Understanding Childhood Hearing Loss

Information Booklet for Families of Children Newly Diagnosed with a Hearing Loss
Disclaimer

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Introduction

The purpose of this booklet is to provide families with information about hearing loss. We consulted with families who have been through the process of having a child diagnosed with a hearing loss and they have made suggestions as to what information would be useful to them.

It can be difficult for families to come to terms with the diagnosis of a hearing loss and you will have questions about what lies ahead for your child. But be assured you are not alone and there is support and information for you and your family.

This booklet includes explanations about the different types and levels of hearing loss and information on the variety of hearing tests that can be carried out to check the level of your child’s hearing loss. It explains about audiograms, gives examples of the main types of hearing aids and gives information about different communication approaches. There are also sections about entitlements and the roles of relevant professionals.

This booklet was produced by the staff of DeafHear, who have an extensive knowledge of supporting parents of children newly diagnosed with a hearing loss.

Our mission statement is:

- To promote the right of every Deaf person to enjoy an equality of opportunity in all aspects of life, and to develop full independence and citizenship.
- To promote the right of parents of Deaf children to enjoy access to the full range of appropriate supports and services, and to take an active role in their child’s education and development.
- DeafHear plans to fulfil this mission: Through advocacy for equal opportunities Through development and direct services Through encouraging the development of services by others.

More information can be found on: www.deafhear.ie
Coping with the Diagnosis

The majority of children who are identified with a hearing loss are born to hearing parents, so you may have very little knowledge or experience of hearing loss; there might not be a history of hearing loss in the family and you may not know any other families in the same situation. It is possible, that when you were actually given the diagnosis you might not have taken in properly what the professional said to you.

The time of diagnosis can be difficult for some parents and families. You may go through an array of emotions, which could include shock, denial, pain, guilt, disbelief, sadness, fear, anger, confusion, frustration, isolation, fear of coping, reflection, relief at getting a diagnosis, adjustment and acceptance. Also, at this time you may be confused by meeting all the professionals, the new terminology, or anxious about making the right decisions for your child with limited experience and knowledge. These feelings are not unusual and it is an on-going process. Be prepared for good and bad days and it is important to remember it is ok to feel like this. On the other hand, you may not be feeling any of these emotions and you may have accepted the diagnosis without any major reaction. Be assured that there is no right or wrong way to react, and the way you are reacting is right and normal for you.

You may want to talk to other parents who have been in this situation, or to professionals who understand your situation, who will listen to you and support you. Please contact your local DeafHear Resource Centre who can provide professional support to you and put you in touch with other parents and services.

Coping Strategies

Many parents have said that once they gained some knowledge of hearing loss, their child’s communication needs and language acquisition, they felt more in control and not as fearful. So try and get as much information as possible from reputable sources and take the time to read and understand it.

If you want information or jargon clarified, write down questions you want to ask the professionals before each appointment and write a few notes on the answers they give you.

Take the opportunity to speak to other parents - family and friends do mean well, but there is nothing like talking to someone in a similar situation.

Do not be pressured into making a decision for your child, be sure that you have enough information to make an informed decision.

Remember your child doesn’t know any different and will still want to do all the same things as their peers, it might just be in a slightly different way!
Understanding Childhood Hearing Loss

Roles of Professionals that Could be Involved in Your Child’s Life

**Audiological Scientist - Audiologist**
- works to diagnose hearing problems in children using a series of tests. They address hearing loss by the prescription and fitting of hearing aids and other assistive technologies. The audiological scientist works in the community and in hospital settings. Referral to the audiology department is usually through the Public Health Nurse or your GP.

**Speech and Language Therapist**
- can be involved with children who have any degree of hearing loss. They work with the child and parents to promote the development of communication and are usually located in local community clinics. The therapist will initially carry out an assessment in conjunction with the child, family members and other relevant professionals. Following the assessment the therapist will devise an Individual Therapy Plan, which should include aspects of development such as play skills, listening skills, turn-taking, comprehension and oral communication.

**Ear, Nose and Throat Consultant**
- (ENT) is a specialised doctor trained in the health, medical and surgical treatment of the ears, nose, throat and associated structures of the head and neck. They are based in hospitals and work as part of a multi-disciplinary team.

**Visiting Teacher for the Deaf and Hard of Hearing Service**
- this service is provided by the Department of Education and Skills from the time of referral until transition to third level or further education. The aim of the service, through partnership with home and school, is the successful development of the whole child on an educational, social and emotional level. The visiting teacher covers a particular geographic region and supports the child, family, teachers and other professionals involved. The nature and frequency of the support will depend on a range of factors including the age of the child, severity of hearing loss, educational placement and individual learning needs. The visiting teacher provides information to parents and guardians on hearing loss, advises on the management of hearing aids, other assistive technologies and on all available educational options, enabling them to make informed choices for their child. Their main focus is on the development of language and communication skills in spoken and/or sign language (ISL).

**DeafHear Support Staff**
- provide services to Deaf and Hard of Hearing people and their families. Our attention focuses on helping individuals and families deal with their particular situation. The services are strictly confidential and are provided free of charge.

**Cochlear Implant Team**
- this service is located in Beaumont Hospital, Dublin. The Cochlear Implant (CI) Programme is comprised of a multidisciplinary team of highly trained and qualified professionals specialising in deafness, including ENT surgeons, audiological scientists, speech and language therapists, teachers of the deaf, psychologists, and administrators. Assessment for CI suitability is carried out from a few months old and across all age groups. Once a child is assessed as suitable for a CI, and cochlear implant surgical intervention is chosen as the management option by the parent/guardian, the CI programme provides lifelong management for CI recipients residing in ROI. This includes individuals transferred from other programmes worldwide. The programme is completely publicly funded and includes assessment, hearing aid fitting, surgical intervention and all post-operative follow up and management. Referrals are accepted from any medical or healthcare provider.
Role of DeafHear.ie

Since 1964 we have campaigned for full equality in all aspects of life for Deaf and Hard of Hearing people, and for parents of children with a hearing loss to have appropriate supports and services for their children’s development.

Family support services

Many parents experience a range of emotions when they discover that their child has a hearing loss. DeafHear provides a range of supports which you may find helpful at this time. The Family Support Service is a service for all parents/guardians of a child with a hearing loss, and focuses on helping individuals and families deal with their particular difficulties.

This service is available to provide support on a range of issues including coping with diagnosis, adjustment to deafness and hearing loss, behavioural issues, parenting, rights and entitlements, information and advice, social work and counselling, family therapy, personal and relationship difficulties, and advocacy.

DeafHear’s Family Support Service comprises of professionally qualified Social Workers and Family Support Workers who are familiar with all aspects of deafness and hearing loss. This service is strictly confidential and is provided free of charge and through the communication method of your choice, i.e. Irish Sign Language, Lip-reading etc.

Information weekend for families with a child newly diagnosed with a hearing loss

The weekend brings families together from across the country, giving them the opportunity to gain information about supports available locally and nationally from professionals and peers. The weekend is led by experienced DeafHear staff. The programme includes guest speakers with relevant experience of working with children with a hearing loss, such as an Audiological Scientist and a Speech and Language Therapist. There is a session with a Deaf person and their family members: they talk about their experiences of being a Deaf child in a hearing family and having a Deaf child in the family.

There is also ample opportunity to talk to other families and DeafHear staff. Parents of a child with a hearing loss have often said it helps to talk to other parents who have been through a similar experience to their own.

Childcare is provided while parents attend the workshops. All meals, accommodation, childcare and information packs are included in the costs payable by parents. (The event is subsidised by DeafHear.)

Resource centre activities

Each DeafHear resource centre has a programme of activities for families, these include:

Family Fun Days - Easter, Summer, Halloween, and Christmas - these events aim to bring families together socially, giving ample opportunity for you to talk to other parents and for your child to meet their peers with a hearing loss.

Summer Camps - these are usually 3-day events and provide an opportunity for the child with a hearing loss and their siblings to meet other children in a similar situation to themselves in a fun environment.

Please look at our website www.deafhear.ie for information on the services in your local resource centre.
How We Hear

Before we can begin to talk about hearing loss, we must first understand how we hear. The ear is made up of three different sections: the outer ear, the middle ear, and the inner ear. These parts work together so you can hear and process sounds. The outer ear, or pinna (the part you can see), picks up sound waves that then travel down the ear canal.

When the sound waves hit the eardrum, the eardrum starts to vibrate. When the eardrum vibrates, it then causes three tiny bones in the middle ear to vibrate. These bones are called the ossicles (hammer, anvil and stirrup). They conduct sound through the middle and into the inner ear. The vibrations then travel to the cochlea, which is filled with liquid and has thousands of tiny hairs. The sound vibrations make the tiny hairs move. The function of the hairs is to change the sound waves into electrical impulses that then travel along the auditory nerve to the brain. When the electrical impulses reach your brain, you ‘hear’ the sound.

