Otitis Media Consultation Tool for Health Professionals
Information to share with parents and carers

Australian Government
Department of Health and Ageing
care for kids’ ears
strong hearing strong start
Welcome

This resource has been produced by the Australian Government as part of the Care for Kids’ Ears campaign which aims to increase awareness of otitis media (OM) and loss of hearing in Aboriginal and Torres Strait Islander communities.

Otitis media is a significant problem in Australia, especially for Aboriginal and Torres Strait Islander children. Some studies suggest that up to 91% of Aboriginal and Torres Strait Islander children in remote communities present with otitis media.

How to use the consultation tool

This tool has been designed as a quick reference guide to otitis media for health professionals to use in consultations with parents and carers. It aims to assist busy health professionals convey the seriousness of otitis media and its consequences if left untreated.

The tabbed format allows easy access to specific information so health professionals can quickly locate the information they wish to share with each parent or carer.

This resource is intended to be used in conjunction with other resources in the Care for Kids’ Ears kit for health professionals.

What else is in the kit for health professionals?

1. Information booklet (with an overview of the campaign, why ear health is important and what health professionals can do to help);
2. Poster (for display in the waiting room);
3. Brochures (for display in the waiting room and for distribution to parents and carers); and
4. Stickers* (to be used as a fun reward for children who have had their ears checked).

A child ear model* showing inflammation and simulated fluid in the middle ear is available on request (free of charge).

* Limited supplies available

For more information about the campaign and campaign resources, or to order additional resource kits, please visit the Care for Kids’ Ears website.

www.careforkidsears.health.gov.au
The Ear

**Outer Ear**
- Ear canal

**Middle Ear**
- Eardrum
- Malleus
- Incus
- Stapes
- Eustachian tube

**Inner Ear**
- Cochlea
- Semicircular canals
- Vestibular nerve
- Facial nerve
- Auditory nerve

Image courtesy of Virtual Medical Centre www.virtualmedicalcentre.com
The ear can be divided into three parts.

| Outer Ear | • Directs sounds down the ear.  
|           | • Includes the pinna (ear flap) and ear canal. |
| Middle Ear| • Passes sound from the eardrum to the inner ear.  
|           | • Includes the eardrum and ossicles – malleus, incus and stapes (hearing bones - hammer, anvil and stirrup).  
|           | • Is connected to the back of the nose by the Eustachian tube, which is the ear’s drain.  
|           | • Allows pressure to be equalised by swallowing, yawning and sneezing. |
| Inner Ear | • Contains balance and hearing systems.  
|           | • Includes the cochlea and auditory nerve. |
Otitis media
Otitis media (OM) is:

- the medical term for all forms of inflammation and infection of the middle ear;
- also known as ‘middle ear infection’ or ‘ear disease’;
- often the result of another illness (such as a cold) and can be caused by a bacterial, viral or combined infection;
- a complex condition associated with both illness and hearing loss;
- a spectrum of disease that ranges from mild (otitis media with effusion or ‘glue ear’) to severe (chronic suppurative otitis media or ‘runny ear’);
- the most common cause of hearing loss in kids; and
- the most common cause of hearing loss in Aboriginal and Torres Strait Islander people.

Aboriginal and Torres Strait Islander kids experience earlier, more frequent and more severe otitis media than other kids in Australia.

What a normal eardrum and one type of OM may look like during an ear check:

Normal ear: able to see through the eardrum and it is not bulging

Acute otitis media without perforation: fluid behind the eardrum with bulging
# Otitis media

