british association for paediatric otorhinolaryngology

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Recurrent Acute Otitis Media Consensus Guideline

May 2025

ENTUK

british association for paediatric otorhinolaryngology

GIRFT
GETTING IT RIGHT FIRST TIME

Working Group

This guideline has been developed following literature review and in conjunction with expert opinion of the working group representing the British Association for Paediatric Otolaryngology (BAPO).

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Recurrent Acute Otitis Media in Children

Aims

To improve the management of recurrent acute otitis media through synthesis of best available evidence and clinical expertise into accessible guidance for clinicians.

1.0 Background

Acute otitis media (AOM) is inflammation of the middle ear space. This often presents with local and systemic symptoms such as otalgia, fever and lethargy. The most common aetiology for AOM is infective and the most common pathogens associated are *Strep. pneumoniae*, *Moraxella catarrhalis and Haemophilus influenzae.(1)* The peak incidence of AOM is in children under 5; this is due to multiple factors such as naivety of the immune system and Eustachian tube anatomy increasing the risk of middle ear effusion.(2) Spreading infection originating in the middle ear space can result in intratemporal, extratemporal and intracranial complications. The potential for complications with neurological sequelae underlines the importance of recognition and management of AOM.(3)

Recurrent episodes of AOM increase the risk of these complications and is associated with quality-of-life impact such as days off school for children and days off work for parents.(4) As such, management to reduce the frequency of recurrent acute otitis media (rAOM) is essential. rAOM is defined in the literature as 3 or more episodes of acute otitis media in a 6-month period or 4 or more episodes of recurrent acute otitis media in a 12-month period.(5) A recent survey of UK based paediatric otolaryngologists found that >5 episodes of AOM per year was a pragmatic and practical threshold used for referral and consideration of treatment of patients with rAOM, which will be used in this guideline document.(6) (Appendix 2) Consideration should be given to referral and initiation of treatment for patients with less than 5 or more episodes of AOM per year in the presence of other factors such as hearing loss and this is dependent on clinician discretion.

A broad variation in practice exists internationally surrounding the administration of antibiotic chemoprophylaxis when managing rAOM. Both American and Italian national guidelines advise against the use of long-term antibiotics in the management of rAOM.(5,7) A recent clinician survey in the UK found that 70% of paediatric otolaryngologists surveyed use prophylactic antibiotics sometimes in the management of rAOM.(6) (Appendix 2) Furthermore, a focus group of UK parents and carers for children with rAOM found that parents are comfortable with the use of long-term antibiotics for the management of rAOM. (Appendix 3)

Given this variation in practice, it is important that national UK guidelines exist to support the management of patients presenting with rAOM. It is our hope that this guideline document will ensure that all clinicians will be well-versed in the potential management options when managing paediatric patients with rAOM.

2.0 Initial assessment of rAOM

Initial assessment of patients referred with rAOM should include detailed history (including vaccination history and comorbidities) and examination, with audiological testing if appropriate. AOM commonly presents with otalgia, fever and subsequent otorrhea associated with resolution of otalgia.(3) This assessment aims to confirm the diagnosis of rAOM, confirm the frequency of episodes reaches threshold for intervention and also exclude complications of AOM. The presence of otitis media with effusion should also be assessed for on clinical examination, as middle ear effusion can act as a medium for infective organisms.(3)

Where children have not received their complete childhood vaccinations, catch-up immunisation through their General Practice should be encouraged, with potential benefit from the complete course of pneumococcal vaccination.(8) Where parents have concerns about the risks and benefits of vaccination, consider directing them to the Vaccine Knowledge Project for information (vaccineknowledge.ox.ac.uk).

Routine bloods including measurement of pneumococcal serotype-specific antibody titres are unlikely to be helpful. However, the possibility of immunodeficiency should be considered. The European Society for Immunodeficiencies outlines 10 warning signs that should alert clinicians to a potential primary immunodeficiency, two or more of which should prompt a referral to paediatric immunology or general paediatrics (depending on degree of concern and availability). (Table 1) Where there are concerns about immunity in addition to rAOM, full blood count and immunoglobulins (IgG, IgA and IgM) can be helpful. Low immunoglobulins, neutrophils or lymphocytes should also prompt discussion or referral unless shown to normalise. (9)

Management of recurrent acute otitis media includes conservative management/watchful waiting, antimicrobial prophylaxis and ventilation tube insertion. The aim of each management option, as well as the benefits, potential complications and alternatives should be communicated with patients and parents prior to formulation of a patient-centred treatment plan.

10 warning signs of Paediatric Primary Immunodeficiency

1. Four or more new ear infections within 1 year
2. Two or more serious sinus infections within 1 year
3. Two or more months on antibiotics with little effect
4. Two or more pneumonias within 1 year
5. Faulure of an infant to gain weight or grow normally
6. Recurrent, deep skin or organ abscesses
7. Persistent thrush in mouth or fungal infection on skin
8. Need for intravenous antibiotics to clear infections
9. Two or more deep-seated infections including septicemia
10. A family history of Primary Immunodeficiency

Table 1 – 10 warning signs of paediatric primary immunodeficiency

2.0.1 Evidence

A 2020 Cochrane review established that pneumococcal vaccination results in a significant relative risk reduction of AOM secondary to *Strep. pneumoniae* infection. However, a reduction in risk of all-cause AOM was not established.(10) Studies have identified a high prevalence of non-protective pneumococcal antibodies among children with rAOM with revaccination conferring protective antibodies in a high proportion.(11) However, randomised controlled trials in unvaccinated children with rAOM have not shown any reduction in AOM episodes following pneumococcal vaccination (conjugate then polysaccharide).(12) There are no studies reporting clinical outcomes following revaccination in children with rAOM and low pneumococcal titres.

