My Child’s Hearing Adventure
A Parent’s Journal
Providing Support and Communication
Dear Parent(s),

Your child is beginning a new adventure into the amazing world of sounds, voice, and music. This Parent Journal is a special place for you to document your child’s journey to sound. Use this journal to store important information and records regarding your child. Take this book to appointments so that you have easy access to previous test results, observations, notes on your child’s recent progress, and results from other professionals. Share this book with important caregivers, therapists, and teachers. This journal provides opportunities for increased communication between you, your family, and your child’s team members. For more information and additional inserts, please go to AdvancedBionics.com/Support.

If lost, please return to:

Name ____________________________________________
Address __________________________________________
Phone ____________________________________________
Email ____________________________________________

Learn more about Cochlear Implants

To get more information about hearing restoration with cochlear implants, contact Advanced Bionics:

Visit AdvancedBionics.com
Join HearingJourney.com
In this section, consider placing your child’s:

- Audiograms (hearing test results)
- ABR/ASSR Test and/or OAE Results
- Speech Perception Results
- Audiogram of Familiar Sounds

(Download additional copies from AdvancedBionics.com/rehAB)
Audiogram of Familiar Sounds

In this section, consider placing information on your child’s:

- Medical Reports (Otology/ENT, Ophthalmology, Genetics, etc.)
- CT and/or MRI Reports
- Immunisations
- Developmental and Growth Milestones
- Medications and Dosages
In this section, consider placing information on:

- Practical Tips to Improve your Communication with your Child
- Information About Bilingualism
- Exploring Communication Options
- Using Normal Development Milestones with Very Young Children who Have Cochlear Implants
Exploring Communication Options

As (a) parent(s) of a child with a severe-to-profound hearing loss, you will need to choose which communication methodology is the best for your child and your family. Below you will find some basic information about all communication options available. We have also posted additional website links where you can learn more about each approach.

Sign Language
- Typically associated with the Deaf culture (bilingual/bicultural)
- A completely visual and conceptual system
- A separate language comprised of its own unique syntax and word form
- No written form
- Amplification is not required for communication
- No focus on expressive or receptive spoken language
- Expressive communication uses the entire body to convey meaning

Total Communication
- The goal is to develop spoken language through speech reading with some form of manual communication
- Usually involves some group instruction with daily one-to-one therapy
- Expressive speech developed through a combination of hearing, vision, and tactile cues
- Usually involves early academic or social mainstreaming
- Use of sign language interpreter depends on student's needs

For further information about Total Communication, visit: raisingdeafkids.org/communicating/choices/tc.php

Cued Speech
- A visual communication system of eight hand-shaped (cues) that represent different sounds of speech
- Cues are used while talking to make spoken language clear through vision
- This system allows the child to distinguish sounds that look the same on the lips
- An oral option
- Parent is often the primary language facilitator
- Usually involves early academic mainstreaming

For further information about Cued Speech, visit: cuedspeech.com

Auditory-Oral
- The goal is to develop spoken language primarily through hearing and speech reading
- Involves some group instruction with other children with hearing loss
- Teacher or parent is the primary language facilitator
- Often includes early preschool for hearing impaired children
- Often involves early social mainstreaming; academics may be in a self-contained setting
- Consistent use of appropriate and working amplification is required for this approach
- Parental carry-over from classroom setting is required for development of spoken language

For further information about Auditory-Oral, visit: agbell.org and oraldeafed.org

Auditory-Verbal
- The primary goal is to develop spoken language through listening
- All therapy is done one-to-one, with parent or caregiver participating in each session
- Primary caregiver is the primary teacher
- Early mainstreaming is the goal
- Adherence to the 10 principles of Auditory-Verbal Therapy is necessary
- An early intervention approach to teaching spoken language

For further information about Auditory-Verbal, visit: agbell.org and avuk.org
Why should we use normal developmental milestones?
1. Children who are deaf have the potential to learn to hear and speak with a cochlear implant.
2. Specific goals can be developed for children with cochlear implants using normal developmental milestones for vocabulary, speech, and language as a guide.
3. Progress can be measured to determine if a child is meeting appropriate milestones.

