Practice Guidance

Aural Care (Ear Wax Removal)

Date: April 2017

Due for review: April 2021
General foreword

This document presents Practice Guidance by the British Society of Audiology (BSA). This Practice Guidance represents, to the best knowledge of the BSA, the evidence-base and consensus on good practice, given the stated methodology and scope of the document and at the time of publication.

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Published by the British Society of Audiology

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#### BSA
##### 2017

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Introduction

This document provides best practice guidelines for safe removal of ear wax (aural care) by professionals trained to complete this activity. Its purpose is to describe recommendations for safe aural care using manual instruments, water irrigation and suction under magnification. BSA acknowledges that ear wax can also be removed under an endoscopic view using suction devices or manual instruments such as Jobson Horne probes. This newer method of wax removal currently has a limited evidence base. Unless the professional is already experienced in endoscopic techniques and uses them regularly BSA would advise caution in the adoption of this technique until a firmer base of evidence can be developed. Furthermore, if a professional chooses to adopt this method, as for the other wax removal techniques, they must develop skills via training which meets the criteria described in BSA (2013) Minimum Training Guidelines in Aural Care Delivered By Hearing Care Professionals.

The term ‘must’ is used in this document to refer to essential practice, and ‘should’ is used to refer to desirable practice.

The document was developed in accordance with the current National Institute for Health and Care Excellence (NICE) Clinical Knowledge Summaries (last updated in July 2016) and based on clinical evidence reviewed in BMJ Clinical Evidence Systematic Review (2015). In addition, in January 2017 a comprehensive Clinical Practice Guideline document was updated and published by The American Academy of Otolaryngology (Head and Neck Surgery) which the authors recommend as further useful reading on this subject.

Unless stated otherwise, this document represents the consensus of expert opinion and evidence as interpreted by the Professional Guidance Group of the British Society of Audiology (BSA) in consultation with its stakeholders.

Scope

2.1 Procedural scope

This document intends to describe aural care only in regards to necessary ear wax removal in routine ears.

Necessary ear wax removal refers to the removal of ear wax which is:
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- occluding the view of the tympanic membrane and external auditory meatus thus preventing their effective examination
- causing the patient to report a blocked/occluded sensation
- reducing the hearing beyond the usual baseline ability of the patient
- preventing a required procedure or activity from safely or effectively taking place which may include a hearing test, tympanometry, impression-taking, or fitting of a hearing aid including real ear measures
- interfering with the performance of a hearing aid when in situ

Routine refers to ears which have none of the referable conditions described in the checklist in Appendix B and which, to the best of the professional’s knowledge through otoscopy and through history-taking and previous case notes (especially if unable to fully observe the tympanic membrane), contain a tympanic membrane which is intact and healthy.

Therefore these practice guidelines do not extend to cover non-routine cases such as:

- perforated ears
- post-surgery ears including provision of post-surgery care/treatment
- the removal of foreign objects
- the treatment of medical conditions
- removal of discharge or debris caused by acute or chronic ear infections, or which arise from skin conditions such as eczema or psoriasis

See Appendix B for the complete checklist of contra-indications and special care conditions.

Please note that children under the age of 16 years are also beyond the scope of this document.

2.2 Professional scope

2.2.1 Registered professionals

The audiology, nursing or medical professional usually undertaking this procedure will be registered with HCPC or RCCP.

It is acknowledged that some individuals under specific circumstances may be able to remove ear wax from non-routine cases or from the ears of patients under the age of 16 years. This must depend on extended additional training, a suitable working environment and equipment, and availability of support from nursing or medical staff should complications arise.
2.2.2 Other professionals

If professionals of a non-registerable status such as assistant audiologists, hearing care assistants (HCA) or healthcare assistants (HCA) are trained in the removal of ear wax their employers must ensure that the procedural and professional scope is made clear.

As for any other procedure the assistant/HCA will not be responsible for the full pathway of care in relation to this activity and must have access to direct supervision from their registered professional. The assistant/HCA must not be in a situation where they are lone-working, particularly in a domiciliary capacity.

Both the assistant/HCA and their supervising professional must complete the same level of training in aural care as any other aural care professional, via training which meets the current BSA Minimum Training Guidelines in Aural Care, which means that they must demonstrate theoretical and practical competency as detailed in section 3.4.