2.1 Conservative management vs watchful wait approach

2.1.1 Recommendations

Conservative management is an established treatment option for patients presenting with rAOM. There are many adjuncts to a watchful waiting approach that should be considered. Firstly, patients should continue to be treated with antibiotics for episodes of AOM, where indicated.(13) It is important that, for patients being managed with a watchful wait approach, ongoing clinical assessment to establish frequency of further AOM episodes is undertaken. With the current pressures on appointments, patient initiated follow up (PIFU) can be utilised with clear parameters of what represents need for reassessment or intervention. In patients with ongoing episodes of AOM, consideration should be given to alternative treatment options. (Figure 1)

2.1.2 Evidence

The peak incidence of rAOM at <5 years of age means that the majority of patients will “grow out” of rAOM. This is likely due to patient growth and their Eustachian tube anatomy maturing to reduce the risk of middle ear effusion and as such, rAOM, as well as immunological maturation.

2.2 Antimicrobial Prophylaxis

2.2.1 Recommendations

Antimicrobial prophylaxis can be considered in the management of rAOM but requires discussion of the potential benefits and harms (see evidence below). Antibiotic choice should be made in conjunction with local microbiology departments with consideration to patient allergies and potential drug interactions. Commonly used prophylactic antimicrobials include

trimethoprim and azithromycin. We recommend they are given for a 12-week period (Table 2), with treatment response assessed after completion of antibiotics. It is important that, during a period of trial of antibiotic prophylaxis, acute episodes of AOM are still treated with a short course of antibiotics as indicated. Patients and parents should be counselled on stopping the prophylactic antibiotics during this time and recommencing prophylactic treatment following completion of treatment antibiotics.

When counselling parents on the use of antimicrobial prophylaxis in paediatric patients, it is important to provide balanced information including risks of antimicrobial exposure in young patients in the consent discussion. There is limited evidence associating antimicrobial exposure in children under 2 years old with increases in risk of childhood obesity, allergic symptoms, asthma, and neurodevelopmental disorders.(14,15) However, there is risk of confounding as these conditions are usually evolving from early infancy and can affect healthcare seeking behaviour, as well as risk of receiving antibiotics. It is important to give consideration to our clinical antimicrobial stewardship responsibilities, as outlined by the UK 5-year action plan for antimicrobial resistance.(16) (Figure 1)

Antimicrobial prophylaxis			
Antibiotic	Dose (up to 50kg)	Frequency	Duration
Azithromycin	10mg/kg up to maximum 500mg	3x weekly	12 weeks
Trimethoprim	2mg/kg up to maximum 100mg	Once daily	12 weeks

Table 2. Antimicrobial choices for chemoprophylaxis in the management of recurrent acute otitis media

2.2.2 Evidence

A 2006 Cochrane review demonstrated that prophylactic antibiotics reduce the frequency of rAOM by around 50%, which would correspond to around 2-3 episodes for a child experiencing 5 episodes per year.(17) A recent systematic review and meta-analysis also produced similar results.(18) Prophylaxis also increased the proportion of patients with no further AOM which is also valued by parents (Appendix 3). It is important to note that the literature surrounding the use of prophylactic antibiotics in the management of is dated and of variable quality. The randomised controlled trials that underpin this component of practice were not undertaken with the antimicrobials that are most commonly used in practice today.(6,18) Furthermore, no randomised controlled trials have been undertaken in the post pneumococcal vaccine (PCV) era. A National Institute for Health Research (NIHR) double blinded randomised control trial

(RABBIT) is in the planning phase and aims to establish the efficacy of commonly used antibiotics in the management of rAOM in the post-PCV era.

Clinical trials of antimicrobial prophylaxis have mainly been undertaken with either penicillins or sulfonamides alone or in combination with trimethoprim (co-trimoxazole).

2.3 Surgical management

2.3.1 Grommets

2.3.1.1 Recommendations

Ventilation tubes are an additional management option for patients with recurrent acute otitis media. This can be offered both as first line or in the event of failed medical management with prophylactic antibiotics. The aim of ventilatory tubes is to normalise the pressure between the middle ear and the environment. This reduces the risk of negative pressure in the middle ear and as such the risk of OME and rAOM. Ventilatory tubes are an established treatment option for patients presenting with rAOM and should be offered to patients meeting AOM frequency threshold for intervention. A preoperative age-appropriate hearing test should be undertaken in all patients having grommet insertion. Risks of ventilatory tube insertion should be communicated with parents, with risks including pain, infection, bleeding, early extrusion, grommet retention, persistent perforation, discharging ear, altered hearing and further procedures. Grommets are normally extruded between 6-18 months after insertion, it is therefore important to highlight to parents that this is a temporary solution until the child eventually outgrows this condition.