Types of Hearing Loss

There are three types of hearing loss: Conductive, Sensorineural and Mixed.

Conductive: This describes a condition in which sound is not conducted efficiently through the outer ear canal to the eardrum and the bones or ossicles of the middle ear. This would result in the inability to hear faint sounds; sounds not being effectively delivered to the inner ear and/or a reduction in sound levels. This type of hearing loss can often be medically or surgically corrected.

Sensorineural: This describes a condition in which the problem lies in the cochlea (inner ear) or in the nerve pathways (auditory nerve) which deliver the sound to the brain. This hearing loss is permanent and the only treatment is the fitting and use of a hearing aid or cochlear implant.

Mixed: This type of hearing loss may occur when there is a sensorineural loss and a conductive loss present.

Causes of conductive hearing loss
Typical causes include middle ear infections, collection of fluid in the middle ear (‘glue ear’ in children), and blockage of the outer ear (wax). Other causes can include frequent colds and flu, allergies, foreign bodies in the ear, trauma to the ear or head and otosclerosis (this is a condition in which the bones of the middle ear become immobile because of the abnormal growth of the bone surrounding them).

Causes of sensorineural hearing loss
Common causes include age-related hearing loss (a natural part of the aging process) and acoustic trauma to the hair cells (such as a loud noise). Other causes include viral infections of the inner ear (measles, mumps, chickenpox), head injuries, Ménière’s disease (abnormal pressure in the inner ear) and Ototoxicity (certain drugs have a toxic effect on the structures of the ear, especially on its nerve supply). Congenital hearing loss, which is a hearing loss present from birth, can have a range of causes such as events during pregnancy or birth, prematurity, lack of oxygen, intrauterine infections including rubella or genetic factors. In some cases, the causes may not be known.
Levels of Hearing Loss

Hearing loss is often classified by means of different levels. The same definitions are not always used, but the following are among the most common.

**Normal**
On average, the quietest sounds heard by people with their better ear are up to 20 dB.

**Mild**
On average, the quietest sounds heard by a person with their better ear is between 20 and 40 dB. The effects for someone with a mild hearing loss when having a conversation are if the other person is too far away or if the other person’s voice is quiet or the background environment is noisy, then the person with the hearing loss may not be able to understand all the conversation.

**Moderate**
On average, the quietest sounds heard by a person with their better ear is between 40 and 70 dB. People who have a moderate hearing loss have difficulty keeping up with conversations when not using a hearing aid and even then they may struggle if the listening environment is noisy or the other person is not facing them.

**Severe**
On average, the quietest sounds heard by a person with their better ear is between 70 and 95 dB. People who have a severe hearing loss could benefit from powerful hearing aids, but often they rely heavily on lip-reading, even when they are using hearing aids and would be assisted by quieter and brighter listening environments. Some people would also use sign language.

**Profound**
On average, the quietest sounds heard a person with their better ear is from 95 dB or more. People who have a profound hearing loss are very hard of hearing and typically rely on lip-reading, and/or sign language. They may hear loud sounds.

The levels of hearing loss are shown on an **Audiogram**
Understanding Sound Frequency and Volume

Sound is made up of vibrations of energy which knock together to produce sound waves. The waves travel on air particles, spreading outwards from the source of the sound.

Most sounds are made up of different frequencies; they are described as the pitch of a sound. Frequency is measured in Hertz (Hz), as shown horizontally in the diagram below across the top of the grid. The frequency of a sound affects the pitch that it is heard at. For example if you look at a piano keyboard from left to right, the low pitch notes are on the left and high pitch notes are on the right.

Loudness is measured in decibels (dB) and is shown vertically on the left column in the diagram below. The sounds are getting louder as you move down the column. The diagram shows how loud some everyday sounds can be.

Audiologists often describe loudness as ‘intensity’.

Diagram illustrating the loudness and pitch of the sound components of speech and a variety of common sounds in our environment.
Understanding Audiograms

The audiogram is a picture of how well we hear. It is a graph on which a person’s ability to hear different tones (frequencies or pitch) at different volumes (intensities) of sound is recorded.

**Modes of testing**
- Air conduction – what your child can hear through their external ear.
- Bone conduction – vibrates the bone behind the ear to bypass the outer/middle ear and stimulates the inner ear directly to determine the type of hearing loss. This may include conductive (hearing loss in the outer and/or middle ear) or sensorineural (hearing loss in the inner ear). These tests enable the audiologist to determine the type and level of hearing loss.

**Symbols**
- Left ear air conduction, represented by an \( \times \)
- Right ear air conduction, represented by an \( \circ \)
- Bone Conduction by an \( \Delta \)

A hearing loss may be unilateral (affecting one ear), or bilateral (affecting both ears). The diagram below demonstrates that the person has a bilateral mild hearing loss in the low frequencies and a bilateral moderate loss in the high frequencies.

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How the Audiogram Relates to Speech

This chart shows the frequency and loudness of individual speech sounds and is known as the Speech Banana.

If you look at your child’s audiogram you can begin to understand the sounds they can hear or can’t hear with or without their hearing aid/cochlear implant.

The main priority of a hearing aid/cochlear implant is to maximise speech intelligibility, but please be aware that they do not restore normal hearing. You should keep your expectations realistic and be prepared to assist your child to adjust to wearing their assistive device.
Audiological Tests

Newborn Hearing Screening Programme
An Otoacoustic Emissions (OAE) test is normally the first test in this screening programme. Otoacoustic Emissions are sounds produced by the outer hair cells of the cochlea, in response to sound stimulation. In this test the emissions are measured and recorded from the ear canal. If there is any damage to the hair cells then a hearing loss is present and there will be no OAE produced. This is a simple, quick and non-invasive test which gives immediate results, your baby stays with you at all times and is usually asleep when the test is carried out. The test involves placing a small probe into your baby’s outer ear canal, the probe produces a gentle sound that is heard in the ear and then the ear should respond by producing a small sound which the probe will measure.

If the OAE test does not produce a clear result, it does not mean that your child definitely has a hearing loss; maybe the environmental conditions were not exactly favourable at the time or there was fluid in the ear canal. The tester may refer your baby for a further test called an AABR, which can give a more detailed description of your child’s hearing.

An Automatic Auditory Brainstem Response (AABR) screen is usually carried out in the audiology clinic or hospital environment. Its non-invasive and your baby must be asleep.

The audiologist places a probe each into a set of ear couplers which are then placed over the baby’s ears, three small sensor pads with electrodes attached are placed on your baby, on the forehead, shoulder, and the back of the baby’s neck. At this stage sound is sent to the ear via the acuscreen and the sensors pick up the brain activity. The machine will give one of two results, a “Pass” which indicates the hearing is normal. A “Refer” means that the machine is not happy with the response and the baby is then referred on for a full audiological assessment.

Distraction Test
While this is not an actual audiological test, it is often the first time that your child’s hearing would have been checked/tested; this is generally carried out by your Public Health Nurse (PHN), when your child is around the age of seven months. Your child sits on your lap, while a PHN attempts to keep their attention by playing with some toys, another PHN standing away from your child’s line of vision makes a variety of different sounds. The PHN would be looking to see if your child reacts to the stimulation by turning towards the direction of sound. The distraction test checks your child’s ability to react to the direction of sounds, and he/she should be able to hear exactly where a sound is coming from. The test can give a general indication of a baby’s hearing, but is not always a very accurate way of assessing a child’s hearing.

Visual Reinforcement Audiometry - (VRA)
This test is a behavioural audiometric test carried out in the audiology clinics sound-proof booth. Your child sits on your lap and you are positioned between two loudspeakers. The audiologist produces a range of different intensities and frequencies of sound through the speakers and your child will respond to what they hear by turning towards the sound source, once they have responded, your child is rewarded with the movement or lighting-up of an animated toy.

Auditory Brainstem Response - (ABR)
This test looks for neurological (electrical) responses from your child’s hearing nerves and brain to sound stimulus. Your child will be tested if they have an unsatisfactory AABR or if the audiologist considers it necessary to assist with diagnosis. It is non-invasive and is completed by an audiologist. Your child will wear earphones in each ear and some sensor pads which will be attached to their head, neck and shoulders, these are connected to a computer. It is not an automated test as in the AABR because the audiologist will use a range of intensities and frequencies of sound to measure your child’s responses, the results of which are printed from the computer and assessed. This test needs to be completed when your child is totally still and relaxed. Because it can be difficult to communicate this message to a young child, this test may be done under general anaesthetic.
Conditioned Play Audiometry
This test involves your child listening to a range of intensities and frequencies of sound. For young children who won’t allow headphones, they can be tested using speakers – not specific to each ear but will give overall levels of two ears together (binaural hearing) which usually represents the better ear. As your child develops and they can put on headphones to carry out testing, each ear can be tested separately through headphones.

This test uses play to acquire a conditioned response from your child to a sound source, such as put a peg in a hole or drop a block into a bucket.