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
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<tbody>
<tr>
<td>Otitis media (OM)</td>
<td>Refers to all forms of inflammation and infection of the middle ear. Active inflammation or infection is nearly always associated with a middle ear effusion (fluid in the middle ear space).</td>
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<tr>
<td>Otitis media with effusion (OME)</td>
<td>Presence of fluid behind the eardrum without any acute symptoms. OME is also known as ‘glue ear’, ‘serous otitis media’ and ‘secretory otitis media’. OME may be episodic or persistent.</td>
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<tr>
<td>Persistent (chronic) otitis media with effusion</td>
<td>Presence of fluid in the middle ear for more than 3 months without any symptoms or signs of inflammation.</td>
</tr>
<tr>
<td>Acute otitis media (AOM)</td>
<td>General term for both acute otitis media without perforation and acute otitis media with perforation. It is defined as the presence of fluid behind the eardrum plus at least one of the following: bulging eardrum; red eardrum; recent discharge of pus; fever; ear pain; irritability.</td>
</tr>
<tr>
<td>Acute otitis media without perforation (AOMwoP)</td>
<td>Presence of fluid behind the eardrum plus at least one of the following: bulging eardrum; red eardrum; fever; ear pain; irritability.</td>
</tr>
<tr>
<td>Acute otitis media with perforation (AOMwiP)</td>
<td>Discharge of pus through a perforation (hole) in the eardrum within the last 6 weeks. The perforation is usually very small (pinhole) when the eardrum first ruptures. The perforation can heal and re-perforate after the initial onset of AOMwiP.</td>
</tr>
<tr>
<td>Recurrent acute otitis media</td>
<td>Occurrence of 3 or more episodes of acute otitis media in a 6 month period, or the occurrence of 4 or more episodes in the last 12 months.</td>
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<tr>
<td>Chronic suppurrative otitis media (CSOM)</td>
<td>Persistent ear discharge through a persistent perforation (hole) in the eardrum. Definition of CSOM varies in the duration of persistent ear discharge (from 2-12 weeks). Diagnosis is only appropriate if perforation is seen and is large enough to allow the discharge to flow out of the middle ear space. CSOM is also known as ‘runny ear’.</td>
</tr>
<tr>
<td>Dry perforation</td>
<td>Presence of a perforation (hole) in the eardrum without any signs of discharge or fluid behind the ear. Also referred to as ‘inactive CSOM’.</td>
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Causes / Symptoms
What causes otitis media?

- Otitis media develops when there is a build-up of fluid in the middle ear, behind the eardrum.
- When something (e.g. a cold or sore throat) causes the tube that connects the middle ear to the back of the nose (the Eustachian tube) to swell and become blocked, fluid that would normally drain out of the middle ear gets trapped.
- When the Eustachian tube is blocked, germs can also be trapped in the middle ear, where they grow and cause infection.

Why young kids are at increased risk of otitis media

- The Eustachian tube is shorter and more horizontal in babies and young kids than in older kids and adults. This makes it more difficult for fluid to drain out of the ear.
- Babies’ and young kids’ immune systems are not as effective as the immune systems of older kids and adults. This makes it harder for them to fight infections.
Causes / Symptoms

The signs and symptoms of otitis media include:

- signs of a cold (coughing, sore throat, runny nose)
- pain in the ear
- runny fluid or pus from ear
- kids pulling at ears
- fever
- can’t hear properly
- not eating
- diarrhoea or vomiting
- irritability

However, kids can have otitis media with none of these symptoms.
The germs that cause otitis media can be easily passed from one person to another. They can come from the nose or mouth through coughing, sneezing, touching or kissing.

There are lots of things parents and carers can do to help stop kids getting otitis media:

- Get kids’ ears checked every time they are seen by a health worker, nurse or doctor (even if they are there for something else) and follow their health professionals’ advice about treatments.
- Get kids to wash their hands and faces regularly.
- Make sure kids get all their scheduled health checks.
- Make sure kids get all their vaccinations.
- Get kids to blow their noses and put tissues in the bin.
- Breastfeed – it helps fight infection.
- Don’t smoke around kids.
It also helps if parents and carers:

- Always get kids to blow their nose and wash their hands and face before playing with babies – babies can very easily catch otitis media from other kids.
- Feed kids healthy food.
- Don't stick anything in kids' ears (e.g. cotton buds/tips), unless a health worker, nurse or doctor tells them to.
Treatment

Oral analgesics such as paracetamol (to relieve ear pain) and oral antibiotics (to fight infection) are the most common forms of treatment for otitis media.

If kids are prescribed antibiotics:

- They must keep taking their antibiotics until completely finished, even if they seem better after just a few doses.
- It is very important that they take all of the antibiotics; otherwise the medicine will not work properly.

