

ASKING THE EXPERTS: HEARING CARE PROFESSIONALS' VIEW OF WIDEX

OLIVER TOWNEND, B.SC., LEAD AUDIOLOGIST

LAURA WINNTER BALLING, PH.D. EVIDENCE AND RESEARCH SPECIALIST

With the launch of a new hearing aid platform – and maybe especially with one like WIDEX MOMENT™ with its revolutionary ZeroDelay™ technology – a lot of work goes into testing and verifying the effect of the new features and studying how they are experienced by hearing aid users (see for instance Balling, Townend, & Helmink, 2021; Balling, Townend, Stiefenhofer, & Switalski, 2020; Kuk, Ruperto, Slugocki, & Korhonen, 2020; Slugocki, Kuk, Korhonen, & Ruperto, 2020). But hearing rehabilitation of course does not happen without the hearing care professional (HCP), and it is crucial to Widex to understand the HCPs' experiences of the full hearing solution, including both hearing aids and fitting software. This is a pivotal part of the development of our fitting software, but also an important objective after the launch, when the products are used in the everyday practice of HCPs all over the world. To that end, this article presents the results of a survey of HCPs about their experiences working with WIDEX MOMENT and Compass™ GPS 4.

1. METHOD

29 experienced HCPs from the US, the UK, Canada and Germany answered a survey about their perception and experience of the WIDEX MOMENT hearing aids, the PureSound program, and the Compass GPS fitting software. They were all experienced HCPs with between 3 and 35 years' (mean 16.6) of experience fitting Widex hearing aids. The HCPs all had patients that were enrolled in the end-user field survey reported by Balling et al. (2021) and thus constitute a group of HCPs who are interested in taking part in research.

With one exception who had only fitted two devices, the respondents' answers were based on at least eight and up to over 200 fittings of WIDEX MOMENT, giving them a good basis for evaluating the product and the software. The responses were collected between September and November 2020, covering experiences with Compass GPS 4.0 and 4.1. Later in this article, we briefly touch on updates to Compass GPS in the 4.2 and 4.3 versions.

The survey questions addressed the HCPs' perceptions and experiences with the WIDEX MOMENT platform, both in general and specifically with the sound quality, and with the PureSound™ program. In addition, there were questions concerned with the usability and functionality of Compass GPS. All except one of the questions were phrased to use the same seven-point answer scales, ranging from 'Strongly disagree' to 'Strongly agree'.

2. THE WIDEX MOMENT PLATFORM

The MOMENT hearing aids include two major innovations in sound

- ZeroDelay processing, which radically reduces the delay in the processed sound (Balling et al., 2020; Kuk & Slugocki, 2021) and virtually eliminates the delay-based distortion known as the comb-filter effect, which is characteristic of other premium digital hearing aids. ZeroDelay processing is implemented in the PureSound program, which is targeted at users with mild-to-

moderate hearing losses, who are likely to have the type of open fittings where delay-based distortion is most prominent, and whose milder hearing losses make the distortion likely to be more audible.

- TruAcoustics, which adjusts gain depending on the acoustics of the individual's ear canal and the precise coupling used in the hearing. This means that the sound is optimized for the individual user. This is relevant to all users, including both Universal and PureSound users.

In addition, the MOMENT platform came with a major update to the fitting software, Compass GPS 4, including revised acoustic selection with new recommendations of eartips, a revised feedback test, and an interface designed to be fast and intuitive to use.

3. PERCEPTIONS OF THE MOMENT HEARING AIDS

Turning to the HCPs' view of this platform, their general satisfaction ratings are illustrated in the top panel of Figure 1. These ratings are very positive,