Audiometry
A comprehensive audiometric evaluation consists of two essential tests. For these tests your child will be seated in a soundproof booth or room, headphones are placed over their ears and they are asked to respond each time they hear a sound or a soft tone in their ears. First, the audiologist determines the softest sound that they can hear at several different frequencies. This is called testing via air conduction. The second test is via bone conduction, a device is placed behind your child’s ear to determine the softest sound level that they can hear when stimulating the inner ear directly and bypassing the outer and middle ear.

Information obtained from these two tests helps to determine the type of hearing loss. This may include conductive (hearing loss in the outer and/or middle ear) or sensorineural (hearing loss in the inner ear). The information allows the audiologist to also determine the levels of hearing loss.

Otoscropy
This test involves looking down your child’s ear canal with a special magnifying pen light called an 'otoscope'. This is to check for things like wax, blockages or any problems with their ear canal/drum which need to be taken into account before proceeding onto other tests.

Tympanometry
This is an examination of the middle ear function. During this test a small probe is inserted in the ear and your child will feel a slight pressure change. They may also hear a series of loud beeps. This test measures how well the eardrum moves in response to slight pressure. It is a very sensitive test in detecting anything that would inhibit the motion of the eardrum such as fluid, infection, or eustachian tube dysfunction.
Hearing Aids

Once the audiologist has assessed the results of the hearing tests, they can determine whether hearing aids will help your child. Hearing aids amplify all the sounds in the environment. However, the audiologist will programme the hearing aid to suit your child’s hearing loss, with the focus on maximising access to speech sounds. Wearing two hearing aids may help balance sounds, improve your child’s understanding of words in noisy situations, and make it easier to locate the source of sounds.

Behind the ear - BTE

These hearing aids are worn behind the ear and are connected to a plastic ear mould that fits inside the outer ear. The components are held in a case behind the ear. Sound travels through the ear mould into the ear. BTE aids are used by people of all ages for mild to profound hearing loss. Poorly fitting BTE ear moulds may cause feedback, which is a whistling sound caused by the fit of the hearing aid or by build up of earwax or fluid.

The difference between ‘analogue’ and ‘digital’ hearing aids

‘Analogue’ and ‘digital’ refer to the way that sound is amplified by a hearing aid. Traditional hearing aids are now known as analogue aids, following the development and introduction of digital aids. Most children in Ireland are fitted with a digital aid. In a digital hearing aid, a mini-computer amplifies the sound. The sounds are picked up by the microphone and are then converted into electrical signals, as with an analogue aid. These sounds are converted into data. The hearing aid is programmed to change the data to facilitate your child’s type of hearing loss - maybe they need more amplification at the high frequencies or filtering of background noises. The data is then converted back into sound and sent into the ear through the ear mould.
Understanding Childhood Hearing Loss

Cochlear Implant

What is a cochlear implant and how does it work?
A cochlear implant is a small electronic device that sends an electrical signal through an electrode implanted into the cochlea (inner ear), this signal is sent straight to the auditory nerve which bypasses the damaged parts of the middle ear and/or damaged or absent hair cells. If the auditory nerve is still working the cochlear implant can provide access to sound to a person who is profoundly deaf or severely hard of hearing. An implant does not restore or create normal hearing. Instead, under the appropriate conditions, it can give a Deaf person a useful auditory understanding of the environment and help the child to understand speech.

There is an internal and external part to the implant, the internal part is surgically placed under the skin behind the ear and the external part is worn on/behind the ear, magnets hold a disc in place on the side of the head, this unit is called a processor. The external part is removed when your child goes to sleep, bath-time, swimming etc.

An implant has four basic parts:
- A microphone, which picks up speech and environmental sounds;
- A speech processor, which selects and arranges sounds picked up by the microphone;
- A transmitter and receiver/stimulator, which receives signals from the speech processor and converts them into electric impulses;
- Electrodes, which collect the impulses from the stimulator and send them to the brain.

Who gets cochlear implants?
Both adults and children who are profoundly deaf or severely hard of hearing can be candidates for cochlear implants. Young children can also be candidates for implants. Cochlear implants, coupled with intensive pre/post-implantation therapy, can help young children to acquire speech, language, which in turn helps their developmental and social skills. Children who receive implants are usually between 2 and 6 years old and when they are very young they usually do very well with their implants. With newborn hearing screening programmes some Deaf children are being implanted at 12 months of age. Older children who have had made good use of their hearing aids and have spoken language skills, may be able to benefit from an implant.

Children who were born hearing or with minor hearing losses, but whose hearing has deteriorated to severe or profound can do well with a cochlear implant. The sooner they receive their implant after the onset of deafness, the better they are likely to do. Cochlear implants have been helpful to children worldwide who have lost their hearing for different reasons, including meningitis.

How does someone receive a cochlear implant?
In Ireland the Cochlear Implant team works in Beaumont Hospital, Dublin. A detailed assessment is needed to find out whether your child is likely to benefit from a cochlear implant. The assessments are carried out by the cochlear implant team. As a general guideline, to be considered for an implant you need to meet the following criteria:
- Have severe to profound sensorineural hearing loss in both ears;
- Receive only marginal benefit from hearing aids;
- Be medically suitable for surgery;
- Be strongly motivated;
- Have a good support network from family, friends, or other professionals.

The implant team assesses each case individually and will look at these issues and at other factors which will affect whether or not your child is likely to benefit from a cochlear implant.

A cochlear implant is a surgical procedure. The decision to receive an implant should involve a lot of discussion with the cochlear implant team. Some may choose not to have a cochlear implant for a variety of personal reasons. Also, though surgical implantation is almost always safe, complications are a risk factor, just as with any kind of surgery.

An additional consideration is learning to interpret the sounds created by an implant. This process takes time and practice. Speech and Language Therapists and Audiologists are the professionals frequently involved in this learning process.

Also, as parents you need to be aware that not everyone performs at the same level with a cochlear implant.

Ref: The National Institutes of Health, National Institute of Deafness and other Communication Disorders (NIDCD)
Beaumont Cochlear Implant Website
The purpose of a hearing aid/cochlear implant is to give your child the best opportunity possible of gaining knowledge of familiar sounds such as people's voices, speech sounds, household, environmental noise etc. and direction of sounds. Therefore, it is crucial that you persevere in encouraging your child to wear their hearing aid/cochlear implant at all times when they are awake.

Each child reacts differently, some will wear the hearing aid/cochlear implant without any fuss, others will become upset or throw a tantrum, or some children will wear the aid in certain situations and not others. It is important to be mindful of the fact that each environment/situation produces its own set of listening challenges, which your child has to deal with. Some sounds can be too loud or too piercing for example, but your child needs to learn the skills to deal with these changes themselves and taking the hearing aid/cochlear implant out will slow this process down. In the beginning, reward your child if they wear the aid for 5-10 mins with lots of praise and hugs. Use reward charts if your child is of an age where they understand the concept. You may have to repeat this process several times throughout the day and it can become exhausting, so if you can, share this process with another family member. It is important to stay as calm as possible and be consistent.

When introducing the hearing aid/cochlear implant, make the situation fun, maybe by playing with a teddy/doll which has a hearing aid/cochlear implant on, made out of plasticine. Let the child put the aid over your ear and play a game or read a story and then ask them to wear the hearing aid for the length of a story or game. Give them a break before re-introducing the aid for another period of time or play session.

Let your child hold/touch the hearing aid/cochlear implant, leave it on the table while they are playing, so they become familiar with it. Encourage your child to participate in the process of putting in/taking out their aid and make it fun. Have a special box that they have decorated to keep the aid in and put it in an area where the child can reach.

Try putting the hearing aid/cochlear implant in your child's ear before they wake up. Warming up the mould in your hands before putting it in your child's ear can sometimes help to make it more pliable and feel more comfortable in their ear.

Maybe you will need to introduce different parts of the aid separately i.e. the mould for one-day, then the hearing aid on another day. You could put the hearing aid on the ear in the 'off' position, to allow your child time to get used to the feeling of something on their ear, when your child is comfortable with the aid, turn the aid on at a low volume for a short period of time, then turn it off, but leave the hearing aid in place. Keep repeating this process, turning up the volume slightly each time.

If your child is reluctant to wearing the hearing aid/cochlear implant for any length of time, use a timing device that vibrates/flashes/is visual, and ask them to wear it for the length of time set, and then lengthen the time as the day/week progresses.

When your child is wearing the hearing aid/cochlear implant, play with toys that involve listening to sounds or watch T.V./DVDs. Show them everyday things and name them when the sound is made i.e. the doorbell, phone ringing etc. This will help them understand the benefits of the hearing aid/cochlear implant, attach meaning to sounds and develop their listening skills. Talk to them all the time, make eye contact, allow time for them to reply – it may take your child slightly longer to process information.
Understanding Childhood Hearing Loss

**Story Books to Help with Acceptance of a Hearing Aid or Cochlear Implant**

**Oliver Books**
These books are written for children with a hearing loss and their peers, to raise awareness and understanding about hearing loss and being fitted with a hearing aid. Also covers attending school and using a radio aid. Available from www.deafheare.ie.

