

Phonak

Field Study News

New Tap Control: providing a preferred and reliable alternative to access direct streaming functions

The new Tap Control function on Audéo Paradise rechargeable hearing aids is a reliable way for hearing aid users to access and control more direct streaming functions. This study was conducted at Aurora Operations and Distributions Center Sonova US with thirteen first-time users and showed that twice as many of the participants preferred the Tap Control function compared to an alternative method.

Adler, M., & Woodward, J. / August 2020

Key highlights

- The Tap Control function on Paradise rechargeable hearing aids allows clients to: accept/end phone calls, pause/resume audio streaming and access the voice assistant with a Bluetooth® paired cell phone.
- Twice as many participants preferred the new Tap Control function compared to alternative methods for controlling direct streaming.
- Nine out of thirteen participants rated the new Tap Control as "reliable" or "very reliable."
- Participants indicated they "loved the Tap Control function and ease of use."

- Tap Control is a beneficial option to offer hearing aid wearers as a way to have more control over the streaming options from a Bluetooth device to their hearing aids.

Considerations for practice

- It is important for hearing care professionals to counsel clients on how to use Tap Control before they leave the clinic, using the training function within Phonak Target software.
- The Tap Control function is turned on by default, but can be personalized by the hearing care professional in the Target fitting software or by the client via the myPhonak app.

Introduction

With the introduction of direct connectivity in Phonak hearing aids, hearing aid wearers need to be able to access and control more functions in their hearing aids.

Smartphone penetration has seen growth across all age groups, and the 55-75 category has seen the most growth increasing from 40% in 2013 to 80% in 2019 (Lee & Calugar-Pop 2019). A recent Mobile Consumer Survey by Deloitte in 2018 showed that adults aged 55+ represent the fastest growing cohort of voice assistant adoption (Watling & Lee, 2018). In addition, consumer needs research has shown a demand for simplicity of use (Abrams, 2015). This need for simplicity has been exemplified by the success of rechargeable hearing aids. Tap Control aims to take this a step further. Tap Control functions are already offered in many consumer electronic devices and would bring an additional way for clients to easily access features of their paired Bluetooth devices, via their Phonak Paradise rechargeable hearing aids.

Phonak's current receiver-in-the-canal and behind-the-ear hearing aids are controlled by a rocker switch, which is operated on the left or right hearing device with a short or long press or by pressing on the top or bottom part of the button. In addition to these existing functions, Phonak has introduced Tap Control as an additional possibility in Audéo Paradise rechargeable hearing aids. The aim of the Tap Control function is to bring connectivity features to clients to address the needs of active smartphone and app users in an easy and reliable way. A built in sensor within Paradise rechargeable hearing aids detects the double tap and activates one of three different functions from a Bluetooth device: (1) accept/end hands-free phone calls; (2) pause/resume audio streaming from a connected Bluetooth device; and (3) access voice assistant from a connected Bluetooth device.

In this study, reliability, user satisfaction and ease of use of Tap Control were evaluated.

Objective

The primary objective of this study was to evaluate whether adult first-time users with mild to moderate hearing loss rate the new Tap Control function in the Phonak Audéo Paradise rechargeable hearing aids as a reliable way of accessing phone calls, audio streaming and voice assistant compared to the current multi-function button or accessing the function on their phone. The secondary objective was to evaluate user satisfaction and ease of use when using Tap Control to access phone calls, audio streaming and voice assistant compared to the existing methods available.

Methodology

Participants

A total of thirteen first-time users participated in the study at Aurora Operations and Distributions Center Sonova US between February 25, 2020 and March 6, 2020. The participants had mild to moderate hearing loss (Figure 1) and good cognitive abilities. There were nine female and four male participants with an average age of 65 years (ages ranged from 58 to 70 years).

