



## SURVEY RESULTS

### High satisfaction all around

Demographics data on respondents' location, age, and device use were collected. Ratings were performed on a scale from zero (very poor/difficult) to ten (very good/easy). Respondents had the option of indicating "I don't know" for items they were unable to rate. The number of respondents making use of this option for each item is indicated in the figures.

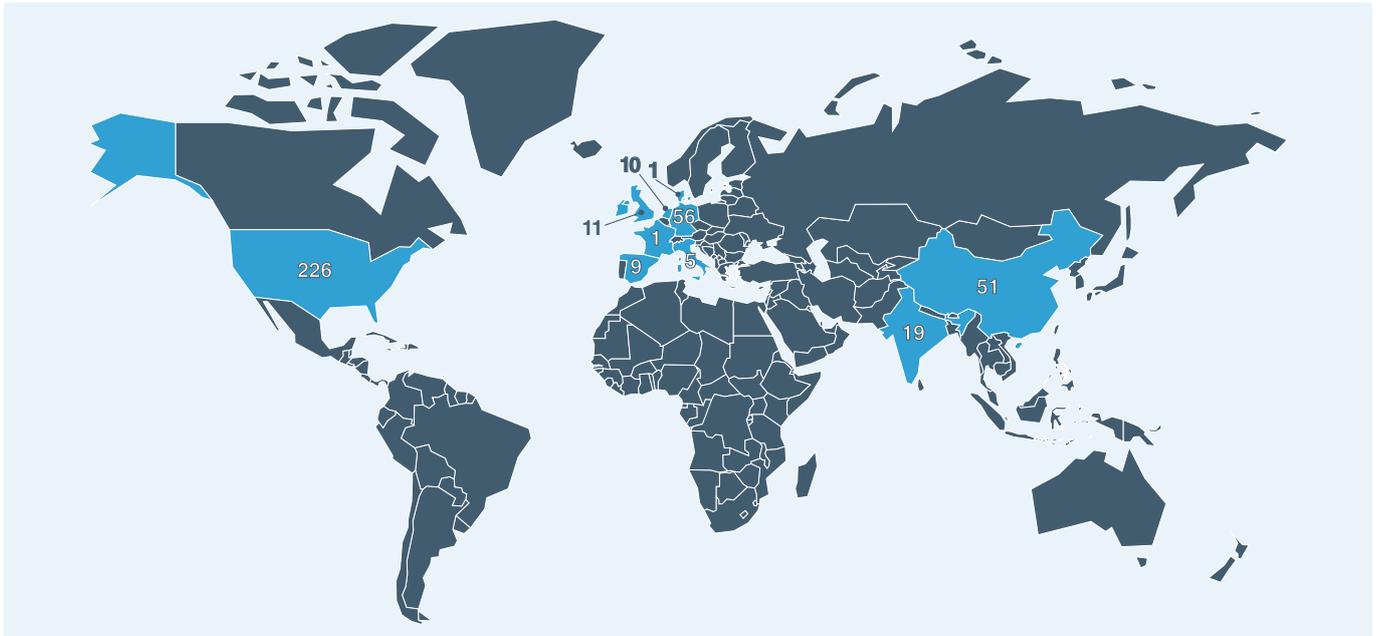


Fig. 1: Responses were collected from countries across the world.

## STUDY POPULATION

### Almost 400 responses covering all age groups

Overall, 389 responses were collected from the following countries: China, Denmark, France, Germany, India, Italy, Netherlands, Spain, the UK, and the USA. Of those, 300 had previously used another sound processor (77.1%), and 89 indicated that the current AB Hearing System was their first CI system (22.9%).

Among the respondents were 82 unilateral CI recipients (21.1%), 143 bimodal CI recipients (36.8%), and 156 bilateral CI recipients (40.1%). Eight respondents (2.1%) indicated using other hearing configurations. A breakdown of the respondents' age groups is shown in Fig. 2. The duration of use of the current AB Hearing System ranged from three months to more than 12 months, with the majority reporting a duration of use of three to nine months.

