



Do the additional features of partially subsidised hearing devices improve client outcomes?

Recent research has found that the additional features in partially subsidised hearing devices may not necessarily result in improved client outcomes.

Hearing device manufacturers produce ‘families’ of devices, which incorporate a wide range of features and technology at different price points. Partially subsidised hearing devices available under the Hearing Services Program (the program) can be costly (as a result of research, marketing, overheads and manufacturing costs which are passed on to the consumer) but there is little in the way of independent research about the effectiveness of their additional features on client outcomes. Most advice is in the form of unverified claims by manufacturers, or research trials funded by device manufacturers.

However, more recently there has been independent research looking into the effectiveness of hearing devices features.

What has this research looked into?

The University of Memphis’ Hearing Device Research Laboratory^{[1],[2]} investigated if there was a difference in client outcomes when using devices which are the equivalent of fully subsidised hearing devices and partially subsidised hearing devices available through the program, focusing on the areas of

- speech understanding (understanding words with noise in the background)
- listening effort (such as how much ‘work’ it takes a client to listen, using the device)
- localisation (detecting the direction from which a sound is coming)
- sound acceptability (how comfortable it is to listen to sounds other than speech)
- quality of life.

The research was conducted on English-speaking older adults (aged 61 to 81 years) with uncomplicated, mild to moderate sensorineural hearing loss.

What were the findings?

Using hearing devices (equivalent to the program's fully and partially subsidised hearing devices) from two major device manufacturers, the research found that speech understanding, listening effort, sound acceptability and quality of life both in the laboratory and in real-world situations were not improved with the partially subsidised hearing device equivalents when compared to the fully subsidised device equivalents.

In only one contrived laboratory situation (localisation of high-frequency filtered speech in a quiet setting) did the equivalent of partially subsidised hearing devices demonstrate better performance, but this did not translate to perceived benefit to the participants when tested in real-world situations.

What about other studies?

While no statistically significant or clinically important differences were found in the University of Memphis' studies, partially subsidised equivalent hearing devices do have other features which attempt to address other difficulties encountered by hearing device users. These studies did not cover the potential benefits of these features. While there has been very limited independent research in this area, one published laboratory study found that some features could provide speech understanding benefits when compared to fully subsidised hearing device equivalents, for speech coming from behind the person or to their side^[3].

However, for individuals with uncomplicated hearing loss, whose main goal is improved speech understanding, fully subsidised equivalent hearing devices can have the same benefits as partially subsidised equivalent hearing devices.

References

[1] Johnson et al., June 2015. '[Does premium listening require premium hearing devices?](#)' International Adult Aural Rehabilitation Conference, Florida.

[2] Cox et al. 2014. '[Impact of advanced hearing device technology on speech understanding for older listeners with mild to moderate, adult-onset, sensorineural hearing loss](#)', Gerontology. Vol 60, No 6.

[3] Wu et al., 2013. '[The effect of hearing aid technologies on listening in an automobile](#)', Journal of the American Academy of Audiology, Vol. 24, No. 6.

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