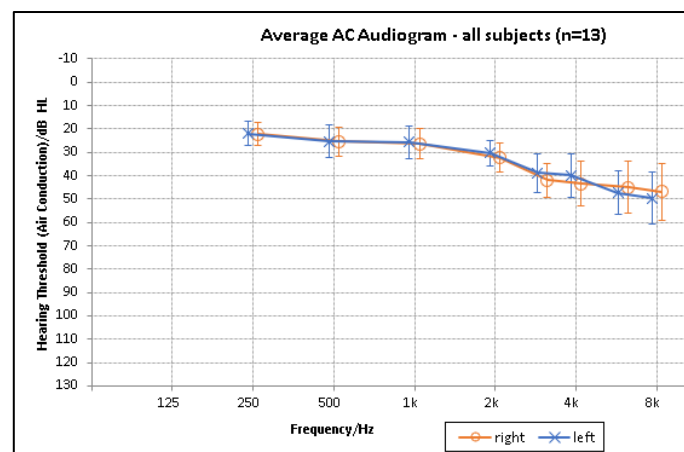


Figure 1 Average audiogram of all subjects participating in the study

All participants were fit with development product Phonak Audéo P-R hearing aids (firmware version 1.0.4.0) with domes and receivers based on the recommendation in Phonak Target for each participant's audiogram. Twelve participants were fit with M Receivers and one with the S Receiver. The hearing aids were fit in the Target fitting software (internal version 6.2.5.48295) using Noahlink Wireless (firmware version 2.19).

This study required participants to have a personal cell phone that had Bluetooth capabilities. The phone models used were: ten iPhone®, two Samsung® and one Google™.

Procedure

The study included two lab appointments with a one-week home trial in between.

Appointment #1

At the first visit, all participants were fit with the devices and a feedback test was conducted. The right hearing aid was paired to their personal cell phone and participants were trained on the various Tap Control and multi-function button functions. A comparison was completed in a randomized order for accepting/ending phone calls, pausing/resuming audio streaming and accessing the voice assistant using the Tap Control function vs. the button on the hearing aid or their phone, depending on the task. Usability and reliability testing was also completed. Participants were given a client questionnaire to respond to

prior to the second visit about their experiences during the one-week home trial.

Final appointment

At the second and final visit, first comments were discussed and the client questionnaire reviewed. In addition, reliability testing was completed again.

Results

The primary objective of this study was to evaluate whether adult first-time users with mild to moderate hearing loss rate the new Tap Control function in Audéo Paradise hearing aids as a reliable way of accessing phone calls, audio streaming and voice assistant compared to the multi-function button or accessing the function on their phone. After one week of use the participants rated reliability via the client questionnaire on a five point scale (very unreliable, unreliable, neutral, reliable and very reliable). In regards to accepting/ending phone calls, seven of the thirteen participants indicated that the Tap Control function was "reliable" or "very reliable" compared to ten for the multi-function button on the hearing aid. Six of the thirteen participants indicated that pausing/resuming the audio signal using the Tap Control function was "reliable" or "very reliable" compared to ten for accessing the function via the phone. Only eleven of the participants used the voice assistant during the home trial. Nine of the eleven participants indicated that the Tap Control function was "reliable" or "very reliable" for accessing the voice assistant compared to ten for accessing it via the phone.

The secondary objective was to evaluate user satisfaction and ease of use when using Tap Control to access phone calls, audio streaming and voice assistant compared to using the existing methods available. At the final visit after a one-week home trial, twice as many participants (62%) indicated that they prefer the Tap Control function compared to the alternative method (31%) for the various functions (Figure 2).

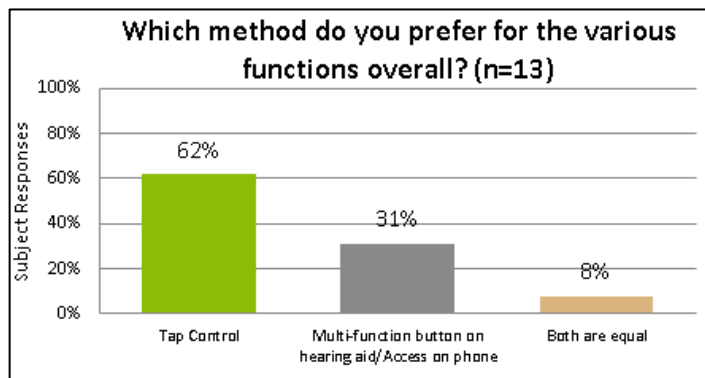


Figure 2 Final visit: Which method do you prefer overall?

