

Offering the utmost support for new clinicians

Oticon Optimal Fitting Series No. 2 - 2022 updates

INTRODUCTION

This whitepaper is the second edition of the Oticon Optimal Fitting Series, where we take a clinical dive into new offerings from Oticon.

A hearing aid fitting can be straightforward or include some complexity. Especially for clinicians who are new in their field, some hearing aid fittings may require a helping hand. To offer that support, this paper introduces Oticon Fitting Assistant with the purpose to inspire both experienced and new clinicians in their daily clinical work. To illustrate its function, the paper will provide examples of how Fitting Assistant can be utilized in two use cases.

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Oticon Fitting Assistant

When users of hearing aids seek help with perceived issues, often, commonalities or shared themes seem to occur. The user may say that his/her voice sounds too echoey, or a new user may suddenly perceive sounds present in daily life, such as cutlery, as too loud. In Spring 2021, we introduced Oticon Fitting Assistant to you, the hearing care professional. With this new tool, you can apply solutions for most of the concerns raised by clients by clicking a few buttons in Oticon Genie 2.

Oticon Fitting Assistant supports clinicians in performing a personalized fitting to ensure the satisfaction of hearing aid users. The tool includes trimmers related to gain, Maximum Power Output (MPO), and Transient Noise Management, as well as textual recommendations, such as "Change to a more closed dome/vent". From 2022, Fitting Assistant includes trimmers related to MoreSound Intelligence™ (MSI) and feedback issues. The updated Fitting Assistant supports new clinicians in their first years of practicing audiology, but more experienced clinicians may also find inspiration and input to their fine-tuning, especially when addressing the handling of unwanted noise using the MSI feature.

MoreSound Intelligence™ trimmers

When the hearing care professional is targeting noise reduction issues, Fitting Assistant will suggest solutions related to **Environmental configuration**, **Neural Noise Suppression - Difficult** and **Neural Noise Suppression - Easy**, if applicable. Solutions related to **Virtual Outer Ear** and **Sound Enhancer** may also be suggested, depending on the issue for the specific client. Due to the nature of MSI, the solution will always be symmetrically, hereby meaning applied in right and left hearing aid in cases of bilateral hearing loss.

When a complaint is chosen in Fitting Assistant, up to three MSI solutions can be combined. This demonstrates how fine-tuning of MSI can impact the fitting and the experienced benefits of the hearing aids.

Even if the hearing care professional chooses not to apply the solution, it can serve as an educational and inspirational tool for clinicians with varying levels of experience.

Feedback recommendations

Feedback issues may be experienced by some clients, and these complaints cannot be ignored. Therefore, Fitting Assistant now includes solutions for this purpose. Complaints can be related to the hearing aids whistling when using the phone, listening to music, or in general. Fitting Assistant offers contextual solutions such as "Check the tubing or casing for cracks" or "Consider using streaming or a telecoil loop system", and may suggest changes to the gain settings.

Conversational guidance

Clinicians, whether new in their field or with Oticon hearing aids, or having many years of clinical work behind them, will meet hearing aid users who find it difficult to verbalize and specify their issues. Often, the general complaints are "I don't like the sound" or "it sounds wrong". Understanding the underlying audiological issue and correcting this in the fitting software can be a challenging task.

Therefore, Fitting Assistant is built as an excellent conversation starter with a short, easy, and understandable descriptive text for each complaint. This gives as much help as possible, being very aware of the time pressure clinicians often experience.

When addressing a complaint, Fitting Assistant first offers six topics to choose from, where each will activate more specific complaints. These are excellent reference points during the conversation and can help the client verbalize his/her issues. Fitting Assistant then offers the possibility to apply one or more solutions for the specific complaint chosen. Based on this step-by-step approach divided in three manageable boxes, the hearing care professional, together with the client, can easily specify and target the issue.

How to use Fitting Assistant illustrated by two different use cases

The hearing aid fitting contains two leading parts: The client and the hearing care professional. How Fitting Assistant is utilized depends a lot on the specific client, his/her complaints, and how the hearing care

professional likes to work. The following section illustrates how Fitting Assistant can be utilized with two different use cases.

Meet Mr. Davies.

He recently graduated as an audiologist and began his first full-time employment in a private clinic. He has some experience working as a part-time audiologist at the local public hospital during his studies, but he was always supervised by an educated audiologist when fitting hearing aids.

Mr. Davies has appointments with Mr. Lewis and Ms. Green during his first 5 months in the private clinic.



Meet Mr. Lewis.

He is a new hearing aid user, and he sees Mr. Davies for his second appointment. Mr. Lewis has a moderate-to-severe bilateral hearing loss and has been trying Oticon More 1 for the last three weeks. On Mr. Davies' suggestion, he has written four pages of notes with his experiences with Oticon More, which he hands to Mr. Davies. Mr. Lewis is a very talkative and engaged client, and starts discussing his issues already when met in the waiting area.

