Lesson 1: Introduction to hearing aids

Who uses hearing aids

Hearing loss is a condition when a person is not able to hear as well as a person with normal hearing. Hearing aids help people with hearing loss to hear speech and sound. They may be used by people of all ages who have difficulty with hearing.

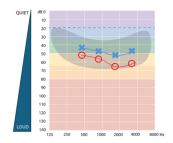
On TAP, adults and children aged five years and older can be assessed and fitted with hearing aids. Children under five years of age need assessment from a person with more specialist training.

Measuring hearing loss

Hearing loss is measured using an audiometer. An audiometer tests how well a person hears sounds (hearing test). This includes how well a person can hear different types of sound (frequency) and how loud or quiet sounds are (decibels).



Audiogram



The hearing test results are shown in an audiogram. An audiogram shows the quietest sound that a person can hear (hearing threshold) at different frequencies of sound. Results for each ear are shown in a different colour or shape.

Grades of hearing loss

The results of a hearing test can be graded to six different levels for each ear. The grades are based on average hearing thresholds for each ear:

- 1. Normal hearing
- 2. Mild hearing loss
- 3. Moderate hearing loss
- 4. Moderately severe hearing loss
- 5. Severe hearing loss
- 6. Profound hearing loss

Hearing aids included on TAP

Hearing aids are electronic devices worn on the ear. They assist a person by making some sounds louder so that the person can hear better.



Preprogrammed:

- Already programmed according to common types of hearing loss
- Can be adjusted manually or by an app on a smartphone or tablet
- Recommended for adults.

Fully programmable:

- Can be adjusted by computer software or a downloaded app
- Provide extra programming features to make sounds clearer
- Recommended for children.

Important features	Other features
 Hearing aids should be comfortable and easy to wear behind the ear and durable when exposed to light rain, humidity and dust. Different sizes of standard earmoulds should be available. Essential adjustments include: Programming options Minimum of four sound processing channels Fitting range to include mild to severe hearing loss. 	 Other features may include: Rechargeable hearing aid and/or battery Programming connection (wireless or cable) Additional channels. Hearing aids may have extra features which make: It easier to hear speech sounds in noisy environment Sounds that are loud more comfortable to hear.

Hearing aids not included on TAP

Custom earmoulds	In-the-ear hearing aids	Cochlear implants
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Analogue hearing aids are also not included in TAP as they have limited technology to make sounds louder.

Lesson 2: Step one: Select

Assessment overview

Through an assessment you will gather information about the person's hearing and grade of hearing loss. The information will help you and the person to plan:

- If they may benefit from hearing aids
 - What type of hearing aids might be suitable
 - What to teach
 - Follow up
- Referral to other services.

If the person already has hearing aids and is returning to the service, this assessment can check whether the hearing aids are meeting their needs.

Hearing test

A hearing test (audiometry) will measure a person's right and left ears to check for hearing loss. The results will help you both decide if hearing aids could help.

Before the hearing test, check the environment is suitable for testing by measuring the level of background noise. The noise level should be less than 40 decibels (dB).

Warning!

If a person has an ear health problem, it may make the hearing test result worse. Treating the ear health problem first will give a more accurate hearing test result. Always do an ear health screen to check a person's ears before a hearing test.

When carrying out a hearing test with a person:

- 1. Explain the hearing test
- 2. Practice test response if the person does not pass the practice, do not continue to the hearing test.
- 3. Carry out the hearing test the person must respond correctly at least two out of three times to confirm the hearing threshold for each frequency
- Calculate average hearing threshold get the average decibels (dB) by adding threshold values of 500 Hertz (Hz), 1000 Hz, 2000 Hz, and 4000 Hz then divide by four. To continue, the difference between right and left ears should be less than 15 dB
- 5. Record result for each ear includes test confidence and grade of hearing loss for right and left ear.

Plan

- Monitor: Plan follow up in one year for adults with normal to mild hearing loss, to retest hearing.
- **Refer:** With their permission, refer adults with profound hearing loss or more than 15 dB difference between average hearing thresholds in their right and left ears to an ear and hearing professional.