**A Birthday for Ben**
Hi! My name is Ben and last week was my 7th birthday. When you meet me, you might notice I am wearing something on my ear. Before you ask, it's not for listening to music or talking on the phone. It's to help me with my hearing! For children aged 4 to 8, this book introduces: * Hearing aids  * Sign language  * Lip-reading  * Deaf culture. Available from Eason's or from www.specialstories.ie.

**My Brother John**
This book is about a boy who uses a cochlear implant and a hearing aid. It shows the fun relationship he has with his sister. "It is a fun book that's also a subtle deaf awareness aid." www.mybrotherjohn.co.uk, www.theearfoundation.org.uk or www.amazon.co.uk.

**John Gets Ready for School**
Caroline’s brother John is deaf and he wears a hearing aid and cochlear implant. It’s time for John to get ready for school. But John keeps getting it wrong! Whose clothes will he put on next? And will he remember to put on his underpants! Available from www.mybrotherjohn.co.uk, www.theearfoundation.org.uk or www.amazon.co.uk.

**Cathal Can Sign**
This is an illustrated book for children to learn about Irish Sign Language and Gaelic, encouraging strong communication skills at a young age when children are the most receptive to learning new languages. The book uses clear photos of each sign and the illustrated character of Cathal and his family, to introduce basic vocabulary, including the alphabet, numbers, days of the week and family members. Available from www.cathalcansign.ie.

**Cosmo Gets an Ear**
This book explains audiologist’s visits, the benefits of hearing aids and explaining to others about hearing aids. Available from www.amazon.co.uk.

**Elana’s Ears**
Lacey’s luxurious life as an “only dog” changes the day Mom and Dad bring home a new baby. While Lacey goes through all of the confusion and upset that any child feels when presented with a new sister or brother, she eventually starts to like having baby Elana around. Then Lacey realises that Elana can’t hear, and she vows to become “Elana’s ears” and the best big sister in the world. Lacey offers children a refreshing honest and funny glimpse at parents, new babies, and growing toddlers. For parents, a comprehensive afterword describes children’s common responses to new siblings and offers extensive how-to recommendations for making the adjustment as easy as possible. Available from www.amazon.co.uk.

**Can you hear a Rainbow**
Chris shares his thoughts and experiences of how he enjoys everyday life as a young boy, who happens to have been born deaf. He tells of using Sign, Lip-reading and other senses to communicate with his family and friends, with his team-mates on the football field, and at school with an interpreter. Suitable for age 7-11. Available from www.forestbooks.com.

**Abby Gets a Cochlear Implant**
Abby has a progressive hearing loss and wears purple hearing aids. Her family has chosen for Abby to have a cochlear implant. The story describes the hearing testing, introduction to cochlear implants and the steps the family would take to explore this option of habitation for their child who has a hearing loss. Available from www.amazon.co.uk. (seller jermcr2).

**Patrick Gets Hearing Aids**
A picture book, aimed at youngsters with a hearing loss. Through a series of cartoons the book tells the story of Patrick the Rabbit and the changes in his life before and after he is fitted with a hearing aid. This is a useful tool in calming the fears a youngster may have at the prospect of visiting the doctor or audiologist. There is also a useful Speech and Hearing Checklist at the back of the book for parents to chart their child’s progress in speech and hearing. Available from www.amazon.com (seller jermcr2).

**First Animal Sign Book**
All children will love this original First Animal Sign Book, part of Simply Signing’s innovative Zoo Animal Sign series. This vibrant book has been designed for all children and adults to enjoy together. Colourful pictures and simple text make this ideal for first readers and young children learning Irish Sign Language. Also included in the book is the manual Irish Sign Language Alphabet as a learning tool. Along with the animal signs a selection of words have been spelled out using the ISL Alphabet to provide finger spelling practice. Available from www.simplysigning.ie.
Hearing Aid Maintenance

If the hearing aid is not kept clean, it could require repairs more frequently. So it is best to try and get into a daily routine of keeping the hearing aid clean. This is best done when your child has gone to bed at night or if they are old enough you could involve them in this process.

If there is any earwax or other debris on the hearing aid or ear mould, wipe it with a soft, dry tissue. A wax-loop and wax-brush can be used for cleaning the mould. Do not insert anything (including the cleaning tools) into the hearing aid.

You can take off the tubing and mould from the hearing aid and clean in warm soapy water, you must dry it thoroughly with a dry cloth on the outside, and the puffer will remove the water from inside the tubing. The Hearing Aid must not come into contact with water.

When you are cleaning the hearing aid, check the mould for cracks or splits, if these appear your child will need to be fitted for a new mould. The tubing needs to be soft and pliable, if it goes yellow or hard the Audiologist, Visiting Teacher or DeafHear Support Worker can replace it for you. These problems will affect the quality of sound that your child will hear.

Store the hearing aid in a case/box with the battery compartment open in a cool, dry place. Do not store a hearing aid in direct sunlight.

Check that the battery is still working using a hearing aid battery tester on a regular basis. The battery should work for a minimum of a week, but this may vary due to the strength of the battery and how much power your child’s hearing aid needs.

Your child will need to be fitted for a new mould on a regular basis to ensure a good fit. As the mould becomes too small the hearing aid may whistle more often and it will become uncomfortable for your child.

Weather conditions that can affect the hearing aid/cochlear implant

If it is raining or snowing protect the hearing aid/cochlear implant with a hat. Remember this will interfere with the level at which your child hears sounds.

In extreme cold, the hearing aid may make “popping” noises and then stop working. This happens when the battery becomes too cold. The hearing aid should begin working once your child returns indoors and it “warms up”.

On hot/humid days, the hearing aid may stop working if sweat plugs the canal.

Do not let your child wear the hearing aid/cochlear implant while bathing or swimming.

If the hearing aid/cochlear implant becomes wet and stops working, remove the battery and throw it away. Place the hearing aid in the storage case or dehumidifier box and let it dry overnight.
**Hearing Aid Care Kit**

**Oliver Paediatric Hearing Aid Care Kit**

**Contents:**

**Battery Tester**
Place battery in the appropriate slot and press. The scale indicates the battery status.

**Air Puffer**
Use the air puffer to remove moisture from the ear mould tubing. Water droplets can occur in the tubing, these can affect the functioning by blocking the transmission of sound.

**Listening Tube**
This is used to check the functioning of the hearing aid. Place the earpiece in your ear and the cupped end over the tip of the ear mould and turn on the hearing aid.

**Kids Clip**
This device helps to ensure that the hearing aid is not lost or broken if your child takes the hearing aid off or if it is knocked off while playing.

**Dehumidifier**
A hearing aid will function best and have a longer life expectancy when kept dry. You should use this equipment on a nightly basis. Put the capsules in the bottom of the tub underneath the plastic insert. Place the hearing aid with the battery compartment open (do not put in the battery), and put the lid on. Capsules can be re-used as they will change colour when they need to be changed.

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**Tips on keeping the hearing aid on your child’s ear**

Check the tubing on the ear mould, as it may need to be cut to a length appropriate to keep the aid in place. If the tube is too short or too long, it may cause an inappropriate fit and discomfort for your child. The Audiologist, Visiting Teacher or DeafHear Support Worker can do this for you.

Toupee tape (for hairpieces) or other double sided tape (with mild adhesive) can be used to attach to the hearing aid behind the child’s ear.

Eye glass chain/string can be attached to the hearing aid, and pinned to the child’s shirt. If the aid falls off, it will stay with the child.

A very small amount of petroleum jelly rubbed onto the ear mould can help if there are areas of redness, chafing or friction in the ear.

You should ask your audiologist to check the fitting of the hearing aid if your child is having some discomfort.
Acquiring and developing good communication skills is crucial for all children and their families. Children will learn their skills from you and other friends and family. The acquisition of good communication skills will help your child in all areas of their development including intellectual, emotional, personal and social skills. It is extremely important that you be persistent with your child regarding wearing their hearing aid/cochlear implant, as this will assist your child with their communication and listening skills.

Communication with your child with a hearing loss will start as it would with any other child, they will respond to your facial expressions, voice, eye-contact, body movement etc. It is essential that you continue to play games, sing and talk to your child, but be aware that the child will need to see your face; they will struggle if you are talking while looking the other way or have your back to them. You will become aware of your child trying to communicate with you, you should respond promptly and be encouraging. As well as verbal praise, it may be beneficial to use simple gestures or signs that are age-appropriate, such as ‘thumbs up’ or clapping.