A single dose of intra-operative antibiotic drops (ciprofloxacin) can prevent early onset otorrhea and tube blockage.(19) Grommets should be offered as a second line treatment option for patients failing conservative management or antimicrobial prophylaxis. (Figure 1) (Appendix 4)

2.3.1.2 Evidence

A 2018 Cochrane review demonstrated that grommets were more effective than active monitoring in reducing the frequency of further episodes of AOM. This review was unable to establish if grommets are more or less effective that antibiotics prophylaxis in reducing the frequency of AOM post treatment.(20) A 2021 study published in the New England Journal of Medicine concluded that the efficacy of VT placement and antibiotic prophylaxis were equivalent in reducing the frequency of subsequent AOM over a follow up period of 2 years.(21)

2.3.2 Adenoidectomy

2.3.2.1 Recommendations

Adenoidectomy should not be offered along with ventilation tube insertion for management of recurrent AOM in absence of symptomatic nasal obstruction. Adenoidectomy should be considered in patients where concurrent otitis media with effusion exists or if there is symptomatic nasal obstruction.

2.3.2.2 Evidence

A Cochrane review conducted in 2010 showed that there was no benefit to offering adenoidectomy alone or in conjunction with ventilation tube insertion on AOM.(22) A randomised trial conducted in 2003 showed no clinical difference in reduction of AOM in children <2years who underwent ventilation tube insertion vs those that underwent adenoidectomy in addition to grommet insertion.(23)

3.0 Ongoing assessment, Acute exacerbations and Persistent rAOM

3.1 Ongoing assessment

Successful treatment of rAOM is considered to be when the frequency of rAOM episodes falls below 2 episodes per year (based on a national survey of ENT clinicians). Patients managed with watchful waiting or antimicrobial prophylaxis should be offered ongoing follow up or patient initiated follow up (PIFU) to assess for resolution of symptoms or need for further management.

3.2 Acute exacerbations

An episode of acute otitis media should be considered in all patients with fever and otalgia, with a high index of suspicion in those patients with previous rAOM. Acute exacerbations of rAOM in patients managed with watchful waiting, antimicrobial prophylaxis and grommet insertion should be managed with a short course of therapeutic dose antibiotics. Common antibiotic choices include amoxicillin and clarithromycin, with dosing and duration available in NICE guideline (NG91) on the management of acute otitis media.(13) The NICE guidance also suggests consideration of the use of eardrops containing an anaesthetic and an analgesic for pain if an immediate oral antibiotic prescription is not given and there is no eardrum perforation or otorrhoea with a review of treatment if symptoms don't improve within 7 days or worsen at any time.

3.3 Persistent rAOM

3.3.1 Persistent rAOM in patients managed with watchful waiting

Patients managed through watchful waiting should be continually assessed for resolution of symptoms. The presence of more than 2 episodes of AOM in a period of 12 months can be an indication for further management. Both, antimicrobial prophylaxis and ventilation tube insertion can be offered as a second line treatment for management of persistent symptoms. (refer section 2.2 and 2.3)

3.3.2 Persistent rAOM in patients managed with antimicrobial prophylaxis

Patients who have experienced more than 2 episodes of AOM in a period of 12 months despite antimicrobial therapy can be offered ventilation tube insertion as a second line management. Clinicians may elect to offer measurement of pneumococcal serotype-specific titres in fully vaccinated children, though the unsupportive evidence (refer section 2.0) should be borne in mind, along with the lack of a clear threshold to guide revaccination.

3.3.3 Persistent rAOM in patients managed with ventilation tube insertion

3.3.3.1 Persistent otorrhea in the post-operative period

Early onset ventilation tube (VT) otorrhea can occur within the first 2 weeks following grommet insertion in 10-20% of patients increasing the risk of blockage. This is more commonly associated with children <3 years of age, presence of fluid within the middle ear cavity, and surgery performed during winter/autumn.(24)

Application of a single dose intraoperative antibiotic drops with or without steroids or multiple saline washouts intra-operatively can help reduce early onset otorrhea.(25,26) There is conflicting evidence in literature about the role of post-operative topical antibiotic drops, it is therefore not recommended unless there is evidence of middle ear infection at the time of grommet insertion.(19)

3.3.3.2 Acute VT Otorrhea with no systemic symptoms

Three in four children with grommets will develop otorrhea after the immediate post-operative period. Acute VT otorrhea in the absence of pyrexia or systemic illness should be treated with topical antibiotic drops (with or without steroids) rather than oral antibiotics in the first instance.(19,27) The choice of topical fluroquinolones is considered safe and is recommended by the FDA for non-intact tympanic membranes.

3.3.3.3 Acute VT Otorrhea with systemic symptoms

Acute onset VT otorrhea in the presence of systemic symptoms such as fever, lethargy, peri-auricular cellulitis, coryzal symptoms is an indication of acute otitis media. This should be treated with systemic antibiotics following clinical assessment. An ear swab should be taken for culture and sensitivities. If possible, aural micro suctioning should be also performed.(27)

3.3.3.4 Chronic VT Otorrhea

Chronic otorrhea lasting more than 6 weeks with or without treatment can occur in up to 4% of patients. Fungal infections should be excluded especially after prolonged multiple treatments with antibiotics. It is also important to note that persistent rAOM in patients managed with VT insertion could potentially be a presentation of immunodeficiency, in which case an immunology referral is warranted.(28) Other considerations include community acquired methicillin-resistant staphylococcus aureus (MRSA) and formation of bacterial biofilms on the grommets.

