



# To Fit or Not to Fit Adults with Mild Hearing Loss?

By Leslie K. Rolph

**A**udiologists see a variety of hearing losses, mild sloping to severe, flat, and precipitous. We do not question to recommend amplification for a patient with a moderate hearing loss or a high-frequency, mild-to-severe hearing loss. But what about a mild, high-frequency hearing loss? What determines whether a patient chooses a hearing aid?

Patients with hearing loss often do not pursue amplification until 10 years after they first perceive hearing problems (Davis, 2007). Why do they wait? Is it because they do not perceive a hearing problem? If those patients with mild hearing loss wait to obtain hearing aids, then their hearing loss may worsen. Research

has also shown that untreated sensorineural hearing loss and chronic health conditions show a reduction in the health-related quality of life (Chisolm et al, 2007).

In children, mild hearing loss can cause “delayed language, trouble paying attention, [and difficulty] understanding in noise” (Anderson, 2011). But what about adults? Adults with mild hearing loss have “less satisfaction with their independence, reduced emotional well-being, and greater perceived limitation while others show no problems or limitations.” (Timmer, 2014). What causes an adult patient to choose or decline amplification? Is there evidence to show that adults with mild hearing loss benefit from amplification?

Sereda et al (2015) asked audiologists what were important factors in fitting mild hearing losses. Without bothersome tinnitus, the top five factors were patient-reported hearing difficulties, motivation to wear hearing aids, self-reported impact of hearing loss on quality of life, degree of hearing loss, and realistic expectations.

We have all seen patients with the same hearing loss, normal sloping to a mild, high-frequency hearing loss. One patient chooses to obtain hearing aids, while the other patient does not. Why?

## Factors for Those Who Chose Amplification

During the case history, does the patient report or deny hearing problems? Activity limitations? Social withdrawal?

Those who obtain hearing aids have a higher self-perceived difficulty prior to being fit than those who don't, and greater difficulties perceived by others (Laplante-Lévesque, 2012), based on the Hearing Handicap Questionnaire (HHQ). Whereas, those who chose no amplification accept their hearing loss, have less communication-related stress, and feel less emotionally handicapped by their hearing loss, based on the Hearing Handicap Inventory for the Elderly- Short form (HHIE-S) (Laplante-Lévesque, 2012).

Johnson et al (2016) also showed that pre- and post-fitting measures are beneficial to demonstrate how the patient perceives their hearing difficulties and quality of life. They show that if a questionnaire is completed, it must be done prior to amplification. After the hearing aid fitting, results about the unaided condition are not as accurate.

How can we, as audiologists, measure these outcomes? Here are a few methods:

- Pre- and post-questionnaires on the HHIE-S
- Hearing Handicap Inventory for Adults (HHIA)
- Abbreviated Profile of Hearing Aid Benefit (APHAB)
- Client-Oriented Scale of Improvement (COSI)

Laplante-Lévesque (2012) also found that patients who have applied for financial assistance for amplification are more likely to actually obtain amplification than those who are not eligible.

## Factors for Those Who Did Not Choose Amplification

Timmer's study (2014) shows there are no differences between those who choose amplification versus no amplification on the following:

- Audiogram
- Word recognition scores
- ABR wave V
- Age of onset
- Education level
- Speech-reading ability
- Auditory processing disorder testing via VA CD
- Loudness discomfort levels (LDL)
- Distortion production otoacoustic emissions (DPOAEs)
- Hearing aid expectations

There is a wide range of speech intelligibility scores in those with a mild hearing loss (Timmer, 2014). Other research based on patient outcomes has shown no consensus on age, cosmetics, type of hearing aid, previous experience with amplification, intelligence quotient, and visual impairment. There is some disagreement among researchers regarding socioeconomic status and its effects. Some research has shown that "higher socioeconomic status was associated with less of a self-perceived hearing disability" (Sereda, 2012).

Can we fit patients with mild hearing losses? The current technology in hearing aids is changing

---

**Those who obtain hearing aids have a higher self-perceived difficulty prior to being fit than those who don't, and greater difficulties perceived by others.**

---

very quickly. The technology in itself may allow audiologists to fit mild hearing losses better due to a higher frequency range, advances in connectivity to TV and phone, improved microphones for speech-in-noise, and overall better open-fit hearing aids. We can perform verification on these hearing aid fittings for these mild hearing losses, and we can show that we can indeed fit these mild hearing losses through real ear. But what does this mean for the patient? He or she may not realize what hearing aids will do to help.

Therefore, the question of to fit or not to fit a mild hearing loss has been shown to rely on patient case history, interviews, questionnaires, and patient preferences, NOT on the audiogram. One in three adults older than age 65 has a mild hearing loss (WHO, 2012) and with the number of aging adults tripling by 2050, mild hearing loss will increasingly affect the older population (Timmer, 2014).

Should we or shouldn't we fit these mild hearing loss patients? Should it be a recommendation? How much weight do patient factors have? What do they say? Are they having hearing problems and are they ready to do something about it? It appears patient factors weigh more heavily than audiological factors, verification methods, and age. **A1**

Leslie K. Rolph, AuD, Board Certified in Audiology, is an audiologist at the University of Texas Medical Branch Hospital in Galveston, Texas. Her interests include adult and pediatric audiology, vestibular testing, amplification, and electrophysiology.

Illustration by Johanna van der Sterre.

## References

- Anderson, K (2011) Minnesota Department of Education Parents Know website. <http://parentsknow.state.mn.us>.
- Chisolm TH, Johnson CE, Danhauer JE, Protz LJ, Abrams HB, Lesner S, McCarthy PA, Newman CW. (2007) A systematic review of health-related quality of life and hearing aids: final report of the American Academy of Audiology Task Force ON the Health-Related Quality of Life Benefits of Amplification in Adults. *J Am Acad Audiol* 18(2):151–183.
- Davis A, Smith P, Ferguson M, Stephens D, Gianopoulos I. (2007) Acceptability, benefit and costs of early screening for hearing disability: A study of potential screening tests and models. *Health Tech Assess* 11:1–294.
- Johnson CE, Danhauer JE, Ellis BB, Jilla AM. (2016) Hearing aid benefit in patients with mild sensorineural hearing loss: a systematic review. *J Am Acad Audiol* 27(4):293–310.
- Laplante-Lévesque A, Hickson L, Worrall L. (2012) What makes adults with hearing impairment take up hearing aids or communication programs and achieve successful outcomes? *Ear Hear* 33(1):79–93.
- Sereda M, Hoare DJ, Nicholson R, Smith S, Hall DA. (2015) Consensus on hearing aid candidature and fitting for mild hearing loss, with and without tinnitus: delphi review. *Ear Hear* 36(4):417–429.
- Timmer B. (2014) It may be mild, slight, or minimal, but it's not insignificant. *Hear Review* 21(4):30–33.
- World Health Organization. (2012) WHO global estimates on prevalence of hearing loss. Geneva: World Health Organization.