Begin by establishing the child’s “hearing age”
To use normal speech and language milestones to monitor the performance of children who are deaf, you must first establish the child’s hearing age. When a child’s cochlear implant is activated they celebrate a hearing birthday, and a “hearing age” is used to indicate the child’s length of time with the cochlear implant. Skill level at the hearing age is compared to the chronological age. When there is a gap between the two ages, therapy goals are set to help the child “close the gap” with the ultimate objective that the implanted child will eventually reach the skill level of their normal-hearing peers.

Children one year of age and older are approved for cochlear implantation. The table below, from asha.org, includes listening and speaking milestones for children birth to two years of age with normal hearing and can be useful for assessing the post-operative progress of children with cochlear implants.1

<table>
<thead>
<tr>
<th>HEARING AND UNDERSTANDING</th>
<th>TALKING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>0–3 Months</strong></td>
<td><strong>0–3 Months</strong></td>
</tr>
<tr>
<td>• Startles to loud sounds</td>
<td>• Makes pleasure sounds (cooing, gooing)</td>
</tr>
<tr>
<td>• Quiets or smiles when spoken to</td>
<td>• Cries differently for different needs</td>
</tr>
<tr>
<td>• Seems to recognise caregiver voice and quiets if crying</td>
<td>• Smiles when sees parent</td>
</tr>
<tr>
<td>• Increases or decreases sucking behaviour in response to sound</td>
<td></td>
</tr>
<tr>
<td><strong>4–6 Months</strong></td>
<td><strong>4–6 Months</strong></td>
</tr>
<tr>
<td>• Moves eyes in direction of sounds</td>
<td>• Babbling sounds more speech-like with many different sounds, including p, b, and m</td>
</tr>
<tr>
<td>• Responds to changes in tone of your voice</td>
<td>• Vocalises excitement and displeasure</td>
</tr>
<tr>
<td>• Notices toys that make sounds</td>
<td>• Makes gurgling sounds when left alone and when playing with you</td>
</tr>
<tr>
<td>• Pays attention to music</td>
<td></td>
</tr>
<tr>
<td><strong>7 Months – 1 Year</strong></td>
<td><strong>7 Months – 1 Year</strong></td>
</tr>
<tr>
<td>• Enjoys games like peek-a-boo and pat-a-cake</td>
<td>• Babbling has both long and short groups of sounds such as “tata upup bibibibi”</td>
</tr>
<tr>
<td>• Turns and looks in direction of sounds</td>
<td>• Uses speech or non-crying sounds to get and keep attention</td>
</tr>
<tr>
<td>• Listens when spoken to</td>
<td>• Imitates different speech sounds</td>
</tr>
<tr>
<td>• Recognises words for common items like “cup”, “shoe”, “juice”</td>
<td>• Has one or two words (bye-bye, dada, mama), although they may not be clear</td>
</tr>
<tr>
<td>• Begins to respond to requests (“Come here,” “Want more?”)</td>
<td></td>
</tr>
</tbody>
</table>
**Using Normal Development Milestones**

with Very Young Children who Have Cochlear Implants

### Hearing and Understanding

**1 – 2 Years**

- Points to body parts when asked
- Follows simple commands and understands simple questions ("Roll the ball," "Kiss the baby," "Where’s your shoe?")
- Listens to simple stories, songs, and rhymes
- Points to pictures in a book when named

### Talking

**1 – 2 Years**

- Says more words every month
- Uses some 1-2 word questions ("Where kitty?" "Go bye-bye?" "What’s that?")
- Puts two words together ("more cookie," "no juice," "mommy book")
- Uses many different consonant sounds at the beginning of words

#### Therapy Planning

Each therapy session should contain goals and activities related to each area of development: Audition, Cognition, Speech, Language, and Vocabulary, as well as activities parents can do with their children to reinforce the concepts learned in therapy.