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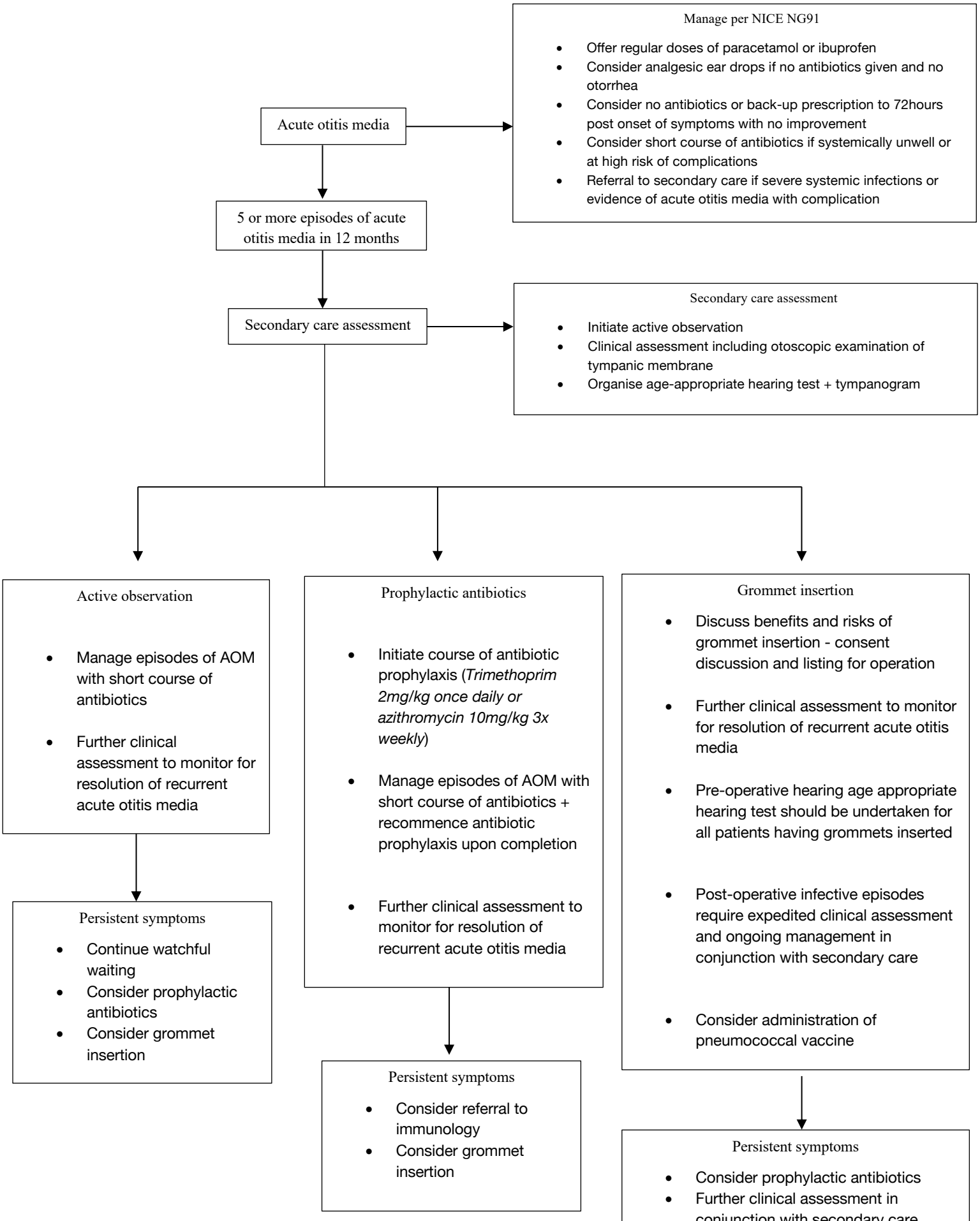


Figure 1. Flow diagram outlining the initial assessment and management of patients presenting with recurrent acute otitis media.

Appendix 1 - ENTUK leaflet for Recurrent acute otitis media

Recurrent acute otitis media

What is acute otitis media?

This is an infection of the middle ear. The middle ear fills with pus (yellow infected fluid). Your child complains of ear pain and hearing loss. They may have a fever.

Nature usually lets the pus out through the ear drum. This relieves the pressure and pain. This is when you notice a discharge from your child's ear. The pus can be stained with blood.

Most ear infections are self-limiting. The hole in the ear drum will usually heal on its own.

What is recurrent acute otitis media?

This is a middle ear infection that keeps coming back. Your child will have 4 or more middle ear infections in a year.

A little over 4 out of 5 children aged 3 years old will have had an ear infection. After the age of 2 years old, the risk of having a middle ear infection decreases. The older your child is, the less likely they will have an ear infection. This is because their eustachian tubes work better and they can top up the air inside the middle ear. Their immune system tends to also get stronger.

What problems can this give my child?

