My Starkey Mobile App: User-driven simplicity and control

Chris Howes

The synergy between Starkey's new Genesis AI hearing aids, My Starkey mobile application (My Starkey) and a smartphone, allows for more than simply making basic hearing adjustments and streaming audio. My Starkey provides users with the most advanced and engaging functionality ever from a hearing aid app—from remote functionality, program customization, health and wellness support, remote programming, to an acclimation program loaded with content for both new and experienced hearing aid users.

Introduction

Starkey first introduced the ability to connect hearing aids to Bluetooth® compatible devices (like a mobile phone) via the Ear Level Instrument (ELI) close to two decades ago. Subsequent hallmark product lines such as the Starkey Halo allowed for seamless streaming with Apple products and empowered wearers with the ability to personalize their hearing aid settings using a mobile app.

Since those first initial products were launched, smartphones, hearing aids, and mobile apps that control them have been gaining more and more functionality and are now built to tightly integrate into our daily lives. While the overarching design philosophy of My Starkey centered around providing simplicity, there is recognition that hearing aid users' expectations and needs from their hearing aids have grown in sophistication over the years. One constant in this equation is the focus on providing the best possible enhanced hearing experience for Starkey hearing aid users and to continue supporting their needs in whatever situation they encounter.

Designing for the hearing aid user

My Starkey is built from the ground up and driven by extensive research and the most current user experience/user interface (UX/UI) guidelines for mobile apps.

The most important UX driver for My Starkey was and is the voice of hearing aid users themselves. The My Starkey UX/UI design is a result of thousands of user feedback points from over 100 hearing aid users and over 500 hours of interviews and observations.

The user research methodology incorporated 5 different research cycles:

- Extensive background market research on the hearing-related mobile app landscape through an external consultation company as well as leveraging internal market and clinical research
- Initial user-driven research to investigate hearing aid user control using the mobile app (11 participants)
- Four rounds of usability testing spanning over 60 sessions with 32 participants aged between 55 and 75 years
- User interface testing on the functional mobile app design with 10 participants aged between 60 and 75 years

- A clinical research study carried out on the completed mobile app and Genesis AI hearing aids evaluated using the System Usability Scale *(Brooke, 1996)* across 43 research participants, achieving a high usability score of 82.0 *(Fig 1)*. System Usability Scale scoring can be thought of similarly to grading on a curve and a score of 68 is considered average while any score higher than 80.3 gives that product an "A" (top 10% of scores). This level of score is where users of the product are more likely to recommend it to a friend.

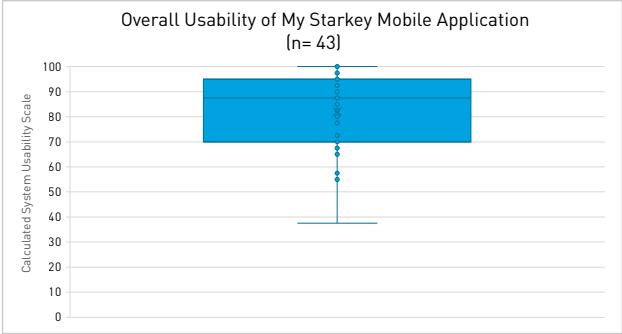

Figure 1: System Usability Scale score responses for My Starkey

Overall Design

After synthesizing the body of market and user-driven research, the UX/UI for My Starkey is intentional with features and functions aligned to the hearing aid user's priorities. Features and functionalities that are commonly used are placed up front for easy access and other items that are used less often are located one or two levels deeper.

Home

The main screen for My Starkey is the Home screen *(Fig. 2)*. This section provides users with the status of their hearing aid battery and wireless connection to the smartphone. There is full control over the volume level of the hearing aid microphone(s) and the ability to mute the hearing aid(s) if desired.

The current, active program is displayed by default on the Home screen. Navigation to other (professional or custom) programs is made simple by swiping across the screen in either direction or by opening the Programs menu.

Edge Mode+

Edge Mode+ is Starkey's second generation on-demand adaptation feature that is designed to optimize clarity and comfort when engaged by the hearing aid user. In this version, hearing aid users can decide their listening intent (Enhance speech or Reduce noise, see Figure 3) for the sound environment that they're in through a simple interface on their phone. Of those asked, over 90% of users (n=35) found the ability to select listening intent in My Starkey app to be beneficial. *(Fig 4)*