For assistants/HCA’s procedural scope must not be extended to include non-routine cases, or patients under the age of 16.

2.2.3 Supervision

Further to the points made in section 2.2.2, registered professionals who are supervising wax removal activities for unregistered professionals (or supervising registered staff who are training in this activity) must ensure that they are available for direct supervision. The supervisor must have undertaken wax removal training which meets the current BSA Minimum Training Guidelines for Aural Care and must have been practising this procedure for a minimum of 12 months.

The supervisee must not attempt to undertake aural care activities without the direct supervision of their supervisor, and must not act beyond their current professional scope of practice.

2.2.4 Fitness to Practice considerations

As well as being appropriately trained, the professional undertaking the procedure must ensure that they have sufficient visual ability and manual dexterity to undertake the procedure safely.

This extends to ensuring that the equipment they use (see section 4.1) meets the correct quality and safety specifications to allow them to examine the ear confidently, and that it is set up correctly for their own vision. Magnification equipment such as the microscope, head loupe or endoscope should have clean lenses and a good light source and should be set up prior to the appointment to meet the professional’s own visual requirements. This is especially important for shared equipment.
Professionals must be aware that proceeding without being able to clearly see what they are doing, or proceeding without the required manual strength or dexterity to manipulate the equipment is a Fitness to Practice issue which could affect their registration.

Fitness to Practice for this procedure also includes:

a) adherence to infection prevention and control policies and procedures
b) adherence to referral guidelines reflecting recognition of scope of practice

3. Training and competencies required

The professional undertaking the procedure will have completed training with an accredited provider via a course which meets the current BSA Minimum Training Guidelines for Aural Care, see details below:

Using this route, the following knowledge, skills and understanding will be developed:

a) Communication with patients, carers or significant others
   - Issuing clear and appropriate instructions and information
   - Obtaining informed consent
b) Infection control and health and safety
   - Correct procedures for personal hygiene and disinfection
   - Equipment cleaning and maintenance
   - Correct handling and disposal of waste and instruments

c) Aural anatomy and physiology

d) Medico-legal issues

e) Competent use of associated equipment and procedure

Assessment will be completed through observation, and oral, practical and written examination. On successful completion of the training full theoretical and practical competence in the following learning outcomes must have been achieved:

a) **Communication with patients, parents or significant others (including those with hearing loss)**
   - Issuing clear and appropriate instructions and information
   - Obtaining informed consent

b) **Correct management of infection control and other health and safety issues**
   - Correct procedures for personal hygiene and disinfection
   - Equipment cleaning and maintenance
   - Correct handling and disposal of waste and instruments
c) **Understanding of relevant anatomy and physiology**

- Knowledge of the anatomy and physiology of the outer and middle ear
- Identification of the structures of the outer ear
- Examination of the ear with and without magnification
- Ability to recognise abnormal conditions and refer accordingly

d) **Understanding of medico legal issues**

- Knowledge of current issues
- Contraindications and special care considerations for aural care
- Obtaining appropriate consent for the procedure to be performed
- Referral criteria and process
- Public liability and professional indemnity insurance
- Maintain accurate records of tasks undertaken

e) **Correct use of equipment**

- Perform thorough and safe otoscopy
- Use safe technique for aural examination using magnification equipment.
- Perform effective and safe aural care using the most appropriate method(s) and equipment available to clear the ear canal of ear wax
- Identify any underlying pathology and decide whether the ear has been satisfactorily cleared, and whether further treatment or referral is needed
- Knowledge of techniques and range of equipment available for aural care procedures

4. **Equipment and working environment**

4.1 **Equipment**

4.1.1 **Infection control related to equipment**

Equipment must be kept clean in adherence to local infection control policies and according to any manufacturers’ recommendations.
If equipment requires disinfection (such as the irrigation system) this must be carried out carefully according to the manufacturer’s recommendations. Care should be taken to ensure that if using chlorine cleaning tablets for irrigation tanks that the hands are washed thoroughly afterwards, that fumes are not inhaled and that contact with the eyes is avoided. During the soaking period the irrigation system must be left in a safe place to avoid spills. Following the recommended soak time the system must be thoroughly flushed with clean water and dried.

Single use consumables must not be disinfected or sterilised, and must be disposed of according to local infection control and disposal policies. Single use items must stay in their protective packaging until the point of use.