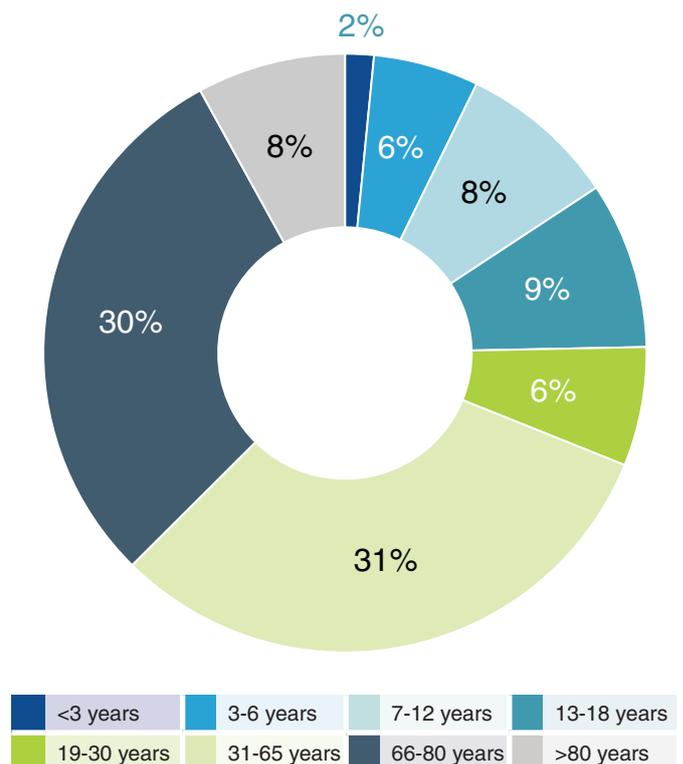


Fig. 2: All age groups were included in the survey.

## SOUND QUALITY AND SPEECH PERCEPTION

### *Superior sound quality and speech perception*

Several aspects of speech intelligibility and sound quality were rated in several listening scenarios (see Fig. 3). The results were analyzed for all user groups (unilateral, bilateral, bimodal) combined. All listening and conversation situations surveyed were rated positively with ratings significantly higher than 6 out of 10 and median ratings between 7 (good) and 10 (very good).