#### Auditory Goals

Below is a list which includes some examples of activities that may be included at each level of the auditory hierarchy.

#### Hierarchy of Listening Skills

Adapted from Figure 4.1, Estabrooks, W. (Ed.) 2006. Auditory-Verbal Therapy Theory and Practice, p. 78.

<table>
<thead>
<tr>
<th>Detection</th>
<th>Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Conditioned play response</td>
<td>• Suprasegmentals</td>
</tr>
<tr>
<td>• Spontaneous alerting response</td>
<td>- Prosodic features of speech</td>
</tr>
<tr>
<td></td>
<td>- Loudness and pitch</td>
</tr>
<tr>
<td></td>
<td>- Angry and sad voices</td>
</tr>
<tr>
<td></td>
<td>- Male, female, and children’s voices</td>
</tr>
<tr>
<td></td>
<td>• Segmentals</td>
</tr>
<tr>
<td></td>
<td>- Initial “sound” vocabulary</td>
</tr>
<tr>
<td></td>
<td>- Words varying in number of syllables</td>
</tr>
<tr>
<td></td>
<td>• Words in which the vowel is constant and</td>
</tr>
<tr>
<td></td>
<td>the consonants contrast in manner, place,</td>
</tr>
<tr>
<td></td>
<td>and voicing</td>
</tr>
<tr>
<td></td>
<td>• Two critical elements in a message</td>
</tr>
<tr>
<td></td>
<td>• Auditory monitoring of segmentals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comprehension</th>
<th>Answering questions about a story: closed set and open set</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Familiar expressions/common phrases</td>
<td>• Comprehension activities/exercises in noisy environments</td>
</tr>
<tr>
<td>• Single directions/two directions</td>
<td></td>
</tr>
<tr>
<td>• Classroom instructions</td>
<td></td>
</tr>
<tr>
<td>• Sequencing three or more directions</td>
<td></td>
</tr>
<tr>
<td>• Sequencing three events in a story</td>
<td></td>
</tr>
</tbody>
</table>

**It is important to note that children with cochlear implants may not need formal teaching of each goal at each level due to advances in cochlear implant sound processing. Often children do not require formal training at the discrimination level.**
Speech and Language Goals
Each therapy session should contain goals and activities related to each area of development: Audition, Cognition, Speech, Language, and Vocabulary, as well as activities parents can do with their children to reinforce the concepts learned in therapy.

Auditory Goals
Use of the chart below can be helpful for establishing specific goals for acquiring new vocabulary.

<table>
<thead>
<tr>
<th>RATE OF VOCABULARY ACQUISITION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12 months</td>
<td>First expressive word appears</td>
</tr>
<tr>
<td>18 months</td>
<td>20–100 words</td>
</tr>
<tr>
<td>24 months</td>
<td>300 words</td>
</tr>
<tr>
<td>36 months</td>
<td>900 words</td>
</tr>
<tr>
<td>48 months</td>
<td>1,500 words</td>
</tr>
<tr>
<td>60 months</td>
<td>2,500 words</td>
</tr>
</tbody>
</table>

Therapy Tips
1. Write very specific short-term goals. Example: “Given auditory input, child will learn 10 new words per week. Child will demonstrate comprehension of 2–3 critical elements in a message through audition alone.”
2. Therapy sessions are diagnostic, so stay one step ahead of the child’s skills (or two!) and be prepared to adjust the activity as needed.
3. Therapy is fun and functional. Avoid activities the child has mastered in the past, except for review.
4. The parent can be an active participant, not a passive observer. Don’t forget to involve mum and dad!
5. Set high expectations for the child from the beginning.
6. Be prepared for the unexpected! When therapy “falls apart” have a bag of tricks to engage the child, such as a hand puppet or a pop-up toy, to get the session going.