### 4.1.2 Fitness for purpose

When purchasing equipment procurers must be advised that equipment must be *fit for purpose*, and recognised as appropriate for use with the ear, nose or throat, i.e. it should be an ENT grade otorhinolaryngology medical product.

This therefore indicates that the equipment is appropriate for use in soft tissue orifices encountered in ENT such as those lined with skin or mucous membrane.

### 4.1.3 Safety and quality specifications and standards

For otorhinolaryngology and endoscopic medical products such as suction units, warm water rinsing devices and nasopharyngoscopes the equipment must meet the following necessary minimum safety and quality standard specifications according to the International Organisation for Standardisation (ISO) and the Conformité Européene CE (translation = European Conformity):

1. The class II medical equipment must possess a CE certificate from an official certification body which confirms that it “meets the requirements of Annex II, excluding section 4 of the directive 93/42/EEC. The manufacturer of the equipment must be able to prove that they have a quality assurance system which is subject to periodic surveillance, defined by Annex II, section 5 of the aforementioned directive. For placing on the market of class III devices covered by the certificate a CE design-examination certificate according to Annex II, section 4 is required.” (Standard CE Certificate wording).

2. The equipment must also possess a certificate from an official certification body that it meets the requirements specified in EN ISO 9001:2008, and also EN ISO 13485:2012 and EN ISO 13485:2012/AC:2012
4.1.4 Non conformity and the use of off-label medical equipment

Professionals must think carefully before proceeding with aural care using off-label equipment (i.e. equipment which does not have a CE mark). If it is not possible to source a CE marked device consult the UK Government Medicines and Healthcare products Regulatory Agency (MHRA) guidelines.

The key point is that the professional must firstly ensure that there is truly no other option than to use an off label device. If so, the patient must be made aware of the non-conformity of the equipment and must give their informed consent to the professional that they are willing to allow the use of the off-label device in their treatment.

The following advice is taken directly from the current UK Government MHRA guidance on this area:

“You must balance the risks and benefits to the patient taking into account recommendations which include:

- carrying out a risk assessment and documenting it
- considering the ethical and legal implications
- implementing suitable precautions to minimise the risk
- reviewing the risk assessment at suitable periods
- getting approval from MHRA for exceptional use of non-complying devices (if necessary)

You must inform the patient during the consent procedure and make a note on their records that you will be using a medical device off-label.”

4.1.5 Equipment maintenance

A planned preventative maintenance (PMM) schedule must be in place to ensure that equipment is in good working order and checked and replaced regularly.

The procedure must be abandoned immediately if it is suspected or identified that a machine has developed a fault whilst in the process of undertaking the aural care procedure.

4.1.6 Risk assessments

Procedural risk assessments for wax removal must include appropriate use of equipment and should also acknowledge as a risk the possibility of inappropriate use of the equipment.
4.2 Environment

Aural care must only be performed where room lighting levels allow safe illumination of the equipment and of the patient/ears. This must be further supported by additional light sources e.g. head loupes, otoscopes etc.

For irrigation, the room must have a sink with hot and cold water and facilities for waste disposal. It may be helpful if this includes a sluice if working in a medical environment.

The environment must be conducive to infection control.

These factors will be more difficult to control in a domiciliary environment therefore extra care must be taken.

Preparation for the procedure

5.1 Patient preparation

5.1.1 Consent

Patients must give informed consent for this procedure. This may be verbal or written consent according to local policy.

The risks of the procedure must be clearly explained to the patient. See section 8 for details of risks.

Patients must be advised to report back to the professional immediately if discomfort, pain, swelling, discharge or odour, or disruption to the hearing is experienced following any procedure so that inspection and referral can take place. See section 12 regarding advice and aftercare.

See Appendix A for an example of a consent sign off form.

5.1.2 Softening of ear wax prior to the procedure

Prior to ear wax removal by any method patients must be advised to use an ear wax softener. This is usually in the form of olive oil spray or drops, unless the patient or professional is aware of any known previous reactions to this preparation. This must be used for a minimum of 3-5 days following the manufacturers’ guidelines on use which usually involves application between 2 – 4 times daily. If the ear wax remains very firm the olive oil may be applied for a further 3-5 days up to a max of 10 days. Expert opinion varies on the appropriateness of using olive oil in non-routine ears.