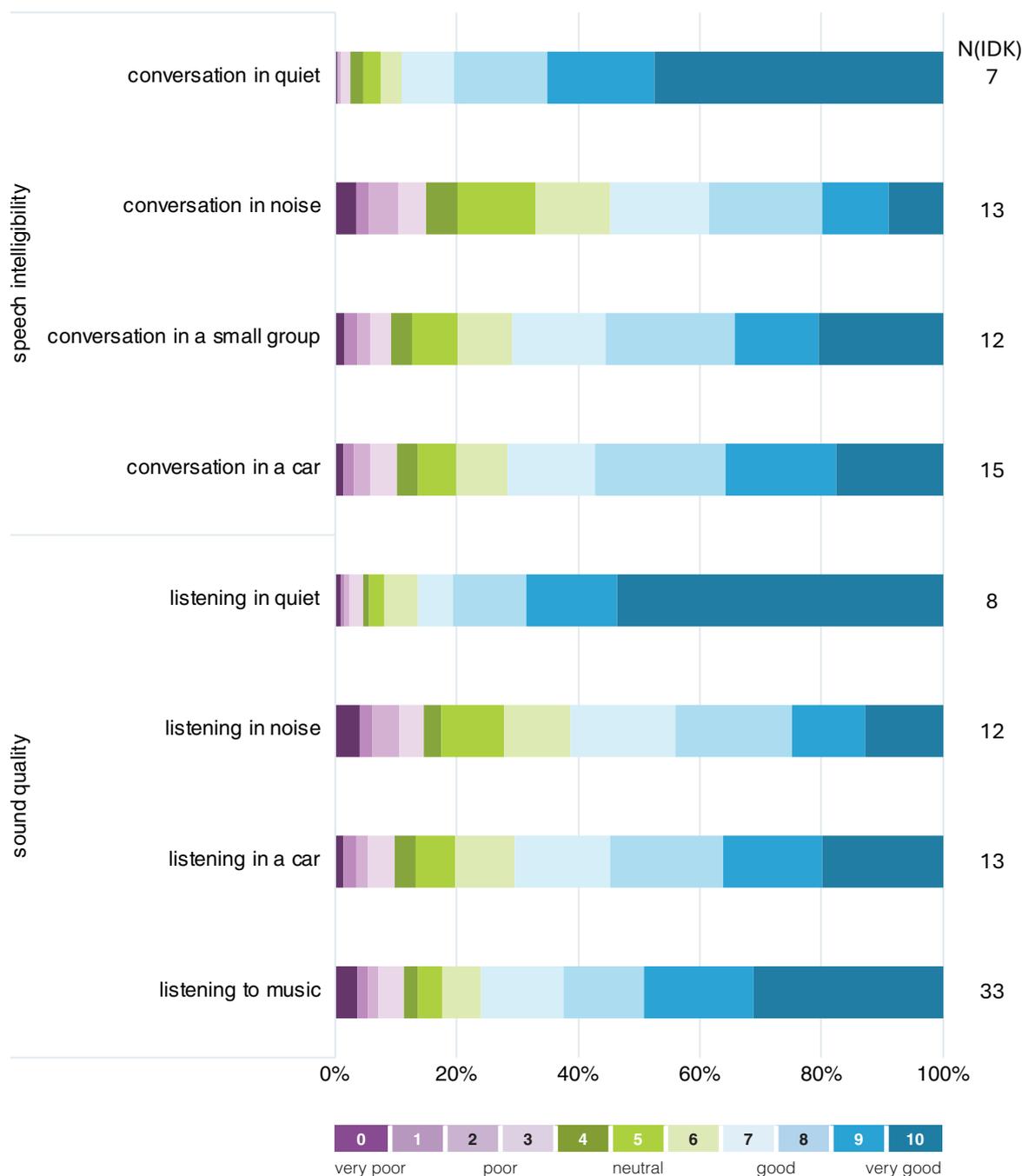


Fig. 3: Subjective rating of speech intelligibility (top) and sound quality perception (bottom). All items were rated as significantly higher than 6 out of 10. N(IDK) indicates the number of respondents who chose the "I don't know" option for each item.

\*One-sample Wilcoxon signed rank test.

# BLUETOOTH EXPERIENCE

## Bluetooth capabilities impress

Survey respondents were asked to rate their experience with several aspects of the current AB Hearing System's Bluetooth® capabilities, divided into the categories Phone, TV, and Media (see Fig. 4). The results were analyzed for all user groups (unilateral, bilateral, bimodal) combined.

While outliers with very poor ratings can be found for all rated items, all items were rated as significantly\* higher than 6 out of 10 and the median scores of 9 out of 10 for all items indicate high satisfaction with all aspects related to the Bluetooth® capabilities.