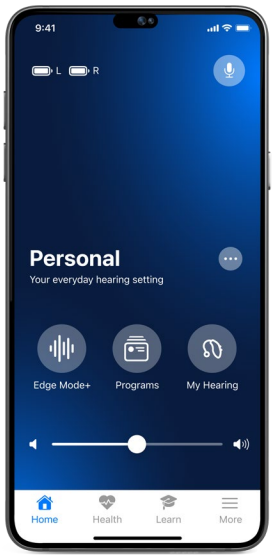

Figure 2: My Starkey Home screen

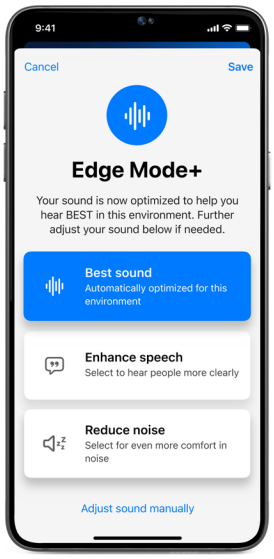

Figure 3: My Starkey listening intent screen

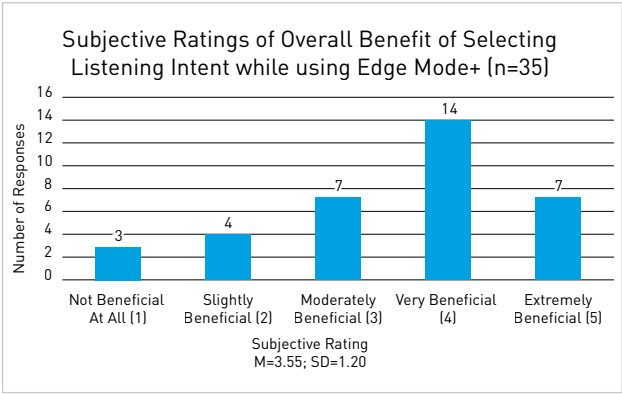

Figure 4: Perceived overall benefit of Edge Mode+ user intents

Programs

Through the program menu, it's easy to see all available program options and select a program to use. The user can even create new custom programs based on those originally created by their hearing professional.

My Hearing

In this section, hearing aid users can make adjustments to microphone volume, Self Check, Find My Hearing Aids, and other hearing aid settings (Tap control, Audio streaming, Smart Assistant mic, Auto on/off).

Customize

The My Starkey customization feature turns the smartphone into a personal-adjustment tool, by providing the ability to modify the response for any of the professionally adjusted programs, to better suit a particular environment or scenario *(Fig 5)*. This feature is perfect for when a user wants to do some extra fine-tuning of the hearing aid response shape, specific to their current environment.

The Adjust sound area provides added flexibility for personalizing the performance of hearing aids through a frequency equalizer and control of adaptive noise reduction features for noise and wind noise.

Learn

My Starkey has introduced an integrated acclimation program (Learn) to provide helpful and timely content to the hearing aid user that is specific to their hearing aid and experience using hearing aids *(Fig 6)*. This feature supports the hearing care professional during the early acclimation period when hearing aid users are getting used to their devices and may even minimize or shorten the time spent counselling in clinics during the early fitting process.

Learn is filled with articles, lessons, and videos that are delivered in a timed and targeted fashion through the "New for you" section. This will update with new content as the hearing aid user goes through the initial weeks and months of new hearing aid use. All of the content is also searchable and presented in popular topics for quick discovery.

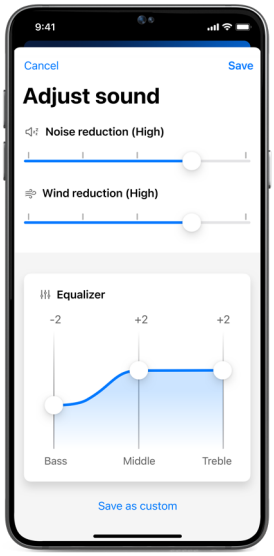

Figure 5: Adjust sound customization screen

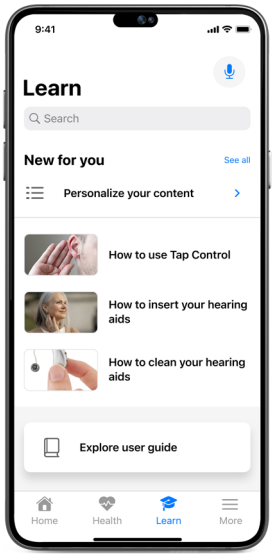

Figure 6: My Starkey Learn content screen

Health

My Starkey coupled with the Genesis AI hearing aids provides the user an easy, yet powerful way to monitor and support a variety of health metrics. Taking advantage of the integrated sensors and artificial intelligence in Genesis AI, My Starkey compiles and presents health data in an easy-to-view fashion.