Repeated ear infections can result in complications of infection. This includes the infection spreading to the mastoid bone or in the brain. It can lead to hearing loss, scarring of the ear drum, a discharging ear (for weeks to months) and poor speech development. They may be absent from school a lot.

How is this condition treated?

Treatment options include:

• **Active observation**

Every episode of acute middle ear infection is treated as it comes. Children are given painkillers for the first 48 to 72 hours (watchful waiting). This can be an anaesthetic and painkiller ear drops. If the infection does not settle down in 48 to 72 hours, then oral antibiotics are prescribed.

• **Longterm antibiotics**

A single daily dose of oral antibiotics for 12 weeks can reduce how often your child has an infection. Infections can still occur. These can be treated with a short course of antibiotics. Then restart the single daily dose again for the prescribed duration.

• Grommets

Grommets are small hollow plastic tubes that create a hole in the ear drum. The operation is done through the ear canal whilst your child is asleep. They can usually go home on the same day.

Grommets allow fluid and pus from the middle ear to come out and air to go in. They reduce the number of ear infections. They fall out between 6 to 18 months.

For further information including the risks, please see ENTUK *Grommets – a decision-making aid for parents*
https://www.entuk.org/patients/conditions/5/grommets_a_decisionmaking_aid_for_parents

When can my child go back to school?

Provided your child recovers well from the anaesthetic, they should be able to go to school or nursery the next day.

How soon can we fly?

You can fly immediately after the operation. In fact, your child will not feel the ear discomfort that they may have previously felt during take-off and landing.

Follow up

Your doctor will let you know when your child will be seen in clinic.

Appendix 2 - National rAOM survey of UK Paediatric ENT Surgeons

Recurrent Acute Otitis Media (rAOM) Survey of Paediatric ENT Consultant Surgeons

1. *What do you define as recurrent acute otitis media (rAOM), i.e. how many episodes of acute otitis media in a year?*

   Median = 5 episodes per year

2. *What number of episodes of rAOM is your threshold to instigate treatment?*

   Median = 5 episodes per year

3. *How many cases per year of rAOM approximately do you see in clinic?*

   Median = 100 cases per year

4. *Do you prescribe antibiotics for rAOM?*

   Yes = 72.7% No = 27.3%

5. *If you do prescribe antibiotics, which antibiotics, at what dose and frequency, and for how long?*

   Azithromycin three times a week 60%

   Trimethoprim once daily 40%

6. *Do you offer active observation for rAOM, and for how long?*

   Yes = 63.6% No = 36.4%

   Median = 4 months

7. *Do you offer grommets for rAOM?*

   Yes = 90.9% No = 9.1%

8. *If you do offer grommets for rAOM, at what time point do you offer this?*

   Median = 6 months

9. *In your opinion, what is the expected AOM rate over the course of a year in the absence of antibiotic prophylaxis?*

   Median = 4 months

10. *What number of episodes of AOM per year would you consider to be successful treatment of rAOM?*

    Median = 2 episodes per year

Appendix 3 - rAOM Public and Patient Involvement (PPI) workshop

PPI Session Summary

Parents from Liverpool, Belfast, Newcastle, London and Cardiff

1. *What are the things that worry you about your child having repeated ear infections (recurrent acute otitis media)?*

   The predominant concern here was hearing loss, followed by pain, high temperatures, needing repeated antibiotics, and generally being unwell.

2. *What do you expect from your doctor/surgeon when you take your child for treatment of repeated ear infections (recurrent acute otitis media)?*

   Most parents wanted help, clear communication and an evidence-based approach. Ideally they wanted an appropriate treatment option.

3. *How do you feel about your child having antibiotic as a treatment for repeated ear infections (recurrent acute otitis media)?*

   Generally parents were fine with giving long term antibiotics, but one parent raised concerns about increasing antibiotic resistance.

4. *Do you have a strong preference for either azithromycin (3 times a week) or trimethoprim (once a day) as an antibiotic treatment for repeated ear infections (recurrent acute otitis media), bearing in mind that we don't have strong evidence yet supporting their effectiveness?*

   The majority of parents preferred azithromycin due to the reduced frequency, but one parent raised the point that it is easier to take an antibiotic once a day, rather than 3 times a week, as with the antibiotic 3 times a week there may confusion as to which days it needs to be given. It

was highlighted that it is harder to give antibiotics in very young children so the less frequent the dosage the better.

Appendix 4 - ENT UK Grommets decision-making aid for parents

Grommets - A decision-making aid for parents

Should my child have a grommet? A decision-making aid for parents

About glue ear

Glue ear is when the space behind the eardrum is filled with liquid instead of air. It is also called otitis media with effusion, or OME. Glue ear can develop when there is not enough air getting to the middle ear. This can be because the tubes (called the eustachian tubes) which help bring air into the middle ear don't work as well in childhood.

How can I help my child?

If your child can't hear well, you can try these tips to help:

- Call your child's name to get them to look at you before you speak.
- Make sure he or she can see your face when you speak.
- Speak clearly and wait for your child to answer.
- Let nursery and schoolteachers know that your child has a hearing problem.
- It may help for your child to sit at the front of the class so as not to miss out.

