Better Hearing Devices and Many Forms of Delivery

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“The quality of the manufactured product is not all that the wearer should receive.”
“The primary purpose of providing better hearing is to improve quality of life, but its provision is encased in a multitude of forms.”
Better Hearing In Its Many Forms

FORM 1
For any person but intended for non-hearing impaired consumers

Personal Sound Amplification Products (PSAPs)

Remaining Forms
To include a case history, hearing evaluation, and medical waiver or clearance

FORM 2
For a person with hearing loss

Self-fitting or software first-fit hearing aids (HAs) delivered over-the-counter or by the mail with minimal to no service
Better Hearing In Its Many Forms

FORM 3

For a person of a given hearing loss

Face-to-face delivery of HAs at a verified prescription with personal adjustment counseling and subsequent follow-up and fine tuning services

FORM 4

For an individual person no matter the measured hearing loss

Face-to-face service provision with HAs aimed at treating the whole person

This includes, but is not limited to, Form 3 plus

• thoroughly addressing patient-specified listening goals and personal communication needs,
• immersive participation in a rehabilitation program.
Better Hearing In Its Many Forms

• Forms 2, 3, and 4 are operating in the free market with equivalency in some perceptions and practices.

• But, there should be a consideration of whether all these forms are indeed equal both in terms of:
  1. the level of care that providers are capable of delivering
  2. and realized outcomes of persons with hearing loss.
The Use of Hearing Amplification in Society
A Failure to Uptake

• A story of Edith Fore, the actress who played Mrs. Fletcher demonstrated the utility of a device — “I’ve fallen and I can’t get up!” — for Life Call beginning in 1989.

  – As an over-the-counter product and with special case reimbursement, only about 5-10% of the 7 million or so older adults in the USA who could benefit have one.

  – By comparison then, HAs with the current 25-30% adoption rate in the USA have been a real success.
Gerontechnology

• Advances since Edith Fore’s day include:
  – “Smart” pillboxes that remind people to take their medicine.
  – A whole array of wearable technology like heart rate monitors, sleep monitors, pedometers, as well as hearables/PSAPs.

• A strange incongruity persists though between what science makes available and what society makes use of…
  Let’s call it the *Edith Paradox or Ed Paradox*. 
Younger Ed versus Older Ed

I do not have any health concerns.

Hearing loss is far away and near the last thing on my mind.

Why is there not coverage for hearing aids like there are for my medicines or eyeglasses?

I have several competing health concerns. I need someone I can trust who understands.
Rather Than Just a Technology Solution

• Consider that…
  – Best estimates are *35 million of 308 million people* in the USA have enough functional hearing loss to need help.
  – With an average of 5 years before replacing HAs and a 25-30% adoption rate, *only 2 million people seek new HAs each year*.
  – 2 million people is *not typical consumer electronic device volume* nor are the *demographics* of the people comparable.

  – Real growth in adoption depends on the patient-provider relationship.
    1. To lessen the emotional and social barriers
    2. To provide a standardized protocol of care
Rather Than Just a Technology Solution

• Consider that…
  – The marketplace for HAs is inelastic (i.e., lower prices will not increase demand) (Amlani, 2005; 2007; 2013).
  – In countries, like Japan, with hearing aid deregulation and low cost products, adoption rates are as low as 10-15%.
  – A large evidence base already supports quality service delivery to encourage hearing aid uptake and good outcomes.
When formulating an effective, safe, and sustainable solution consider the following…

**Usually**

*Form*

follows

*Function*
What function is trying to be accomplished?

Function 1 - Putting a product in the ears of every person wanting to hear better

or

Function 2 - Ensuring the successful uptake and positive outcomes of persons with hearing loss
**Better Hearing In Its Many Forms**

**FORM 3**

For a person of a given audiometric hearing loss

Face-to-face delivery of HAs at a verified prescription with personal adjustment counseling and subsequent follow-up and fine tuning

**FORM 4**

For the individual person no matter the measured hearing loss

Face-to-face service provision with HAs aimed at treating not just the hearing loss but the whole person

This includes, but is not limited to, Form 3 plus

- thoroughly addressing patient-specified listening goals and personal communication needs,
- immersive participation in a rehabilitation program.
Form 1

Form 2

Form 3

Form 4

Possible

Diminishing Returns

Effort

Return On Effort

Excellence
CEN 380/NS-EN 15927
European Standard for Services Offered by Hearing Aid Professionals


Better Forms of Delivery are Already Affordable

- Using a quality-adjusted life-year (QALY), which is a measure of quality and the quantity of life lived
  - A cost-utility analysis revealed
    - Total cost for better forms of delivery = $1,119 per person.
    - HAs treatment cost $60.00 per QALY gained.
    - HAs + aural rehabilitation cost $31.91 per QALY (Abrams, Chisolm, and McArdle, 2002).
Better Forms of Delivery are Already Affordable

• As a comparison, Evans et al (1995) calculated a cost per QALY of
  - $15,590 for the cochlear implant
  - $11,940 for coronary angioplasty
  - $29,220 for an implantable defibrillator
If Necessary, Contemplate The Cost To Subsidize Better Forms

– Current national demand in the USA is 3.3 million hearing aid units per year.
  • This national demand is 4 times US Department of Veterans Affairs (VA) dispensing volume of 825,000 units.
  • Total national cost then for better forms would approximate $2.2 billion (4 X $550 million).

– Without present coverage of HAs, the current national Medicare budget is ~$600 billion.
  • A hearing aid and service delivery extension then to beneficiaries would represent a 0.33% increase to expenditures.
If Necessary, Contemplate The Cost To Subsidize Better Forms

- If adoption rates did increase to 40% nationwide, such as in the United Kingdom and Denmark, the annual demand would rise to 5.4 million units from 3.3 million...
  
  • Then, total cost would approximate $3.5 billion (still <1% of current Medicare spending).
“In the presence of demand for access to better hearing and possible allowance for many forms, value must continue to be placed on Forms 3 and 4.”
STANDARD DISCLAIMER

• The opinions expressed are those of the presenter and do not necessarily represent the official position of the U.S. Department of Veterans Affairs or the United States government.

• The presenter has a private Audiology and Speech Language Pathology practice, Johnson Hearing Technology and Communication, PLLC.
References


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