Hearing loss in adults: assessment and management

NICE guideline: short version

Draft for consultation, November 2017

This guideline covers assessing and managing hearing loss in primary and secondary care. It offers guidance for primary care on removing earwax, and when to refer to secondary care or audiology services. It also provides recommendations for secondary care on using MRI and treating sudden sensorineural hearing loss. For audiology services, the guideline offers advice on providing hearing aids and assistive listening devices, and giving information and support to people with hearing loss..

The guideline covers adults aged 18 and over who present with hearing loss, including those with onset before the age of 18 but presenting in adulthood.

Who is it for?

- Health and social care professionals.
- Commissioners of health and social care services.
- People with hearing loss, their families and carers.

This version of the guideline contains the draft recommendations, context and recommendations for research. Information about how the guideline was developed is on the guideline's page on the NICE website. This includes the guideline committee's discussion and the evidence reviews (in the full guideline), the scope, and details of the committee and any declarations of interest.

Contents

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in your care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Assessment and referral in primary care

Hearing difficulties or suspected hearing difficulties

1.1.1 Refer all adults, regardless of their age, who present for the first time with hearing difficulties, or in whom you suspect hearing difficulties, to audiology services for an assessment, unless they have:

- sudden or rapid onset of hearing loss (see recommendation 1.1.2)
- hearing loss with specific additional symptoms or signs (see recommendations 1.1.3 to 1.1.8).

Sudden or rapid onset of hearing loss

1.1.2 Refer adults with sudden or rapid onset of hearing loss that is not explained by external or middle ear causes as follows.

- If the hearing loss developed suddenly (over a period of 3 days or less) within the past 30 days, refer immediately to an ear, nose and throat service or an emergency department.
- If the hearing loss developed suddenly more than 30 days ago, refer urgently to an ear, nose and throat or audiovestibular medicine service.
- If the hearing loss developed rapidly (over a period of 4 to 90 days) refer urgently to an ear, nose and throat or audiovestibular medicine service.

Hearing loss with specific additional symptoms or signs

1.1.3 Refer immediately adults with acquired unilateral hearing loss and altered sensation or facial droop on the same side to an ear, nose and throat service or, if stroke is suspected, follow a local stroke referral pathway.

1.1.4 Refer immediately adults with hearing loss who are immunocompromised and have otalgia (ear ache) with otorrhoea (discharge from the ear) that has not responded to treatment within 72 hours to an ear, nose and throat service.

1.1.5 Consider a suspected cancer pathway referral to an ear, nose and throat service for adults of southeast Asian family origin with hearing loss and a unilateral middle ear effusion not associated with an upper respiratory tract infection.

1.1.6 Consider referring people aged over 40 with unilateral hearing loss and otalgia that has lasted for more than 3 weeks to an ear, nose and throat service.

1.1.7 Refer adults with hearing loss that is not explained by external or middle ear causes to an ear, nose and throat or audiovestibular medicine service, or an audiology service using a local complex audiology pathway, if they have any of:

- hearing loss that is asymmetric
- hearing loss that fluctuates and is not associated with an upper respiratory tract infection
- hyperacusis (intolerance to everyday sounds)
- unilateral tinnitus that is persistent, or pulsatile, or has significantly changed in nature
- vertigo that has not fully resolved or is recurrent.

1.1.8 Refer adults with hearing loss to an ear, nose and throat service if, after initial treatment of any earwax or acute infection, they have any of:

- partial or complete obstruction of the external auditory canal that prevents full examination of the eardrum or taking an aural impression
- pain affecting either ear (including in and around the ear) that has lasted for 1 week or more and has not responded to first-line treatment
- a history of discharge (other than wax) from either ear that has not resolved, has not responded to prescribed treatment or is recurrent
- abnormal appearance of the outer ear or the eardrum, such as:
  - inflammation
  - polyp formation
  - perforated eardrum
  - abnormal bony or skin growths
  - swelling of the outer ear
  - blood in the ear canal.

Adults with suspected or diagnosed dementia, mild cognitive impairment or a learning (intellectual) disability

1.1.9 Consider referring adults with diagnosed or suspected dementia or mild cognitive impairment, to an audiology service for a hearing assessment because hearing loss is a comorbid condition.

