis Externa (localized):</b></p>	<ul style="list-style-type: none"> <li>• Usually caused by furuncle associated with hair follicle.</li> <li>• Systemic antibiotics usually successful (see formulary)</li> <li>• Review analgesia plan.</li> </ul>	
<p><b>Otitis Media:</b> Acute onset. Middle ear effusion often with bulging tympanic membrane TM or limited or absent movement of TM or an air/ fluid level behind the TM. May have perforation of TM with otorrhoea. Erythema of TM and/ or otalgia.</p>	<ul style="list-style-type: none"> <li>• Children &gt;12 months – symptomatic Rx for 24 - 48 hours then re-evaluate. <b>If</b> symptoms persist consider antibiotics.</li> <li>• If Vomiting/ fever and other systemic features present: Antibiotic treatment per formulary.</li> <li>• If patient re-presents after 48 - 72 hours consider antibiotic therapy.</li> </ul>	<p>Ensure patient understands the problem and has access to GP for follow-up plan.</p>

<p><b>Barotrauma:</b> pain hearing loss and fluid behind tympanic membrane. Common in aircraft passengers and divers.</p> <p><b>Foreign Body in Ear:</b> Pain deafness or irritating buzzing of insect.</p>	<ul style="list-style-type: none"> <li>• Patient education and health promotion</li> <li>• If tympanic rupture refer to GP</li> <li>• Consider lignocaine topically for relief.</li>   <li>• Ensure adequate analgesia (Ibuprofen often effective if not contraindicated)</li> <li>• GP follow up</li> <li>• Patient education and health promotion.</li>   <li>• <b>Visible</b> and patient &gt;10 years old. If NP experienced and has micro instruments available attempt removal otherwise refer to GP or ED.</li> <li>• If insect drown with 1% lignocaine first.</li> <li>• DO NOT syringe out vegetable matter as may cause swelling and more pain.</li> <li>• Refer to ED or GP</li> </ul>	<p>Ensure patient understands the problem and has access to GP for follow-up plan.</p> <p>Ensure patient understands the problem and has access to GP for follow-up plan.</p>
	<b>Patient Discharge Education</b>	<b>Outcomes</b>
<b>When to return:</b>	<ul style="list-style-type: none"> <li>• Verbal instruction from NP</li> <li>• Discharge letter</li> </ul>	<p>Ensure patient understands the problem and has access to GP for follow-up plan. Ensure patient is safe to go home.</p>
<b>Follow up Appointments</b>	<ul style="list-style-type: none"> <li>• Verbal instructions from NP</li> <li>• Written discharge letter for GP/ ED</li> </ul>	
<b>Medication Education</b>	<ul style="list-style-type: none"> <li>• Verbal instructions from NP</li> <li>• Written instruction as per any medications dispensed.</li> </ul>	
<b>Certificates</b>	<ul style="list-style-type: none"> <li>• Absence from work or school certificates</li> </ul>	

	<b>Medications</b>	<b>Outcomes</b>
	<b>All medication will be stored, labeled and dispensed in accordance with relevant legislation.</b>	
<b>Simple Analgesia S2, S4 Mild Pain</b>	<p><b>Paracetamol 500 mg:</b> 1 or 2 tablets 4 – 6/24; not to exceed 8 tablets in 24 hrs.  <b>Children:</b> 15mg/kg 4 hourly up to 4 times in 24 hours. Not to exceed 4 doses in 24 hours.</p> <p>or</p> <p><b>Painstop Day:</b> 0.6 ml/kg</p> <p><b>*Auralgin Drops:</b> available over the counter for home use. *(Contra indicated in ruptured tympanic membrane)</p>	<p>Patients given medication subject to and in consideration of allergies, sensitivities, current medications and past medical history. Analgesia requirements subject to ongoing pain assessments.</p>
<b>NSAIDS S4 Moderate Pain</b>	<p><b>ADD to paracetamol if pain not controlled.</b>  <b>Naproxen: 500 mg initially then 250 mg 6 – 8 hourly.</b></p> <p><b>Children:</b> Ibruprofen: 10mg/kg 3- 4 times daily to a maximum of 600 mg in 24 hours.  <b>If NSAIDS contraindicated: *Tramadol:</b>  <b>Adults &lt;55 yrs. Children &gt;14 yrs.</b>  <b>*NB: contraindicated in SSRI use and epilepsy.</b>  <b>Oral:</b> 50 – 100 mg QID Maximum 400 mg in 24 hours.</p>	
<b>Severe Pain requiring Narcotics:</b>	<b>Refer to GP or ED</b>	
<b>Anti-emetic S4:</b>	<p><b>Adults: Metoclopramide</b>  Hydrochloride 10mg oral 8/24.  Children: Refer to GP/ED.</p>	
<b>Antibiotics S4:</b>		
<b>Otitis Externa: (localized)</b>	<p><b>Dexamethasone/Framycetin Sulphate/ Gramicidin Ear Drops:</b> 3 drops TDS for 3 -7 days.</p> <p>Systemic: <b>Di/flucloxicillin:</b> 500 mg (child 12.5mg/kg up to 500mg) orally 6 hourly for 5 days.</p>	

<b>Otitis Media: (rare in adults)</b>	<b>Amoxicillin:</b> Child: 15mg/kg 8 hourly for 5 days orally (maximum 500mg daily).  If hypersensitive to Penicillin: Children: <b>Cefactor</b> Suspension: 10mg/kg 8 hourly for 5 days.	
<b>Date Written: Nov 2008</b>		<b>Review Date: Nov 2011</b>
<b>References</b>		
<ol style="list-style-type: none"> <li>1. eMims 2008 [cited 2008 Nov 10]; Available from MIMS 2008.</li> <li>2. Clinical Practice Guidelines: Acute Otitis Media: [Royal Childrens Hospital] [cited 2008 Nov 10]; Available from: <a href="http://www.rch.org.au">www.rch.org.au</a></li> <li>3. Rosenfeld RM, Brown L, Cannon CR, Dolor RJ, Ganiats TG, Hannley M, Kokemueller P, Marcy SM, Roland PS, Shiffman RN, Stinnett SS, Witsell DL, American Academy of Otolaryngology--Head and Neck Surgery Foundation. Clinical practice guideline: acute otitis externa. Otolaryngol Head Neck Surg 2006 Apr;134(4 Suppl):S4-23 [cited 2008 Nov10]; Available from: <a href="http://www.guideline.gov/summary/summary.aspx?doc_id=9310&amp;nbr=004979&amp;string=otitis+A+ND+externa">http://www.guideline.gov/summary/summary.aspx?doc_id=9310&amp;nbr=004979&amp;string=otitis+A+ND+externa</a></li> </ol>		