Editorial

It can be said that ‘increased life expectancy is indeed one of the greatest achievements of the 20th century’ (<http://www.who.int/bulletin/volumes/94/6/16-176743/en/>). However, it brings with it one of the biggest challenges for public health in the first half of the 21st century, which is to identify, design and implement strategic health programs that ensure that the added years gained can be lived in a state of good health for an ever-growing elderly population.

Professionals from around Europe and the USA gathered to address issues associated with remediating and assessing hearing loss in the elderly population during the third Cochlear Science and Research Symposium on Aging and Implantable Solutions held in Madrid on April 17–18, 2016. The epidemiology of the growing aging population, the impact upon related health costs, clinical experiences in managing hearing loss and the associated comorbidities that affect outcomes were shared and discussed.

Worldwide, 360 million people live with disabling hearing loss that interferes with understanding normal conversational speech (source: WHO, 2016). More than one third of the hearing-impaired population is already over 65 years of age (i.e. 180 million) with clear evidence of an association with increasing age. By 2050, the elderly population is expected to have more than doubled, increasing the need to address hearing loss in this age group all the more. Hearing loss contributes to the severity of additional disease burdens and is linked with cognitive decline, depression and dementia. If left unaddressed, the potential result is a significant reduction in an individual’s self-reliance, social well-being, quality of life and economic independence. As a consequence,

hearing loss and associated age-related comorbidities will lead to increasing financial burden locally, nationally and globally.

A concern for many is the lack of access to treatment as a result of limited reimbursement funds, which vary across regions and show disparity compared to available provisions for children. How best to define the indications for hearing aid and cochlear implant treatment amongst the geriatric population and to determine the optimal configuration of hearing devices remain topics of debate.

Raising awareness and understanding the implications of age-related diseases, including hearing loss as one of the top global burden diseases, constitute a crucial step forward in developing appropriate health care strategies. Gathering medical evidence that establishes the benefits of treatment for hearing loss over improved hearing function alone, including overall health for the individual, increased independency, societal and medical cost savings, is a prerequisite to shape and support decisions by health care policy makers.

Given that the economic impact of not treating hearing loss upon society in the growing elderly population is greater than that of cancer or cardiac disease, more medical evidence on the cost-related savings of providing hearing treatment is needed. The evidence gathered may then be used to influence health policies and the provision of associated health programs. The aged population has demonstrated they can cope with new technologies despite the need for additional support in some cases. The elderly do benefit from improved hearing thresholds and speech understanding ability and they deserve the opportunity to positively affect their senior years by appropriate hearing treatment.

Clearly, the elderly population presents a widely heterogeneous group, making it difficult to prescribe a standard of care for comprehensive hearing therapy that meets the needs of all individuals. Beyond the audiological/implant team, opportunities should be sought that enable involvement of a multidisciplinary team, either locally or via specialist referral, with the aim to offer wider remediation for the broader range of aging processes through targeted therapies as needed. Further investigation into the links between hearing impairment and cognitive function may have important implications for the screening and diagnosis of cognitive decline in older people with hearing impairment and may provide further evidence for the choice and most appropriate timing of hearing treatments.

No single factor can predict cognitive decline, an unavoidable aspect of the aging process, evidenced by biomarkers indicating changes in brain volume and structure. Hearing loss is known to be associated with mild cognitive impairment, demonstrated by reduced language comprehension abilities due to the additional cognitive load. When coupled with severe cognitive impairment, the impact of hearing loss is even more pronounced. Ideally, repeated measures specific to cognitive abilities, with and without the involvement of audition, are needed to evaluate the associated benefits of hearing treatment therapies applied.

There is an increasing emphasis on the importance of maintaining and enhancing the quality of life in the elderly population, which is also an important component of the pretreatment evaluation and an integral part of the posttreatment therapy and counseling. Provision of hearing treatment, hearing aids or cochlear implants, or a combination of both, is one important step towards improving quality of life. It may also help reduce the negative influences of significant hearing impairment upon

social isolation as a consequence of decreased communication ability, loss of independence for daily function, depression and degradation of cognitive functions.

Rehabilitation programs may need to be tailored specifically to consider existing comorbidities and their progression in order to ensure that patients can manage their device, possibly with involvement of a family member or the primary caregiver, and to create the remote support network needed. Appropriate counseling to help optimize benefits of hearing treatment in the long term may also involve suggestions for behavior and lifestyle changes that might help reduce the potential negative effects of age-related vascular diseases and other comorbidities.

Clear guidelines for identification, referral and recommendation for implantation amongst the hearing-impaired population, in consideration of the presence and severity of age-related comorbidities, will help support the clinical management of the aging patient and improve the efficacy of hearing treatments.

As a group of professionals, we are convinced that cochlear implants offer a very strong treatment option, not only to treat hearing loss in the elderly population, but also to help slow down and possibly prevent a further decline of their physical, psychosocial and economic status. Clinical practices and evaluations of the hearing-impaired elderly group, both before and after implant treatment, are already evolving and include a more holistic view to assessing and establishing the benefits to the overall health status of the older patient.

It is our ongoing responsibility to focus on gathering and reporting high-quality medical evidence pertaining to the benefits of hearing treatment in the elderly, including cochlear implants and their comparators, to help shape evidence-based health care policies to provide the foundations for healthy aging.

*Manuel Manrique-Rodríguez, Pamplona
Ángel Ramos-Macías, Las Palmas*