1.1.10 Consider referring adults with diagnosed dementia or mild cognitive impairment, without hearing loss, to an audiology service for a hearing assessment every 2 years.

1.1.11 Consider referring people with a diagnosed learning (intellectual) disability to an audiology service for a hearing assessment when they transfer from child to adult services, and then every 2 years.

1.2 Removing earwax in primary and community care

1.2.1 Offer to remove earwax in primary or community care for adults if it is contributing to hearing loss or other symptoms, or prevents examination of the ear.

1.2.2 Consider ear irrigation using an electronic irrigator to remove earwax in adults, provided there are no contraindications such as eardrum perforation, ear infection or ear surgery.

1.2.3 When carrying out ear irrigation in adults:

- use pre-treatment wax softeners, either immediately before ear irrigation or for up to 5 days beforehand
- if irrigation is unsuccessful:
  - repeat use of wax softeners **or**
  - instil water into the ear canal 15 minutes before repeating ear irrigation with an electronic irrigator
- If irrigation is unsuccessful after the second attempt, refer the person to a specialist ear care service or an ear, nose and throat service for removal of earwax.

1.2.4 Consider microsuction or other methods of earwax removal (such as manual removal using a probe) for adults in primary or community care only if:

- the practitioner (such as a community nurse or audiologist) has training and expertise in using these methods to remove earwax **and**
- the correct equipment is available.

1.2.5 Do not offer adults manual ear syringing to remove earwax

1.2.6 Advise adults not to remove earwax or clean their ears by inserting small objects, such as cotton buds, into the ear canal. Explain that this could damage the ear canal and eardrum, and push the wax further down into the ear.

1.3 Assessment and management in secondary care

1.3.1 Offer MRI of the internal auditory meati to adults with hearing loss and localising symptoms or signs (such as facial nerve weakness) that might indicate a vestibular schwannoma or CPA (cerebellopontine angle) lesion, irrespective of pure tone thresholds.

1.3.2 Consider MRI of the internal auditory meati for adults with sensorineural hearing loss and no localising signs if there is an asymmetry of 20 dB or more at any single frequency between 0.5 kHz and 4.0 kHz on pure tone audiometry.

1.3.3 Consider a steroid to treat idiopathic sudden sensorineural hearing loss in adults.

1.4 Assessment and management in audiology services

1.4.1 Include and record the following as part of the audiological assessment for adults:

- a full history including relevant symptoms, comorbidities, cognitive ability, physical mobility and dexterity
- the person's hearing and communication needs at home, at work or in education, and in social situations
- any psychosocial difficulties related to hearing
- the person's expectations and motivations with respect to their hearing loss and the listening and communication strategies available to them,
- any restrictions on activity, assessed using a validated self-report instrument such as the Glasgow Hearing Aid Benefit Profile or the Client-Orientated Scale of Improvement
- otoscopy
- pure tone audiometry
- tympanometry.

1.4.2 After the audiological assessment:

- discuss with the person:
  - the pure tone audiogram and the impact their hearing loss might have on communication
  - hearing deficits (such as speech in noise) that are not obvious from the audiogram

  - the options for managing their hearing needs, such as hearing aids, assistive listening devices and communication strategies, and the potential benefits and limitations of each option.
- agree and record a personalised management plan, taking into account the person's preferences, including goals, and give the person a copy.

1.4.3 Give the person and, if they wish, their family or carers, information about the causes of hearing loss, how hearing loss affects communication and how it can be managed.

1.5 Hearing aids and assistive listening devices

Hearing aids

1.5.1 Offer hearing aids to adults whose hearing loss affects their ability to communicate.

1.5.2 Offer 2 hearing aids to adults with hearing loss in both ears. Explain that wearing 2 hearing aids can improve sound quality, help to make speech easier to understand when there is background noise, and make it easier to tell where sounds are coming from.

1.5.3 Consider using motivational interviewing or engagement strategies when discussing hearing aids with adults for the first time, to encourage acceptance and use of hearing aids.

