



AUSTRALIAN SOCIETY OF OTOLARYNGOLOGY HEAD AND NECK SURGERY

**SUBMISSION
(PART 2 : BALANCE DISORDERS)**

Inquiry into the Hearing Health and Wellbeing of Australia

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NOTE: This submission specifically relates to balance disorders.

Most balance disorders are chronic medical conditions that derive from dysfunction of the balance (“vestibular”) organs within the inner ear, central (brain) vestibular processing or the integration of information across the senses of vision, balance and body position. Because of this, management of balance disorders requires professional input from both Ear, Nose and Throat (ENT) surgeons and neurologists. Audiologists are integral to the diagnosis, and physiotherapists pivotal to the rehabilitation. As such, the approach to balance disorders is intrinsically multi-disciplinary.

The current causes and costs of balance disorder to the Australian health care system should existing arrangements remain in place;

Balance is defined as either vertigo (a perception of movement or rotation) or unsteadiness. It may be caused by a variety of conditions, including benign paroxysmal positional vertigo (BPPV), Meniere’s Disease, vestibular migraine, drug injury to the inner ear (ototoxicity) or infection, or sudden loss of function of the inner ear (labyrinthitis or vestibular neuronitis). Imbalance may also a symptom of some life-threatening medical emergencies, such as stroke, or associated with heart problems such as low blood pressure.

Self-reported prevalence of dizziness and vertigo exceeds 36% in Australians over the age of 50 years (Gopinath et al, Dizziness and vertigo in an older population: the Blue Mountains prospective cross-sectional study, Clin Otolaryngol. 2009 Dec;34(6):552-6. doi: 10.1111/j.1749-4486.2009.02025).

Many of these conditions (e.g. Meniere’s Disease, vestibular migraine, BPPV) lead to recurrent paroxysms of dizziness that significantly reduce the confidence of the individual in their balance; the attacks are frightening, may lead to falls, and are often misinterpreted by those around them as intoxication. These individuals, and those afflicted with other types of chronic imbalance find that daily activities are difficult to maintain. Simple tasks such as going to the shops may make sufferers feel unwell, and elicit considerable anxiety. These factors lead to social isolation, reduced productivity, and high levels of anxiety and depression.

To make matters worse, balance is poorly understood by many health professionals, and even experienced practitioners can find it difficult to make the correct diagnosis. As a result those afflicted with dizziness often feel that their condition is not understood, even within the health system. Fortunately treatments can be effective once a diagnosis is made, but access to experts is piecemeal across the health system, and there are few centres that bring together the multidisciplinary teams required to provide best-practice management plans. These teams usually involve

ENT surgeons and neurologists, physiotherapists, audiologists and sometimes a psychologist. The current health system provides this type of integrated service for falls, but these are focused primarily on the elderly and the treatment of balance disorders is not within their scope.

Some disorders of the inner ear cause both imbalance and hearing loss. Meniere's Disease is the most prevalent of these conditions. Hearing in its own right is associated with social isolation, loss of socioeconomic productivity and depression, so the sum effect of both hearing loss and imbalance has a profoundly negative impact upon wellbeing and social connectedness.

Because balance problems are so poorly understood both in the health system and the wider community, affected individuals often feel that they lack support. Community based peer support groups have provided many people with imbalance an environment where they feel understood, are accepted, can share their experiences and learn more about their condition. In the current environment, the value of peer support is neither understood nor appreciated within the health system and there are limited opportunities for interaction between peer and professional support services.

Community awareness, information, education and promotion;

There is limited understanding of the nature of balance problems in the community. This means that people that suffer dizzy attacks can be misunderstood by community members. People do not know how to react to someone experiencing a dizzy attack, and often misinterpret the situation (e.g. attribute the imbalance to intoxication). This lack of community awareness leaves people with balance problems stigmatized.

Quality information about dizziness is difficult to access within the community. Apart from health professionals, peer support groups are the main resource.

There is no government authority providing oversight to balance problems, as exists for hearing. This means that it is difficult to bring about system-wide strategy concerning changing public perceptions relating to people with dizziness, or disseminate information.

Access, availability and cost of required drugs, treatments and support for balance disorders sufferers;

The cost of medication can be a burden on those with balance disorders. Some medications in wide clinical practice do not attract a PBS subsidy.

Access to medical specialists (ENT surgeons and/or neurologists) who are competent in treating balance disorders is extremely variable across Australia. Specialist access is particularly sparse in rural centres.

There is a system-wide need for better access to vestibular rehabilitation and psychological support.

Emotional and social support for balance disorder sufferers is often difficult to access. Peer support groups are well placed to provide this.

Best practice and proposed innovative models of hearing health care to improve access, quality and affordability;

Given the complex nature of balance disorders, and their wide-reaching impact upon wellbeing, multidisciplinary clinics of ENT surgeons, neurologists, audiologists, physiotherapists and psychologists are best practice. These should be implemented across the health system. This multidisciplinary approach has proven highly successful for the assessment and management of falls risk. A similar approach is required to provide equitable access for those with balance disorders.

Telemedicine could be implemented to provide practitioners in rural communities access to the expertise of multidisciplinary balance clinics.

Episodes of dizziness are often short-lived, so improved diagnostic tools, possibly involving web-enabled technologies with Cloud-based decision-making capabilities would help primary care givers in community and emergency settings make more accurate diagnoses.

Developments in research into balance, including: prevention, causes, treatment regimes, and potential new technologies;

- Research into the prevalence and costs of balance disorders in the Australian context.
- Research into methods for large-scale up-skilling of health professionals in the diagnosis and management of balance disorders.
- Improved diagnostic tools, particularly those that capture and classify clinical information (usually eye movements) during attacks of dizziness. Such devices could be used at home by balance disorder sufferer, or by doctors in primary health care or emergency settings. This research requires a continued commitment to research on the science that underpins vestibular function, and its disorders. Such research has been highly productive, and has led directly to the diagnostic tools now used in clinical practice. Australia is a world leader in this field.

- Research into MRI imaging techniques to diagnose and provide insights into the causes of inner ear dysfunction causing dizziness, particularly Meniere's Disease.
- The cause of some of the most common balance disorders, such as Meniere's Disease and Vestibular Migraine are still not understood. Research should be directed towards improving our understanding of these diseases, so that better treatments can be developed.
- Vestibular bionic prostheses are in development internationally. Given Australia's pre-eminence in hearing bionics, the country should also be investing in research into vestibular bionic devices.

For further information, please contact Professor Stephen O'Leary.