54% of the participants indicated that the Tap Control function was simpler to use overall, compared to 31% for the multi-function button/access on the phone and 15% indicating "both are equal" (Figure 3).

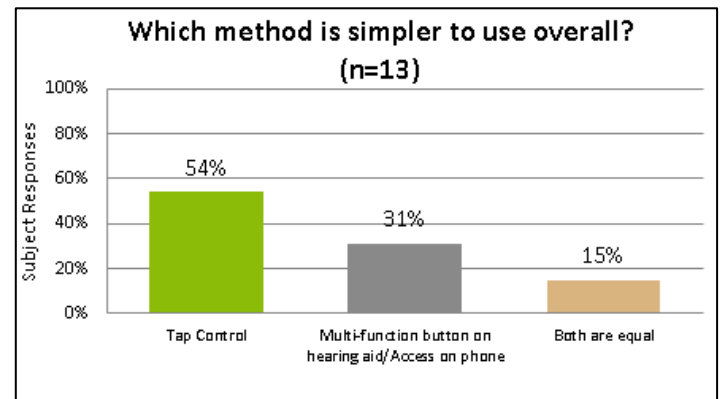


Figure 3 Final visit: Which method is simpler to use overall?

In addition, at the final visit participants rated reliability and sensitivity of the Tap Control as well as their confidence level with the various functions on the hearing aid.

Nine out of thirteen participants indicated that the Tap Control function was "reliable" or "very reliable" overall for the various use cases.

The sensitivity of the Tap Control function was rated as "too unresponsive" by 38% of the participants, "just right" by 54% and "too responsive" by 8% (Figure 4).

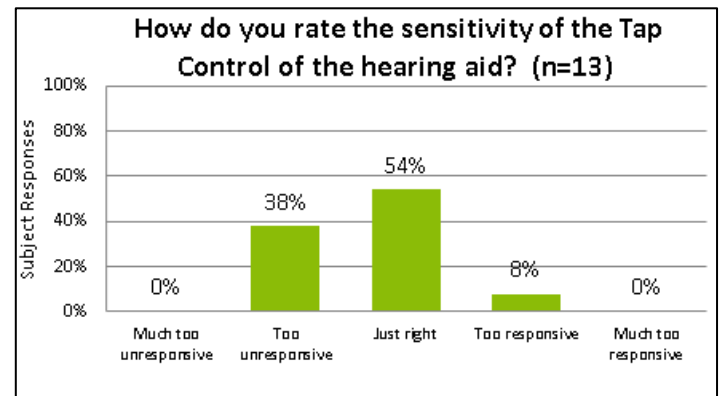


Figure 4 Final visit: How do you rate the sensitivity of the Tap Control?

Lastly, the participants were asked to rate how confident they were with the combination of the multi-function button on the hearing aid and the Tap Control function. Ratings for the combination of the two functions were "confident" for 62% and "very confident" for 15% of the participants after just a one-week home trial (Figure 5).

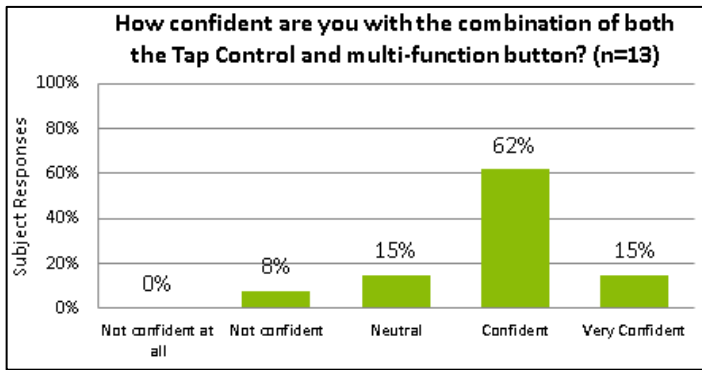


Figure 5 Final visit: How confident are you with the combination of both the Tap Control and multi-function button on the hearing aid?

Participants in the study shared various comments about their experiences with the Tap Control function: "being able to pause podcasts with devices was a game changer", "cool feature", "easier and more reliable", "quick learning curve", and "better than sliced bread". 77% of the participants indicated that they would purchase and/or recommend the device to friends or family. One participant indicated, "Absolutely. Loved the tap feature, ease of use and the sound quality."