References:
In this section, consider placing your child’s:

- "My Child’s Ears" Form
- The Ling Six Sound Check and Pictures of the Ling Six Sounds
  *(Download additional copies from AdvancedBionics.com/rehAB)*
- Behavioral Listening Check Forms
  *(Download additional copies from AdvancedBionics.com/rehAB)*
- Becoming Familiar with Cochlear Implants
- Hearing Device(s) (e.g., Hearing Aid(s), Cochlear Implant(s), FM System)
- Hearing Technology User Guides
  *This will help others understand how your child’s hearing technology works*
  *(AB Product Guides are available for download at AdvancedBionics.com)*
- Hearing Technology Programs (i.e., Sound Processor Programs)
- Notes on Recent Changes to Their Hearing Device
# My Child’s Ears

## On My Child’s Right Ear is:

- [ ] Hearing Aid
- [ ] AB Cochlear Implant
- [ ] Other ______________________

![Hearing Aid Image]

## Program Description

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

- **Volume Setting**
- **Sensitivity Setting**

- **Serial Number**

## Batteries:

- [ ] Rechargeable
- [ ] Disposable

**Size/Type:**

---

## Other Technology:

- [ ] Personal FM System
- [ ] Remote Control
- [ ] Other

**Size/Type:**

---

## Additional processor features and/or important notes about how my child listens:

---

---
On My Child’s Left Ear is:

- [ ] Hearing Aid
- [ ] AB Cochlear Implant
- [ ] Other ______________________

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Volume Setting</td>
<td>Sensitivity Setting</td>
</tr>
<tr>
<td>Serial Number</td>
<td></td>
</tr>
</tbody>
</table>

Batteries:
- [ ] Rechargeable
- [ ] Disposable

Size/Type: ____________________________

Other Technology:
- [ ] Personal FM System
- [ ] Remote Control
- [ ] Other

Size/Type: ____________________________

Additional processor features and/or important notes about how my child listens:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
The Ling Six Sound Check

aa

UU

eeee

sh

SSSS

mmm
What is the Ling Six Sound Check?

A behavioural listening check to determine a cochlear implant’s effectiveness.

The sounds 'ah', 'ee', 'oo', 'sh', 's', and 'm' indicate a child’s ability to detect all aspects of speech, as these six sounds encompass the frequency range of all phonemes.

This check can be used to determine what sounds the child is able to detect, discriminate, and identify.

**Detection**: Recognising the presence or absence of sound.

**Discrimination**: Recognising if two or more sounds are the same or different.

**Identification**: Reproducing a sound or pointing to a picture of the sound heard.

Administration

Using a hand-held screen or standing behind or to the side of the child so your face is not visible, assess the child’s responses to the phonemes ah, oo, ee, sh, ss, mm in the auditory-only condition at a distance of one metre.

If the child has the ability to hear:

- 1,000 Hz – (s)he should hear the three vowel sounds 'ah', 'ee', and 'oo', spoken in a quiet voice at a distance of at least four metres.
- 2,000 Hz – (s)he should also hear the sound 'sh'.
- 4,000 Hz – (s)he should detect 's' from a distance of at least one to two metres.

Advice: If this test is performed on a regular basis, deviations from “normal” performance will quickly be identified, so that troubleshooting and problem solving (for example: external equipment replacement, re-programming) can be initiated in a timely fashion.
Form for recording a child’s responses to the Ling Six sounds:

Child’s Name: _________________________________   Age: _____   Date: ________________

