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Ear & Hearing Health

No disclosures

- I acknowledge the Gadigal people who are the traditional custodians of the lands and waters where we are undertaking this conference today. I pay my respects to their elders past present and emerging.

Moree Pius X AMS

- Land of the Kamilaroi people

- St Vincent's ENT surgeons attending since 2003
- Usually day trips
- Consulting
- Some operating at Moree Base hospital

Moree Pius X AMS

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Ear & Hearing Health - Why

- Prevalence of Hearing loss amongst first Nations people is high- 43% over age 7 with hearing loss in 1 or both ears
- First Nations children have some of the highest rates of ear disease and hearing loss in the world
- First Nations people are 3.6 times more likely to have ear or hearing related conditions than non indigenous Australians.

Ear & Hearing Health

- What do we need to know?
- What can we do? – strategies
- Tips in assessment

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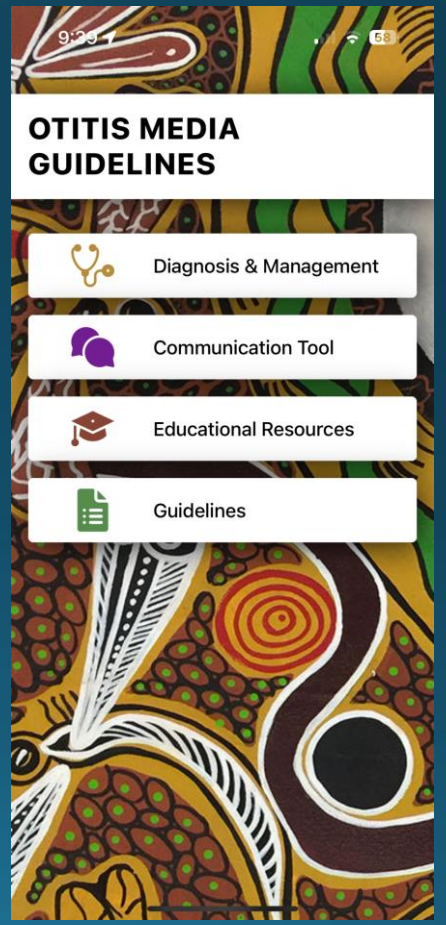
Otitis Media guidelines

- Menzies school of Health Research – 2017 – last update 2 years ago
- Aimed at paediatric otitis media
- Extensive information & guidelines



Tips in otoscopy

- Know how to use an otoscope
- Bright light

- Largest speculum possible = more light & better vision

St Vincent's SKULL BASE SURGERY

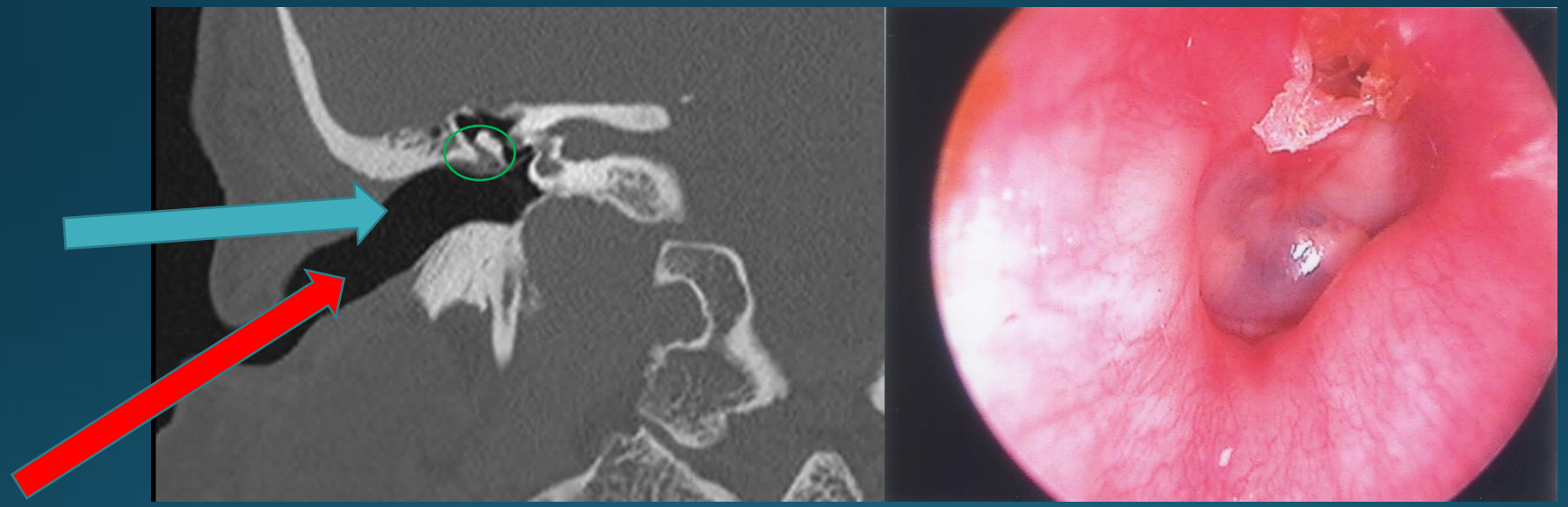
PNEUMATIC OTOSCOPY – to check drum mobility

St Vincent's SKULL BASE SURGERY

CLINICAL ASSESSMENT OF HEARING

- TUNING FORKS
- WHISPER TEST

Don’t forget to look up



Otitis media

- Spectrum AOM – OME – CSOM
- Common in children to have AOM or OME at some stage
- Aboriginal and Torres Strait Islander populations have the highest rates of severe and persistent OM described in the medical literature
- Hearing loss in early childhood is associated with
  - impaired school performance, poorer reading skills in primary school
  - impaired language skills, impaired attention span, speech disorders
  - anxiety, depression problems later in life
  - higher unemployment, impaired social relationships, poor cognitive development, increased rates of incarceration.

