

## **Clinical evaluation of cros and bicros use in a group of adolescents**

Lise-lotte Eliasson

### Background:

At Karolinska university hospital (department of hearing habilitation) we see children and youth from 0-19 years of age. In 2020, around 401 patients with single-sided deafness were enrolled of which 244 had a cros or bicros hearing aid. We do not have any routine around which tests to use or other type of measure to evaluate their benefit.

### Purpose:

To investigate what benefit the study participants experienced from their cros/bicros hearing aids in different listening situations. We also wanted to find out from what age it is most favorable to start a cros/bicros trial process.

### Methods:

The participants tried Oticon Play 1 miniRite T and Phonak Sky V90-M + Cros II as these are two of the models available in the clinic. Although it is recommended to use different settings, we do not know how the children and youth with single sided deafness experience the difference between them. A questionnaire was created to measure the patient's benefit before and after the trial period of each hearing aid respectively. Other measures used were localization and Hearing In Noise Test.

### Results:

It was not possible to differentiate the benefit between the cros/bicros modes from the methods used in this project. Localization skills were generally worse with the hearing aids on, although some participants experienced slight benefit.

### Discussion:

We cannot recommend cros/bicros to get any localization benefit. In order to start using these hearing aids, the individual needs to be mature enough to be able to judge if they increase or decrease speech perception in different situations.