Hearing Report

Hearing report is a weekly delivery to inform the user of a few items regarding their hearing health. *(Fig. 7)*

- Hearing aid usage measures the amount of time the hearing aids are worn.
- Interaction measures how much time is spent in environments where the user engages in conversation with others or streams audio, like phone calls.
- Environment measures the variety of environments and situations experienced throughout the day.

The hearing report provides insights and tips for the hearing aid user to reinforce the use of hearing aids in all environments.

Activity

- The Activity section is a measure of progress toward three daily goals: Steps, Standing, and Exercise. My Starkey provides a detailed visualization of these goals *(Fig. 8)*.
- Steps shows the number of steps taken during the day and can be expanded to show time of day and distance.
- Exercise shows the number of minutes that the user was active at more than a basic walking pace and can be expanded to show time of day when the user was most active.
- Standing displays the number of hours during the day when the user was up and moving for at least one minute.

My Starkey maintains a history of these measures to show progress over time.

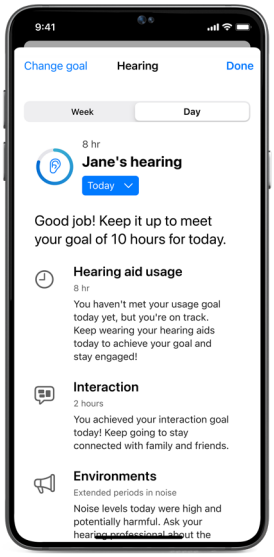

Figure 7: Hearing report screen

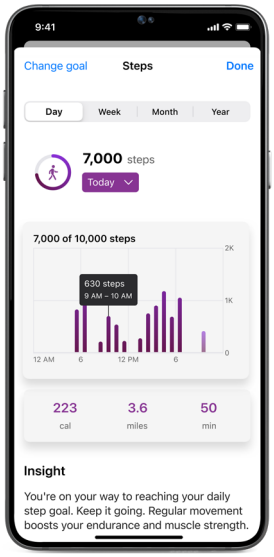

Figure 8: Activity screen

Wellness

Starkey continues to be the only manufacturer to alert the user and Fall Alert contacts when a fall event is detected by using the motion sensors onboard the hearing aids. The Fall Alert feature is located in the Wellness section of the app *(Fig. 9)*.

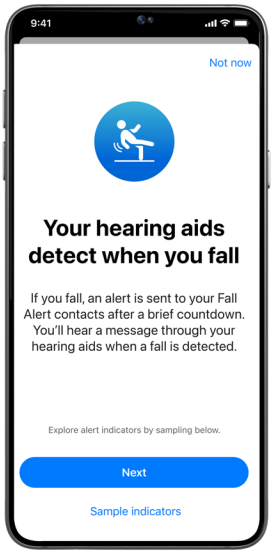

Figure 9: Fall Alert screen

More

My Starkey offers additional features in the More section. Many of Starkey's world-first smart hearing aid features, which will be discussed in this section, can now be found in the More section, along with the industry-only Hear Share settings. Hear Share is a companion app to My Starkey which allows a caregiver to view shared data like hearing aid battery level, activity levels, and hearing data. Additional configurations like privacy setting can also be found in More.

Help Center

Help Center offers a full and detailed user guide and options to contact customer support.

TeleHear

Allows a user to have a virtual appointment with the hearing care professional. TeleHear enables the hearing care professional to make remote adjustments to the hearing aids through two-way live video chat.

Reminders

Reminders can help users keep track of important tasks, appointments and more without having to remember them all. Reminders are streamed directly to the hearing aids.

Transcribe

Transcribe feature allows the user to see spoken words displayed as text on the phone. This feature can be used to transcribe conversations or voice memos that can then be saved or sent through multiple smart phone applications.

Translate

Translate feature facilitates connections and communication with others by integrating a multilingual, machine translation service. When paired with Genesis AI devices, My Starkey supports near real-time translation of over 70 different languages, and the translation streams directly to your ear in your preferred language.

Conclusion

My Starkey is an easy-to-use app that puts the user in control of their Genesis AI hearing aids. My Starkey provides an amazing array of features designed to enhance the listening experience in simple app that makes using hearing aids a fun and personalized experience.

Learn more about the My Starkey app and its functionalities here: https://www.starkeypro.com/products/mobile-apps/my-starkey

References

1. Brooke, J. (1996). SUS-A quick and dirty usability scale. *Usability evaluation in industry*, 189(194), 4-7.

Author Biography

Chris Howes is a Senior Software Product Manager at Starkey. Chris has worked at Starkey for over 25 years across all areas of product research and development. His primary focus is the design and development of mobile and cloud software for all aspects of hearing aid interaction. Chris holds multiple granted patents across a wide range of concepts and was awarded Starkey Inventor of the year in 2016.