

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

Title of the case study: Quinn

General data on the case:

Quinn was born deaf. The hearing loss was over 90 dB. At 3 weeks old the first conversation about CI was carried out. The parents researched the topic for impact and risks. They also started a course in Dutch sign language. Quinn's parents were guided and supported by Kentalis and they also met other parents. There is no history of hearing loss in the family. Quinn's brother is also hearing.

- Case history (Anamnesis):

- **Significant medical data** – hearing loss detected by Neonatal Hearing Screening
- **Educational setting:** Quinn attends a regular school and is well integrated into his group of peers. He often uses solo-equipment. To hear and understand the teacher, he uses the Roger Pen. This is a separate microphone hanging around the teacher's neck which connects with his CI. It helps him keep his attention during class. He is also seated in front of the classroom. Kentalis doesn't provide guidance anymore, because it is no longer necessary. Language is still a point of interest.
- **Significant social data** – he plays soccer; only heading is scary. Quinn also plays the saxophone and has a good sense of music and rhythm.
- **Age of fitting the first hearing aids and cochlear implants**
- **How often and what kind of support/rehabilitation does the child/family receive?**
Currently, Quinn doesn't receive any therapy or support.

The implantation

- **age when undergoing first cochlear implantation (left or right side):** first implant at the age of 12 months; second implant at the age of 7
- **type of implant:** Advanced Bionics; initial speech processor – Neptune – recently replaced by Naida

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. The reaction to the first sound appeared to be normal. Even



after placing the second CI, he still preferred the first one. The second one gives him rest; when the first is not working, he still has the second one. He also hears more.

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>parents intend to forget that Quinn is still hard of hearing</i>