1.5.4 Demonstrate how to use hearing aids at the time they are first discussed.

1.5.5 When offering hearing aids to adults, explain the features on the hearing aid that can help the person to hear in background noise, such as directional microphone and noise reduction settings.

1.5.6 Advise adults with hearing aids about choosing microphone and noise reduction settings that will meet their needs in different environments, and ensure that they know how to use them.

1.5.7 Give adults with hearing aids information about getting used to hearing aids, cleaning and caring for their hearing aids, and troubleshooting.

Assistive listening devices

1.5.8 Give adults with hearing loss information about assistive listening devices such as personal loops, personal communicators, TV amplifiers, telephone devices, smoke alarms, doorbell sensors, and technologies such as streamers and apps.

1.5.9 Tell adults with hearing loss about organisations that can demonstrate and provide advice on how to obtain assistive listening devices, such as social services, the fire service, or the government through its Access to Work or Disabled Student Allowance programmes.

1.6 Follow-up in audiology services

1.6.1 Offer adults with hearing aids a face-to-face audiology appointment 6 to 12 weeks after the hearing aids are fitted.

1.6.2 At the follow-up audiology appointment for adults with hearing aids:

- ask the person if they have any concerns or questions
- address any difficulties with inserting, removing or maintaining their hearing aids
- provide information on communication, social care or rehabilitation support services if needed
- tell the person how to contact audiology services in the future
- ensure that the person's hearing aids and other devices meet their needs by checking:
  - the comfort, sound quality and volume of hearing aids, including microphone and noise reduction settings, and fine-tuning them if needed
  - hearing aid cleaning, battery life and use with a telephone
  - use of assistive listening devices
  - hours the hearing aid has been used, if shown by automatic data logging
- review the goals identified in the person's care plan and agree how to address any that have not been met

- update the person's care plan and give them a copy.

1.6.3 For adults with hearing loss in both ears who chose a single hearing aid, consider a second hearing aid at the follow-up appointment.

1.6.4 For adults with hearing loss who have chosen a management strategy other than hearing aids, such as assistive listening devices or communication strategies, offer a follow-up appointment when the effectiveness of the device or strategy can be evaluated.

1.6.5 Tell adults with hearing loss how to contact audiology services in the future if they have chosen not to have a hearing aid or other device.

1.7 Information and support

1.7.1 Follow the principles on tailoring healthcare services for each person and enabling people to actively participate in their care in the NICE guideline on patient experience in adult NHS services by, for example:

- taking measures, such as reducing background noise, to ensure that the clinical and care environment is conducive to communication for people with hearing loss, particularly in group settings such as waiting rooms, clinics and care homes
- establishing the most effective way of communicating with each person, including the use of hearing loop systems and other assistive listening devices
- ensuring that staff are trained and have demonstrated competency in communication skills for people with hearing loss

- encouraging people with hearing loss to give feedback about the health and social care services they receive, and responding to their feedback.

When offering people audiology appointments follow recommendation 1.3.1 in the NICE guideline on patient experience in adult NHS services

Terms used in this guideline

Refer immediately

To be seen by the specialist service within 24 hours

Refer urgently

To be seen by the specialist service within 2 weeks

Refer

A routine referral

Suspected cancer pathway referral

To be seen within the national target for cancer referrals (currently 2 weeks)

Putting this guideline into practice

[This section will be finalised after consultation]

NICE has produced tools and resources [link to tools and resources tab] to help you put this guideline into practice.

[Optional paragraph if issues raised] Some issues were highlighted that might need specific thought when implementing the recommendations. These were raised during the development of this guideline. They are:

- [add any issues specific to guideline here]
- [Use 'Bullet left 1 last' style for the final item in this list.]

Putting recommendations into practice can take time. How long may vary from guideline to guideline, and depends on how much change in practice or services is needed. Implementing change is most effective when aligned with local priorities.

[Clinical topics only] Changes recommended for clinical practice that can be done quickly – like changes in prescribing practice – should be shared quickly. This is because healthcare professionals should use guidelines to guide their work – as is required by professional regulating bodies such as the General Medical and Nursing and Midwifery Councils.

