The impact of hearing loss on our patients

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The impact of hearing loss on our patients can be profound. It arrives with consequences of social, functional and the psychological well-being of individuals. Imagine walking outside your home in the springtime to water your garden, turning on the water and hearing silence. Millions of people experience this every single day. As a matter of fact, hearing loss is a common problem affecting 466 million people globally. Thirty-four million of them are children. Hearing loss does not discriminate; it is unevenly and unequally distributed amongst the world's population.[1]

Common causes of hearing loss

- Genetics
- Disease processes
- Viral infections
- Ototoxic drugs
- Excessive noise exposure
- Age-related factors
- High fever or elevated body temperatures
- Heredity
- Hypertension

What is often left out of the conversation; is that almost half of hearing loss globally, is preventable. An overwhelming amount of evidence supports that professional intervention with appropriate technology results in successful outcomes and preservation of hearing status. An important task amongst Health Care Practitioners (HCPs), is confirming with patients that losing your hearing is a normal and common part of aging. Raising awareness amongst HCPs, patients and society is critical to improve identification, education on prevention, reduce stigmas and assist in developing technologies that will improve hearing and communication. Hearing loss left undetected or untreated can negatively impact an individual's language development, physical and mental health, and overall quality of life. Greater emphasis on the HCPs part is required if we want to increase the number of patients who receive benefits of timely and efficacious treatments. HCPs are a vital component in the process of detecting age-related hearing loss. As part of their routine consultations, they can help detect, counsel and appropriately refer to specialists before additional and unfavourable consequences arise.

IMPACT OF HEARING LOSS ON SOCIAL INTERACTIONS AND ECONOMIC BURDEN

Frustrated with hearing difficulties and the challenges of speech understanding in the presence of noise, people with hearing loss often find themselves slowly withdrawing from their primary circles of communication. Given the hyperconnected world we currently live in, this should not be the case. Hearing loss impacts verbal communication and conversation that is required in social integration and interaction. Dialogue is open ended and the essence of dialogue is listening. Furthermore, persistent deficits in social-emotional reciprocity only lead to more complex interactions with one another, and perhaps creating lives of isolation. Hearing aids can make a dramatic difference. Those who choose to remedy the situation with hearing aids are most often able to equally partake in conversations, report less mental exhaustion and find that it eases the stress of not understanding or misinterpreting conversations. Hearing aids and assistive listening devices amplify speech from others and allow for full participation in a range of social situations and help people feel less isolated.

Not only is untreated hearing loss an inconvenience with social interactions, it is also an unwanted, ever-increasing monetary expense. Longitudinal research from John Hopkins Bloomberg School of Public Health studied two groups; those with hearing loss and those without hearing loss and followed each group for a 10-year period. The differences between groups became sharply evident within the first two years of the study and confirmed that

patients with untreated hearing loss can incur up to 46% higher health care costs, when compared to those without hearing loss. This resulted in a staggering $22,434 USD ($20,403 incurred by the health plan, $2,030 by the individual in out-of-pocket costs) per patient over a ten-year period.[2] The public health challenge of hearing loss is only growing. Typically, those with hearing loss have waited an average of 7-10 years before they seek treatment. Healthcare practitioners are often the first point of contact for individuals who are seeking help for common medical conditions as well as those who are healthy and seeking annual check-ups. With increased internet access, web-based education has the potential to promote earlier identification of hearing loss and a call to action by Healthcare practitioners to decrease the number of years patients wait to seek help.

OCCUPATIONAL IMPACT

In the workplace, untreated hearing loss can be a two-fold problem leading to: 1) underperformance and 2) soaring public health expenditures. According to the National Institutes of Health, in the United States, approximately 48 million Americans have some degree of hearing loss and 15% of that number, between the ages of 20-65 are living with some degree of noise induced hearing loss. The National Institute for Occupational Safety and Health (NIOSH) reports that 22 million U.S. workers are exposed to damaging noise levels at work, and according to the Centers for Disease Control and Prevention (CDC), workplace-related hearing loss is the most commonly reported injury. It is not surprising, then, that hearing loss disability costs an estimated $242 million in annual workers' compensation payments. Most employers require proficiency in communication and some type of social interaction among their co-workers; for that reason alone, hearing becomes a critical factor. Each person's needs and requirements in the workplace are unique and not every employer is required to screen employees for hearing loss. Noise induced hearing loss rarely presents with symptoms of pain and often patients complain more of a feeling fullness in the ear, muffled sound, or ringing. People fail to notice the dangers of noise because their symptoms seem to increase when they are only in very quiet places or their symptoms may go away in a few minutes, hours or days. It is important for HCPs to recognise that patients may feel they have "been cured" of their symptoms, when noise induced hearing loss has lasting effects that may not be as noticeable at first. HCPs have a relatively simple and inexpensive opportunity to help prevent hearing loss from noise exposure by advising their patients to protect their hearing by avoiding noisy places when possible and use ear plugs, protective earmuffs or noise cancelling headphones when exposed to loud sounds. When patients present with, or report indications of noise induced hearing loss, HCPs can rule out other diseases, conduct hearing screenings or refer them on to a hearing specialist. Hearing instruments offer more than just amplified sound in the workplace, they also offer a sense of reassurance and support that people can effectively communicate with others, form working relationships with colleagues, listen to instructions and perform as needed.

