NICE National Institute for Health and Care Excellence

2018 surveillance of otitis media with effusion in under 12s: surgery (NICE guideline CG60)

Surveillance report

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Contents

Surveillance decision

We will update the whole guideline on otitis media with effusion in under 12s.

The following table gives an overview of how evidence identified in surveillance might affect each area of the guideline, including any proposed new areas.

Section of the guideline	New evidence identified	Impact
1.1 Clinical presentation	No	No
1.2 Diagnosis of otitis media with effusion (OME)	No	No
1.3 Appropriate time for intervention	No	No
1.4 Children who will benefit from surgical intervention	Yes	No
1.5 Surgical interventions	Yes	Yes
1.6 Non-surgical interventions	Yes	Yes
1.7 Management of OME in children with Down's syndrome	No	No
1.8 Management of OME in children with cleft palate	No	No
1.9 Information for children, parents and carers	Yes	Yes
Proposed new areas		
Intraoperative care	Yes	Yes
Post-operative care	Yes	Yes

Reasons for the decision

This section provides a summary of the areas that will be updated and the reasons for the decision to update.

For some sections of the guideline there was either no new evidence identified or the evidence supported current recommendations. However, because new evidence impacts on a high proportion of the guideline and it has not been updated for over 10 years, we are proposing a full update.

Surgical interventions

New evidence was identified that is relevant to recommendation 1.5.1 which states 'Once a decision has been taken to offer surgical intervention for OME in children, the insertion of ventilation tubes is recommended. Adjuvant adenoidectomy is not recommended in the absence of persistent and/or frequent upper respiratory tract symptoms.' The new evidence shows a significant benefit of adenoidectomy in combination with a unilateral ventilation tube on the resolution of OME in children aged 4 years and older who have recurrent OME, although the effect on hearing may be small (van den Aardweg et al. 2010 and Simon et al. 2018). The evidence does not therefore support the recommendation that adenoidectomy should only be undertaken in children with OME who also have frequent upper respiratory tract symptoms. This new evidence should be considered for a potential impact on recommendation 1.5.1.

Non-surgical interventions

Recommendation 1.6.1 recommends that antibiotics should not be used in the management of OME. While this viewpoint is supported by the International consensus (ICON) on management of OME in children (Simon et al. 2018), a Cochrane review which assessed the benefits and harms of oral antibiotics in children, reported that oral antibiotics significantly increased the chance of complete resolution of OME when compared with any control treatment, which included placebo, no treatment or 'therapy of unproven effectiveness' (Venekamp et al. 2016). The impact of antibiotics on hearing was uncertain and antibiotic use was associated with significantly more incidents of diarrhoea, vomiting or skin rash. While OME often clears up on its own within 3 months and there are concerns about side-effects from antibiotic use and the emergence of antimicrobial resistance, this new evidence should be considered for a potential impact on recommendation 1.6.1.

Recommendation 1.6.2 advises that, 'Autoinflation may be considered during the active observation period for children with OME who are likely to cooperate with the procedure.' New evidence indicates that autoinflation is effective at resolving OME, low cost, not associated with adverse events and may be used in children as young as 2 years old (Perera et al. 2013 and Simon et al. 2018). Therefore, there appears to be evidence to support the use of autoinflation which suggests that the recommendation for its use could be strengthened to 'offer autoinflation'.

Information for children, parents and carers

Recommendations 1.9 provides a general recommendation that parents, children and carers should be given information on OME and have opportunity to discuss the condition. However there is no advice on the specific content and details of this information. All the evidence identified in the

surveillance review should be considered for how it impacts on parents'/carers' decisions and therefore what information they should receive about different non-surgical and surgical options' appropriateness, risks, benefits and expected outcomes. For example, while the guideline recommends that ventilation tubes should be offered once a decision has been taken to offer surgical intervention for OME in children (recommendation 1.5.1), recommendations do not reflect the evidence identified in the surveillance review that ventilation tubes benefit hearing loss when they are in place, but do not appear to have a long-term beneficial effect on hearing following ventilation tube extrusion (Browning et al. 2010 and Simon et al. 2018). Children who present with recurrent hearing loss after a first tube extrusion may therefore require further surgical intervention (Simon et al. 2018). This is information that parents and carers may want to consider prior to any surgical intervention.

New areas

Intraoperative care

Although the current guideline makes recommendations around surgery, it does not advise on intraoperative care. Evidence suggests that a number of approaches are effective at reducing the rate of otorrhoea (ear discharge) up to 2 weeks following surgery. These include multiple saline washouts at surgery, a single application of topical antibiotic and/or corticosteroid drops at surgery, a prolonged application of topical antibiotic eardrops, antibiotic and/or corticosteroid eardrops or aminoglycoside and/or corticosteroid eardrops, or a prolonged application of oral antibacterial agents and/or corticosteroids (Syed et al. 2013). Recommendations in this area would support healthcare professionals and should be considered in the update of the guideline.

Post-operative care

Similarly, the current guideline does not advise on post-operative care. For children with ear discharge occurring at least 2 weeks after ventilation tube insertion, there is evidence that antibiotic eardrops (with or without corticosteroid) are more effective than oral antibiotics, corticosteroid eardrops and no treatment (Venekamp et al. 2016). There was also some limited, inconclusive evidence that antibiotic eardrops are more effective than saline rinsing; and there was uncertainty concerning whether antibiotic-corticosteroid eardrops are more effective than eardrops containing antibiotics only. Another Cochrane review assessed the effectiveness of water precautions (actions to ensure ears are kept dry) for the prevention of ear infections in children with ventilation tubes at any time while the tubes are in place (Moualed et al. 2016). It reported that while there was 'some evidence to suggest that wearing ear plugs (when swimming or bathing) reduces the rate of otorrhoea in children with ventilation tubes, clinicians and parents should understand that the absolute reduction in the number of episodes of otorrhoea appears to be very

small and is unlikely to be clinically significant.' They also noted that consensus guidelines 'recommend against the routine use of water precautions on the basis that the limited clinical benefit is outweighed by the associated cost, inconvenience and anxiety'. Recommendations in this area should be considered in the update of the guideline as they would support healthcare professionals, parents, carers and children.