Children with a hearing loss can learn to communicate through spoken language or sign language, or a combination of both, also known as ‘total communication’. The decision as to how your child learns to communicate is primarily down to the parents with guidance from professionals actively involved with your child’s hearing loss. It is important to be aware that there is a history of debates regarding the best communication approach to use with a child with a hearing loss and some professionals may favour one method of communication over the other and may strongly recommend that you follow their guidance. In order for you to make an informed decision, it is imperative that you ask all the questions you need to, of all the professionals involved, and if possible other parents of children with a hearing loss. The method of communication may change throughout your child’s life, so don’t feel that you can’t change your mind once you have made a decision, as you will be guided by what works for your child and for you as a family.

Children who have limited communication skills can be frustrated and you may find that your child may have frequent tantrums or show other signs of frustration. To keep these incidents to a minimum, it may be useful to use ‘Picture Cards’. They will also motivate your child to communicate in your chosen communication method.

The ‘picture card’ will show a picture of an item, person, venue or task that the child can recognise as something they want, i.e. a drink of milk, juice, or other food items, toys they play with etc. You and your child should verbalise and/or sign the word together with the picture cards. The cards can also be used for when you want to tell your child that it is time for a bath, for school, to get in the car or go swimming etc.

You can photograph the items, people, venue or task the child can recognise as something they want, i.e. a drink of milk, juice, or other food items, toys they play with etc. You and your child should verbalise and/or sign the word together with the picture cards. The cards can also be used for when you want to tell your child that it is time for a bath, for school, to get in the car or go swimming etc.

<table>
<thead>
<tr>
<th>Get dressed</th>
<th>Put in hearing aid</th>
<th>Breakfast</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Get dressed" /></td>
<td><img src="image2" alt="Put in hearing aid" /></td>
<td><img src="image3" alt="Breakfast" /></td>
</tr>
</tbody>
</table>
Understanding Childhood Hearing Loss

Creating Good Communication and Listening Environments

Your child will get the most from their hearing aid/cochlear implant when they are in a good listening environment. An example of a good listening environment may be a room with soft furnishings, carpet and curtains, all of which absorb sound. You can also help by turning down any background noise, for example the television or radio, when you are having a conversation with your child.

**DO.....**

- Keep still
- When talking be brief and to the point
- Keep good eye contact
- Have good light on the speakers face
- When in a group, one person to talk at a time
- Place yourself at a good distance from your child
- Take your time
- Speak clearly
Good lighting, soft furnishings and minimal background noise are essential to creating a good communication environment. Your child is likely to be using lip-reading skills as they have been taught or that they have learnt instinctively.

**A good lip-reading environment would be:**

✔ facing your child, one to two metres between you and your child
✔ good lighting so that your child can see your lips clearly and to ensure that your face is not in a shadow
✔ letting your child know you are starting to speak by tapping them gently on the shoulder
✔ moving down to your child’s eye level
✔ providing plenty of extra clues - both visual and auditory
✔ turning down the TV/radio or moving away from a noisy washing machine

**Lip-reading would be difficult if you:**

✘ look away whilst talking
✘ mumble
✘ have an overgrown moustache or beard
✘ stand in front of distracting wallpaper
✘ have too many people moving behind the speaker
✘ talk with chewing gum or other food in your mouth
✘ put your hands over your mouth whilst talking
✘ use exaggerated mouth patterns as these can distort the speaking rhythm
Creating Good Communication and Listening Environments

Managing a topic in a conversation
When you change the subject in your conversation, always make sure that you let your child know, otherwise they may still be thinking about the first topic that you were talking about. As a guide it is useful to introduce the topic first before expanding on it. “Swimming, shall we go swimming today, what will we need to take with us for swimming?” It helps if your child has an idea of what you will be talking about before trying to lip-read the extra information. If necessary show a picture so that they can make a connection with the words.

Remember
Listening and lip-reading is very tiring so don’t overload your child with too many oral instructions. Also, your voice is not the only sound being heard, as there may be additional sounds being amplified through the hearing aid/cochlear implant.

The design and layout of the environment can have a significant impact on communication with your child. Have a good look around your home and pinpoint the busiest parts and the quietest parts. It can be very difficult for a child with a hearing loss to concentrate on listening to different sounds if the environment is very noisy. For a child wearing their hearing aid/cochlear implant, sounds can echo or be distorted and it can be quite distressing or frightening if there are sudden loud noises. Sounds also ‘bounce’ on hard surfaces and this can make it harder for your child to listen to individual voices, for example in a room with wooden floors and hard surfaces, or an open plan area.

Listening conditions can be improved by:
• fitting blinds or curtains;
• carpeting floors;
• closing the window or door when there is a noise outside;
• adding soft furnishings - rugs, cushions, tablecloths.

Positioning in a room
• Remember a child cannot see your face well if you are standing in front of the light or a window.
• When in a group it may be better to place your child with their back to the window so that they can see you, and the other people and be aware of what is happening in the room.
• Pictures, photographs & posters can be distracting for a child with a hearing loss. Hang them a bit higher above a child’s eye level so that they can concentrate on looking at you rather than being distracted by them.
• It may not be possible to alter everything, however being aware of the environment can help to make it more ‘deaf’ friendly.

Your child may find it hard to understand speech when they are wearing their hearing aid/cochlear implant in group situations, for example a children’s birthday party or a noisy restaurant. This is because most hearing aids amplify all sounds, not just speech sounds.
Visiting Teacher for the Deaf and Hard of Hearing - this service is provided by the Department of Education and Skills from the time of referral until transition to third level or further education.

They can be contacted at the following addresses:

Manager, Visiting Teacher Service
Department of Education and Skills
Leinster North
Block 3, Marlborough St
Dublin 1
01 889 6400

Leinster South
County Hall
Belgard Square North
Tallaght, Dublin 24
01 463 550

South and Mid West
Rosbrien Road
Punch’s Cross
Limerick
061 430004

North and North West
First Floor Custom House
Druid Lane
Galway
091 568922

The National Council for Special Education (NCSE)
The NCSE is a statutory body established under the Education for Persons with Special Educational Needs Act 2004. Since their establishment they have concentrated on developing an organisation which provides a timely and efficient service to schools in sanctioning teaching and Special Needs Assistant (SNA) resources to support children with special educational needs.

They have a wide-ranging programme of research on the provision of special education which will help them formulate policy advice to the Minister for Education and Skills.

Contact Details:
1-2 Mill Street, Trim, Co. Meath.
Tel: 046 948 6400
Fax: 046 948 6404 www.ncse.ie

The Special Education Needs Organiser (SENO)
The Special Educational Needs Organisers (SENOs) are appointed by the National Council for Special Education to provide a direct service to the parents of children with special educational needs and to schools within geographical areas. This involves identifying the needs of children and deciding on the level of resources schools require to provide them with an appropriate education service.

The SENO, on behalf of the NCSE, provides a service to parents and children through the co-ordination of the delivery of services between the health sector and schools. This facilitates the inclusion of the child in the school system. Most importantly they keep parents informed of what decisions are being made on their child’s behalf.

The local SENO can:
• discuss any problems or anxieties that you may have about your child’s education;
• help you source and co-ordinate services provided by schools and the health sector;
• ensure that you are included in the decision-making process that affects your child;
• ascertain quickly the resources available to your child and inform your local school of these;
• explain to you exactly how the school will meet the needs of your child;
• keep you informed of all the decisions made about your child and the reasoning behind them.

www.ncse.ie/contact_us/SENO_List.asp
The Individual Education Programme (IEP)

This is a written document prepared for a named student. It specifies the learning goals that are to be achieved by the student over a set period of time and the teaching strategies, resources and supports necessary to achieve those goals.

The people that can be involved or consulted in preparing the IEP are:
- Parents
- The Principal
- Class Teacher
- Visiting Teacher
- SENO
- Student (where appropriate)
- Other persons as recommended by the principal

Content of an Individual Education Programme (IEP)

The format of IEPs should include:
1. The nature and degree of the child’s abilities, skills and talents.
2. The nature and degree of the child’s special educational needs and how those needs affect his or her educational development.
3. The present level of educational performance of the child.
4. The special educational needs of the child.
5. The special education and related support services to be provided to the child to enable the child to benefit from education and to participate in the life of the school.
6. Where appropriate, the special education and related services to be provided to the child to enable the child to effectively make the transition from pre-school education to primary school education.
7. Where appropriate, the special education and related support services to be provided to the child to enable the child to effectively make the transition from primary school education to post-primary school education, and third level.
8. The goals that the child is to achieve over a period not exceeding 12 months.

Ref: www.ncse.ie and www.nda.ie
Educational Options

Mainstream Schools
Most children with a hearing loss attend school in the mainstream class. Mainstreaming is the term used for placing a child when a child with a special educational need attends the local school with their peers and is included in the full educational curriculum.

The unit teacher would follow the National Curriculum in conjunction with the class teacher of your child’s hearing peer group. The unit teacher would work with your child in a small group and/or on an individual basis, through the form of communication that meets the needs of the individual pupil, including Speech, Sign Language and Total Communication.