High risk population

- < 2years old with first infections
- Remote / regional
- Poor living environment
- Smoking
- Other family members with CSOM
- Co-morbidities – Cleft palate / craniofacial / immune

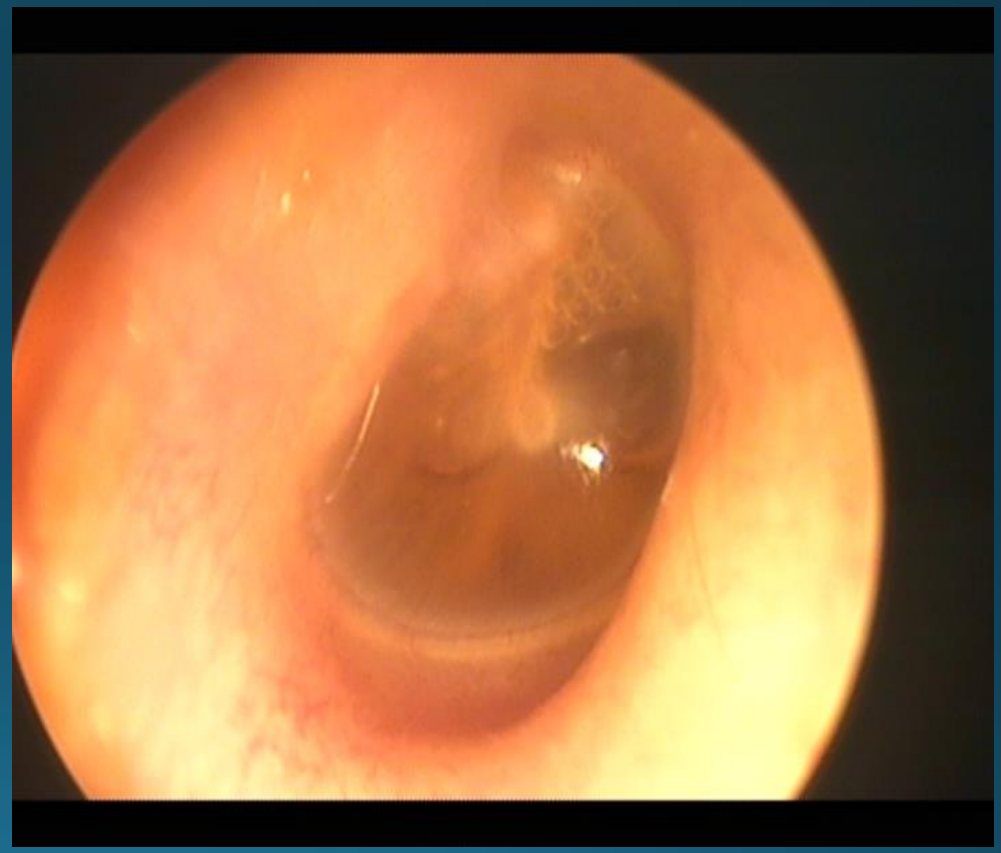
Episodic Otitis Media with Effusion - OME

- Mainly observation
- Consider intervention if significant speech delay or progressive TM retraction
- Antibiotics or occasionally ventilating tubes

Persistent OME

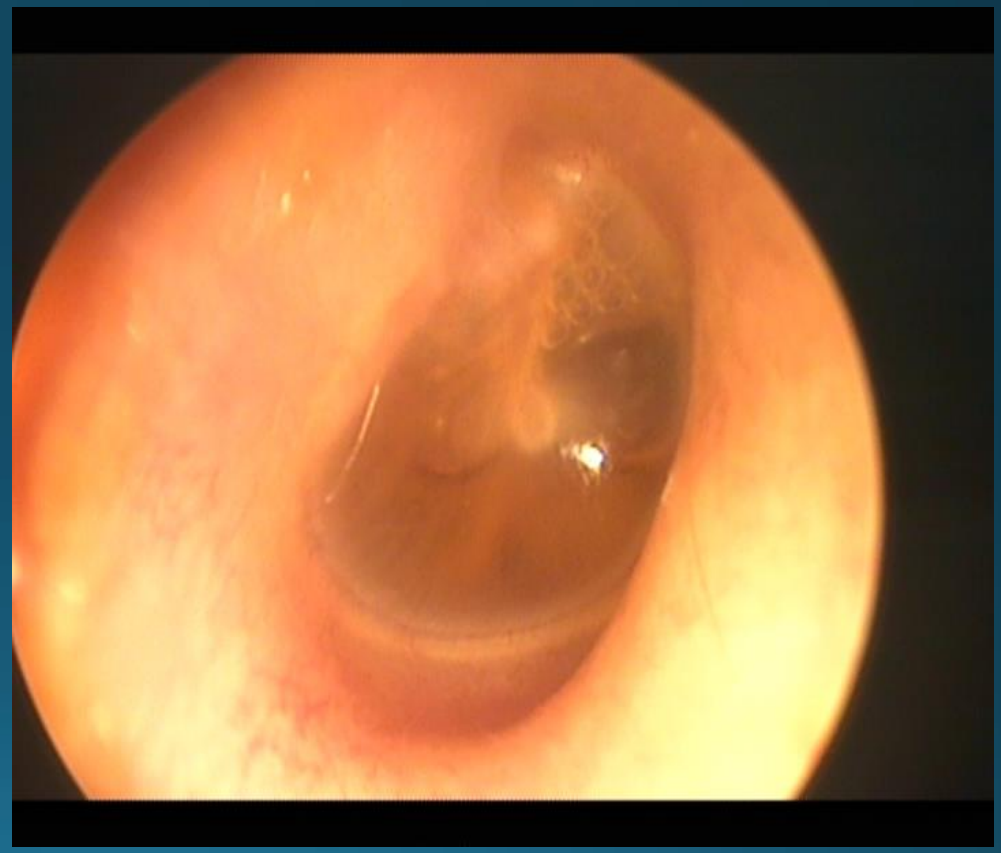
- > 3months
- Refer for audiology & ENT review
- Consider antibiotics
  - Amoxycillin 50mg/kg/day
  - Up to 4 weeks
- Consider Ventilating tubes if CHL or significant retraction +/- adenoidectomy