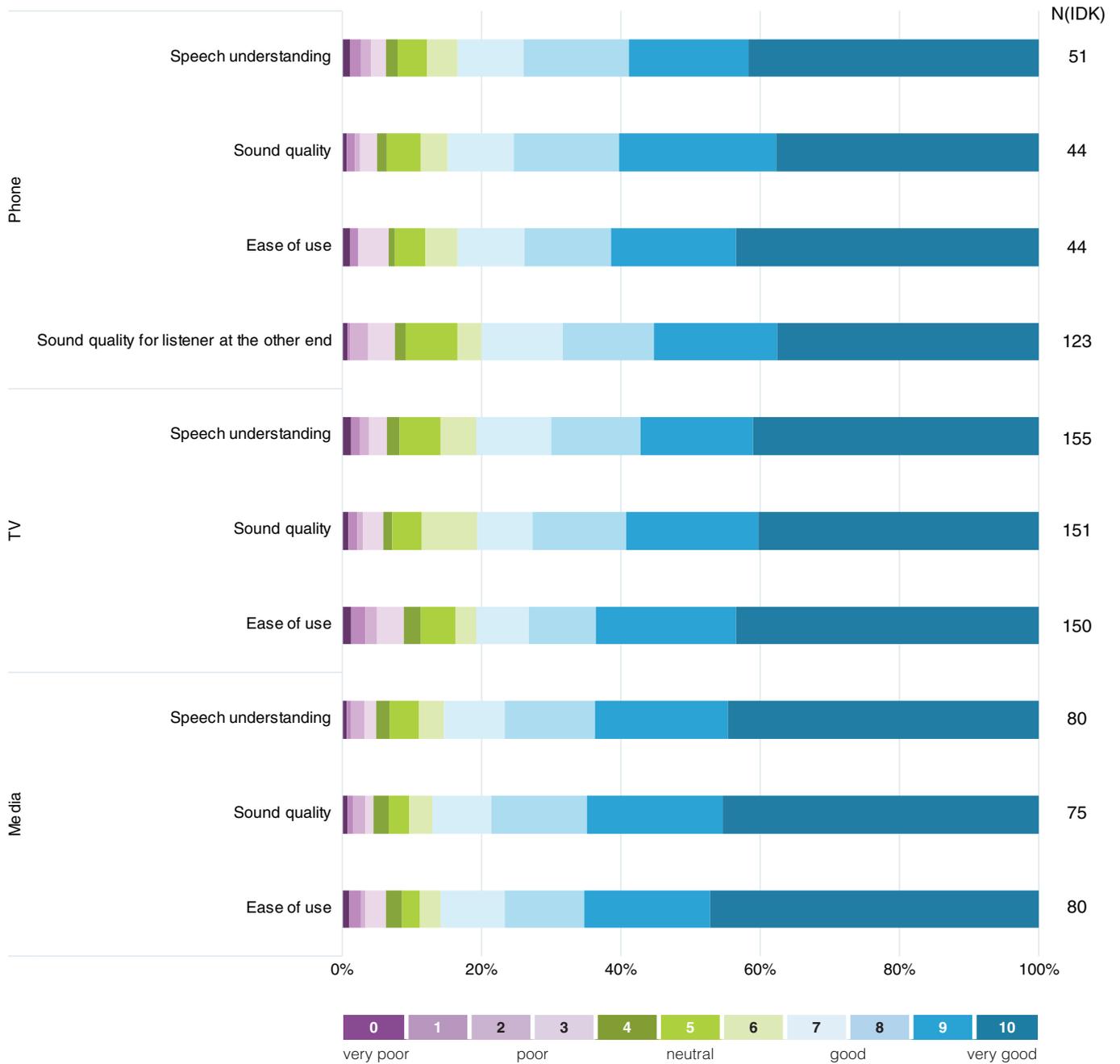


Fig. 4: Subjective rating of Bluetooth capabilities when using the Phone (top), TV (middle) or when streaming media (bottom). All items were rated as significantly higher than 6 out of 10. N(IDK) indicates the number of respondents who chose the "I don't know" option for each item.

\*One-sample Wilcoxon signed rank test.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Sonova AG is under license.

## BATTERY OPTIONS

*Medium sized standard battery is most commonly used*

The most used battery option used on the CI device among survey respondents was the M Battery Standard, followed by the M Battery Medium and the M Battery Large with 134, 110, and 92 respondents indicating their use. The least used battery option was the M Zn-Air Pak with only 11 respondents indicating using this option.