All children in the unit would be integrated into the mainstream class with their hearing peers for non-academic subjects e.g. Art, P.E., dancing, football, swimming and athletics. They would attend assembly; have lunch, playtime, school plays and events with their peer group class. Depending on the child they may also be integrated for more academic subjects e.g. Maths, History, Geography, Science. Children would use assistive amplification when integrating in mainstream class.

Unit for children with a hearing loss
The aim of a unit for Deaf children is to allow a child with a hearing loss to access the National Curriculum in a small class setting with additional supports and where appropriate to integrate with their hearing peers in a mainstream class setting.

Your child would enrol in school to which the unit is attached, and then attend the unit which typically consists of up to six children with a hearing loss, and is facilitated by teacher usually trained in working with children with a hearing loss and a special needs assistant (SNA).

The unit teacher would follow the National Curriculum in conjunction with the class teacher of your child’s hearing peer group. The unit teacher would work with your child in a small group and/or on an individual basis, through the form of communication that meets the needs of the individual pupil, Oral, Sign Language and Total Communication.

All children in the unit would be integrated into the mainstream class with their hearing peers for non-academic subjects e.g. Art, P.E., dancing, football, swimming and athletics. They would attend assembly; have lunch, playtime, school plays / events with their peer group class. Depending on the child they may also be integrated for more academic subjects e.g. Maths, History, Geography, Science. Children would use assistive amplification when integrating in mainstream class.

School for Deaf children
A school for Deaf children would enrol children with severe and profoundly hearing loss of all abilities. Children are admitted following an assessment by a team of medical and educational professionals. There is an ongoing assessment procedure to ensure that the students are making satisfactory progress. The classrooms are equipped with either a group or radio aid system. This ensures that the students are exposed to amplified sound during the school day. (Outside school the pupils wear an individual hearing aid or cochlear implant).

The teaching staff would follow the National Curriculum which is delivered within a small group setting or on an individual basis through the form of communication that meets the needs of the individual pupil. This could involve Speech, Sign Language, Total Communication and the use of assistive technology.

They have the services of a full time home/school liaison person, and also have access to the services of a psychologist, audiologist, counsellor and Speech and Language Therapist.

The school would have day and residential pupils. The majority of the children would have Irish Sign Language as their first language.
Assistive Technology for the Classroom

In mainstream schools the visiting teacher makes recommendations regarding assistive technology where necessary or deemed appropriate. The school applies to the SENO, with the visiting teacher’s report for approval of assistive technology. When the equipment is sanctioned, funding is provided to the school by the Department of Education and Skills. Many children currently avail of Soundfield systems or personal FM systems.

FM system
There is a wide range of personal FM systems available. The transmitter/microphone transmit the teacher’s voice directly to the receiver that is attached to your child’s hearing aid/cochlear implant. Because the sound is transmitted directly, an FM system will typically provide a better sound quality to your child, and will also eliminate background noise. The system is portable.

Soundfield system
A Soundfield system usually consists of four speakers for each corner of the room, a base transmitter and a wireless microphone for the teacher. When the teacher speaks at a normal conversation level, their voice is amplified through the speakers to the whole class.

The teacher can move about the classroom while talking and this will not affect the level of sound produced by the speakers. It allows your child to have the opportunity to hear equally well wherever they are seated in the room.

When your child starts school you may find that they might have some difficulty hearing/listening in this setting. This could be because they are in an environment which is prone to background noise such as scraping of the chairs on the floor, rustling of paper and children’s voices etc.

Interactive whiteboards
An interactive whiteboard is a large interactive, touch-sensitive display that connects to a computer and a projector. A projector displays the computer’s desktop onto the whiteboard surface where your child controls the computer using a pen, their finger or other device. The whiteboard is typically mounted to a wall. It allows pupils to engage and interact with the technology to become active participants in learning.

Classroom tips
- Seat child at the front and to the side so they can see who is talking.
- Keep the class quiet during instruction so they can hear.
- Seat child away from major noise sources (e.g. heating, open windows/doors).
- Assign their seat no more than 5-10 feet from the teacher.
- Teacher should be aware of light sources, i.e. not to stand in front of a window.
- Encourage the teacher to ask your child an occasional question related to the subject to be certain they are following the discussion. (Try not to say “Do you understand?”)
- Ask the teacher to rephrase the question/statement, if your child doesn’t understand the first time.

The visiting teacher will provide advice to the class teacher regarding optimal positioning of your child in the classroom and on a range of other issues that will help the school to understand and respond to the educational implications of your child’s hearing loss.
Introduction to Entitlements

Assessment of Need for Children under 5

On June 1, 2007, Part 2 of the Disability Act 2005 became law for children under 5 years of age. It states that children with disabilities have a right to: An independent assessment of their health and educational needs arising from their disability, which includes an assessment report and a statement of the services they will receive.

Who can apply for an assessment?
Any parent who feels that their child aged under 5 may have a disability can apply for an assessment. An application can also be made by a guardian, visiting teacher, social worker or a personal advocate assigned by the Citizen’s Information Board to the HSE. (www.citizensinformation.ie or www.welfare.ie).

What is an Independent Assessment of Need?
An independent assessment of need is an assessment of the full range of your child’s needs associated with his or her disability. After this you will receive an assessment report detailing your child’s health and educational needs and the services required to meet those needs.

Who will carry out the assessment?
Your first point of contact is your local Assessment Officer who is responsible for your child’s assessment. Each Local Health Office has an Assessment Officer. They can assist you with your child’s application and help and support you through the process. The Assessment Officer is responsible for issuing your child’s assessment report. The assessment is independent, based solely on your child’s disability needs, and is carried out regardless of the cost or availability of services. All assessments will be carried out in line with the standards developed by the Health Information and Quality Authority. You will be encouraged to take part in your child’s assessment.

Where do I apply?
Applications must be made in writing on a standard form which is available from the Assessment Officer in your Local Health Office.

Carer’s Allowance

Carer’s Allowance is a payment to people living in Ireland who are looking after someone who is in need of support because of age, physical or learning disability or illness, including mental illness. The Carer’s Allowance is means tested.

How to apply
You should apply for a Carer’s Allowance as soon possible. To apply fill in an application form for Carers Allowance (pdf) or contact your local Social Welfare local office for a copy of this form. Payment will be awarded from the date your application is received or from the date the qualifying payment is awarded, if later. Forward the completed application form with the relevant certificates to Carer’s Allowance Section at the Department of Social Protection.

Domiciliary Care Allowance

The Domiciliary Care Allowance is a monthly means tested payment made to the carer of a child with a disability who lives at home. Parents of a child with a hearing loss may qualify for this payment.

Eligibility for the allowance is based on the degree of additional care and attention needed by the child rather than the type of disability involved. A medical assessment is carried out by the Department of Social Protection.

Where to apply
Through your local Social Welfare Office or Social Welfare Services Office, Department of Social Protection, College Road, Sligo. Tel: 071 915 7100, Local: 1890 500 000
**Incapacitated Child Tax Credit**

The Incapacitated Child Tax Credit can be claimed by a parent/guardian of a child in Ireland who is permanently incapacitated. Parents of a child with a hearing loss can qualify for this payment.

To apply for the credit you should write to your local tax office outlining the credit claimed and the name of the child. A first claim should be accompanied by a doctor’s certificate showing the date the disability first arose and the degree and extent of the disability.

How to apply
You should write to your local tax office outlining the credit claimed and the name of the child. A first claim should be accompanied by a doctor’s certificate showing, the date the incapacity first arose and the degree and extent of the incapacity.

**Irish Sign Language Grant**

There is a weekly home tuition service for deaf pre-school/school-going pupils to provide tuition in Irish Sign Language for the child, their siblings and parents. You can get details of this grant by contacting your visiting teacher, DeafHear support worker or the Special Education Needs Section at the Department of Education and Skills, which is based in Athlone.

Entitlement information is correct at time of printing. For more or updated information go to: www.citizensinformation.ie or www.welfare.ie or www.hse.ie
Glossary of Terms

**A**

**Acoustics** - The study of how sound reacts to the environment. This includes the concepts of loudness, pitch, resonance and reverberation.

**Amplifier** - the device in the hearing aid that makes sound louder.

**Analogue Hearing Aids** - these hearing aids have a microphone that picks up the sound and converts the sound into small electrical signals. These signals are then amplified (made louder) by transistors and fed to the earphone or receiver on the hearing aid.

**Audiologist / Audiological Scientist** - a person that tests, counsels and helps people that have concerns about their hearing.

**Audiogram** - is a graph that shows a representation of a person’s hearing threshold at different frequencies and decibels.

**B**

**Behind the Ear (BTE) Hearing Aids** - these have ear moulds which sit inside your ear. The hearing aid rests behind your ear and a plastic tube connects it to the ear mould.