- Autoinflation – nasal balloon
- Speech Pathology



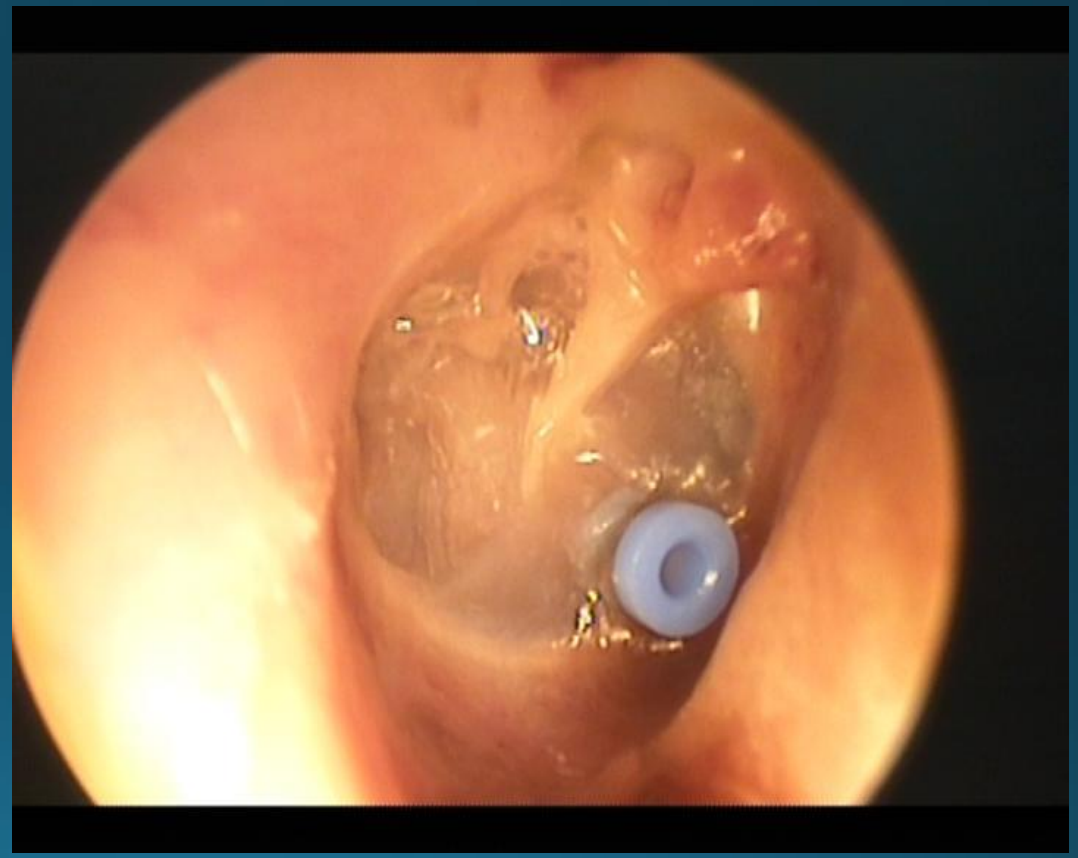
Persistent OME

- What doesn't particularly work
  - Intranasal steroids
  - Oral steroids
  - Antihistamines



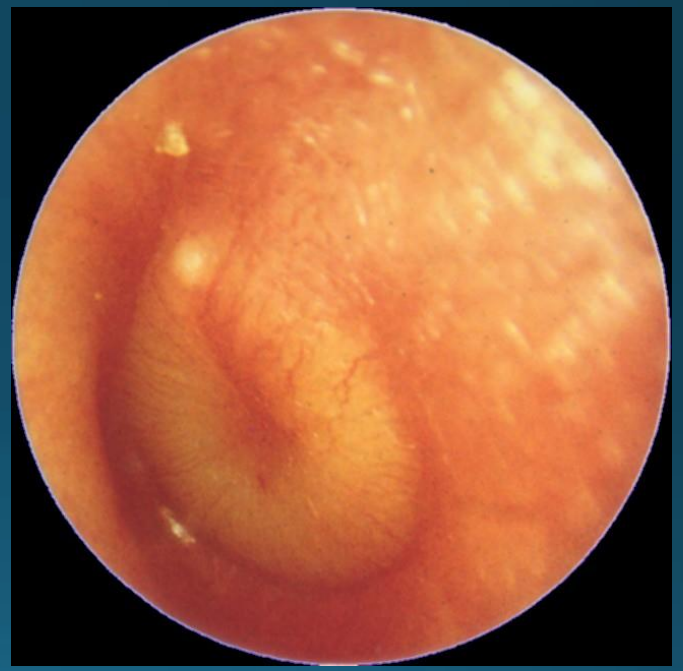
Retracted TM / OME

Retracted TM / OME



AOM without perforation

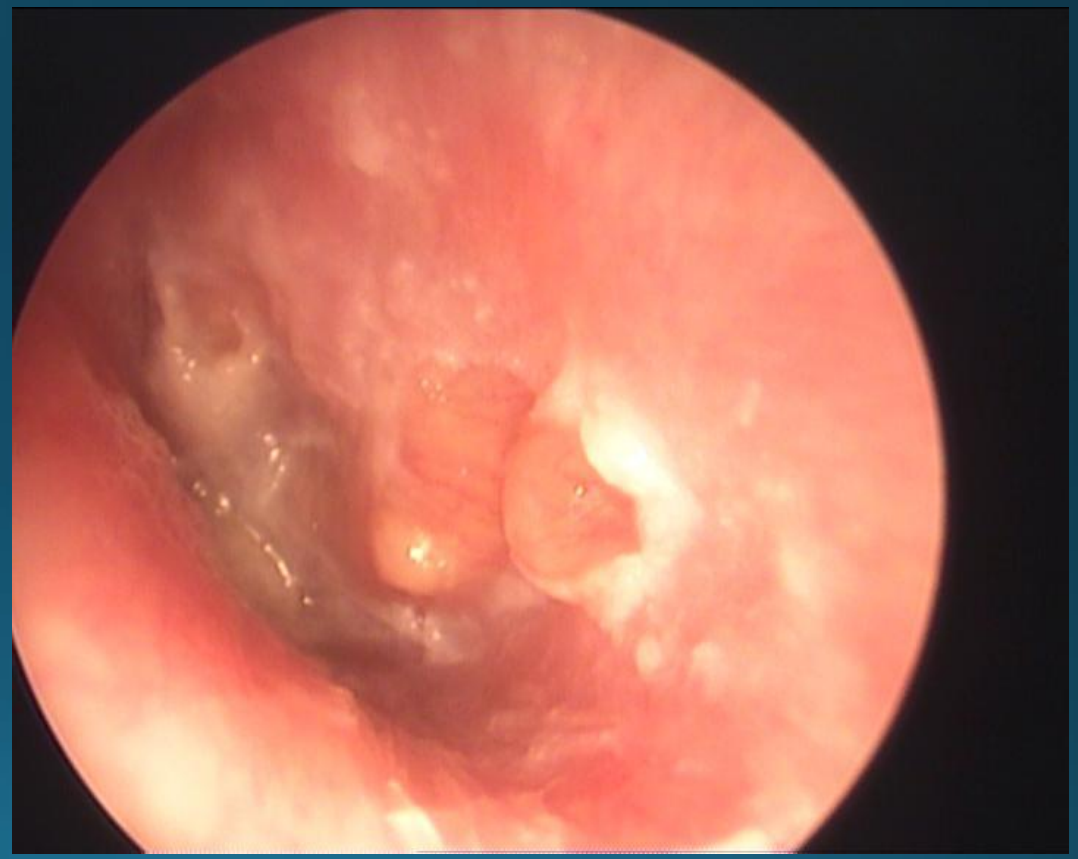
- Analgesics
- Antibiotics if high risk
  - Amoxycillin 50-90mg/kg/day 7 days
  - Augmentin 90mg/kg/day – 7 days
  - Co-trimoxazole 4+20mg/kg/dose for 5 days
  - Azithromycin 30mg/kg single dose