The patient must be advised that their ear may feel more occluded following application of an ear wax softener due to the expansion of the ear wax. For some it may also induce fluctuations in their hearing
and mild discomfort or irritation. In addition, for patients who wear hearing aids, particularly those with receiver in the ear/canal (RITE/RIC) and in the ear/canal (ITE/ITC/ICC) models, olive oil may adversely affect the function of the hearing aid if it enters the hearing aid, therefore it may be advisable to avoid wearing the hearing aid when olive oil has recently been administered.

If the ear wax is very hard and has been present for a long time sodium bicarbonate drops may be of benefit. This preparation should be obtained following consultation with their pharmacist and should generally only be applied to ears which are considered to be routine.

6.5 Procedure time

6.1 Routine cases

Adequate time should be allocated to allow the safe removal of the ear wax using whichever method is deemed most suitable by the professional. Sometimes a combination of methods may be required in order to remove the ear wax and time should be sufficient to allow for a switch in method if required. Providing that the ear wax has been softened sufficiently it should not take longer than half an hour on average to clear both ears.

It can sometimes be the case that the softener has not completely penetrated a long or very hard plug of ear wax and it may have only softened the outer layers. This means that it is not always possible to remove all it. In this case it is important to be able to recognise when to cease the procedure and advise further application of the softener so that the remaining ear wax can be removed on a future appointment.

6.2 When a routine ear becomes non-routine

During ear wax removal it can sometimes be the case that an ear considered to be routine is revealed as non-routine as the ear wax comes away. For example a foreign object may be uncovered, or an infection or trauma or other referable abnormality may become visible. If this occurs the procedure should be stopped and the patient must be informed. They should be referred for a medical opinion and for continued treatment according to the condition revealed and the professional referral guidelines.
Contra-indications and special care considerations

See Appendix B for a checklist to help identify if an ear is to be considered as routine. Ear wax removal should not be attempted if the ear is identified prior to the procedure as non-routine, unless the professional has been trained to work with non-routine ears and is working in an environment with appropriate medical support available. See section 2 for more details on scope.

Risks and complications associated with ear wax removal

8.1 Physical (direct) trauma

During any ear wax removal method there is the risk of physical trauma to the skin of the ear canal walls. Manual instruments such as loops, curettes, forceps and black needles carry the greatest risk of abrasion to the skin, but suction tube appendages, Tumarkins and Rosen speculae, and endoscopes can also cause injury.

To minimise this risk it is important that the patient position is as stable as possible, either lying on a raised couch or sat in an upright position in a chair ideally with a head rest. No instrument should be introduced into the ear beyond the line of sight of the professional performing the procedure. Furthermore it is not recommended that instruments are used in the inner third of the ear canal or near the tympanic membrane unless the individual performing the procedure is medically trained and/or experienced, and has appropriate risk mitigation measures in place for the enhanced risk, for example quick access to medical help should it be required.

8.2 Pressure trauma

Risk of damage to the tympanic membrane due to pressure from an irrigation or suction device is possible. These are minimised by restricting the depth of insertion of the suction tube and assistive Tumarkins or Rosen speculae.

Risks from water pressure are minimised by ensuring that the irrigator pressure is kept low. Higher pressures from the irrigator are not necessary to remove ear wax from an ear which has been prepared well with softeners. In addition, the water jet from the irrigator should be directed at the ear canal wall or wax and not the tympanic membrane itself.

8.3 Infection

During any ear wax removal method there is the risk of infection developing after the procedure. Risks can be minimised by ensuring adherence to infection control policies and any manufacturer’s guidelines regarding equipment disinfection, and by ensuring that single use items are kept packaged
until the point of use and not re-used. (See section 4.1). Effective audit should also be used to ensure that consumable stock is rotated and items are not used if out of date.

Infection from *Pseudomonas* or other microbial agents may occur following these procedures. Following water irrigation the ear should be dry-mopped using a curette wrapped in cotton wool to minimise the risk of a *Pseudomonas* bacterial infection forming as a result of water remaining trapped in the ear. It is not necessary to use sterilised water for this procedure as water introduced into the ear possesses the same risk of carrying infectious agents as water from a domestic tap.