Middle ear infections that keep coming back

Middle ear infections that keep coming back (also known as recurrent acute otitis media) may make your child ill with earache and a fever. In rare cases, severe middle ear infections can lead to mastoiditis or a mastoid abscess. This is a serious infection in the mastoid bone behind the ear. If your child has a mastoid abscess, they will need to go to hospital. They will be put to sleep under a general anaesthetic while the abscess is drained.

Managing your child's symptoms

Most cases of glue ear get better within a week. You can use paracetamol (such as Calpol) and/or ibuprofen to help with your child's pain and fever. In more severe cases, your child may need antibiotics.

Watchful waiting

This means making a note of how often your child gets an ear infection or a hearing problem and how bad they are each time, to see if they are getting better or worse. You can keep a **symptom diary** on a sheet of paper or keep notes in your mobile phone. You should keep treating your child's symptoms at the same time. If your child's ear infection is caused by bacteria, your doctor may prescribe antibiotics, which can help treat the infection. Keep a note of how many times your child has needed antibiotics, or any concerns from their school or nursery. Usually, children get better on their own over time.

For more information on antibiotics and infections of the middle ear, visit the National Institute for Health and Care Excellence (NICE) website.

What next? Making a decision about surgery

Surgery involves having an operation to put tiny plastic tubes called grommets into the eardrums. These let air get in and out of your child's middle ear.

This may be an option if your child has had:

- a lot of ear infections
- hearing problems that affect their speech or schoolwork.

Inserting a grommet can improve your child's ear symptoms.

- Grommets work well at improving the hearing of children with glue ear. Children with grommets don't have as many ear infections.
- When children with grommets get an ear infection, they don't get as much pain or fever. These infections are usually easy to treat with antibiotic eardrops.

Figure 1(a). An eardrum with glue ear.

Figure 1(b). A grommet inserted through an eardrum.

Deciding whether to have the treatment

The decision to have surgery is based on your doctor's recommendation, your and your child's wishes, taking into consideration your child's circumstances. You may wish to change your mind about the operation at any time and signing a consent form does not mean your child must have the operation.

If you would like to have a second opinion regarding the treatment, your child's specialist or GP can arrange this for you

How can I help the grommets to work?

- It is important to stop water getting into your child's ears as much as you can. You need to do this until a doctor looks into the ears and tells you that your child's grommets have come out.
- When you wash your child's hair, put a cotton ball covered in Vaseline into their ear to stop water getting in. Don't let your child lie down in dirty or soapy bathwater.
- Children with grommets can still go swimming. Use earplugs if they are playing a lot under the water or if they are swimming on holiday in other countries.
- If swimming, it is important not to dive deeper than two feet. The water pressure at that depth (or deeper) can force water through the grommet.

Are there any options instead of grommets?

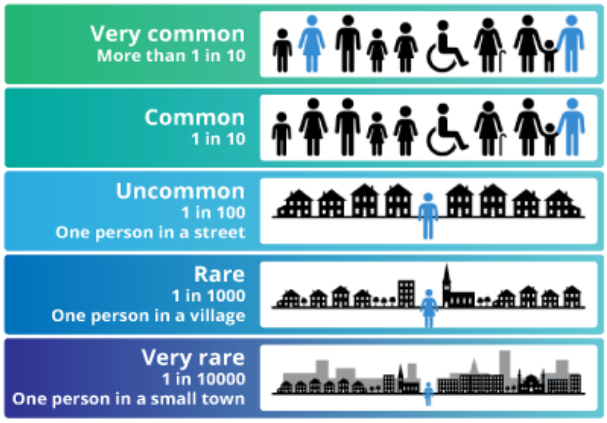
- Most ear problems get better on their own with time. If your child's problems are not too bad, it might be best to just watch and wait a bit longer.

If the main problem is hearing, you could try hearing aids. They will work fine as long as your child is willing to wear them. You will need to come to the hospital for regular appointments to get them adjusted.

Figure 2. Child with colourful hearing aid.

Does the operation involve risks?

There are risks involved with any surgery. It is important that you understand these risks when making a decision.

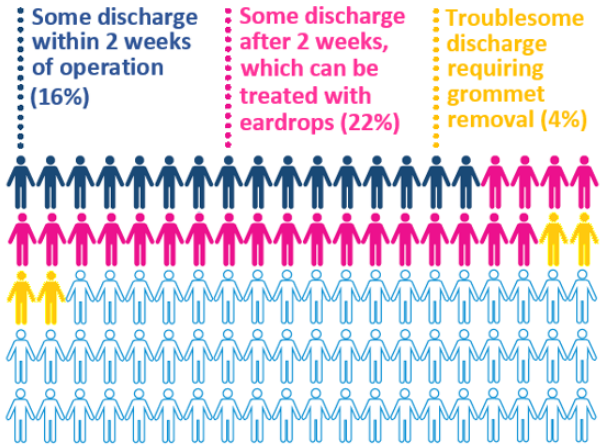


Some children will have fluid (discharge) coming from their ears for the first day or so. This is normal and doesn't need any treatment.