AOM with perforation

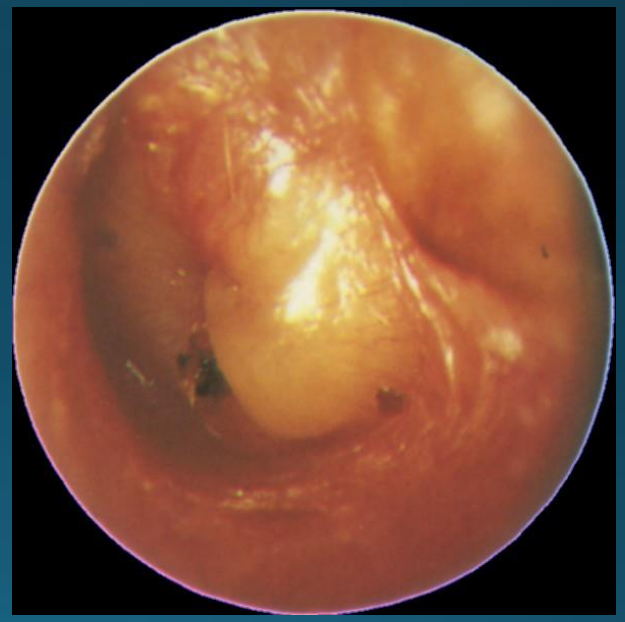
- As per AOM without perforation
- +/- add ciprofloxacin drops
- Ear cleaning

- Further management depends on size and position of perforation



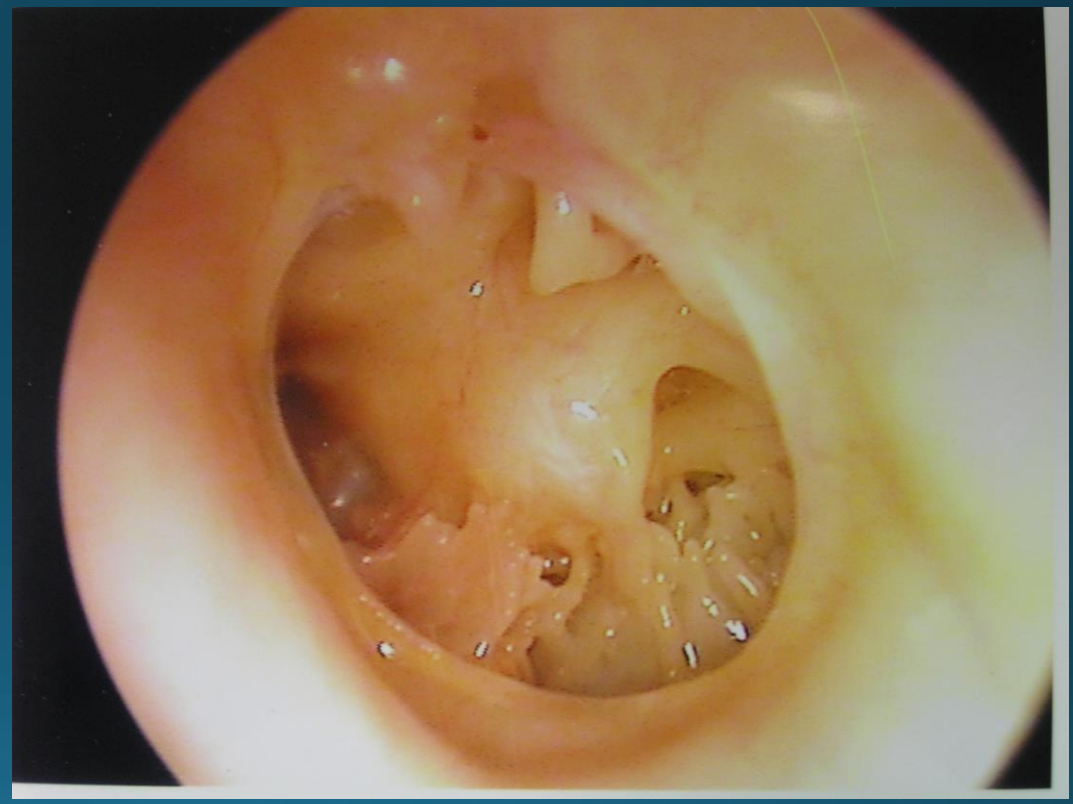
Recurrent AOM

- Give prophylactic antibiotics (amoxycillin 50 mg/kg/day one time per day for 3-6 months) if child is <2 years old
- Otherwise avoid prophylactic antibiotics
- ENT referral (VT's considered)
- Audiology – can have Conductive or SN hearing loss