### 8.4 Vertigo

Some patients may experience dizziness as a result of wax removal. This can arise from the physical sensations created by the movement of the instruments in the ear canal, or may be induced by the movement of the wax plug itself. It is thought that this may also be due to the mild compression (or release of compression) of underlying facial nerves during the process.

Dizziness (caloric reactions) can also arise from temperature changes occurring in the external auditory meatus and particularly at the tympanic membrane. Temperature variations can occur in the water used to irrigate the ear, or may arise from changes in temperature created by the suction device.

Occasionally dizziness may be a result of poor breathing (either holding the breath or hyperventilation) due to anxiety if the patient has had negative experiences of the wax removal process in the past.

In rare cases, fainting may also occur.

If the patient is lying down or in a seated position during the procedure this makes these occurrences easier to manage.

### 8.5 Noise exposure

Sound pressure levels created in the ear during irrigation but more particularly during suction have the potential to reach levels of greater than 85 dB in some cases (Snelling et al. 2009).

Noise levels from this procedure therefore have the potential to exacerbate or trigger existing tinnitus and in rare cases trigger newly presenting tinnitus. These levels also have the potential to cause a temporary hearing threshold shift.

Efforts should be made to minimise the time taken to complete the procedure so as to reduce the length of exposure to noise generated by the equipment and procedure and therefore reduce the risk or tinnitus and temporary threshold shift.
8.6 Risks arising from over-cleaning the ear canal

Removal of essential moisture can encourage dryness and irritation of the ear canal skin.

Skin layers may be physically disrupted resulting in the natural microbial flora of the skin surface entering the inner epidermal layers, and therefore possibly leading to the development of otitis externa.

As detailed in section 2.1, only necessary ear wax removal should be performed.

Manual removal using simple extraction instruments

Please note these are practice guidelines, not step-by-step recommended procedures.

9.1 Patient instruction

The patient must be instructed to remain as still as possible and to keep the professional informed of changes in comfort. The professional must also regularly visually and verbally monitor the patient’s comfort. The professional must be seated during the procedure.

9.2 Method

Safe use of instruments such as loops, curettes and forceps must be demonstrated. When holding the instrument bracing a finger on the patient’s cheek is recommended to steady the hand where it is physically possible to do so, according to the professional’s hand and finger span and where safety will be improved by doing so.

The pinna should be pulled backwards and upwards to open and straighten the ear canal and improve the line of sight.

The working end of the instrument must be directly applied to the wax itself. Contact of the working end of the instrument with the skin must be avoided.

The ear canal should be viewed via a binocular head loupe with its own light source, or through a binocular microscope either with its own light source or with an additional directional external light source. These binocular systems allow a 3 dimensional (3D) view which enables good depth perception – important to assist in the avoidance of contact with the ear drum.

If these are unavailable otoscopy must be used regularly throughout the procedure and vision should also be supported by an additional light source to illuminate the ear canal. This may include a simple head torch or head mirror and lamp.
9.3 Variations in method

Use of ear speculae, usually Tumarkins or Rosen speculae, may assist the process by keeping the ear-
canal open and the skin protected.

An endoscope may also be used to view the ear during the procedure if the ear canal is wide enough to
allow the safe insertion of both the endoscope and the ear wax removal instrument, and providing that
the endoscope does not impede the required movement of the instrument. Professionals should be
aware that the 2 dimensional (2D) view achieved by the endoscopic system may not be as effective as a
binocular view at enabling good depth perception in a small space such as the ear canal. See advice in
section 1 regarding endoscopic methods.

9.4 Limitations of the procedure

This method must only be used to remove ear wax which is within easy reach in the outer regions of the
ear canal, within a clear line of sight and of a consistency which is soft enough to extract without causing
disruption to the ear structures or discomfort to the patient.

Patient tolerance – the patient may start to become uncomfortable if the procedure continues for too
long.

9.5 Complications of the procedure

Professionals must not perform this procedure on ears which are not routine unless it is within their
current scope of practice. See section 2.1 and 2.2 for details.

Infection is possible even when ears are routine due to the risk of abrasion by the wax removal
instruments. Where the skin of the ear is already traumatised due to existing abrasions, cuts, bruising,
inflammation, infection, or skin conditions such as otitis externa, eczema and psoriasis, the risk may be
increased.