Changes should be implemented as soon as possible, unless there is a good reason for not doing so (for example, if it would be better value for money if a package of recommendations were all implemented at once).

Different organisations may need different approaches to implementation, depending on their size and function. Sometimes individual practitioners may be able to respond to recommendations to improve their practice more quickly than large organisations.

Here are some pointers to help organisations put NICE guidelines into practice:

1. **Raise awareness** through routine communication channels, such as email or newsletters, regular meetings, internal staff briefings and other communications with all relevant partner organisations. Identify things staff can include in their own practice straight away.

2. **Identify a lead** with an interest in the topic to champion the guideline and motivate others to support its use and make service changes, and to find out any significant issues locally.

3. **Carry out a baseline assessment** against the recommendations to find out whether there are gaps in current service provision.

4. **Think about what data you need to measure improvement** and plan how you will collect it. You may want to work with other health and social care organisations and specialist groups to compare current practice with the recommendations. This may also help identify local issues that will slow or prevent implementation.

5. **Develop an action plan**, with the steps needed to put the guideline into practice, and make sure it is ready as soon as possible. Big, complex changes may take longer to implement, but some may be quick and easy to do. An action plan will help in both cases.

6. **For very big changes** include milestones and a business case, which will set out additional costs, savings and possible areas for disinvestment. A small project group could develop the action plan. The group might include the guideline champion, a senior organisational sponsor, staff involved in the associated services, finance and information professionals.

7. **Implement the action plan** with oversight from the lead and the project group. Big projects may also need project management support.

8. **Review and monitor** how well the guideline is being implemented through the project group. Share progress with those involved in making improvements, as well as relevant boards and local partners.

NICE provides a comprehensive programme of support and resources to maximise uptake and use of evidence and guidance. See our into practice pages for more information.

Also see Leng G, Moore V, Abraham S, editors (2014) Achieving high quality care – practical experience from NICE. Chichester: Wiley.

Context

Hearing loss is a major public health issue affecting about 11 million people in the UK. Because of our ageing population it is estimated that by 2035 there will be around 15.6 million people with hearing loss in the UK – a fifth of the population. The psychological, financial and health burden of hearing loss can be reduced by prompt and accurate referral, robust assessment and correct management.

The care offered to people with hearing difficulties varies from place to place, and many people face delays in having their hearing loss identified and managed. Most hearing difficulties are age-related and need assessment and management by the local audiology team. Earwax may complicate the clinical picture and cause hearing difficulties, and can be treated in primary or community care. Other causes of hearing difficulties need prompt, or even urgent, investigation and treatment by specialist services.

This guideline aims to improve the quality of life for adults with hearing loss by providing advice for healthcare staff on who to refer for audiological assessment, how to manage earwax in primary care and when to refer people for specialist assessment and management. The guideline also offers advice on assessment and follow-up in audiology services, and information and support for people with hearing

loss. In addition, the guideline considers best practice in the management of sudden sensorineural hearing loss and MRI as an investigation for hearing loss.

It is important that the person with hearing loss has the opportunity to participate in making decisions about management, in partnership with their healthcare professionals, and this is reflected in the guideline

More information

To find out what NICE has said on topics related to this guideline, see our web page on ear and hearing conditions.

Recommendations for research

The guideline committee has made the following recommendations for research. The committee's full set of research recommendations is detailed in the full guideline.

1 Idiopathic sudden sensorineural hearing loss

What is the most effective first-line treatment for idiopathic sudden sensorineural hearing loss?

Why this is important

Idiopathic sudden sensorineural hearing loss (SSNHL) affects approximately 5 to 20 people per 100,000 per year and accounts for up to 90% of cases of SSNHL. The hearing loss is usually unilateral, can range from mild to total and can be temporary or permanent. Idiopathic SSNHL has a significant impact on people's lives, causing considerable concern and disability, particularly if there is already a hearing deficit in the other ear.

