

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

### Title of the case study: Mathilde

#### General data on the case:

- Biographical and case identification data – At the age of 3, parents learned that their daughter was hard of hearing. They had been suspecting it for a year. At that moment she started rehabilitation with analog hearing aids. Mathilde could hear reasonably well with them but they were insufficient for her speech and language production. As her hearing deteriorated, Mathilde received the first CI in 2007 in her left ear. Speech perception improved immediately. Later that year Mathilde herself asked for a second CI.
- **Case history** (Anamnesis):
  - **Significant medical data** – parents observed and suspected that their daughter was hard of hearing.
  - **Significant psychological data** – regular development of communication in spoken language, age-appropriate literacy. Hearing directions increased with the help of the second CI, even as listening to whispers.
  - **Educational setting:** full mainstreaming; she scores well.
  - **Significant social data** – Parents loaned money to finance the second CI themselves. They didn't want to wait any longer, while research showed that it was important to place the second CI within 2 years after the first one and before the age of 8. Age of fitting the first hearing aids and cochlear implants: 5 years old

**How often and what kind of support/rehabilitation does the child/family receive?** At the moment Mathilde doesn't receive any support training.

#### The implantation

- **age when undergoing first cochlear implantation (left or right side):** first CI at the age of 5/ left ear; second CI at the age of 6/ right ear.
- **number of implants (CI and hearing aids):** 2 implants (analog hearing aid used in the right ear after the first implant)
- **current average duration of the CI use (information from the audiologists):** all-day use

#### 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;"><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• <i>language development started before hearing loss</i></li> <li>• <i>parental motivation</i></li> <li>• <i>bilateral CI</i></li> <li>• <i>standard rehabilitation at a young age</i></li> <li>• <i>parental guidance</i></li> </ul>	<p style="text-align: center;"><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• <i>late implant</i></li> <li>• <i>insurance delay for second CI</i></li> </ul>
<p style="text-align: center;"><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• <i>the support programs used</i></li> <li>• <i>the engagement of the family</i></li> </ul>	<p style="text-align: center;"><b>Threats</b></p>

