

Case studies of children with cochlear implant rehabilitation therapy, in the Netherlands

Title of the case study: Nora

General data on the case:

Nora (7 years), was born unilaterally hard of hearing. After birth, the other ear functioned as normal. Unfortunately, the hearing loss was progressive and she became hard of hearing in both ears.

- **Biographical and case identification data** – personal data, address, important events in the biography of the subject, significant data on the composition of the family, hearing status of the parents, etc.

- **Case history** (Anamnesis):

- **Significant medical data** – hearing loss detected by Neonatal Hearing Screening
- **Significant psychological data** – language development was delayed. At two and a half years old Nora could hardly speak. After the first implant, language development started to improve. Nora is happy with her implant. It offers her the opportunity to communicate with her family and friends. It is a great device, but it doesn't restore her hearing completely. She misses information when engaging in conversation. Communication in a group or a noisy environment is difficult. Nora also misses information while watching TV. Parents use sign language to optimize communication. Parents think it is important that Nora doesn't feel like she is the only one who needs to adapt. They want her to feel just as good with her disability, as she would have felt without it.
- **Educational setting:** unit in mainstreamed school where Nora receives support.
- **Significant social data** – no significant information
- **Age of fitting the first hearing aids and cochlear implants:** 2 and a half years old
- **How often and what kind of support/rehabilitation does the child/family receive?**

The implantation

- **age when undergoing first cochlear implantation (left or right side):** first CI at 2 and a half years old; second CI at the age of 7
- **number of implants (CI and hearing aids):** 2 Implants
- **current average duration of the CI use (information from the audiologists):** all day
- **other relevant information:** at the moment of placing the first CI, the other ear had a loss of 40-60 dB, but she often had otitis media, which made her hearing even more difficult.

What is the procedure for starting speech therapy after CI? (actors involved, what is needed)



After implantation, the speech and language therapist of the CI team starts the hearing training. This is the official rehabilitation program. Parents do not need to do anything for this; it is standard procedure.

The Speech Therapy used in the rehabilitation

The therapy is the standard rehabilitation hearing training, given by the speech and language therapist involved in the CI team. Sessions are more frequent at the beginning of the program and then their number decreases as therapy progresses.

Results

<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • <i>first CI at a young age</i> • <i>bilateral CI</i> • <i>standard rehabilitation at a young age</i> • <i>parental guidance</i> 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • <i>second CI at the age of 7</i> • <i>language remains a challenge</i> • <i>listening in noisy environments is difficult</i>
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • <i>the support programs used</i> • <i>the engagement of the family</i> 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • <i>noisy environments remain difficult</i> • <i>Nora needs the help of sign language</i>