RELATIONSHIP BETWEEN HEARING LOSS AND BRAIN HEALTH

Hearing loss is an invisible and unfavourable burden which often results in individuals experiencing significant levels of distress because of their hearing challenges. Experts from the University of British Columbia examined the impact of untreated hearing related issues in older individuals and found that a 10-dB reduction of hearing sensitivity was also associated with cognitive declines equivalent to almost four years of chronological ageing.[3] These findings strongly suggest that adult hearing screenings may be beneficial and that early interventions may influence health-related outcome measures.

It is part of the normal ageing process to witness subtle changes in cognitive functioning with patients. Taking care of your eyes and ears may help keep our brains healthy and sharp. An increasing number of findings have suggested an association between age related hearing loss (ARHL) and cognitive impairment, indicating that ARHL may be a potential early indicator of Alzheimer's Disease.[4] Additionally, positive correlations have been identified between degree of hearing loss and risk of dementia. Lin et al., 2011, reported that individuals with mild hearing loss were twice as likely to develop dementia as those with normal hearing, those with moderate hearing loss were three times as likely and those with severe hearing loss had up to five times the risk.[5] Healthcare practitioners cannot afford to ignore hearing loss with their patients. Age related hearing loss influences several core clinical concerns for HCPs. Healthcare practitioners can easily integrate hearing screenings into consultations for other conditions and routine health checks while monitoring their patient's overall health. Hearing loss is a potentially modifiable condition with either medical treatment or amplification. Research studies are in progress that are examining the effects of intervention on cognitive impairment.

HEARING LOSS IN ONE EAR HAS CONSEQUENCES

We were designed to have two ears, working in tandem for a reason. For example, accurate localisation of sound occurs when the brain recognises which direction sounds are travelling from and which ear receives the sound first. When one ear is down, the other is working overtime, the brain begins having difficulty processing where the sound/s have originated, resulting in fatigue. This becomes an issue whether you are in a noisy restaurant and listening for your table to be called or when you are home, and someone calls from a distant room. Unilateral hearing loss can be more difficult to detect because patients generally present with normal hearing in one ear (i.e., hearing thresholds no greater than 20 dB at 250-4000 Hz) and hearing loss in the opposite ear, and/or a reduced sound tolerance. It is often thought that individuals with this type of impairment can function normally, however Unilateral Sensorineural Hearing Loss (USNHL) is considered a handicap that can significantly impact one's quality of lifes. The extent to which patients are impacted by this depends greatly on age of onset, manner of which it was presented (sudden vs. slow), and severity. This information is critical for the medical professional to identify the practical limitations of the hearing loss as well as char-