**Bilateral** - hearing loss in both ears.

**Bone Conduction Hearing Aids** - these are for people with a conductive hearing loss, or people who cannot wear a conventional hearing aid. They deliver sound through the skull by vibrations or built onto spectacles. Another type is the bone anchored hearing aid (BAHA) involves having a small operation.

**British Sign Language (BSL)** - the sign language used in the UK (including some parts of N. Ireland). It is different from Irish Sign Language (ISL). It has its own grammar and is different to written and spoken English.

**C**

**Cochlea** - a winding tubular cavity within the inner ear shaped like a snail shell, which changes the pressure waves of sound into nerve impulses which go to the brain, via the auditory nerve.

**Cochlear Implant** - an electronic device which converts sounds into electrical impulses which in turn stimulate the auditory nerve. This process enables the brain to interpret the impulses as sound.

**CT Scan** - Computerised Tomography - used to make an image of the brain and inner ear.

**Conductive Hearing Loss** - produced by injury to or problems with the bones, eardrum and membranes which carry sound from the external ear through to the inner ear.

**CROS/BiCROS Hearing Aids** - these are for people with hearing in one ear only. CROS hearing aids pick up the sound from the side without hearing and feed it to the better ear. BiCROS aids amplify sound from both sides and feed it (by wire or radio signals) into the ear that has some hearing.

**D**

**Deaf** - partial or complete loss of hearing.

**Deaf Community** - group of Deaf people who use and promote sign language and have their own culture. Deaf communities are close-knit and interconnected.

**Deaf Culture** - The culture of Deaf people is based on sign language and a common heritage. Deaf Culture is based not only a language, but includes social and community aspects, such as clubs, organisations, history, etc.

**Decibel** - measurement of the intensity or loudness of sound, abbreviated as dB. Hearing level is plotted from top to bottom (soft to loud) vertically on an audiogram.

**Department of Education and Skills (DES)** - the mission of the Department is to provide high-quality education which will (a) enable individuals to achieve their full potential and to participate fully as members of society; (b) contribute to Ireland’s social, cultural and economic development.

**Digital Hearing Aids** - work in a different way to analogue hearing aids. The digital hearing aid takes the signal from the microphone and converts it into “bits” of data – numbers that can be manipulated by a tiny computer in the hearing aid. This makes it possible to tailor and process sounds very precisely, in a way that is impossible with analogue aids.

**Disability** - the currently accepted term for a person with reduced function of some physical, sensory or mental capacity. It replaces the term handicap.

**Domiciliary Care Allowance** - a monthly means tested payment made to the carer of a child with a severe disability who lives at home.
Understanding Childhood Hearing Loss

**E**

Ear - the organ of hearing and balance. Incorporating the outer, middle and inner ear.

Eardrum - a thin membrane between the outer and middle ear which vibrates in response to sound waves in the air (tympanic membrane).

Earhook - the portion of the behind-the-ear hearing aid that connects the case to the ear mould tube and hooks over the outer ear.

Ear Mould - a custom fit device that attaches to a behind-the-ear hearing aid via the tubing to deliver sound from the aid to the ear.

E.N.T. - medical doctor that is trained in diagnosing and treating diseases of the ear. They can also identify types of hearing loss that respond to medical or surgical treatment.

Eustachian Tube - the tube connecting the middle ear to the back of the nose which controls air pressure behind the eardrum.

**F**

Feedback - a high pitch squealing or whistling sound that occurs when an ear mould doesn’t fit properly or a hearing instrument is malfunctioning.

FM System - a type of Assistive Listening System that uses FM radio waves to carry the speaker’s voice to the listener.

Frequency - the number of cycles per second expressed in Hertz/pitch. Frequency is plotted from left to right (bass to treble) horizontally on an audiogram.

**H**

Hair Cells - tiny hair-like structures in the inner ear that help transmit sound to the brain.

Hard of Hearing - the currently accepted term to describe those with mild to severe hearing loss.

Hearing Aid - an electronic amplifying device to make sounds audible to a person with a hearing loss. See Analogue Hearing Aid and Digital Hearing Aid.

Hearing Loss - happens when there is a problem with one or more parts of the ear. Someone who has hearing loss may be able to hear some sounds or nothing at all.

Hertz - the unit for measuring frequency usually abbreviated as Hz.

High Frequency - an inexact term which, in audiology, generally refers to any frequency above 1000 Hz.

**Hyperacusis** - an abnormal sensitivity to loudness in a person with normal hearing sensitivity.

**I**

I.E.P. - Individualised Education Plan - an I.E.P. is developed in conjunction with all parties involved in the child’s education. It outlines the educational goals for the child.

Impression - a cast made of the contours within the external ear from which an ear mould for BTE or custom shell for ITE and ITC hearing aid is made. Impressions typically are made using a silicone or audalin material which is plastic for insertion and cures within a few minutes for removal.

Inclusion - an educational philosophy promoting the inclusion of students with disabilities with the general student population. It is assumed that appropriate support services will be provided in these inclusive placements.

Inner Ear - contains the cochlea and the semi-circular canals.

In the Ear (ITE) and In the Canal (ITC) Hearing Aids - these hearing aids have their working parts in the ear mould, so the whole aid fits into your ear.

Irish Sign Language (ISL) - the sign language used in Ireland. It has its own grammar and idioms and is different from written and spoken English. It is used by the majority of profoundly Deaf people in Ireland.

**M**

Mainstreaming - the reassignment of children with disabilities from specialised classrooms into the regular school environment.

M.R.I. Scan - Magnetic Resonance Imaging - a technique to produce high quality images of the nerves of the inner ear.

Middle Ear - The air-filled space inside the eardrum containing the ossicles (ear bones) and the eustachian tube.

Mild Hearing Loss - Hearing loss averaging not more than 40 dB.

Moderate Hearing Loss - Hearing loss averaging not more than 70 dB.
Newborn Hearing Screening - the screening of newborn babies for hearing loss in the first few days of life.

Ossicles - 3 bones of the middle ear. Malleus (hammer), Incus (anvil) and Stapes (stirrup)

OAE - Oto Acoustic Emissions - tiny sounds created in the inner ear in response to a stimulus.

Outer Ear - external most portion of the auditory mechanism.

Pinna - the outer ear that funnels sound into the ear canal.

Pitch - the perception of frequency (i.e. bass or treble).

Profound Hearing Loss - hearing loss greater than 95 dB.

Psychological Evaluation - a series of tests to determine I.Q., personality and learning potential.

Physical and Sensory Disability Database - is a set of information on the specialised health service needs of people with a physical or sensory disability.

Recruitment - the abnormal perception of loudness growth. This affects all sounds louder than a person’s thresholds of hearing.

Residual Hearing - this refers to the hearing that a child with a hearing loss has.

Sensorineural Hearing Loss - hearing loss involving damage or malformation of the inner ear or auditory nerve.

Special Needs Assistant (SNA) - cares for the child in school if needed. The visiting teacher advises on the need for a SNA to the SENO, who makes the application to the Department of Education and Skills (DES).

Special Education Needs Organiser (SENO) - works for the National Council for Special Education (NCSE) and is an important link between the school and the Council. For example, the SENO deals with applications for additional support for pupils with SEN.

Speech and Language Therapist - Speech and Language Therapists work with children who have a degree of hearing loss, congenital or acquired, and work with parents (and others in the child’s environment) to promote the development of communication.

Stethoclip - a tool used by parents and teachers to listen to a child’s hearing instrument.

Severe Deafness - a hearing loss between 70 dB and 95 dB.

Total Communication - an approach to communicate which may use speech, sign, pictorial and written language.

Tympanogram - a graph showing the movement of the eardrum as a function of air pressure changes within the ear canal; this graph gives information regarding the integrity of the middle ear system. The ear canal is closed off with a probe tip and as air pressure is introduced into the canal, eardrum movement is recorded.

Tympanometry - a measurement testing the compliance or movement of the eardrum in response to loading the ear canal with air pressure equal to 200mm (equivalent water pressure). This test is designed to determine the movement of the eardrum as air pressure is changed in the ear canal.