Patients who take anticoagulant medicines may be at more risk of abrasion, bruising and bleeding with
this method if the wax removal instruments come into contact with the skin.

If a patient has a dry, irritable or tickly cough this method may trigger or exacerbate it due to stimulation
of the cough reflex.

Patients must be advised to report back to the professional as soon as possible if discomfort, pain,
swelling, discharge or odours occur, or if any disruption to hearing is experienced in the hours or days
following this procedure. This will ensure that ear examination and referral can take place. See section
12 for more details on advice and aftercare.
10. Irrigation using irrigation machines

Please note these are practice guidelines, not step-by-step recommended procedures.

10.1 Patient instruction

The patient must be instructed to remain as still as possible and to keep the professional informed of changes in comfort. The professional must also regularly visually and verbally monitor the patient’s comfort.

Patients must be sat upright in a stable position on a stable chair which has a head support/rest and no wheels. The professional must also be seated during the procedure.

The patient’s shoulder and clothes should be protected from water spillage using absorbent paper on the neck and shoulder, or a cape. The patient will be asked to hold the water-collecting receptacle securely under their ear during the procedure. A colleague or relative may need to hold this if the patient lacks the dexterity or strength to do this.

10.2 Method

A water irrigator is used to gently circulate water in the ear canal.

The pinna should be pulled backwards and upwards to open and straighten the ear canal and improve the line of sight

The jet tip must rest gently in the inter-tragal notch while the water jet is directed at the ear canal walls or wax, and not the tympanic membrane.

The water jet must enter the ear under low pressure according to the pressure gauge on the equipment.

Following water irrigation the ear should be dry-mopped using a curette wrapped in cotton wool to minimise the risk of a *Pseudomonas* bacterial infection forming as a result of water remaining trapped in the ear. See section 8.3.

10.3 Variations in method

For ear wax which proves difficult to remove sodium bicarbonate powder may be added to the irrigation water to assist in the reduction of ear wax adherence to the ear canal walls.
10.4 Limitations of the procedure

Ear wax may remain adhered to the ear canal walls if the softening preparation has only penetrated the outermost layers of the ear wax obstruction.

The procedure must be abandoned if the ear wax remains too solid to move, or if the usual procedure time has been significantly prolonged.

Patient tolerance – the patient may start to become uncomfortable if the procedure continues for too long.

10.5 Complications of the procedure

Irrigation is not suitable for ears which are not routine.

In particular, harm could occur if water is introduced into an ear where the ear drum is known (or is suspected) to be not intact, e.g. where the ear currently has (or has had) perforations, surgery, where grommets remain in situ, or where cleft palates are present (even if repaired) as water may enter areas which would not normally admit water and may create a risk of infection.

Infection from Pseudomonas or other microbial agents is possible even when ears are routine and the skin presents originally as intact. Where the skin of the ear is already traumatised due to existing abrasions, cuts, bruising, inflammation, infection, or skin conditions such as otitis externa, eczema and psoriasis, the risk may be increased. See section 8.3.

Careful monitoring of the water temperature should be maintained to reduce the risk of dizziness, even in patients who do not have existing or known vertigo. The water temperature should be at body temperature 37° or within a variation tolerance of ideally less than 1 degree Celsius above or below body temperature.

If a patient has a dry, irritable or tickly cough care must be taken as this method may trigger or exacerbate it due to stimulation of the cough reflex.

Efforts must be made to minimise the time taken to complete the procedure so as to reduce the length of exposure to noise generated by the equipment, and to reduce the risk of triggering new tinnitus or affecting existing tinnitus, or creating a temporary hearing threshold shift.

Care must be taken to keep the water pressure low to prevent discomfort or pressure trauma.

Patients must be advised to report back to the professional as soon as possible if discomfort, pain, swelling, discharge or odours occur, or if any disruption to hearing is experienced in the hours or days following this procedure. This will ensure that ear examination and referral can take place. See section 12 for more details on advice and aftercare.
11. **Suction using microscopic vision or via magnification through a head loupe**

*Please note these are practice guidelines, not step-by-step recommended procedures.*

**11.1 Patient instruction**

The patient must be instructed to remain as still as possible and to keep the professional informed of changes in comfort. The professional must also regularly visually and verbally monitor the patient’s comfort.