Cochlear Implant (CI): □ Right Ear □ Left Ear □ Both Ears

CI Settings: _________________________________________________________________

Circle Your Choice

<table>
<thead>
<tr>
<th>Technique Used:</th>
<th>Detection</th>
<th>Discrimination</th>
<th>Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Used:</td>
<td>Behavioral</td>
<td>Conditioned Play</td>
<td>Pointing</td>
</tr>
<tr>
<td>Presentation Level:</td>
<td>Whisper</td>
<td>Normal Voice</td>
<td>Loud Voice</td>
</tr>
<tr>
<td>Distance:</td>
<td>30 cm</td>
<td>2 metres</td>
<td>3.5 metres</td>
</tr>
<tr>
<td>Reliability:</td>
<td>Good</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ling Sound</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Remember to present the Ling Six sounds in random order and to vary your length of presentation so that the child doesn't provide false positives.
How the Ear Works

For sound to be heard, the ear needs to convey the message to the brain. The ear consists of three main parts: outer ear, middle ear, and the inner ear. Each of these parts together with the auditory nerve play a key role in sound transmission to the brain.

The outer ear
The outer ear (or pinna) captures sound and then directs the sound down the ear canal to the eardrum.

The middle ear
Sound vibrates the eardrum and is transmitted to the middle ear. The middle ear consists of three bones, the malleus (hammer), incus (anvil), and stapes (stirrup), all of which help convey sound to the inner ear.

The inner ear
The inner ear (or cochlea) consists of sensory receptor cells. These sensory cells have distinct functions in the transmission of sound. It is the unique properties of the inner ear that are responsible for transcribing pitch and loudness information into an electrical code that the nerve can then transmit to the brain.

The auditory nerve
The auditory nerve (or hearing nerve) is responsible for transmitting the sound information from the inner ear to the higher processing centres of the brain. The brain is responsible for interpreting sound.

What Is “Normal” Hearing?

When the ear mechanisms work properly, the ear can detect a range of pitches or frequencies over a wide range of loudness or intensity. Frequency is measured in Hertz (Hz) and intensity in decibels (dB). Normal-hearing persons can detect very soft sounds of 0 dB HL to very loud sounds of 120 dB HL, over a wide range of frequencies.

An audiogram plots a person’s hearing threshold—the softest level the person can hear as a function of frequency and intensity. Persons with thresholds of 20 dB HL or below are considered to have normal hearing.

What Is Hearing Loss?

Hearing loss refers to a decrease in a person’s sensitivity to sound. Alternatively, hearing loss is an increase in a person’s thresholds to sound. Typically, hearing loss involves damage to the sensory cells of the inner ear, referred to as a sensorineural hearing loss. Hearing losses will range in degree from mild to profound, depending on the extent of sensory cell loss or damage.

Mild Hearing Loss is when hearing is difficult in the 25–40 dB range. Moderate Hearing Loss is when hearing is difficult in the 40–70 dB range. Severe Hearing Loss is when hearing is difficult in the 70–90 dB range. Profound Hearing Loss is when hearing is difficult in the 90 dB and greater range. Often, persons with profound hearing loss are referred to as deaf.

Damage to the sensory or neural structures result in a permanent hearing loss. There is no medical cure for sensorineural hearing loss.
Becoming Familiar with Cochlear Implants

What is a Hearing Aid?
For persons with hearing loss, the most commonly recommended treatment to improve hearing sensitivity is a hearing aid. A hearing aid amplifies sound, or more simply, makes sound louder. By amplifying sound, any remaining, healthy sensory cells in the inner ear are stimulated to transmit sound information to the auditory nerve and brain.

What is a Cochlear Implant?
For patients with severe-to-profound sensorineural hearing losses, hearing aids are often not able to improve speech understanding. While very powerful hearing aids exist that increase intensity to very high levels, they may not improve hearing if there are too few or no remaining sensory cells to stimulate. In these cases, the sound information cannot be properly delivered to the brain. For these patients, a cochlear implant may be recommended. Cochlear implants attempt to restore hearing in people with severe-to-profound hearing loss by bypassing the damaged structures of the inner ear and delivering electrical stimulation directly to the auditory nerve. Cochlear implants are devices with internal components that are surgically placed and external components that require fitting and programming. Cochlear implants are considered the only medical treatment for severe-to-profound hearing loss.

