



To whom it may Concern:

I am writing to support continued coverage of existing patients and specifically of Medicare beneficiaries with hearing test scores less than 40% and for those in ranges of 40% to 50% and 50% to 60% and for both unilateral and bilateral cochlear implantation. My clinical experience suggests that older adults with sensorineural hearing loss can benefit from unilateral and bilateral implantation and this benefit can play a role in improvements in their functional status and connectedness. in older adults

Many research articles (see list below) have looked at this population with great interest as we are living longer. In my experience, age is not the most relevant factor to outcome, and while older adults perform similar to younger adults they may take longer to obtain those outcomes and be less robust. However, they can achieve benefit that can be significant and impact other health related areas of their lives. Francis et al, 2002 has suggests that the correlation between speech perception gains and health related quality of life outcomes suggests that **early intervention** may reduce cumulative downstream effects of auditory deprivation. Dalton et al, 2003, reports that individuals with moderate to severe hearing loss were more likely than individuals without hearing loss to have impaired ADLs and IADLs and that hearing loss is associated with reduced quality of life in older adults. Vermeire et al., 2005, found that cochlear implantation in the elderly provides improvement in quality of life and speech understanding similar to those for younger adults. Lastly, Buchman et al, 1999, reports nearly all patients gained significant benefit from their implant in both interpersonal and environmental awareness and that the surgery was safe and well tolerated in the elderly population

Today, for example, I saw an 82 year old man who has had his implant for 18 months. Prior to the implant, he had 0% discrimination for CNC words with his hearing aids in place. With his unilateral cochlear implant he scored 64% words with his cochlear implant. He reports being able to attend community meetings and better interactions with his family. Even at 82, he continues to run a business and relies heavily on communication. He is so thankful for the opportunities the implant has afforded him.

I currently work at The Listening Center at Johns Hopkins with a focus on adult patients. Approximately 60% of my patients are Medicare patients. Bilateral implantation has increased in recent years, but likely makes up about 20-30% of my caseload. I find that outcomes are individually based and there are many factors that contribute to success. My colleagues and I led by Dr. Niparko, Dr. Francis and Dr. Lin continue to research this topic of implants in older adults.

A PROGRAM OF THE DEPARTMENT OF OTOLARYNGOLOGY-HEAD & NECK SURGERY

JOHNS HOPKINS OUTPATIENT CENTER 601 NORTH CAROLINE STREET SUITE 6009 BALTIMORE, MD 21287-6214
TEL: 410-955-9397 FAX: 410-614-9167 TDD: 410-614-8523

Thank you for allowing me the opportunity to submit my comments to you on this topic. Aggressive and early intervention with hearing loss ensures the most optimal outcomes.

Sincerely,



Jennifer Yeagle, M.Ed., CCC-A
Cochlear Implant Audiologist
The Listening Center at Johns Hopkins

Reference list:

- Bai Z, Stephens D. Subjective outcome measures after cochlear implantation: Overall measures. *Audiological Medicine* 2005; 3(4):212-9.
- Bassim MK, Buss E, Clark MS et al. MED-EL Combi40+ cochlear implantation in adults. *Laryngoscope* 2005; 115(9):1568-73.
- Buchman CA, Fucci MJ, Luxford WM. Cochlear implants in the geriatric population: Benefits outweigh risks. *ENT- Ear, Nose & Throat Journal* July 1999; 489-494.
- Dalton DS, Cruickshanks KJ, Klein, BE, Klein, R, Wiley TL, Nondahl DM. The Impact of Hearing Loss on Quality of Life in Older Adults. *The Gerontologist* 2003; 42 (5): 661-668.
- Damen GWJA, Beynon AJ, Krabbe PFM, Mulder JJS, Mylanus EAM. Cochlear implantation and quality of life in postlingually deaf adults: Long-term follow-up. *Otolaryngology - Head and Neck Surgery* 2007; 136(4):597-604.
- Francis HW, Chee N, Yeagle J, Cheng A, Niparko JK. Impact of cochlear implants on the functional health status of older adults. *Laryngoscope*. 2002 Aug;112(8 Pt 1):1482-8.
- Gifford RH, Shalloo JK, Peterson AM. Speech recognition materials and ceiling effects: considerations for cochlear implant programs. *Audiol Neurotol* 2008; 13(3):193-205.
- Hay-McCutcheon MJ, Pisoni DB, Kirk KI. Audiovisual speech perception in elderly cochlear implant recipients. *The Laryngoscope* 2005; 115(10):1887-94.
- Hawthorne G, Hogan A, Giles E et al. Evaluating the health-related quality of life effects of cochlear implants: a prospective study of an adult cochlear implant program. *Int J Audiol* 2004; 43(4):183-92.
- Klop WMC, Boermans PPBM, Ferrier MB, Van Den Hout WB, Stiggelbout AM, Frijns JHM. Clinical relevance of quality of life outcome in cochlear implantation in postlingually deafened adults. *Otology and Neurotology* 2008; 29(5):615-21.
- Krueger B, Joseph G, Rost U, Strauß-Schier A, Lenarz T, Buechner A. Performance groups in adult cochlear implant users: Speech perception results from 1984 until today. *Otology and Neurotology* 2008;29(4):509-12.
- Liu B, Chen XQ, Kong Y et al. Quality of life after cochlear implantation in postlingually deaf adults. *National Medical Journal of China* 2008; 88(22):1550-2.
- Mawman DJ, Bhatt YM, Green KMJ, O'Driscoll MP, Saeed SR, Ramsden RT. Trends and outcomes in the Manchester adult cochlear implant series. *Clinical Otolaryngology and Allied Sciences* 2004; 29(4):331-9.
- Morris LG, Mallur PS, Roland J, Waltzman SB, Lalwani AK. Implication of central asymmetry in speech processing on selecting the ear for cochlear implantation. *Otology and Neurotology* 2007; 28(1):25-30.

- Most T, Shrem H, Duvdevani I. Cochlear implantation in late-implanted adults with prelingual deafness. *American Journal of Otolaryngology - Head and Neck Medicine and Surgery*. In press.
- Orabi AA, Mawman D, Al-Zoubi F, Saeed SR, Ramsden RT. Cochlear implant outcomes and quality of life in the elderly: Manchester experience over 13 years. *Clinical Otolaryngology* 2006; 31(2):116-22.
- Rama-Lopez J, Cervera-Paz FJ, Manrique M. Cochlear implantation of patients with far-advanced otosclerosis. *Otol Neurotol* 2006; 27(2):153-8.
- Roditi RE, Poissant SF, Bero EM, Lee DJ. A predictive model of cochlear implant performance in postlingually deafened adults. *Otology and Neurotology* 2009; 30(4):449-54.
- Firszt JB, Holden LK, Skinner MW et al. Recognition of speech presented at soft to loud levels by adult cochlear implant recipients of three cochlear implant systems. *Ear Hear* 2004; 25(4):375-87.
- UK Cochlear Implant Study Group. Criteria of candidacy for unilateral cochlear implantation in postlingually deafened adults III: prospective evaluation of an actuarial approach to defining a criterion. *Ear Hear* 2004; 25(4):361-74. DRAFT – Not for citation; Distributed solely for review .
- Vermeire K, Brokx JPL, Wuyts FL, Cochet E, Hofkens A, Van De Heyning PH. Quality-of-life benefit from cochlear implantation in the elderly. *Otology and Neurotology* 2005; 26(2):188-95.
- Vermeire K, Brokx JPL, Wuyts FL et al. Good speech recognition and quality-of-life scores after cochlear implantation in patients with DFNA9. *Otol Neurotol* 2006; 27(1):44-9.
- Wanscher JH, Faber CE, Grontved AM. Effect on quality of life of cochlear implantation in deaf adults. *Ugeskr Laeger* 2006; 168(33):2656-9.