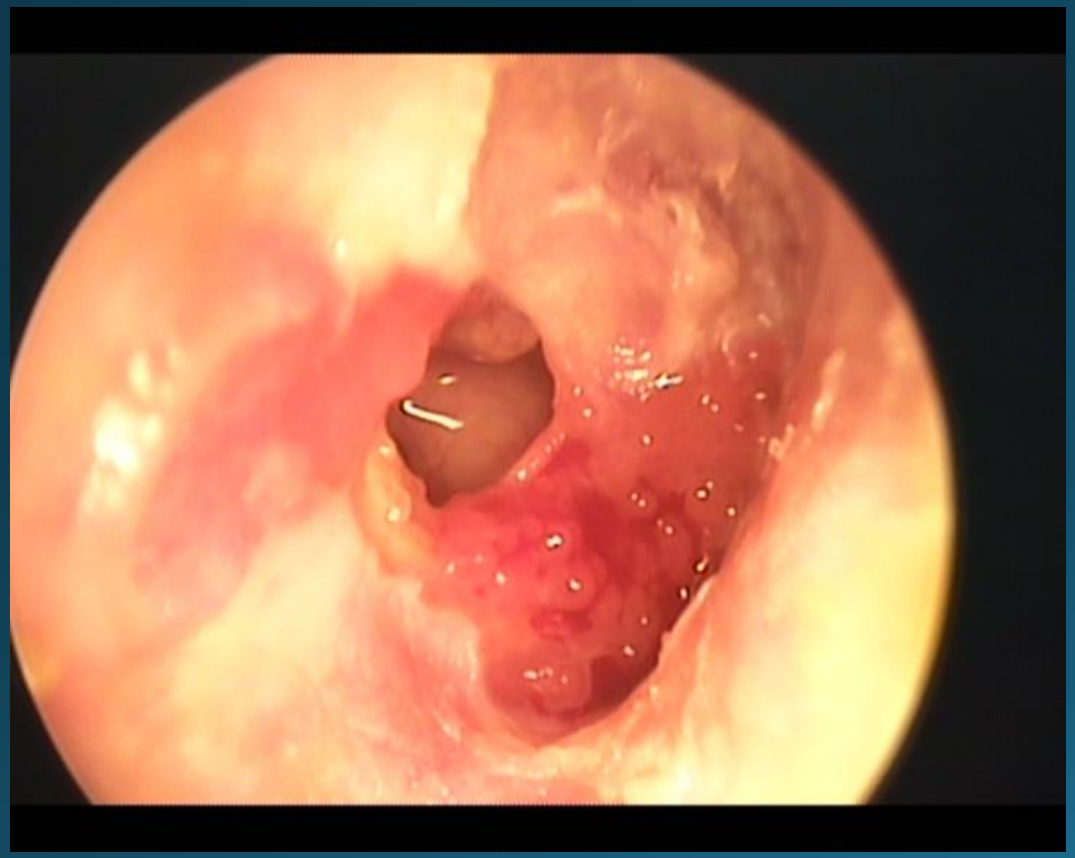


Chronic Suppurative Otitis Media - CSOM

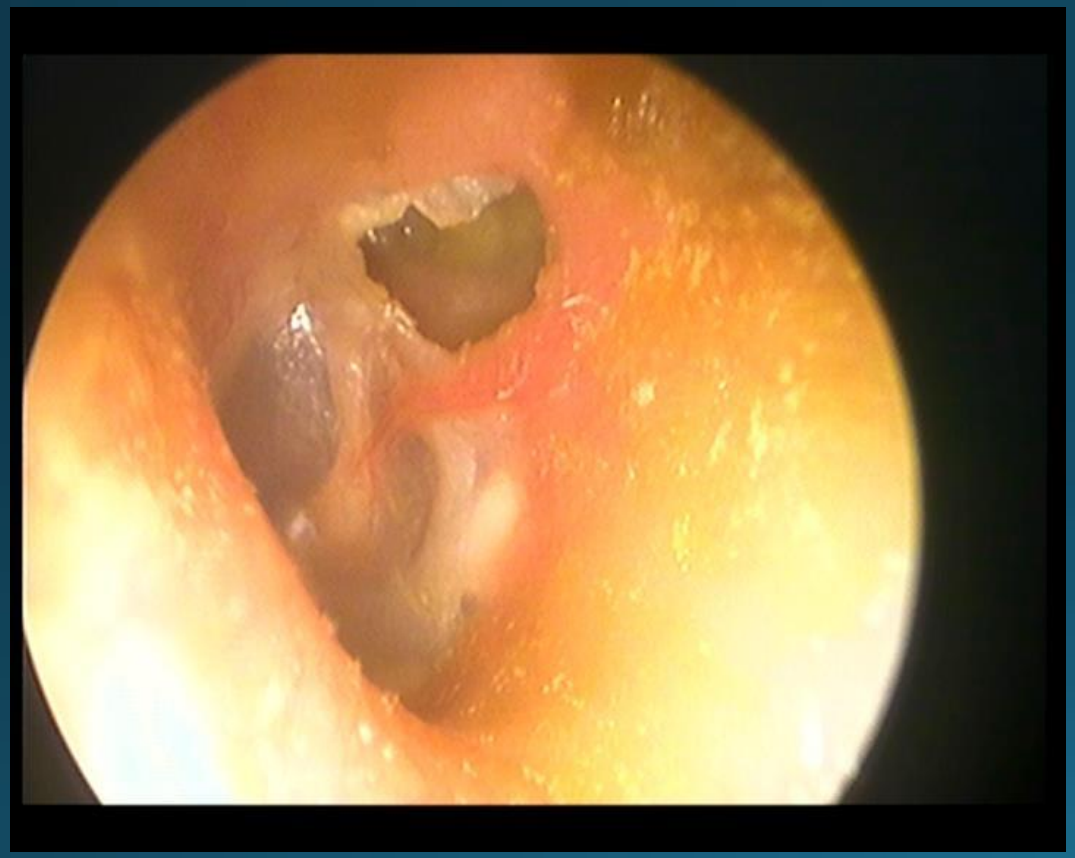
- Ciprofloxacin ear drops for 7 days +/- Co-trimoxazole 8mg/kg/day
- ENT review
- Usually CHL - Risk of SNHL
- Audiology +/- aiding
- Speech pathology if delayed speech