How is a Cochlear Implant Different from a Hearing Aid?
Hearing aids acoustically amplify sound and rely on the responsiveness of healthy inner ear sensory cells to receive that sound and send the message to the brain. In patients with severe-to-profound sensorineural hearing loss, the inner ear sensory cells are lost or damaged to the degree that a hearing aid is no longer beneficial for understanding speech (i.e., there are not enough healthy sensory cells to relay the message to the brain). A cochlear implant, however, bypasses the absent or damaged sensory cells and stimulates the hearing nerve directly by converting acoustic sound input into an electrical pattern that is recognisable to the hearing nerve for the transmission of sound information to the brain.

Who is a Candidate for a Cochlear Implant?
Adults and children 12 months of age and older with severe-to-profound sensorineural hearing loss may be candidates for a cochlear implant. Typically, candidates will have been fitted with hearing aids but received minimal benefit. Benefit with hearing aids is determined by standard diagnostic tests administered by audiologists, as well as parent and teacher/therapist questionnaires, which measure a child’s response to sound and development of speech with hearing aids.

A team approach is most often taken to determine if a child is a candidate. A surgeon rules out medical contraindication with a physical examination, an MRI and/or a CT scan, and medical review of records. An audiologist evaluates the degree of hearing loss, functional benefit with hearing aids, and the potential benefit to be gained from a cochlear implant. A speech-language pathologist evaluates communication development, including speech and language skills. The psychologist assesses cognitive, sensory, and motor development as well as parental expectations and motivations. Educators provide information regarding the child’s academic progress. The key member of the team is the parent(s)/caregiver(s) whose observations are essential in evaluating the child’s overall development and communicative function in the home and outside the educational setting.

The evaluation allows the team to share experiences and knowledge with the family so that appropriate goals and expectations regarding outcome and rehabilitation can be made. If the team determines the child is a candidate, each member of this team will also play a crucial role in the child’s success with the device.
What is the Procedure for Getting a Cochlear Implant?

Preparing the child for surgery
Once a child is determined to be a candidate for a cochlear implant, it is helpful to prepare the child for the surgical placement of the internal part of the device. It is recommended that the child be familiarised with the surgical setup—clothing (caps, gowns, and masks) and the anesthesia mask. Many hospitals or implant centres have materials and programmes to assist families and educators in familiarising the child with this process. Advanced Bionics sends the Bionic Buddy monkey mascot, with each child’s implant system. He wears (a) sound processor(s) and may be useful in explaining the device to the child.

Surgical placement of internal components
The surgical placement of the internal part of the device is performed under general anesthesia and takes approximately two hours.

Fitting the external components
Following a three-to-six-week recovery period, the child will return to the audiologist for fitting of the speech processor. This first fitting is often referred to as the initial stimulation or hook-up. An audiologist programs the device during the fitting process. Programming involves setting specific parameters of stimulation for the recipient, particularly the levels perceived as soft and comfortable. Programming children is different than programming adults. Children typically do not have the language or experience with sound to report when stimulation is perceived as soft or loud. In addition, children do not have the attention span to sit for an hour of programming. Audiologists who specialise in pediatrics use their experience to fit the device for this more challenging population.

Programming requires frequent adjustments or fine-tuning as the child adapts to the device. While some children adjust very quickly, others require several weeks or months. How much a child will learn to understand depends on several factors, including age at implantation, length of deafness, previous experience with sound, and access to aural rehabilitation and therapy services.