First-line treatment options for idiopathic SSNHL can include oral steroids, intra-tympanic steroid injections or a combination of both. There is a paucity of evidence assessing the effectiveness of these different treatment options. There is heterogeneity in doses and types of steroids and this makes the findings unreliable. Therefore, it is difficult to establish the most clinically and cost-effective first-line

treatment for idiopathic SSNHL. This has a direct impact on the care provided to people with SSNHL and on our ability to develop robust guidelines and policy.

2 Earwax

What is the clinical and cost effectiveness of microsuction compared with irrigation to remove earwax?

Why this is important

A build-up of earwax in the ear canal can cause hearing loss and discomfort, contributes to infections and can lead to stress, social isolation and depression. Moreover, earwax can prevent adequate clinical examination of the ear, delaying investigations and management; GPs cannot check for infection and audiologists cannot test hearing and fit hearing aids if the ear canal is blocked with wax. Excessive earwax is common, especially in older adults and those who use hearing aids and earbud-type earphones. In the UK, it is estimated that 2.3 million people each year have problems with earwax sufficient to need intervention.

Earwax is usually treated initially with ear drops. However, if this is unsuccessful, the wax can be removed using irrigation (flushing the wax out using water) or microsuction (using a vacuum to suck the wax out under a microscope). There are few studies comparing these different techniques in terms of effectiveness, efficiency and adverse events.

3 Use of hearing aids and incidence of dementia

In adults with hearing loss, does the use of hearing aids reduce the incidence of dementia?

Why this is important

In the ageing UK population, the incidence of dementia is increasing. Dementia has considerable long-term costs for people with dementia, their families and the NHS and there is no effective treatment to prevent its progression.

Hearing loss is associated with an increased incidence of dementia. It is estimated that among people with mild to moderate hearing loss the incidence of dementia is double that of people with normal hearing, and that the ratio increases to 5 times that

of people with normal hearing in those with severe hearing loss. The cause of this association is unknown; there may be common factors causing both dementia and hearing loss, such as lifestyle, genetic susceptibility, environmental factors or age-related factors such as inflammation and cardiovascular disease. Hearing loss may cause dementia either directly (for example, neuroplastic changes caused by deprivation or increased listening demands) or indirectly via social isolation and depression (which are known be associated with cognitive decline and dementia). Conversely, it is possible that cognitive decline has an impact on sensory function (for example, affecting attention and listening skills). Currently, there is no good evidence to show that hearing loss causes dementia or that hearing aids delay the onset or reduce the incidence of dementia. Hearing aids do, however, have the potential to improve functioning and quality of life, and this could delay the progress of dementia or improve its management.

4 Hearing loss prevalence in people who under-present for hearing loss

What is the prevalence of hearing loss among populations who under-present for possible hearing loss?

Why this is important

The research question aims to identify the prevalence of hearing loss among populations who may be unaware of their own hearing loss or lack motivation and capability to seek help for this.

A full population prevalence study matched to audiology service usage will help identify populations who under-present for possible hearing loss. The research will also identify factors that can act as red flags to prompt health and social care professionals to proactively consider the possibility of hearing loss.

The evidence review for the NICE guideline on adult hearing loss highlighted significant health benefits for people whose hearing loss is identified and addressed at an early stage, yet people often delay seeking treatment for up to 10 years (national commissioning framework for hearing loss services). There are certain groups who are particularly disadvantaged because their health issues lead to a lack of awareness of their deteriorating or suboptimal hearing, or a failure to report their

difficulties. These include those with learning (intellectual) disabilities , dementia and mild cognitive impairment.

Given the importance of early detection, this research is urgently needed to identify populations who are under-represented and any factors that would lead healthcare and social care professionals to consider the possibility of hearing loss.

5 Monitoring and follow-up for adults with hearing loss

What is the clinical and cost effectiveness of monitoring and follow-up for adults with hearing loss post-intervention compared with no follow-up?

Why this is important

The systematic review for the NICE guideline on hearing loss found a lack of evidence to establish the benefits of monitoring and follow-up, how they should be delivered and across what time periods. Robust evidence is needed to establish the clinical and cost effectiveness of monitoring and follow-up, and to understand how and when they might best be used in clinical practice. This will inform future guidelines and policy.

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