Mr. Davies' approach

When talking to Mr. Lewis, Mr. Davies has a hard time grasping the specific issues, so he skims Mr. Lewis's notes. He notices some themes related to issues with perception of own voice, sudden loud noises, and the sound quality of music, and he asks Mr. Lewis to elaborate on them one at a time. While Mr. Lewis is presenting his experiences, Mr. Davies listens carefully, clicks on **FITTING ASSISTANT** under More tools in Oticon Genie 2, and clicks around to get an overview of the issues.

He navigates to the **Select topic** box, where he clicks on **OWN VOICE** to accommodate what Mr. Lewis describes as his biggest issue, his voice being too boomy. Mr. Davies asks if he experiences his voice inside or outside his head. After listening to Mr. Lewis, Mr. Davies clicks on **OWN VOICE IS HEARD INSIDE YOUR HEAD; IT IS TOO LOUD, BOOMY OR**

CLOSED/OCCLUDED in the **Specify complaint** box (this box specifies the selected topic, and categorises the related issues, and some categories may contain undercategories for more specific complaints). Mr. Davies reads the suggested solution in the **Apply solution** box, and hover over the help text icon **i**, to check if he is satisfied with the suggested additional gain for low frequency soft and moderate sounds. He clicks on **BOTH** to apply the settings in both hearing aids. He asks Mr. Lewis if he notices a positive change to the perception of his own voice, which he does. Mr. Davies continues to handle the remaining complaints until Mr. Lewis is ready to leave the appointment satisfied with the fine-tuning.

Mr. Davies chose not to show Mr. Lewis the Oticon Genie 2 fitting screen on the clinic's second monitor, while he was working in Fitting Assistant. Mr. Davies was worried that 1) showing the screen might confuse or mislead Mr. Lewis in his explanation of the issues, and 2) that the additional clicks due to less experience with Genie 2 compared to a more experienced clinician may seem less professional.



Meet Ms. Green.

She has been wearing hearing aids for 9 years and was recently fitted with Oticon More 2 by Mr. Davies. Ms. Green has a mild-to-moderate bilateral hearing loss and was satisfied with her previous hearing aids. Ms. Green is a very quiet client and finds it difficult to verbalize her issues.

Mr. Davies' approach

Mr. Davies starts by asking Ms. Green how she is feeling about her new hearing aids. Mr. Davies wants to understand the main issues, so he asks her to tell the most bothersome things. While she talks he writes down two topics: Understanding speech and background noise being too loud.

Mr. Davies shows Ms. Green the Fitting Assistant screen on the clinic's second monitor. He clicks on **SPEECH** in the **Select topic** box, and asks if she experiences issues related to **Speech loudness**, **speech quality**, or listening to **Speech in noise**, as now visualised in the **Specify complaint** box. Initially, Ms. Green points at **Speech loudness**, but when asked where it mostly occurs, she elaborates and says mostly in the car. When clicking on **SPEECH IN NOISE**, Mr. Davies selects **SPEECH IN LOW FREQUENCY NOISE (E.G. CAR) IS UNCLEAR**. He reads the description of the recommended solution in the **Apply solution** box, apply it in both hearing aids, and tells Ms. Green to notice if the issue persists the next time she has company in her car.

When talking about the second issue, Ms. Green expresses that noise around her is too loud in most situations with just a slight level of soft noise, like at her office, so Mr. Davies opens MoreSound

Intelligence under Fitting. He knows that adjusting **Environment configuration** from Moderate to Simple will apply more noise reduction, which he chooses, but he is wondering if he can help Ms. Green even more.



Therefore, he navigates to Fitting Assistant and replicate the issue by choosing **NOISE** in the **Select topic** box, then **ENVIRONMENTAL NOISE** in the **Specify complaint** box, and finally **BACKGROUND NOISE TOO LOUD**. He reads the recommended solution in the **Apply solution** box which among other things suggests to increase **Neural Noise Suppression - Easy** from 0 to 2 dB. Mr. Davies wants to understand this feature, so he hovers over the solution and reads the pop-up help text (which shortly explains the specific feature/handle that will be activated with the solution). He clicks on **ADDITIONAL SOLUTION** and learns that he can also decrease gain for soft, moderate, and loud input levels for mid frequencies by 2 dB. Without applying the solutions in Fitting Assistant, he goes back to the MoreSound Intelligence pane and adjusts **Neural Noise Suppression - Easy**. He notes down that the additional gain solution may be applied if Ms. Green continues to experience that background noises are too loud.

Mr. Davies felt that he had great success showing the Fitting Assistant screen to Ms. Green, as it helped her verbalize her issues and structured their conversation, when it came to the issue of understanding speech in the car.

Clinical value of Fitting Assistant

As mentioned previously and illustrated in the use case of Ms. Green, Fitting Assistant is excellent as a conversation guiding tool, especially for clients that find it hard to express what they are experiencing. Showing the list of potential complaints may help the client structure this.