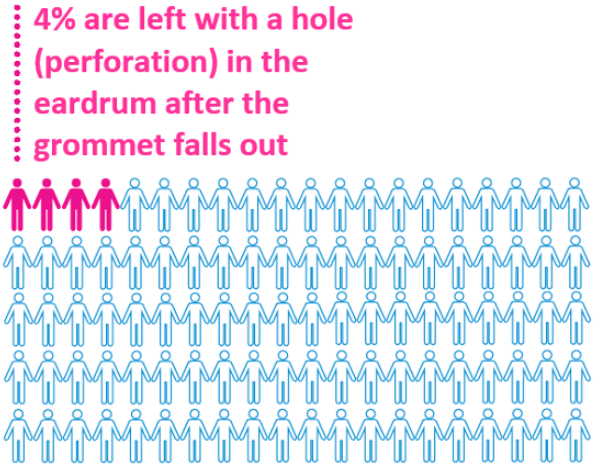
Some children will have fluid coming from their ears after grommets are put in. Sometimes this is because of water getting into the ears. Colds, flu and ear infections can also lead to discharge from the ears.

- 16 out of 100 children with grommets may have discharge from their ears during the first two weeks after the operation.
- 22 out of 100 children with grommets may have discharge from their ears later on. This may need treatment with antibiotic ear drops.
- In four out of 100 children with grommets, there is so much discharge that parents decide to have the grommet removed with another operation.

These different groups can often overlap.



- Four out of 100 children with grommets are left with **a hole in the eardrum** after the grommet falls out. Sometimes this needs an operation to fix it.



Other rare problems include **damage to teeth** from the anaesthetic tube.

The operation is carried out under a general anaesthetic, which means your child will be asleep during the surgery. Your child's pre-assessment team will inform you about the risks of a general anaesthetic. For more information, click here.

What happens after the grommets come out?

- Grommets don't last forever. They fall out by themselves after 6-18 months. This is a good thing because we don't want them there forever.
- Most ear problems get better by themselves with time.
- If your child grows out of their ear problems before the grommets fall out, then the ear problems won't come back.

Things to think about when deciding if surgery is the right choice for your child

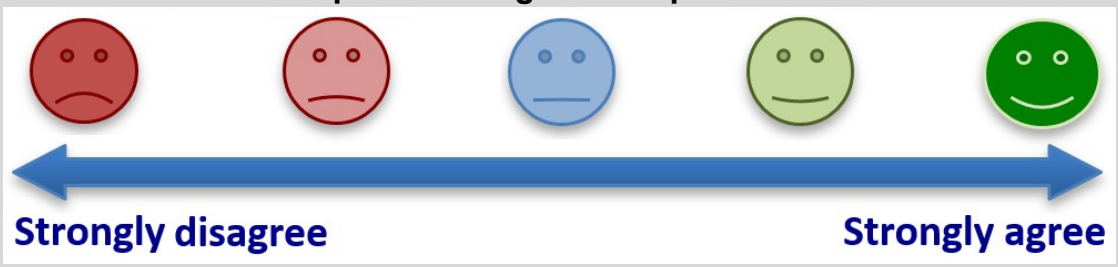
Things to think about	No surgery – wait for the problem to get better by itself or use hearing aids	Surgery – put grommets in
Inconvenience	If nothing is done, your child may keep struggling with hearing. They may need to have their hearing aids adjusted regularly.	Most children need one or two days off school or nursery. You need to make sure water doesn't get into your child's ears.
Pain	Your child might get more ear infections with fever and pain. Wearing hearing aids is not painful.	Your child might have some earache after surgery. This usually settles with Calpol.
Short-term risks	Your child might get more ear infections with fever and pain. They might experience mild side-effects from antibiotics. These include tummy upset or diarrhoea for one child out of 10. Also, mild allergic reaction such as cough or skin rash for one child out of 15). Serious allergic reactions are rare.	See above for the risks of surgery. Fluid leaking from the ears because of infection can usually be treated with antibiotic ear drops. There are also risks from a general anaesthesic. These include nausea and vomiting. Rare complications include

		damage to teeth from the tube used. Serious risks from a general anaesthesia are rare.
Long-term risks	Hearing goes up and down with glue ear, so hearing aid settings may need to be changed regularly. Using antibiotics too much can make them stop working. There is a very small risk of permanent hearing loss from ear infections. Infections can cause a hole in the eardrum. This usually heals by itself but sometimes needs an operation to fix it.	There is a risk of infection around the grommet, which makes fluid leak from the ear. When this happens, the grommet may need to be removed. The grommet causes a hole in the eardrum, or sometimes a scarred eardrum. A hole in the eardrum usually heals but sometimes needs an operation to fix it.
Long-term outcome	No difference. Children who struggle with their hearing at school can be helped with hearing aids. Ear problems usually get better on their own with time.	No difference in long-term hearing. Most children do not need further grommets.

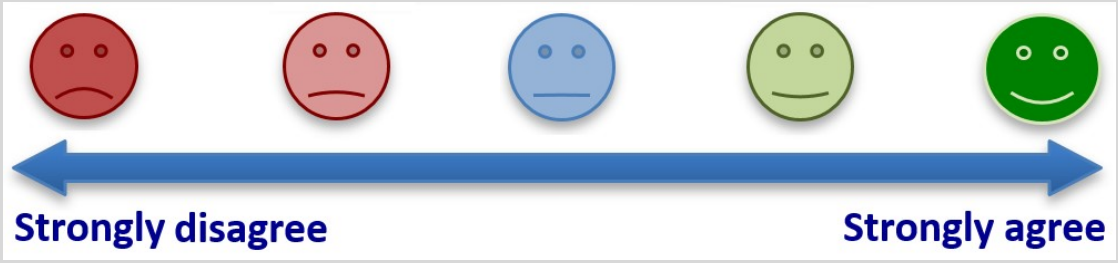
What is important to you and your child?

