

The Outcome of CI – Results from the Swedish Quality Register for CI Surgery on Adults

Åsa Skagerstrand, PhD, Audiological Research Centre/Region Örebro county/Örebro University/
Swedish Quality Register for Severe to Profound Hearing Loss in Adults.

For persons with severe-to-profound hearing loss cochlear implants (CI) improves the possibility to verbal communication and participation in social life¹. For evaluation in Sweden, quality registers are used to collect data on performance and outcome within health care. Every quality register has their own surveys with questions suitable for the current health condition. One of those quality registers mirrors the CI surgeries performed in adults, covering the 7 teams performing CI surgery in adults in Sweden². The register was launched in 2021 and have up to the 1st of April 2026 collected data for in total 858 persons who have undergone CI surgery. Of those, 118 persons have received bilateral CI. In the register data is collected from both patients and professionals involved in CI surgery twice, before and 12 months after surgery.

This poster shows comparisons between persons with unilateral and bilateral CI, pre- and post surgery. The data is from the surveys conducted pre-surgery and 12 months post-surgery. Here we evaluate the answers from the patient's questionnaire concerning the CI-users own experiences of CI for four different areas; benefit of CI, degree of tinnitus, control of own voice, and the satisfaction with the care received.

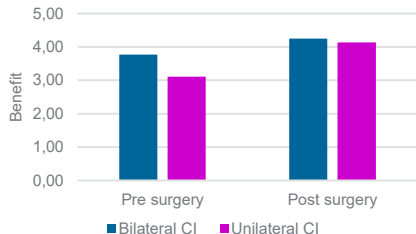


Figure 1. The benefit of CI as comparison before and 12 months after surgery.

Results

The benefit of CI (figure 1), measured with the IOI-HA/CI questionnaire, shows significant higher benefit for the bilateral CI-group pre-surgery compared with the unilateral CI-group, then using hearing aids. Post-surgery, the benefit increases significantly for both groups.

Before CI-surgery 66% of the persons had tinnitus that affected their everyday life. After surgery 48% of the bilateral CI-users and 55% of the unilateral CI-users had remaining tinnitus. In both groups, tinnitus symptoms were less bothersome.

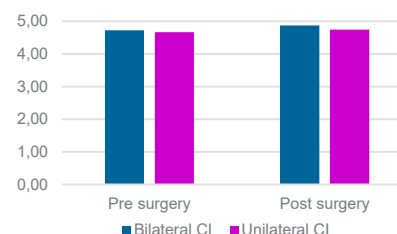


Figure 2. The CI-users satisfaction of the hearing health care

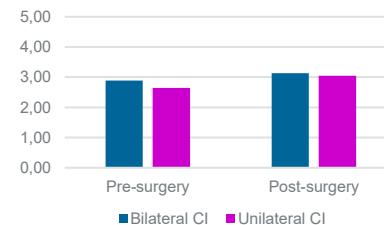


Figure 3. The CI-users control over their own voice.

All persons were very satisfied with the care they received from the hearing health care (figure 2). This was seen both before surgery and 12 months after surgery. Persons with severe to profound hearing loss are dependent on hearing health care for receiving needed rehabilitation.

The perception and control of their own voice (figure 3) were significantly improved for the group receiving their first CI. An improvement were also seen for the bilateral group but not with statistically significant change.

Discussion

The literature shows benefit for speech perception when receiving cochlear implants³. That can be confirmed in the professional survey of the register. We have here shown an improved situation for persons with severe to profound hearing loss when receiving CI according to patient survey. With the information from the national CI register, equal and qualitative hearing health care can be maintained and improved for the patient group. To maintain good results, it is of great importance with structured and nationwide systems for evaluation.

More information of the Swedish Quality Register for Severe to Profound Hearing Loss in Adults for CI surgery can be seen in Poster number PD194.

1. Turton L, Souza P, Thibodeau L, Hickson L, Gifford R, Bird J, et al. Guidelines for Best Practice in the Audiological Management of Adults with Severe and Profound Hearing Loss. *Seminars in Hearing*. 2020;41(3):141-246

2. www.entqualitysweden.se

3. Shafiro V, Moberly AC, Pisoni DB, Tamati TN. Evolving perspectives on speech perception assessment in adults with cochlear implants. *Front. Neurosci.* 2025;19: 1667467