Fitting Assistant also serves as a great back-up tool supporting the hearing care professional during the fitting. New clinicians or clinicians who just started fitting Oticon hearing aids may encounter situations where they are in doubt, or think "did I do it right?" and "did I overdo it?". Matching the manual fine-tuning to what Fitting Assistant suggests, by reproducing the issue in the tool, may leave the hearing care professional with peace of mind, that a good fitting was provided.

From a practical point of view, if the hearing care professional regrets applying a solution in Fitting Assistant, the undo  button reverses the action. For clarity, when a solution is recommended and clicked on, the impacted area will be colour marked in the gain graph (see Figure 1). Finally, Fitting Assistant always suggests at least one solution to an issue, and the additional solution (where maximum one solution is offered) can serve as an expanded approach.

Limitations

If a feature is not available due to the price point, hearing aid generation, or model, solutions related to the feature will not be shown Fitting Assistant. Besides, as mentioned, solutions related to MSI are always applied symmetrically. If the client is wearing an Oticon CROS solution, MSI trimmers will not be available. Instead, Fitting Assistant provides solutions related to gain. In the case of an Oticon BiCROS solution, MSI trimmers will be available on the side of the receiving hearing aid.

In cases where gain has either a minimum or maximum value in the gain grid, changes to gain levels in Fitting Assistant are restricted. This means that Fitting Assistant has more stringent restrictions than manual fine-tuning, which ensures that Fitting Assistant does not recommend solutions that will alter the gain drastically where other solutions may be more appropriate, e.g., a new audiometry or change of acoustics.

When Speech Rescue™ is activated, Fitting Assistant operates in the following way: If High frequency bands are set to OFF in the Speech Rescue panel, Fitting Assistant will override this by allowing high frequency gain changes, unlike for manual fine-tuning. The hearing care professional will be alerted via a text warning.

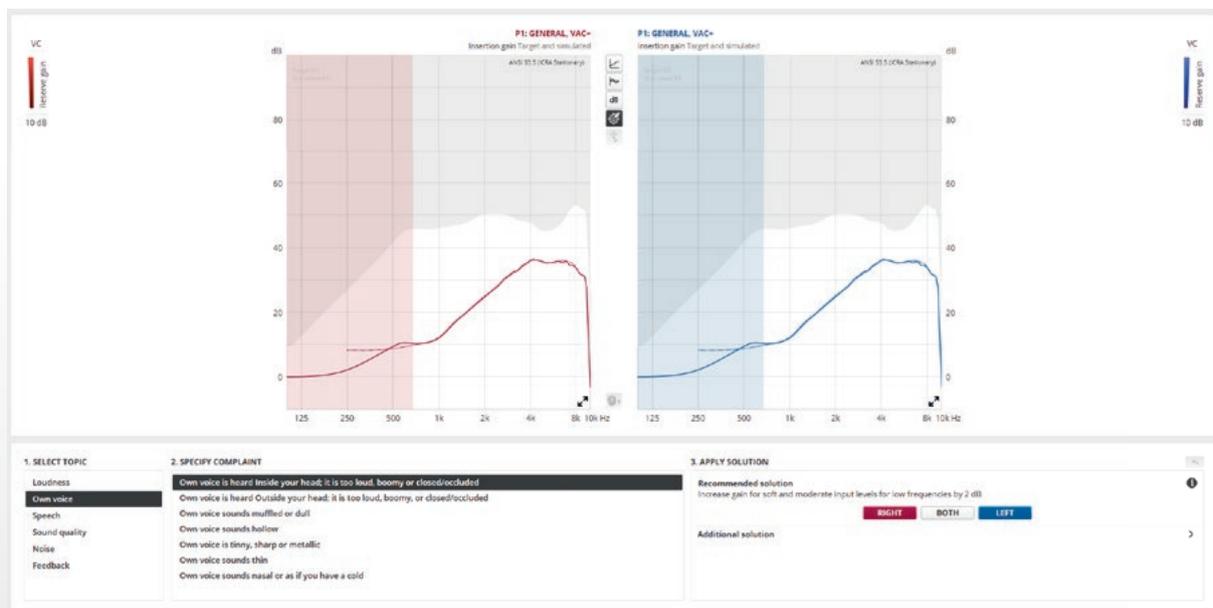


Figure 1. An example of a fitting in Oticon Fitting Assistant.

At Oticon we recognize that for some clinicians, manual adjustments and full control is the preferred approach to a hearing aid fitting. Other clinicians may prefer to receive transparent automatic help in their fitting and Fitting Assistant is a tool for those clinicians seeking that additional help from Genie 2.

Summary

With Fitting Assistant, we introduce a new, beneficial tool for clinicians. As illustrated by two different use cases, Fitting Assistant can be implemented in the daily clinical work in a way that suits you, the hearing care professional. It offers support and guidance for new clinicians, among other things by guiding the conversation, and it can provide inspiration for experienced clinicians, for example when encountering issues with noise reduction. Fitting Assistant may help hearing care professionals trust their first fittings, and this is a great start to many years of satisfied clients walking out of the clinic with well-fitted Oticon hearing aids.