Use these points to think about what matters to you and your child. This should help you to decide about surgery for your child.

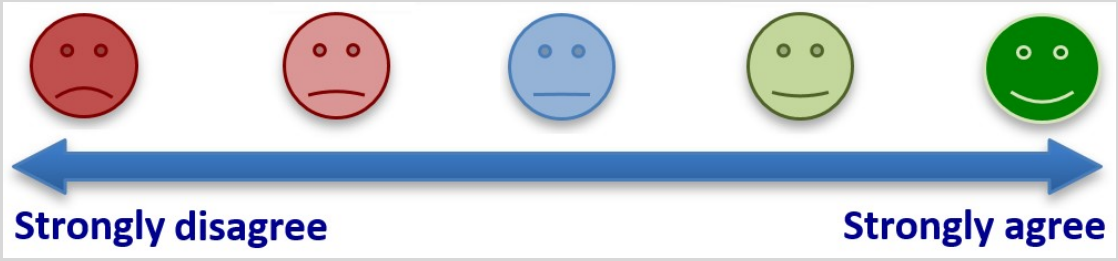
The most important thing is to stop the ear infections.



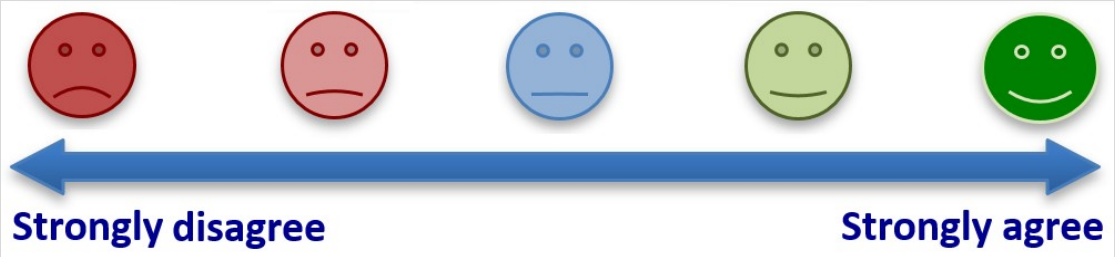
I am willing to wait and see if my child gets better on their own.



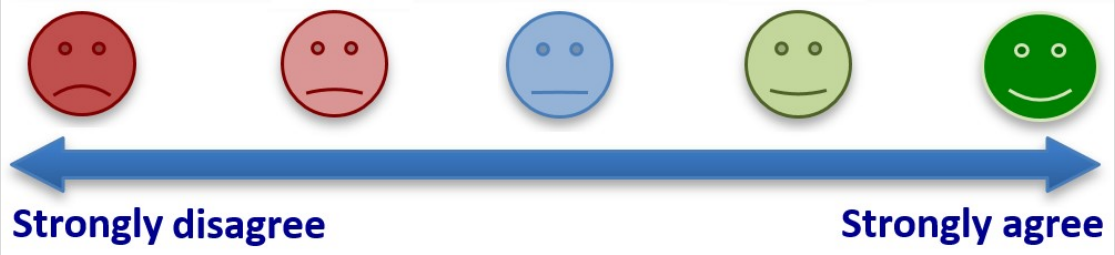
I am concerned about my child having an operation and a general anaesthetic.



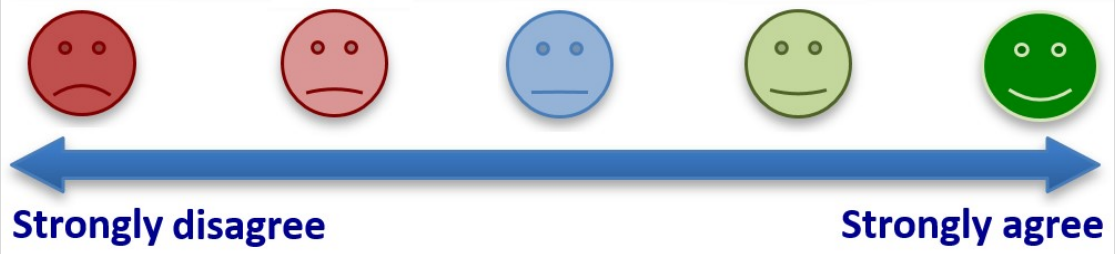
Not being able to hear well has stopped my child doing things at home and at school or nursery.



I want a treatment that means my child does not have to take time off school and lose out on their education. This also means I do not have to take time off work.



My child's hearing is affecting their speech and language development. My child needs to hear better soon, so that they can have normal speech.



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ENT UK has recently gained PIF TICK accreditation to become a 'trusted information creator'.

Kindly submit your feedback to help us improve our Patient Information Leaflets.

We greatly value your input and appreciate the time you take to provide it.

FEEDBACK SURVEY

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