Patients may be lying down on a raised couch or may be sat upright in a stable position on a stable chair which has a head support and no wheels. The professional must also be seated during the procedure.

**11.2 Method**

A suction device should be used to extract the ear wax from the ear canal.

The pinna should be pulled backwards and upwards to open and straighten the ear canal and improve the line of sight. The ear canal may also be held open by the insertion of a Tumarkin or Rosen speculum which will also serve to protect the skin of the ear canal.

The working end of the suction instrument must be directly applied to the ear wax itself. Contact with the skin must be avoided.

The ear canal should be viewed via a binocular head loupe with its own light source, or through a binocular microscope either with its own light source or with an additional directional external light source. These binocular systems allow a 3 dimensional (3D) view which enables good depth perception – important to assist in the avoidance of contact with the ear drum.

**11.3 Variations in method**

The patient must be able to keep the head still, or be assisted to do so, for the procedure to be undertaken safely. A chair head rest or pillow behind the head can therefore be of help.

An endoscope may also be used to view the ear if the ear canal is wide enough to allow the safe insertion of the endoscope and the suction tube, and providing the endoscope will not impede the required movement of the suction tube. Professionals should be aware that the 2 dimensional (2D) view achieved by the endoscopic system may not be as effective as a binocular view at enabling good depth perception in a small space such as the ear canal. See advice in section 1 regarding endoscopic methods.
11.4 Limitations of the procedure

This method should only be used to remove ear wax which is within easy reach in the outer regions of the ear canal, within a clear line of sight and of a consistency which is soft enough to extract without causing disruption to the ear structures or discomfort to the patient.

Patient tolerance – the patient may start to become uncomfortable if the procedure continues for too long.

11.5 Complications of the procedure

An ear care professional must not perform this procedure on ears which are not routine unless it is within their current scope of practice. See sections 2.1 and 2.2 for details.

Infection is possible even when ears are routine due to the risk of abrasion by the wax removal instruments. Where the skin of the ear is already traumatised due to existing abrasions, cuts, bruising, inflammation, infection, or skin conditions such as otitis externa, eczema and psoriasis, the risk may be increased.

If the patient has troublesome vertigo this may be triggered or exacerbated by this procedure due to possible caloric effects caused by changing temperatures in the ear canal by the suction device, or by stimulation of local nerves.

Patients who take anticoagulant medicines may be at more risk of abrasion, bruising and bleeding with this method if the wax removal instruments come into contact with the skin.

If a patient has a dry, irritable or tickly cough this method may trigger or exacerbate it due to stimulation of the cough reflex.

Efforts must be made to minimise the time taken to complete the procedure so as to reduce the length of exposure to noise generated by the equipment, and to reduce the risk of triggering new tinnitus, affecting existing tinnitus, or creating a temporary hearing threshold shift.

Patients must be advised to report back to the professional as soon as possible if discomfort, pain, swelling, discharge or odours occur, or if any disruption to hearing is experienced in the hours or days following this procedure. This will ensure that ear examination and referral can take place. See section 12 for more details on advice and aftercare.
12. **Advice and aftercare**

12.1. **Immediate aftercare**

Patients must be advised to report back as soon as possible to the professional if discomfort, pain, swelling, discharge or odours occur, or if any disruption to hearing is experienced in the hours or days following any ear wax removal procedure. This will ensure that inspection and referral can take place. Patients should be given written details of possible complications to take away and given clear advice about how to contact the department or seek medical advice if complications arise.

12.2. **Educating patients about ear wax management**

There is limited advice and evidence available regarding how often ear wax should be removed and also whether regular removal actually encourages the production and accumulation of ear wax, therefore expert opinion varies on these matters. Patients should be advised following an ear wax removal episode that a build-up of ear wax may recur in the future and require further management.

Education regarding the prevention and reduction of ear wax levels should be encouraged. This may include advising regular use of softening preparations and regular check-ups. Patients with non-routine ears should discuss with their pharmacist or GP regarding the use of over the counter devices or treatments.

To reduce opportunities for patients to harm themselves, patients should be advised against the use of cotton buds or any other devices to manually remove the wax themselves. The use of Hopi candles should also be discouraged due to the lack of evidence that this is a safe or effective wax removal method.