If kids get otitis media repeatedly, are not getting better with treatment or are getting worse, they may need to be referred to one or more specialists for further investigation and/or further treatment.
## Specialist referral

<table>
<thead>
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<tr>
<td><strong>Audiologist</strong></td>
<td>Kids may be referred to an audiologist to confirm a diagnosis of otitis media; determine the amount (db) and type of hearing loss; receive recommendations for ongoing clinical care; monitor outcomes of hearing intervention strategies (e.g. sound amplification systems such as hearing aids and hearing hats); and/or plan hearing rehabilitation programs.</td>
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<tr>
<td><strong>Ear, Nose and Throat (ENT) Surgeon</strong></td>
<td>An ENT surgeon may suggest further treatment, such as an operation, to fix kids’ ears.</td>
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<tr>
<td><strong>Speech Therapist</strong></td>
<td>Kids with hearing loss who are experiencing problems with speech or with listening and understanding sounds may be referred to a speech therapist for help.</td>
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<tr>
<td><strong>Occupational Therapist</strong></td>
<td>Kids may be referred to an occupational therapist for help if hearing problems affect their ability to play with friends and learn at school.</td>
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Complications
Complications

Otitis media can lead to:

- hearing loss (see ‘Hearing loss’ tab for details);
- facial nerve injury;
- mastoiditis – an infection of the mastoid bone (a bone behind the middle ear); and
- serious, rare complications such as:
  - cholesteatoma – recurrent otitis media can lead to the formation of a secondary cholesteatoma (cholesteatoma is an abnormal growth in the middle ear which needs urgent ENT referral)
  - meningitis – inflammation of the protective membranes covering the brain and spinal cord – and brain abscesses, both of which can be life threatening.
Hearing loss
Otitis media can significantly reduce kids’ ability to hear clearly. Hearing loss from otitis media can be:

- temporary – kids with otitis media can experience fluctuating mild to moderate hearing loss; or
- permanent – severe otitis media can result in kids having permanent hearing loss.

Hearing loss can have a lifelong impact on kids. It can:

- impact on kids’ speech, language and learning;
- affect kids’ social, physical and emotional development; and
- impact on kids’ long-term education and employment opportunities.

If parents and carers are concerned that kids are not hearing well, they should take them to see a health worker, nurse or doctor.
There are usually signs that kids have some hearing loss. For example:

**Babies and young kids without hearing loss should be:**
- reacting to loud, unexpected noises;
- turning their head to follow noise;
- responding to familiar voices;
- locating and moving towards noise;
- hearing dogs barking; and
- hearing cars and sirens.

**Older kids without hearing loss in a family setting should:**
- respond when they are called from behind or from another room;
- be aware of signs of danger (hear cars before crossing the road; hear sirens);
- not always be asking “What?” and/or asking for things to be said again; and
- not want to turn the TV up loud.
Good news
• Kids will have a stronger start in life if their hearing is strong.

• Otitis media is not normal – it can be prevented and treated.

• Prompt treatment of otitis media can prevent permanent damage.

• There are lots of things parents and carers can do to help keep kids’ ears healthy:
  • Get kids’ ears checked every time they are seen by a health worker, nurse or doctor so ear problems are picked up early and treated promptly.
  • Make sure kids take all of their antibiotics so the medicine can work properly.
  • Make sure kids get all their scheduled health checks and vaccinations.
  • Don’t smoke around kids because cigarette smoke is bad for kids’ ears.
  • Breastfeed babies because it helps fight infection.
  • Feed kids healthy food because it keeps them strong and healthy.
Good news

- **Kids with otitis media can go swimming as long as:**
  - a health worker, nurse or doctor says it’s OK;
  - they get checked by a health worker, nurse or doctor if they have ear pain after swimming; and
  - they wear ear plugs or silicon ear putty if they have grommets (and don’t dive or swim underwater with grommets).
More information

If you require further information about the Care for Kids’ Ears campaign, please visit www.careforkidsears.health.gov.au or contact:

Department of Health and Ageing
Telephone: (02) 6289 7500
Email: careforkidsears@health.gov.au

For more details, please visit www.careforkidsears.health.gov.au

All information in this publication is correct as of January 2013