## USABILITY AND OVERALL SATISFACTION

*Easy to use and aesthetically pleasing*

Daily processor handling and care aspects of the current AB Hearing System (CI, HA, CROS, or combination thereof) were rated by survey respondents (see Fig. 5). All items were rated positively with ratings significantly\* higher than 6 out of 10. While ratings for connecting/removing the T-Mic showed the highest variability, the median rating of 8 out of 10 indicates that the task was easy to perform for most respondents. Switching programs was rated (median) 9 out of 10, and connecting/removing the batteries, connecting/removing the headpiece cable, and switching programs were rated (median) 10 out of 10, indicating that all tasks of daily processor care and handling are easy or very easy to accomplish for the respondents.

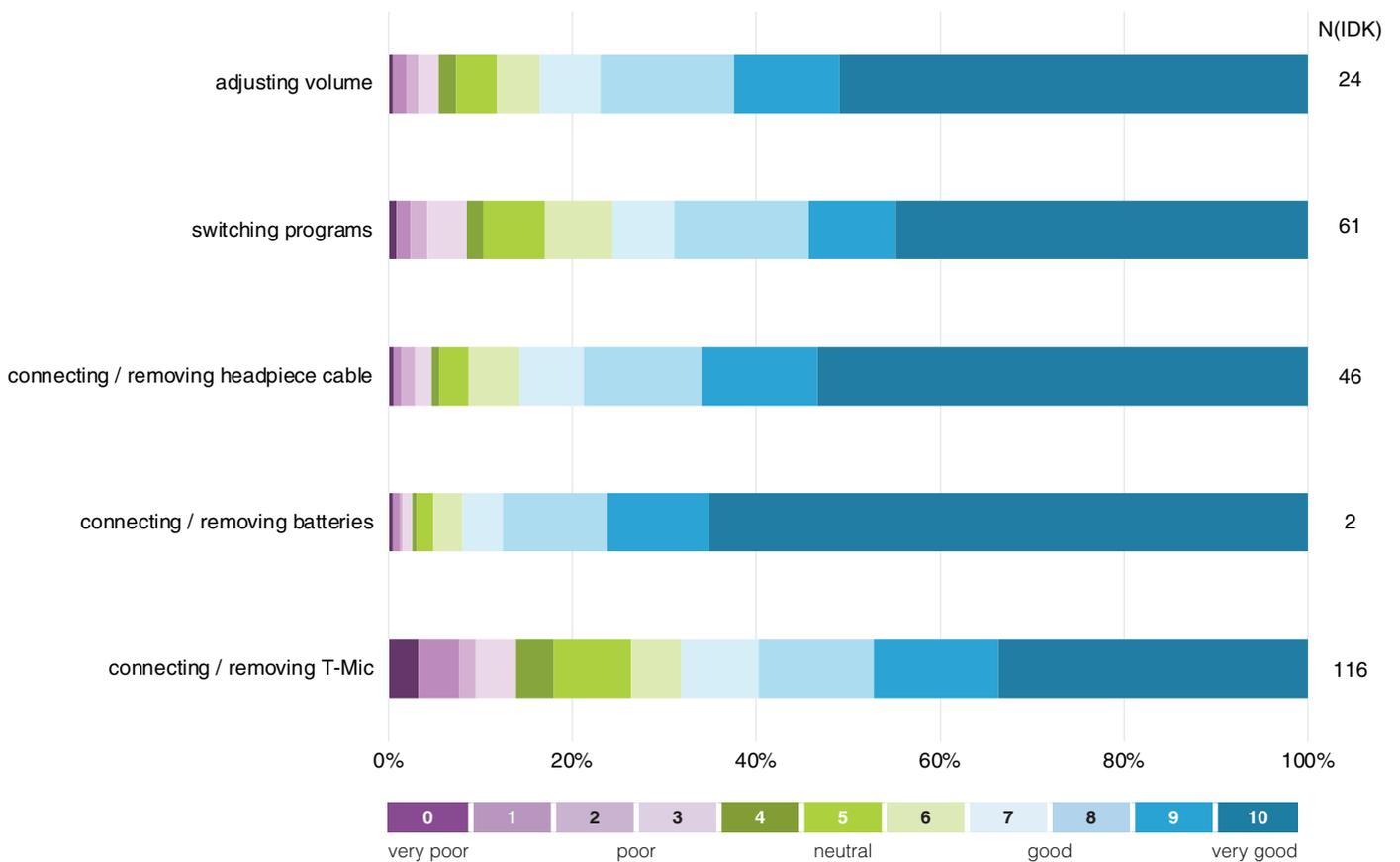


Fig.5: Subjective rating of different aspects of usability. All items were rated as significantly higher than 6 out of 10. N(IDK) indicates the number of respondents who chose the "I don't know" option for each item.

Ratings significantly\* higher than 6 out of 10 with median ratings of 9 out of 10 for each item and few outliers, suggests that the overall satisfaction and the cosmetic/aesthetic appearance of the current AB Hearing System was very positive.

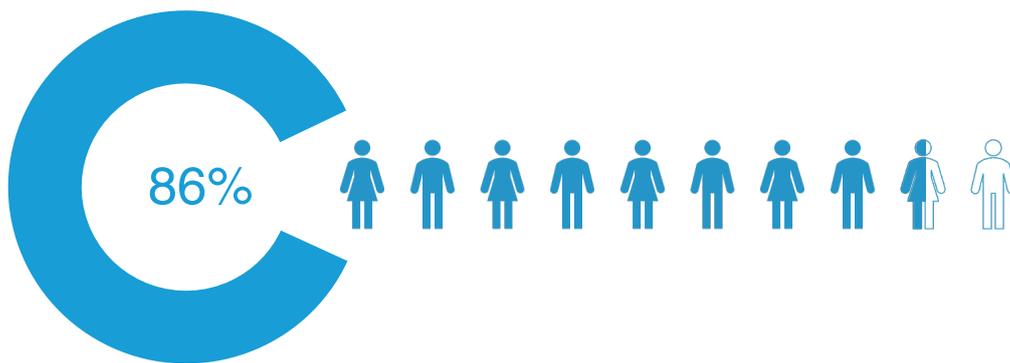
\*One-sample Wilcoxon signed rank test.