NICE guidance on these areas:

- Advise people against inserting anything in the ear. Cotton buds, matchsticks, and hair pins can:
  - Damage the wall of the canal and increase the likelihood of otitis externa.
  - Cause the wax to become impacted by pushing it further into the canal.
  - Perforate the tympanic membrane.
- Advise that the use of ear candles has no benefit in the management of earwax removal and may result in serious injury.
Ear candling should never be used: a hollow candle is burned with one end in the ear canal. The intention is to create a negative pressure which draws the earwax out of the ear canal.
19. References


NICE Clinical Knowledge Summaries https://cks.nice.org.uk/earwax (last viewed 07.04.17)


http://clinicalevidence.bmj.com/x/systematic-review/0504/overview.html. (last viewed 07.04.17)
Appendices
Appendix A

Consent form for Ear Wax Removal

Your Ear Care Professional has discussed with you the need to remove wax from your ear canal/s. In order to do this it is necessary to carry out otoscopy or microscopy (a visual inspection of the ear structures). Wax will be removed from your ear using the safest and most appropriate method for the wax discovered.

Three methods of wax removal may be used, and these are sometimes used in combination:

Removal of wax deposits using manual instruments
Fine instruments are inserted carefully into your ear and used to gently extract the wax from the ear canal.

Wax removal using suction
A fine suction tube is carefully inserted into the ear canal while being viewed closely through a microscope or under magnification from a head loupe. Wax is removed by suction from the tube. This procedure can be noisy.

Wax removal using irrigation
A fine jet of water is gently circulated around the ear canal to loosen and remove the wax deposit. This procedure can also be noisy.

Your Ear Care Professional has undertaken training in wax removal and will use best-practice procedures to minimise any risk of harm. However, even when performed with the utmost care, there are risks involved in wax removal. These risks include:

- damage to skin of the ear canal or the ear-drum during the procedure
- infection of the ear canal or other ear structures following the procedure
- temporary reduction in hearing
- temporary dizziness and (rarely) possible sickness or fainting
- triggering of new tinnitus
- temporary aggravation of existing tinnitus
- temporary irritation to the throat, especially if already dry, tickly or sensitive
If the wax cannot be removed

Sometimes, depending on the amount and consistency of the wax and your own comfort, it may not be possible to remove all of the wax in one attempt. If this situation occurs the Ear Care Professional will stop the procedure and you will be advised to continue to use a wax softener for a specified number of days and return to have the remainder removed.

Please tick the box to confirm:

☐ I have read the information above and understand there are risks involved. I give my consent to allow the Ear Care Professional to remove wax from my ear using the most appropriate method for the amount and consistency of wax discovered.

☐ I understand that the removal may take more than one attempt/visit.

Signed:...........................................................................................................

Date signed:....................................................................................................
**Appendix B**

**Ear wax removal by manual instruments, suction or water irrigation**

**Contra-indications checklist to ensure ears are routine**

<table>
<thead>
<tr>
<th>Contra-indication</th>
<th>No</th>
<th>Yes</th>
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<tbody>
<tr>
<td>Recent or current pain</td>
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<tr>
<td>Foreign object</td>
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<tr>
<td>Middle ear infection (within last 6 weeks)</td>
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<tr>
<td>Acute otitis externa (outer ear infection)/itchy or irritated ears/eczema/psoriasis</td>
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<tr>
<td>Abrasions or inflammation of the ear-canal</td>
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<td>Perforations or recently healed perforations</td>
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<tr>
<td>Ear surgery (of any type, particularly if recent)</td>
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<tr>
<td>Troublesome vertigo</td>
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<td></td>
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<tr>
<td>Cleft palate (even if repaired)</td>
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<tr>
<td>Grommet in situ</td>
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<tr>
<td>History of any previous complications from wax removal procedures (e.g. vertigo, pain, tinnitus or other)</td>
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<tr>
<td>Anticoagulant or blood thinning medication e.g. Warfarin*</td>
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<tr>
<td>Troublesome tinnitus*</td>
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<td></td>
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<tr>
<td>Dry, tickly or irritable throat*</td>
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</table>

* Extra care will be required. For tinnitus and throat issues the ear wax removal procedure may aggravate these symptoms temporarily. Discuss risk with patient/client as it may be possible to proceed with additional patient informed consent based on the ear care professional’s clinical judgement.