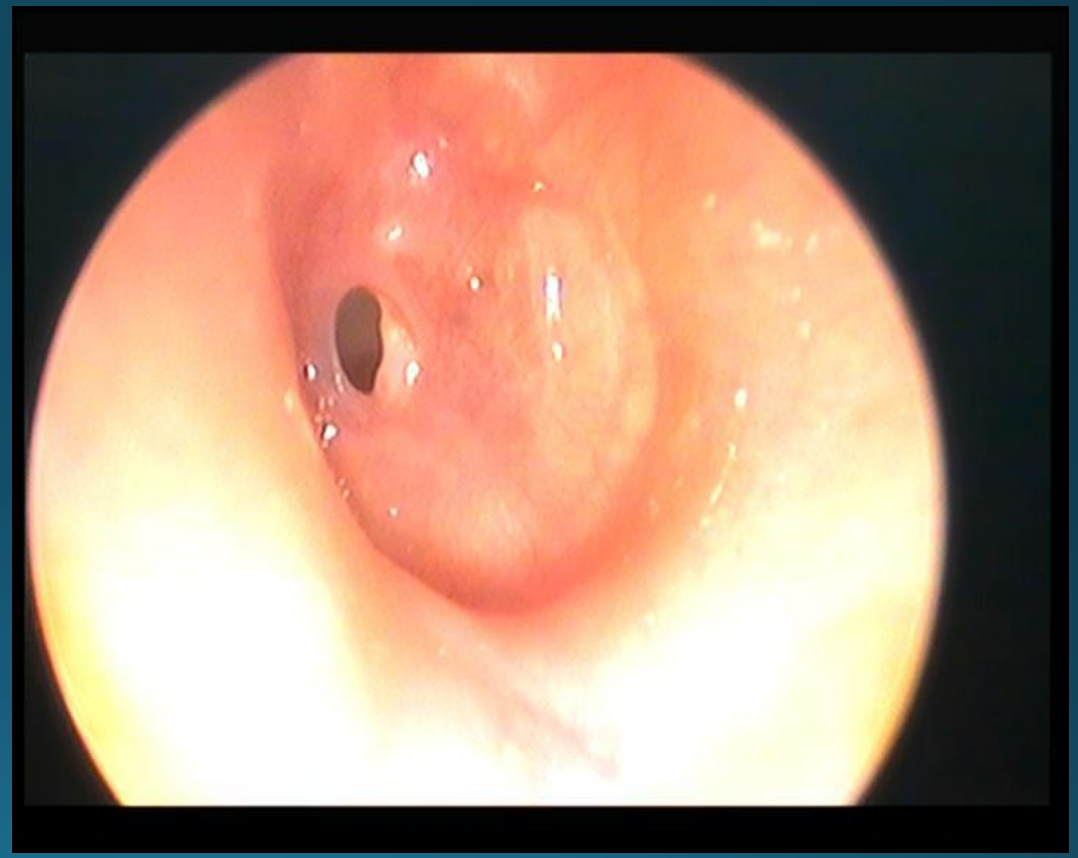


CSOM or ?



CSOM or Cholesteatoma





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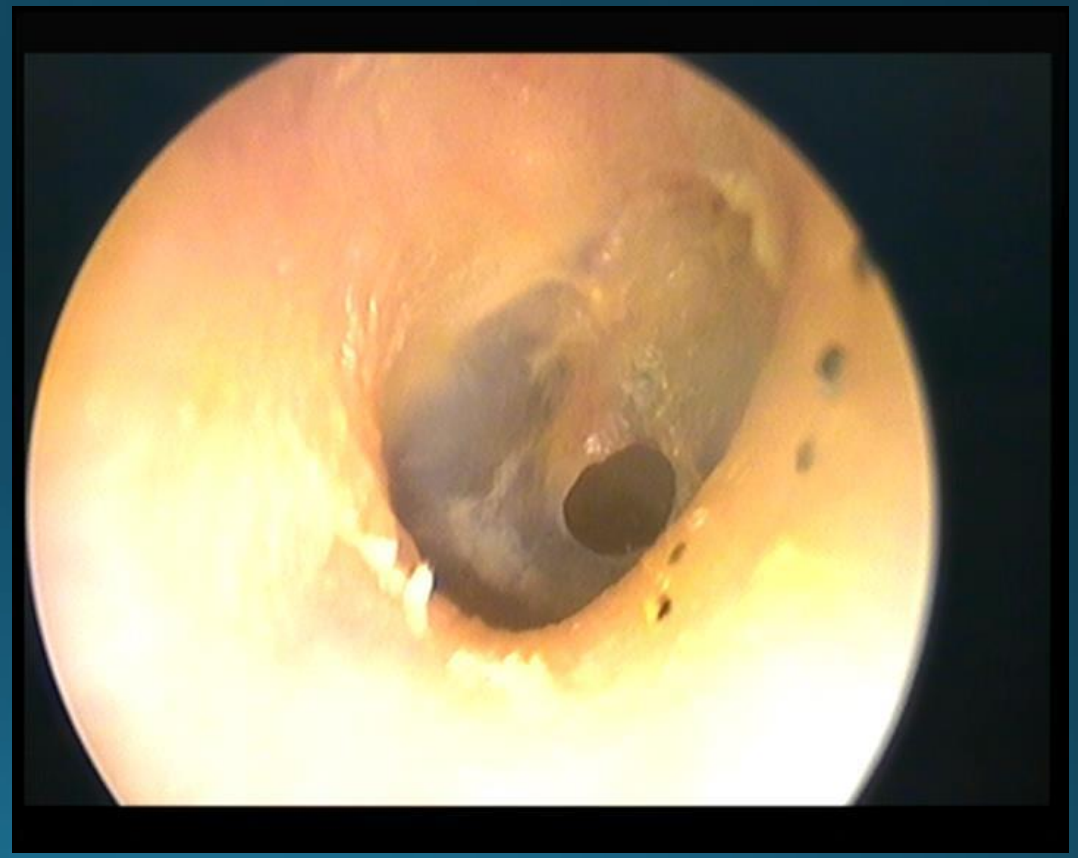
Uninfected simple perforation

- Assess degree of hearing loss +/- language impacts
- Keep dry / prevent infection
- Refer to ENT if > 6 yrs old & present > 6mths or if recurrent infection or significant hearing loss



Uninfected simple perforation

Discharging Grommets

- Aural toilet – tissue spears
- Ciprofloxacin drops for 7 days
  - +/- 1.5% hydrogen peroxide drops 30 minutes before
- Counsel preventing infection

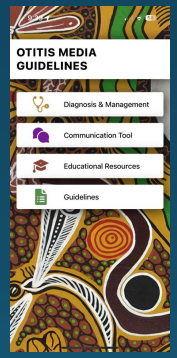
Prevention of OM & Hearing loss

- Strong recommendations
  - Early intervention and education
  - Vaccination – pneumococcal & influenza
  - Breast feeding for at least 6 months
  - Frequent hand washing
  - Avoid smoking around children
- Other recommendations
  - If bottle fed – feed upright
  - Keep sick children away from babies
  - Reduce pacifier use to < 6 months
  - Probiotics
  - Vit D supplements
  - Daily xylitol