Overview of 2018 surveillance methods

NICE's surveillance team checked whether recommendations in otitis media with effusion in under 12s (NICE guideline CG60) remain up to date. The 2018 surveillance followed the static list review process, consisting of:

- Feedback from topic experts via a questionnaire.
- A search for new or updated Cochrane reviews and national policy.
- A search for ongoing research.
- Examining related NICE guidance and quality standards.
- Examining the NICE event tracker for relevant ongoing and published events.
- Consulting on the decision with stakeholders, except if we propose to update and replace the whole guideline.

For further details about the process and the possible update decisions that are available, see ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual.

Evidence considered in surveillance

Cochrane reviews

We searched for new Cochrane reviews related to the whole guideline. We found 9 relevant Cochrane reviews published between 1 June 2007 and 21 August 2018. The findings from the following Cochrane reviews indicate that recommendations should be updated:

- The insertion of ventilation tubes in children with OME (Browning et al. 2010).
- Adenoidectomy for otitis media in children, including those with OME (van den Aardweg et al. 2010).
- The benefits and harms of oral antibiotics in children with OME (Venekamp et al. 2016).
- The effectiveness of autoinflation on the resolution of OME (Perera et al. 2013).
- Evidence on intraoperative care to prevent ear discharge following ventilation tube insertion in children with OME (Syed et al. 2013).

- Evidence on post-operative care following ventilation tube insertion in children with OME (Venekamp et al. 2016 and Moualed et al. 2016).

The findings from the following Cochrane reviews support current recommendations:

- The use of topical or systemic steroids for treating children with OME (Simpson et al. 2011).
- The use of anti-histamines and decongestants for treating children with OME (Griffin et al. 2011).

Previous surveillance

Previous surveillance reviews in 2011 and 2014 concluded that an update was not necessary.

Related NICE guidance

NICE interventional procedures guidance on suction diathermy adenoidectomy, published in 2009 may be considered in the update of NICE guideline CG60 when evidence is considered on the use of adjuvant adenoidectomy to treat OME in children.

Ongoing research

We checked for relevant ongoing research. Of the ongoing studies identified, 2 studies were assessed as having the potential to change recommendations. We will share the details of these studies with the developers responsible for updating NICE guideline CG60 so that they can evaluate the impact of any published results. These studies are:

- Exploring interventions over the watchful waiting period for children with hearing loss secondary to chronic otitis media with effusion ('glue ear').
- Oral steroids for resolution of otitis media with effusion in children.

Intelligence gathered during surveillance

Views of topic experts

We sent questionnaires to 10 topic experts and received 5 responses. The topic experts were recruited to the NICE Centre for Guidelines Expert Advisers Panel to represent their specialty. Four topic experts indicated that the guideline should be updated and 1 indicated that it should not. Areas identified by topic experts that will be addressed in the update are:

- The potential need for multiple ventilation tube insertions in children with recurrent hearing loss, and the insertion of ventilation tubes plus adjuvant adenoidectomy for children aged over 4 years who have recurrent OME and in those with significant nasal obstruction or infection. This was based on new evidence reported in the ICON on management of OME in children (Simon et al. 2018).

- Additional information on non-surgical management of OME, such as further clarity on when to use autoinflation (age group and circumstances when it should be offered). This was based on new evidence reported in the ICON on management of OME in children (Simon et al. 2018).

- Strengthening the recommendation on information for children, parents and carers, for example with regards to the effects on development for those with longer-term OME; and information on the possibility that children with hearing loss due to OME may have recurrent hearing loss following ventilation tube extrusion, which may mean a further new tube insertion is required, either using longer-stay tubes or considering adjuvant adenoidectomy.

The following areas were also highlighted by topic experts and may be considered in the update:

- Risk factors for OME and how these can be managed, however this area is currently out of scope and no evidence was provided concerning risk factors or their management.

- Assessing and treating hearing loss and recurrent ear infections in children with neurological or learning disabilities. However children with multiple complex needs were out of scope for the guideline because they will need individual and specific management of their overall condition by a multidisciplinary group of experts; and no evidence was provided concerning specific approaches for assessment or treatment of OME or hearing loss for this population.

A topic expert also requested that the NICE medtech innovation briefing on Otovent nasal balloon for otitis media with effusion, published in March 2016 should be cross-referenced within the recommendations in NICE guideline CG60. However this is already listed in the NICE Pathway on surgical management of otitis media with effusion in children, which brings together NICE guidance and supporting information on the topic from all of NICE's work programmes.

Views of stakeholders

Stakeholders are consulted on all surveillance proposals except if the whole guideline will be updated and replaced. Because this surveillance proposal was to update all of the guideline, we did not consult with stakeholders.

Equalities

Topic experts noted that there is no guidance on considering the levels of hearing loss in context of the child, particularly in children with neurological or learning difficulties with whom routine audiology may be difficult and lead to delayed intervention.

Editorial amendments

None.

Overall decision

After considering all evidence and other intelligence and the impact on current recommendations, we decided that an update is necessary.

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