Is Aural Rehabilitation Required for Cochlear Implant Recipients?
Aural rehabilitation or therapy is a key factor for successful use of a cochlear implant. The implant is not a cure for hearing loss. A new user will need to practice listening with the device to reach maximum performance. For children, rehabilitation is crucial for the development of oral language and speech skills. Parents of children with a hearing impairment will have several options in education and therapy methodologies. Some of these options use manual forms of communication, such as sign language, while others emphasise oral communication and/or lipreading. Regardless of the educational approach, some form of aural rehabilitation or listening practice is needed to maximise performance. For further information on how to maximise a child’s success with a cochlear implant, see the article Setting Expectations and Communication Goals for a Child with a Cochlear Implant. Additionally, we encourage you to visit The Listening Room™, an AB online rehabilitation resource at TheListeningRoom.com, for you, your child, and their educational team.
In this section, consider placing your child’s:

- Speech-Language Evaluations, Goals, and Reports
- Occupational Therapy Evaluations, Goals, and Reports
- Physical Therapy Evaluations, Goals, and Reports
- Vision Therapy Evaluations, Goals, and Reports
- Other Therapy Evaluations, Goals, and Reports
- Early Intervention Reference Card
What is early intervention?

Early intervention is a system of coordinated services that promotes the child’s age-appropriate growth and development and supports families during the critical years. Following the identification and confirmation of a hearing loss, it is recommended that intervention begins as soon as possible, but at no later than 6 months of age.

A number of principles are very important to early intervention. These include the following:

1. Parents should be offered the opportunity to interact with other families who have infants and children with hearing loss or adults with hearing loss.
2. Parents should also be offered access to professional, educational, and consumer organisations and provided with general information on child development, language development, and hearing loss.
3. Foundational characteristics of developing and implementing early intervention programmes include a family-centered approach, culturally responsive practices, collaborative professional-family relationships and strong family involvement, developmentally appropriate practice, interdisciplinary assessment, and community-based provision of services.

Educational intervention services will usually be provided by early intervention or family support services in or near your community.

What are early intervention services?

If an infant or toddler has a disability or a developmental delay in one or more developmental areas, that child will likely be eligible for early intervention services. Those services will be tailored to meet the child’s individual needs and may include:

- Assistive technology (devices a child might need)
- Audiology or hearing services
- Speech and language services
- Counseling and training for a family
- Medical services
- Nursing services
- Nutrition services
- Occupational therapy
- Physical therapy
- Psychological services

Services may also be provided to address the needs and priorities of the child’s family. Family-directed services are meant to help family members understand the (special) needs of their child and how to enhance their development.

Why is early intervention important?

Research has compared children with hearing loss who receive early intervention and amplification before 6 months of age versus after 6 months of age. By the time they enter first grade, children identified earlier are 1–2 years ahead of their later-identified peers in language, cognitive, and social skills. Therefore, early intervention can lay the foundation for developing fundamental language, social, and cognitive skills that provide the framework for later schooling and success in society.

What is a home visit?

A specialist, such as an early intervention or family support professional, will come to your home or another natural environment to work with you, your infant, and your family members. Visits are conducted in the home or other places where your child spends a big part of his or her time because these are the most natural places for your baby.

During the home visit, the early intervention or family support specialist will help you communicate with your child and encourage his or her development. Your specialist will work closely with you to identify your needs and set priorities for your baby, help you locate resources, and answer your questions.

In this section, consider placing information on:

• IFSP/IEP (Reviews)

• Communication with School and/or Daycare

• School Input Form
  (Download additional copies from AdvancedBionics.com/rehAB)

• Early Intervention Communication Log
  (Download additional copies from AdvancedBionics.com/rehAB)

• Home and Communication Log
  (Download additional copies from AdvancedBionics.com/rehAB)
Dear _________________________________,

Your student, _________________________________, will be seen for a cochlear implant follow-up visit on _________________________________. Your feedback about how this child is doing with their implant is very important to us. Please take a moment to complete this form and email it to me at _________________________________ by _________________________________.