Visiting Teacher - a service for children and young people with a hearing loss that is provided by the Department of Education and Skills from the time of referral until transition to third level or further education.
Useful Websites

**Information**

**DeafHear.ie** - Services for Deaf and Hard of Hearing People - the primary objective is to promote the welfare of Deaf people and their families in all aspects of life. www.deafhear.ie

**National Deaf Children's Society (UK)** - parent-based leading charity dedicated to creating a world without barriers for Deaf children and young people. www.ndcs.org.uk

**Delta (UK)** - is a national charity supporting deaf children, their families and practitioners who wish to follow an auditory oral route from birth through education and beyond. www.deafeducation.org.uk

**Forest Books (UK)** - books on hearing loss and deafness. www.forestbooks.com

**Royal National Institute for the Deaf (UK)** - is the largest charity in the UK tackling hearing loss and making hearing matter. www.rnid.org.uk

**Alexander Graham Bell Association (USA)** - an Association for the Deaf and Hard of Hearing to help families, health care providers and education professionals. www.agbell.org

**Baby Hearing (USA)** - information on screening, diagnosis, hearing loss, aids, speech and language and parenting issues. www.babyhearing.org www.espp.org.uk

Click on ‘toolkit’ and then on ‘monitoring protocol’

**Hands and Voices (USA)** - a communication non-biased family support organisation. www.handsandvoices.org

**Hearing Families (USA)** - this website is dedicated to supporting and strengthening families of children with hearing loss. www.hearingfamilies.com

**Help Kids Hear (USA)** - this was founded by parents of Hard of Hearing children and is dedicated to helping other parents find information and resources they need in dealing with a Deaf/Hard of Hearing child. www.helpkidshear.org

**Infant Hearing (USA)** - information on newborn hearing and screening and early identification process. www.infanthearing.org click on ‘families’

**Listen Up (USA)** - information and products geared to the special need of children with a hearing loss and their families. www.listen-up.org

**National Institute on Deafness and Other Communication Disorders (USA)** - NIDCD is mandated to conduct and support biomedical and behavioural research and research training in the normal and disordered processes of hearing, balance, smell, taste, voice, speech, and language. www.nidcd.nih.gov/

**Cochlear Implants**

**Beaumont** - Cochlear Implant Team in Ireland. www.beaumont.ie

**British Cochlear Implant Group (UK)** - The British Cochlear Implant Group is a professional body representing all the Cochlear Implant Centres and other specialist medical practitioners throughout the United Kingdom. www.bcig.org.uk

**Cochlear.com (UK)** - demonstrates how the cochlear works and you can read personal stories. www.cochlear.com/uk

**Cochlear Implant Online (USA)** - this website was founded in 2001 by Rachel Chaikof who was a 14 year-old cochlear implant user at the time. Rachel wanted to create a better awareness of cochlear implants and that deaf children today can learn the language through hearing and speaking. www.cochlearimplantonline.com

**The Ear Foundation (UK)** - information on Cochlear Implants. www.earfoundation.org.uk

**Education**

**Visiting Teacher Service** - the Visiting Teacher covers a particular region and supports the children, parents/guardians, teachers and other professionals involved with the child by providing information on hearing loss, assessment for and management of amplification devices. www.education.ie

**National Council for Special Education (NCSE)** - is a statutory body established under the Education for Persons with Special Educational Needs Act 2004. Since their establishment they have concentrated on developing an organisation which provides a timely and efficient service to schools in sanctioning teaching and Special Needs Assistant (SNA) resources to support children with special educational needs. www.ncse.ie
Special Education Support Service (SESS) - the role of the Special Education Support Service is to enhance the quality of learning and teaching in relation to special educational provision. The service co-ordinates, develops and delivers a range of professional development initiatives and support structures for school personnel working with students with special educational needs in mainstream primary and post-primary schools, special schools and special classes. The SESS operates under the remit of the Teacher Education Section (TES) of the Department of Education and Skills. www.sess.ie

Irish Deaf Kids - is a Dublin-based non-profit social enterprise whose mission is to support inclusive education for children with hearing issues in Ireland, while empowering parents to develop their child’s full potential. www.irishdeakids.ie

Delta (UK) - is a charity supporting Deaf children, their families and practitioners who wish to follow an auditory route, from birth, through education and beyond. www.deafeducation.org.uk

**Deafness**

DeafHear.ie - DeafHear’s vision is of an inclusive society where Deaf and Hard of Hearing people are fully integrated, with equality of opportunity and participation. It is our role to make this Vision a reality by promoting the equal rights of Deaf and Hard of Hearing people and enhancing their life opportunities. www.deafhear.ie

Cork Deaf Association (CDA) - Cork Deaf Association is committed to the empowerment of Deaf and Hard of Hearing people in Cork city and county through the provision of information, advocacy and support services. www.corkdeaf.ie

Irish Deaf Society - IDS is the national representative organisation of Deaf people. www.deaf.ie

Irish Deaf Youth Association - A Youth Organisation for young Deaf people in Ireland aged between 18-30 years old. www.irishdeafyouth.ie

Irish Deaf Sports Association - IDSA believes that through recreational opportunities, sports training and competition, deaf and hard of hearing people can benefit physically, mentally, socially and spiritually in an environment of equality, mutual respect and acceptance. www.irishdeafsports.net

National Chaplaincy for Deaf People - the aim of the NCDP is to serve and work with Deaf people and the Deaf community and to provide liturgical services and pastoral support. www.ncdp.ie

Deaf Culture (USA) - the aim is to bring as many perspectives on the Deaf and Hard of Hearing experience as possible. While the primary focus of the website is to promote awareness of Deaf culture. www.deaf-culture-online.com

**Sign Language**

Simply Signing - the central aim is to promote the use of Irish Sign Language with all children, support early development of infants throughout Ireland, taking into account the need for early intervention for children with a hearing loss. www.simplysigning.ie

Babies and Sign Language (USA) - Baby Sign Language with your infant or toddler. www.babies-and-sign-language.com

Deaf Children and Parents (USA) - www.deafchildrenandsigning.com

**Parenting**

Rollercoaster - Pregnancy, having a baby and parenting can bring you to the heights of joy and depths of despair - all within the space of a few minutes, this website accompanies you on this exciting journey. www.rollercoaster.ie

Parentline - provides a completely confidential helpline for parents and guardians. Parents can phone with all sorts of problems. There is no typical call. Calls come from parents of children of all ages. They offer support, guidance and information. www.parentline.ie

**Suggested Reading**


DeafHear Resource Centres

North West - Letterkenny
Providing services in Donegal
Sensory Resource Centre, Justice Walshe Road, Letterkenny, Co. Donegal.
Tel: 074 9188252
Fax/Text: 074 9188240
Email: letterkenny@deafhear.ie

Midlands - Tullamore
Providing services in Laois, Offaly, Longford & Westmeath
14 Church Street, Tullamore, Co. Offaly.
Tel/Minicom: 057 9351606
Fax: 057 9326425
Text: 057 9326421
Email: tullamore@deafhear.ie

North East - Dundalk
Providing services in Louth, Meath, Cavan & Monaghan
Sensory Resource Centre, 14 Jocelyn Street, Dundalk, Co Louth.
Tel/Minicom: 042 9332010
Fax/Text: 042 9389186
Email: dundalk@deafhear.ie

Dublin North (Head Office)
Providing services in Dublin North
35 North Frederick Street, Dublin 1.
Tel: 01 8175700
Minicom: 01 8175777
Fax/Text: 01 8783629
Email: info@deafhear.ie

Dublin South
Providing services in Dublin South, Kildare & Wicklow
Unit G-H, Exchange Hall, Belgard Square North, Tallaght, Dublin 24.
Tel/Minicom: 01 4620377
Fax: 01 4620378
Text: 086 1716284
Email: dublinsouth@deafhear.ie

Wexford
Providing services in Wexford
Lochrann Centre, Cinema Lane, Wexford.
Tel: 053 9152645
Fax: 053 9152646
Text: 053 9152647
Email: wexford@deafhear.ie

South East - Waterford
Providing services in Waterford, Carlow & South Tipperary
Catherine Street, Waterford.
Tel: 058 855777 Fax: 058 852132
Email: waterford@deafhear.ie

South - Killarney
Providing services in Kerry & Cork
10 Flemings Lane, High Street, Killarney, Co. Kerry.
Tel: 064 6620052
Minicom: 064 6622608
Fax: 064 6620053
Text: 086 8056202
Email: killarney@deafhear.ie

The Cork Deaf Association,
5 Mac Curtain Street, Cork.
Tel: 021 4505944
Text/Fax: 021 4506190
Email: mail@corkdeaf.ie

Sensory Resource Centre, 14 Jocelyn Street, Dundalk, Co Louth.
Tel: 042 9332010
Fax/Text: 042 9389186
Email: dundalk@deafhear.ie

Sensory Resource Centre, Justice Walshe Road, Letterkenny, Co. Donegal.
Tel: 074 9188252
Fax/Text: 074 9188240
Email: letterkenny@deafhear.ie

Sensory Resource Centre, 14 Church Street, Tullamore, Co. Offaly.
Tel/Minicom: 057 9351606
Fax: 057 9326425
Text: 057 9326421
Email: tullamore@deafhear.ie

Sensory Resource Centre, 14 Church Street, Tullamore, Co. Offaly.
Tel/Mobile: 057 9351606
Fax: 057 9326425
Text: 057 9326421
Email: tullamore@deafhear.ie

The Cork Deaf Association,
5 Mac Curtain Street, Cork.
Tel: 021 4505944
Text/Fax: 021 4506190
Email: mail@corkdeaf.ie

Check www.deafhear.ie for information on the services in your local resource centre.
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DeafHear.ie
Services for Deaf & Hard of Hearing People

An Roinn Sláinte agus Leanaí
Department of Health and Children