Many participants indicated that the Tap Control function for the phone was the most common use case and was liked the most because of its ease of use and they didn't need to take time to find the button on the hearing aid. The Tap Control function can be configured in the myPhonak app to suit the client's needs and preferences.

Conclusion

The results from this study demonstrated that adult first-time users with mild to moderate hearing loss rate the new Tap Control function in the Audéo Paradise hearing aids as a reliable way of accessing phone calls, audio streaming and voice assistant compared to the multi-function button on the hearing aid or accessing the function on their phone. Although not as many participants rated Tap Control to be as reliable as using the alternative method, 9 out of 13 participants did rate the overall reliability of the Tap Control function as "reliable" or "very reliable." The sensitivity of the Tap Control was rated as "too unresponsive" by 38% of the participants, "just right" by 54% and "too responsive" by 8%. For some of the participants that didn't rate the sensitivity as "just right", this resulted in the ratings of the reliability to be decreased. For the participants that indicated the sensitivity of the Tap Control function was not sensitive enough, it is likely that more time spent using the feature could improve this rating.

Twice as many of the participants preferred the Tap Control function compared to using the multi-function button on the hearing aid or using the phone to access phone calls,

audio streaming and the voice assistant. In addition, 54% of the participants indicated that the Tap Control was simpler to use overall, compared to 31% for the multi-function button/access on the phone and 15% indicating "both are equal."

It is important for hearing care professionals to show clients how and where to tap so that they leave the clinic confident in how to use Tap Control. It is also important to counsel hearing aid users on factors that may affect the tap control, such as wearing glasses and having long hair. Tap Control is switched on by default, however hearing aid users can configure this function in the myPhonak app themselves to suit their needs.

The Tap Control function on Phonak Paradise rechargeable hearing aids is a quick and reliable option to offer clients more control over their direct streaming functions.

References

- Abrams, H.B. (2015). Marke Trak 9: A New Baseline, retrieved from <https://www.audiology.org/sites/default/files/conferences/Final%20MarkeTrak%209.9.16.15.Harvey%20Abrams.pdf>, accessed 23 April, 2020.
- Lee, P., & Calugar-Pop, C. (2019). Plateauing at the peak: The state of the smartphone. Deloitte Global Mobile Consumer Survey, May-Jun 2019, UK edition, retrieved from <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/technology-media-telecommunications/deloitte-uk-plateauing-at-the-peak-the-state-of-the-smartphone.pdf>, accessed 23 April, 2020
- Watling, T., & Lee, P. (2018). Talking to myself: Voice assistant usage goes mainstream. Deloitte Global Mobile Consumer Survey, May-Jun 2018, UK edition, retrieved from <http://www.deloitte.co.uk/mobileuk/assets/img/download/Global-Mobile-Consumer-Survey-2018-UK-Cut-Talking-to-myself.pdf>, <https://www.deloitte.co.uk/mobileuk2018/>, and <https://www.deloitte.co.uk/mobileuk2018/#taling-to-myself>, accessed 23 April, 2020.

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

Android and Google are trademarks of Google LLC.

iPhone is a trademark of Apple, Inc.

Samsung is a trademark of SAMSUNG

Authors



Megan Adler, Au.D., Research Audiologist, PARC, Phonak US

Megan is a Research Audiologist with Sonova. She has been with Sonova since 2008 and previously worked in Technical Support as part of the Customer Success Team. Her prior work history includes administering and interpreting audiological evaluations as well as hearing aid fitting and dispensing for adults and pediatrics at an Ear, Nose and Throat office. She earned her M.A. in Audiology at Northern Illinois University and Au.D. from Pennsylvania College of Optometry (now called Salus University).



Jane Woodward, MSc, Audiology Manager, Phonak HQ

Jane develops audiology training, coordinates studies and writes articles to provide evidence-based, impactful products, features and training. She holds an MSc (Audiology) and BSc (Psychology) from Southampton University and has many years of experience in hearing aid and software development. Jane gained extensive pediatric and adult clinical experience during her work in clinics in the NHS and Switzerland.