## SUMMARY

### *A well-received innovation*

The current generation of the AB Hearing System, consisting of dedicated sound processors (Naída CI M and Sky CI M), hearing aids (Phonak Naída Link M and Sky Link M), and CROS (Phonak CROS P-13) device, offers a complete portfolio of two-ear hearing solutions for all recipients.

Sound quality and speech intelligibility, even in challenging listening environments, were rated highly by the survey respondents. Daily use and maintenance of the devices was found to be easily manageable, and the aesthetic appearance of the devices satisfied respondents. The Bluetooth® capabilities integrated into the AB Hearing System received positive ratings across the bench.



*Fig. 6: Percentage of respondents rating their overall satisfaction as good or very good (7 or higher on a scale from 0 to 10).*

## REFERENCES

1. Marvel CI Technology - Leveraging natural ear acoustics to optimize hearing performance, White Paper, Advanced Bionics 2021, 028-Q049-02
2. AutoSense OS™ 3.0 Operating System - Allowing Marvel CI users to seamlessly connect with the moments they love, White Paper, Advanced Bionics 2021, 028-Q029-02
3. Buechner A, Bardt M, Kliesch S, Lenarz T and Brendel M (2024), Enhancing speech perception in challenging acoustic scenarios for cochlear implant users through automatic signal processing, *Front. Audiol. Otol.* 2:1456413, doi: 10.3389/fauot.2024.1456413
4. Agrawal S, Banik A, Nair A, Ajimsha KM, Jagmaag F, Backer S, Sasidharan P, Manoj MP. (2021). Real-world Evaluation of the Marvel CI Sound Processor in Children. 13th Asia Pacific Symposium on Cochlear Implants and Related Sciences. December 8th to 10th. Oral Poster: 28.