Hearing assessment

- Many resources available
- Education of community & health workers & care givers

- Otitis Media Guidelines App
- PLUMS & HATS
- NACCHO
- EarTrain Program (TAFE)
- SoundScouts
- https://www.ahmrc.org.au/health-program/ear-eye-health
- https://www.health.gov.au/topics/aboriginal-and-torres-strait-islander-health/primary-care/ear-health-and-hearing-support



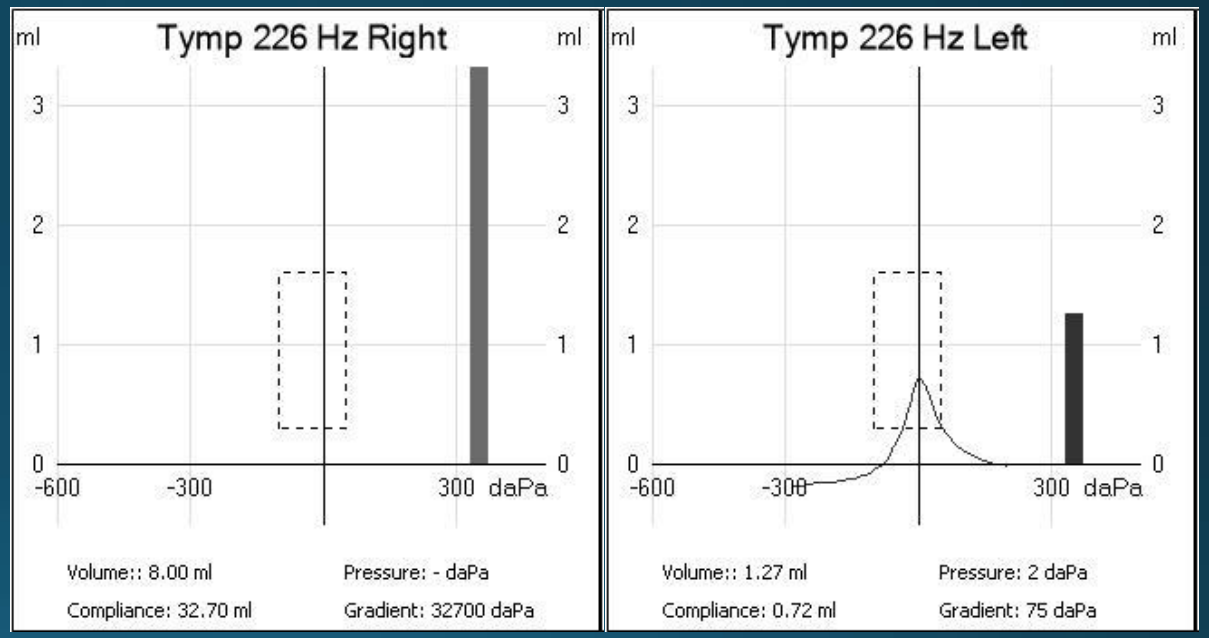
Audiology

- Neonatal hearing screening
- VROA
- Play audiometry
- Pure tone audiogram
- Tympanometry
- Speech discrimination

Tympanometry

- Often used
- Inaccurate in at least 15%

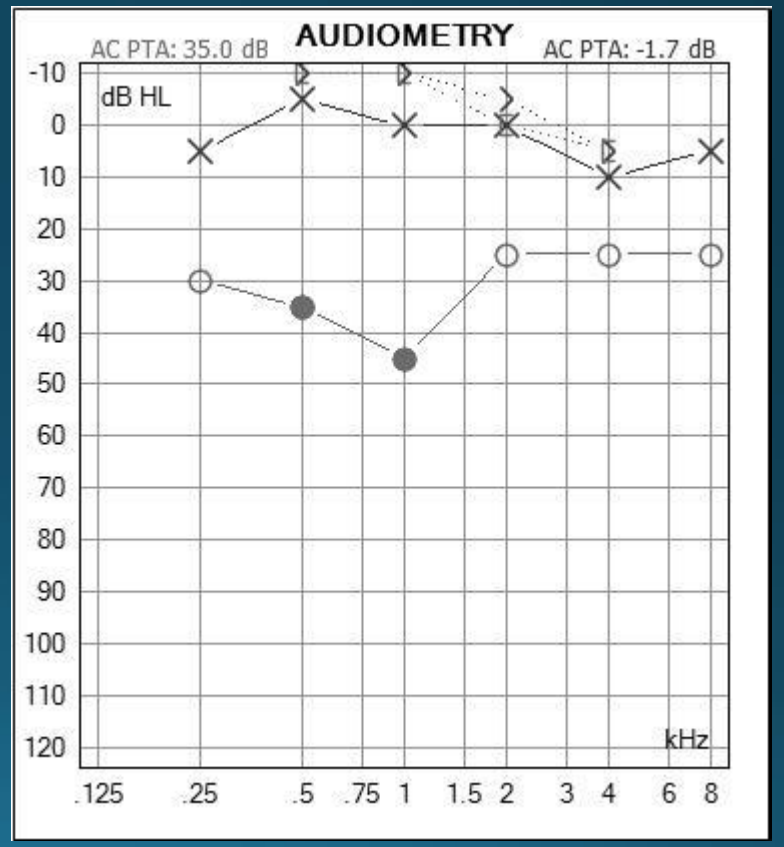
- Use pneumatic otoscopy & tuning forks (if old enough)