Some people will benefit from hearing aids. A person may need time to think about whether they want or need hearing aids. Explain the potential benefits of hearing aids and offer the opportunity to practice using a hearing aid before deciding.

- Select the type of hearing aid, correct size of earmould and battery. Record details.
- Teach how to use for people to get the most benefit from their hearing aids.
- Follow up within two weeks to check how the person is getting on with their hearing aids.

Lesson 3: Step two: Fit

Check hearing aids

Before fitting the hearing aid, check the hearing aid has no sign of damage and is working. To test a hearing aid is working, connect the hearing aid to a listening tube and use the Ling sounds. You should be able to hear all the Ling sounds clearly.

Select programme options

Prepare the hearing aid by matching programme options to the results of a person's hearing test.

Preprogrammed options can be:

- Selected **manually** by adjusting a programme switch (commonly called a trimmer or rocker switch) or
- App assisted using a smartphone or tablet.

Trial hearing aids

After hearing aid programming, it is important to carry out a hearing aid trial. A hearing aid trial will include:

- Fitting hearing aids
- Adjusting hearing aids

Fitting hearing aids

• Start by fitting the earmould. The earmould should be comfortable and easy to fit in/out of the person's ear canal.

• Cut the earmould tube to the correct length. The tube is the correct length when the hearing aid rests comfortably on top of the person's ear with no gaps.

Adjusting hearing aids

Make adjustments to the persons hearing aids if needed:

- Check the person can hear your voice clearly and adjust the volume if necessary. If the person is not comfortable with the sound of their hearing aid, discuss with your service mentor
- Check for feedback. There should be no feedback (whistling sound).

Lesson 4: Step three: Use

How to use hearing aids

It is important to explain the benefits of using a hearing aid and encourage the person to build up use by using them regularly and listening to their voice and other voices.

Teach a person how to use their hearing aid correctly including how to:

- 1. Identify the parts of a hearing aid
- 2. Turn the hearing aid on and off
- 3. Adjust the volume of the hearing aid
- 4. Put on and take off their hearing aids
- 5. Replace and look after battery.

How to look after hearing aids

To prevent damage, it is important to teach a person to care for their hearing aids. This includes:

- Cleaning the earmould and hearing aid: only the earmould should be cleaned with water!
- Avoiding water damage: it is important to protect hearing aids from getting wet.
- **Storing safely:** avoid moisture by wiping daily. Store hearing aid with the battery door open in a dehumidifier overnight. Put the battery in a hearing aid box.

Lesson 5: Step four: Follow up

Hearing aid follow up

Early follow up is advised at two weeks and two months to support a person to adjust to their hearing aids and gain maximum benefit.

Reassessment is recommended every two years for adults. Follow up may take place remotely by phone or video call, or in person. Reassessment appointments must be done **in person**.

Follow up for hearing aids will help you find out if the:

- Hearing aids are meeting the person's needs
- Hearing aids need repair or replacing
- Hearing aids still fit well
- Person needs any problem solving for safe and correct use.

Hearing aid follow up for adults

To find out if an adult is fully benefitting, check if they:

- Are satisfied with the comfort and experience of using their hearing aids
- Use their hearing aids more than four hours a day
- Benefit from using their hearing aids moderately or more.

If the person does not answer yes to all, they are not fully benefitting from their hearing aids. Try problem solving. If problem solving does not help, ask them to attend an in person follow up appointment to carry out an ear health and product check. If a solution is not possible, discuss with service mentor and if needed refer to ear and hearing professional.

Explain that every two years it is important to check their ear health and repeat their hearing test to see if there are any changes.

Check the hearing aid is working correctly using the listening tube. If one or both hearing aids are not working, clean and replace any worn or damaged parts. If this does not help discuss with mentor and if needed, send to manufacturer.

Maintenance and repairs

Clean and check each hearing aid:

- Remove battery and dry with a cloth to remove any moisture
- Use a cloth or brush to clean the hearing aid and battery compartment
- Use wire and brush to remove any blocked ear wax.

Replace any worn or damaged parts. Parts which commonly need to be replaced include:

- Battery
- Ear hook
- Earmould
- Earmould tube.

Replace hearing aid if it has major cracks or has been damaged by water.