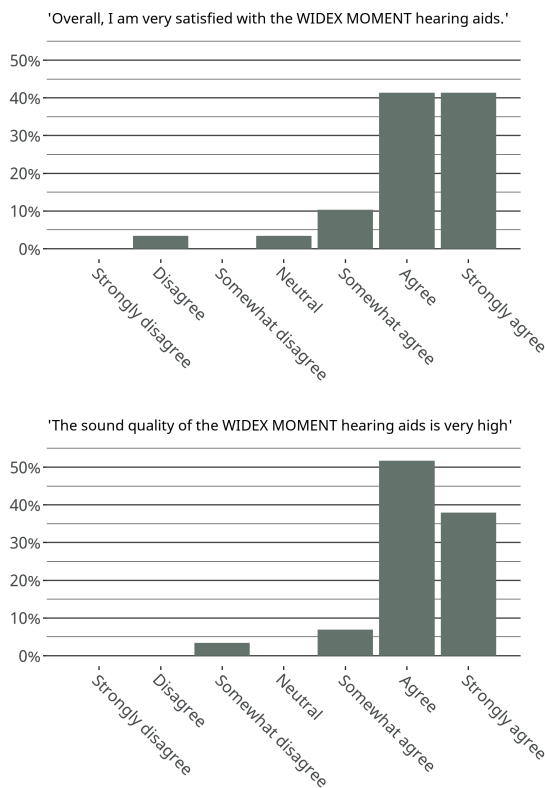


Figure 1: Responses to questions on general satisfaction with MOMENT platform (upper panel) and rating of sound quality (lower panel).

with more than 80% of respondents agreeing or strongly agreeing that they are very satisfied with the MOMENT hearing aids, and only a single respondent expressing a negative opinion. This corresponds to the very high end-user satisfaction ratings in the survey reported by Balling et al. (2021).

When asked specifically about the sound quality of the hearing aids, HCPs' responses are even more positive, as seen in the lower panel of Figure 1, which illustrates a very large degree of agreement with the statement that the sound quality of the MOMENT hearing aids is very high. This result resonates well with the Widex design focus on sound quality and with the major innovations in sound introduced with the MOMENT platform.

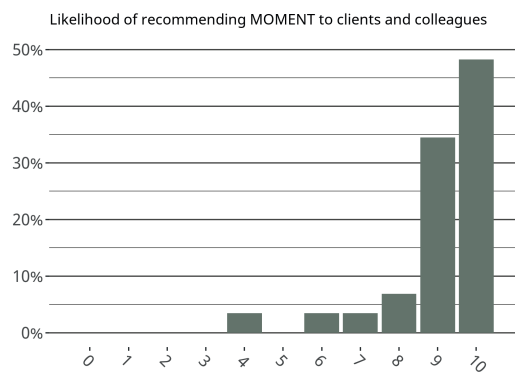


Figure 2: Ratings of likelihood of recommending the MOMENT hearing aids, going from 0 'Not at all likely' to 10 'Extremely likely'.

A final general question on the hearing aids asks how likely it is that respondents would recommend the MOMENT hearing aids to clients and colleagues. For this type of question, respondents who answer 9 or 10 are generally classified as 'promoters', while those answering 1 to 6 are classified as 'detractors'. With this classification, 83% are promoters of WIDEX MOMENT, while only 7% are detractors. The results are illustrated in Figure 2

4. THE PURESOUND PROGRAM

The PureSound program represents a major innovation in the hearing aid industry, both technically and in terms of sound quality. Since the introduction of digital signal processing in the mid 1990's, hearing aids have been characterized by an inherent mismatch between the direct sound, which enters the ear through venting and leakage, and the amplified sound, which is delayed because digital signal

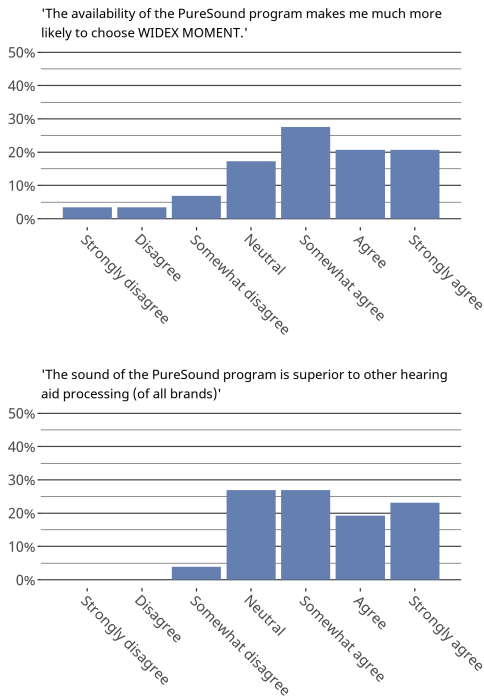


Figure 3: Responses to questions on whether the PureSound program makes MOMENT a likelier choice (upper panel) and about the sound quality of the PureSound program (lower panel).

processing takes time. These two signals in turn add up and cancel each other out, resulting in peaks and troughs in the gain-frequency curve. Perceptually, this results in a tinny, artificial sound known as the comb-filter effect.