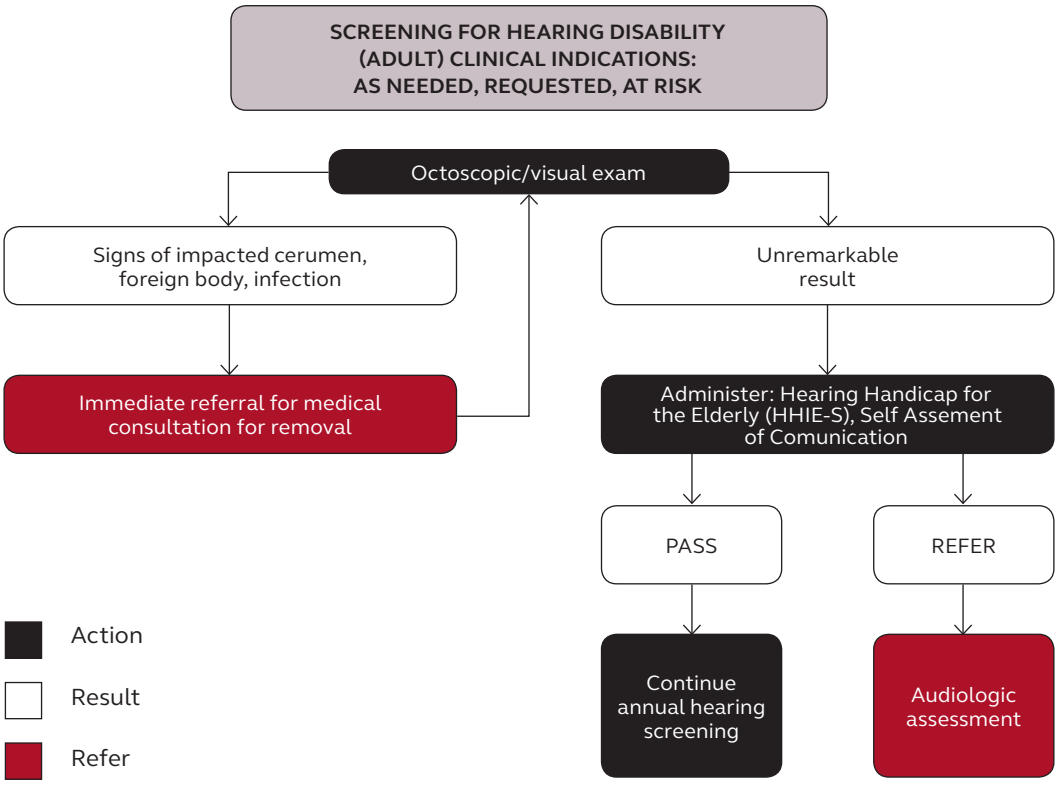
acterising the peripheral sensory mechanism, in order to move forward with a treatment plan. Children are more easily identified with this loss through newborn or school screenings, but also have more severe consequences with speech and language development and are at risk for academic difficulties.

Patients who present with a USNHL are often confronted with a slew of unique challenges. They also experience issues with understanding speech-in-noise, localisation, compromised spatial awareness, and may need to adapt to processing sound in a different manner. To date, there is a gap in published research that directly addresses the outcomes of hearing aid use by individuals diagnosed with USNHL, compared to those with bilateral SNHL. However, a comprehensive treatment approach is necessary and, in many cases, hearing aids as well as hearing assistive technology is strongly recommended. Fitting to the impaired ear; increases the likelihood of preserving binaural cues as well as maintain auditory stimulation for the weakened side. The fitting of hearing devices for USNHL is a critical first step to success, however patient counselling is often forgotten and of equal importance. The patient counselling aspect provides the appropriate strategies to increase and augment the benefit received from the hearing device as well as address any emotional factors that may impact the outcome received.

JOURNEY TO WELLNESS

General practitioners are uniquely qualified to get their patients started on a journey toward hearing wellness. The journey begins with hearing screening and making appropriate referrals for amplification. Definitive screening guidelines are in place for newborn and childhood screening. To date, recommendations for routine screening among adolescents and adults are only suggested. Starting with the Hearing Handicap Inventory for the Elderly Screening is an excellent first step. This validated tool is a self-administered questionnaire that consists of ten questions and takes approximately five minutes to complete. Alternative methods of screening for hearing loss also include the whispered voice test, Rinne test and the Weber test.

Just because patients are not presenting with complaints of their hearing, doesn't mean they are symptom free. In fact, many patients with hearing loss are in denial and may need to be provoked to speak of it. Because hearing loss can be a sensitive situation, asking others who have accompanied the patient to the appointment may also elicit insights. Knowing that age related hearing loss is a common occurrence, physicians should be asking at the very least - how is your hearing? Healthcare practitioners are also part of a much wider team whose roles include promoting, preventing and initiating treatment. It is regular practice to counsel on various age-related conditions and how to manage disorders like hypertension; and cardiovascular disease, and physicians are trained to spot red flag symptoms that may require further investigation or a referral on to specialists. Physicians look after patients' overall wellness, and hearing loss must be included in their inventory. Making appropriate referrals to hearing care specialists and audiologists is imperative. Treating hearing loss results in positive health outcomes, increases social engagement, improved communication, and lowers the risk of depression. Technological advancements are taking place at an astonishing rate and hearing aid technology is no exception. Sophisticated solutions create new opportunities for how people hear, allowing individuals to hear sounds they may not have heard well before. Innovative features have become more copious, sizing is small and more custom and wireless technology continues to connect us as a society. There has never been a better time than the present to need hearing instruments.



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