Audiogram

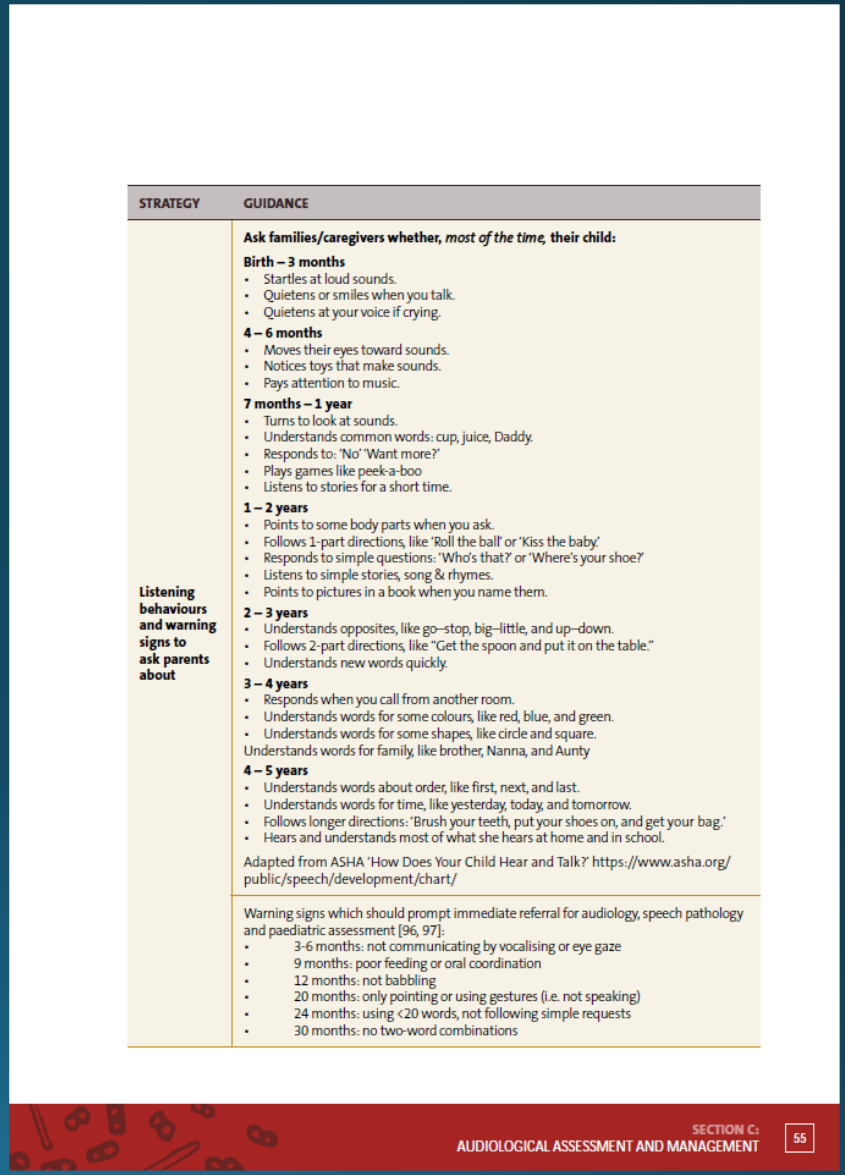
- VROA & play audiometry will pick only moderate to severe losses
- Can often miss unilateral loss

- Age > 5 yrs before get more accurate audiology



Identifying hearing loss

- Early detection best
- Screening and surveillance
- High index of suspicion if language delay
- Referral for testing if in doubt



STRATEGY	GUIDANCE
Listening behaviours and warning signs to ask parents about	**Ask families/caregivers whether, *most of the time*, their child:** **Birth – 3 months** • Startles at loud sounds. • Quietens or smiles when you talk. • Quietens at your voice if crying. **4 – 6 months** • Moves their eyes toward sounds. • Notices toys that make sounds. • Pays attention to music. **7 months – 1 year** • Turns to look at sounds. • Understands common words: cup, juice, Daddy. • Responds to: 'No' 'Want more?' • Plays games like peek-a-boo • Listens to stories for a short time. **1 – 2 years** • Points to some body parts when you ask. • Follows 1-part directions, like 'Roll the ball' or 'Kiss the baby.' • Responds to simple questions: 'Who's that?' or 'Where's your shoe?' • Listens to simple stories, song & rhymes. • Points to pictures in a book when you name them. **2 – 3 years** • Understands opposites, like go–stop, big–little, and up–down. • Follows 2-part directions, like "Get the spoon and put it on the table." • Understands new words quickly. **3 – 4 years** • Responds when you call from another room. • Understands words for some colours, like red, blue, and green. • Understands words for some shapes, like circle and square. Understands words for family, like brother, Nanna, and Aunty **4 – 5 years** • Understands words about order, like first, next, and last. • Understands words for time, like yesterday, today, and tomorrow. • Follows longer directions: 'Brush your teeth, put your shoes on, and get your bag.' • Hears and understands most of what she hears at home and in school. Adapted from ASHA 'How Does Your Child Hear and Talk?' https://www.asha.org/public/speech/development/chart/
	Warning signs which should prompt immediate referral for audiology, speech pathology and paediatric assessment [96, 97]: • 3-6 months: not communicating by vocalising or eye gaze • 9 months: poor feeding or oral coordination • 12 months: not babbling • 20 months: only pointing or using gestures (i.e. not speaking) • 24 months: using <20 words, not following simple requests • 30 months: no two-word combinations

Hearing loss in Adult ATSI population

- Under-reported
- Can be conductive, sensorineural or mixed

- Many first nations people in hospital settings have hearing loss leading to communication and treatment problems

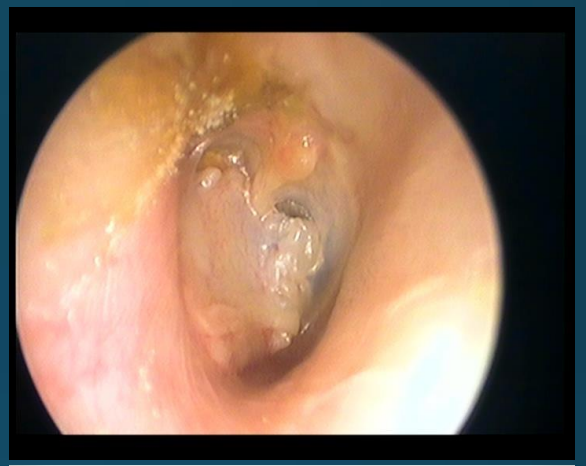
- Some resistance to seeking assistance

Hearing (& speech) rehabilitation

- Ventilating Tubes
- Tympanoplasty

- Hearing aids
  - Children and adults
- Classroom amplification
  - FM systems

- Speech therapy



Priorities in ear health

1. Children <3 years old with discharging years.
2. Children <10 years old who have hearing loss of >30 dB plus speech/ language/ communication problems.
3. Children age 3 to 10 years old who have discharging ears.
4. Other children aged <10 years old with persistent OM or tympanic membrane abnormality and hearing loss >30 dB in the better hearing ear
5. Children 0-16-year-olds who are at risk of chronic in health problems or who reside in a high risk population and have not had a documented assessment in the previous 12 months or who have missed a scheduled in health check

Thankyou

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