Reducing this delay to virtually zero in the PureSound program is a major technical feat, and one that makes a real difference to the sound, which becomes much more natural than with the longer delays typical of other digital hearing aids. For HCPs, this means that they can offer a much more natural sound for those mild-to-moderate hearing losses where naturalness of sound is likely to be most important, because of good residual hearing, and therefore the availability of the PureSound program may make them more likely to fit Widex MOMENT. While this is not the case for every HCP surveyed, there is a noticeable positive skew on this question, as illustrated in the top panel of Figure 3, with 69% of respondents being more likely to choose MOMENT because of the availability of the PureSound program.

The superiority of the sound of the PureSound program is also reflected in the responses shown in the lower panel of Figure 3, where most respondents agree that the PureSound program has superior sound. These responses are all the more striking given the arguably too broad phrasing of the question

where not all respondents may feel qualified to compare the sound of PureSound to 'hearing aid processing of all brands'. This probably underlies at least some of the 'Neutral' responses, as well as three 'NA' responses on this question.

5. FITTING SOFTWARE – USABILITY AND COMPLETENESS

A central component of the hearing solution is of course the software used to fit the hearing aids with, which should ideally be easy to use while also offering the full range of options needed to individualize the hearing aid fitting. This balance is not always a simple one to strike in software development, but has been successfully implemented in Compass GPS, as illustrated in Figure 4.

The upper panel shows outstanding usability ratings where literally everyone agrees that Compass GPS is very easy to use, a statistic which could satisfy even the most enthusiastic developer. But usability of course is not enough, if the software does not allow the professional to make the appropriate adjustments and individualize the fitting, so the survey also included a question on the completeness

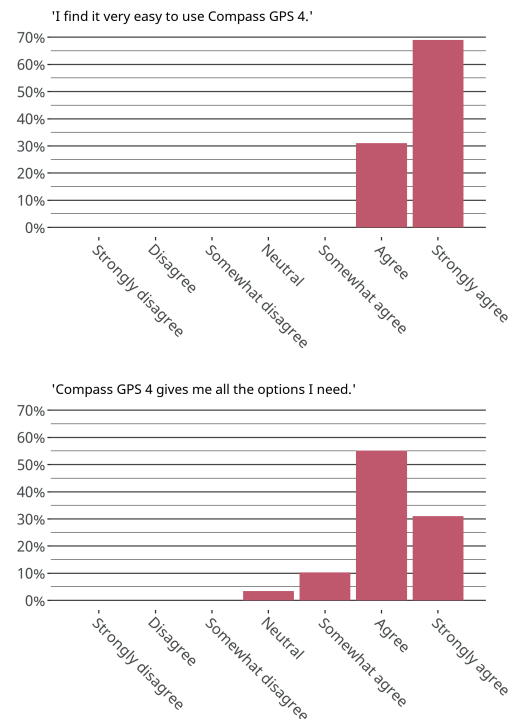


Figure 4: Responses to questions about usability (upper panel) and options (lower panel) of the Compass GPS fitting software.

of the solution, illustrated in the lower panel of Figure 4. These ratings are also overwhelmingly positive, with 97% of HCPs agreeing that Compass GPS offers all the options they need. The single “Neutral” and few “Somewhat agree” ratings likely indicate overall satisfaction but with wishes for possible additional functionality. To understand such wishes the survey also included qualitative questions on Compass GPS, giving feedback to software development.

6. FURTHER IMPROVEMENTS

Like Widex hearing aids, Compass GPS is also continually developed, which means that further improvements have been implemented since the survey was conducted. These improvements include an update to the TruAcoustics personalized fitting algorithms in Compass GPS 4.2, which was based on big data from thousands of fittings sessions (Townend & Balling, 2021b), and updates to the Sensogram and inclusion of AutoREM in Compass GPS 4.3 (Townend & Balling, 2021a).

7. CONCLUSION

Although Widex hearing solutions – including hearing aids, apps and fitting software – are continually developed and improved, it is important and encouraging to see the already very positive perceptions of the solutions among hearing care professionals. HCPs are very satisfied with the Widex MOMENT platform and would recommend it to clients and colleagues, while the PureSound program is seen as superior to other brands, making it an ideal choice for the mild-to-moderate hearing losses for which it was intended. Finally, Compass GPS is seen as very easy to use, while offering all necessary options for an ideal personalized sound, which is the hallmark of a Widex fit. This does not mean that development and improvements stop here, but instead motivates Widex to work hard to keep bringing the best hearing solutions to the market, offering the best sound for all hearing losses and a professional fitting software to personalize that sound.

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