One Week Before Visit

Teacher/Therapist: ________________________________

Email Address: ________________________________

1. Does the child wear the CI consistently and without resistance at all times at school/therapy? ☐ YES ☐ NO
   If NO, please describe: ____________________________________________________________

2. Based on your knowledge, does the child wear the CI consistently and without resistance at home? ☐ YES ☐ NO
   If NO, please describe: ____________________________________________________________

3. What percentage of the time does the child respond to their name when called from behind on the first trial, without prompting? _______ %

4. How much noticeable difference do you see when the child is wearing versus not wearing their cochlear implant? ☐ No difference ☐ Very little difference ☐ Some difference ☐ Quite a difference ☐ Huge difference

5. Are you pleased with the child’s speech progress? ☐ YES ☐ NO Please comment: ________________________________

6. How would you characterise the child’s current speech skills?
   ☐ Completely unintelligible ☐ Few intelligible words ☐ Partially intelligible
   ☐ Mostly intelligible ☐ Completely intelligible

7. Please list any noticeable changes in the child’s listening or communication skills since their last visit to our centre:

8. How would you compare the child’s implant performance to that of other CI children with whom you have worked? ________________________________

9. How would you characterise the child’s current auditory abilities (check all that apply)
   ☐ No consistent detection ☐ Detection ☐ Simple pattern perception ☐ Complex pattern perception
   ☐ Closed-set word recognition ☐ Beginning open-set word recognition ☐ Advanced open-set word recognition

10. Please note any concerns or questions you have about the child’s cochlear implant or auditory development:

________________________________________________________________________________________

________________________________________________________________________________________
Early Intervention Communication Log

(Circle one) CI was: working / not working properly today

(Circle one) FM was: working / not working properly today

Please describe any equipment problems:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

(Circle all that apply) Child was happy / upset / tired / focused / not focused

Notes regarding today’s session:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

(Ling Sound Test) ah eeee oo sh ssss mmm (silence)

Detected

Identified

Ideas and concepts for family to work on at home:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

I have read these notes from school: ________________________________

Parent/Caretaker Initials
To be completed each night by the parent/caregiver and sent to school with the child each morning.

**PARENT/CARETAKER**

Notes from home:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Cochlear implant settings:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Notes from private therapists:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Notes regarding upcoming or recent mapping appointments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Memorable cochlear implant moment:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

I have read these notes from home: __________________________________________

Parent/Caretaker Initials
**SCHOOL**

Please complete this log daily and send home with the child so that the parent(s)/caregiver(s) can review the events of the child’s day and address any concerns you may have before the child arrives at school the next day.

(Circle one) CI was: working / not working properly today.

(Circle one) FM was: working / not working properly today.

Please describe any equipment problems:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

**Ling Sound Test**

<table>
<thead>
<tr>
<th></th>
<th>ah</th>
<th>eeee</th>
<th>oo</th>
<th>sh</th>
<th>ssss</th>
<th>mmm</th>
<th>(silence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detected</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identified</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cochlear implant was worn all day except:

- [ ] No Exceptions
- [ ] Gym
- [ ] Lunch
- [ ] Nap
- [ ] Playground
- [ ] Other

(Circle one) Child was: happy / upset / tired / focused / not focused

**Services received today:**

- [ ] Speech Therapy
- [ ] Occupational Therapy
- [ ] Reading Specialist
- [ ] Deaf/HoH teacher
- [ ] Other

Today, your child:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

I have read these notes from school: ____________________________________________

Parent/Caretaker Initials

* Visit AdvancedBionics.com/support to get additional copies of the Home and School Communication Log.
In this section, consider placing:

- Business Cards or Contact Information for your team of Medical and School Professionals that support your child

- Pictures of your Child’s Therapists, Audiologists, Doctors, and others
  (Take time to familiarise your child with these individuals prior to their appointments; it will make the appointment go more smoothly!)
In this section, consider placing:

- Communication Notes to Professionals
- Journal about Special Moments you don’t want to forget
- Insert Keepsakes and Mementos that are special to you and your child