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Message from the Guest Editors

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A vestibular tsunami is heading our way.

The baby boom, the silver wave, the senior vortex. Statistics Canada estimates that the proportion of Canadians aged 65 and over will grow from one in seven Canadians in 2011, to almost one in four by 2036. This means the number of seniors is expected to double from today's five million to 10.4 million by 2036.[1] How does this relate to vestibular testing?

The Vestibular Disorders Association (VDA) reported that 80% of people aged 65 years and older have experienced dizziness[2]; and BPPV, the most common vestibular disorder, is the cause of approximately 50% of dizziness in older people.[3] Overall, VDA reported that vertigo from a vestibular problem accounts for a third of all dizziness and vertigo symptoms reported to health care professionals.[4] With regards to falls, older people with chronic dizziness or imbalance are two to three times more likely to fall in comparison with older people who do not experience these problems.[5] Something else to consider is that the Public Health Agency of Canada reports that falls account for more than half of all injuries among Canadians 65 years and over. One third of community-dwelling Canadian seniors experience one fall each year and half of those will fall more than once. The likelihood of dying from a fall-related injury increases with age. Among seniors, 20% of deaths related to injury can be traced back to a fall.[6] So, the big question is – what is the current state of vestibular testing in Canada and are we ready to successfully brace this storm of vestibular patients heading our way?

Maxine Armstrong and I are Canadian audiologists working in the area of vestibular audiology who decided to band together to find out where Canada stands on the vestibular front. We created a national Vestibular Special Interest Group and one of our first projects was to develop a survey based on four themes: education, certification, standards of care, and use of supportive personnel. The survey was filled out only by audiologists who count vestibular work to be a part of their current practice. The survey was sent out in both English and French, gathering a total of 67 respondents. The level of education held by the respondents is as follows: 75% had a master's degree, 22.5% an AuD, and 2.5% a PhD. Geographically, the top three provinces who participated were Ontario (42%), British Columbia (18%), and Alberta (12%). Public practice represented 76% of respondents, and 24% work in private practice.

Education

Respondents were asked how much vestibular training they received and if they felt it was an adequate amount. An overwhelming majority felt that their university training was not adequate (78.6%). Some respondents reported they obtained their AuD specifically to get more extensive

vestibular training due to a lack of coverage in their master's degree. Others wondered why vestibular testing was not at least a full course in university audiology programs as it is within our scope of practice.

About 25% reported between 0–5 hours total of vestibular course work (19% reported none at all in their curriculum). This means that an alarming 44% of audiologists currently working in the area of vestibular audiology received 5 or less hours of vestibular course work as a part of their formal education. Those who were unsatisfied with their university training cited lack of total hours devoted to vestibular course work and lack of hands-on training as the cause of their dissatisfaction. When asked where respondents received continued education 81% reported on-the-job training, 60% reported www.audiologyonline.com courses, 41% national or international conferences, 30% manufacturer conferences, and 20% Dr. Richard Gans' American Institute of Balance certification course (these numbers add up to >100%, as some respondents chose multiple answers). Comments included training consisting of self-study only with text books, colleague working groups, or having one member of staff receiving extensive training and then educating all staff members. We have to ask ourselves, in other medical professions such as physiotherapy or optometry, would it be acceptable to learn about advanced key areas of scope of practice (e.g., managing neck injuries, cataracts) based on limited course work with no hands-on training or solely on-the job training after graduation? Would it make a difference if continuing education and certification was not required for that professional in that speciality area?

Certification

Currently, there are no national requirements for audiologists to receive or document continuing education credits or obtain certification in specialty areas such as: vestibular testing, tinnitus retraining therapy, or fitting/programming cochlear implants.

Respondents were asked if their provincial college required certification for vestibular testing with the majority answering no (74%). When asked if they would support certification, there was overwhelming support in favour (83%). Comments made in support of this initiative included increased quality of testing, decreased risk of outdated procedures, disparate quality of on-the-job training, increased accountability, decreased risk of liability, increased access to training, and an elevation of our standard of care to be better recognized by other professionals.

Concerns raised included the following:

- Difficulty obtaining CE hours if you are an audiologist in a rural area with the expectation of being an expert in multiple specialities
- Difficulty obtaining hands-on training in provinces with limited access to a diverse array of vestibular tests and testing facilities
- Lack of audiologists who specialize in vestibular testing to develop or coordinate a CE program

Others noted it should be up to the universities to ensure the curriculum includes enough vestibular training to make new graduates "job ready" instead of requiring certification after the fact.

The College of Speech and Hearing Health Professionals of BC offers an advanced certification program in vestibular assessment and management. The certification requires completion of six objectives overseen by an audiologist mentor. Objectives include attaining pre?requisites (such as the training setting allowing hands on experience), attaining background knowledge, making appropriate patient/client selection, understanding vestibular assessment and treatment, performing vestibular assessments (including completion of 10 patient assessments under constant supervision and 10 with general supervision), and accurately interpreting vestibular assessment results. Further investigation of this pioneering model should investigate the efficacy of this provincial program to

see if it could act as a model for other colleges across Canada.

Standards of Care

Vestibular testing encompasses more than just VNG (68% of respondents) or ENG testing (41%) in Canada. Many sites offer a multitude of tests including Dix-Hallpike (73%), cVemp (41%), Gaze Stability (30%), Head Impulse (28%), ECochG (27%), Rotary Chair (16%), and oVemp testing (11%). Guiding vestibular rehabilitation exercises, which is also within the scope of practice of audiology, is performed by 14% of respondents, and BPPV repositioning maneuvers by 27%. Despite the need for a test battery approach for the identification of many vestibular diagnoses, no clear trends emerged in the types of testing offered. This is probably due to a number of factors, including a lack of clear standards, funding issues, and differences in training/education. Vestibular practices in Canada usually involve a team-based approach. Audiologists work with a number of different health professionals onsite including ENTs (72%), neurologists (28%), neurotologists (31%), physiotherapists (41%), occupational therapists (22%), psychiatrists (28%), and other mental health professionals (9%). Patient referrals seemed to come from a multitude of sources, with the majority of respondents reported accepting referrals from ENT (93%), neurology (60%), and neurotologists (51%). Fewer receive referrals from other audiologists (25%), family doctors (44%), or physiotherapists (14%).

Practices varied as to who manages them. There were public sites managed by a physician (12%), audiologist (33%), and by a nurse manager or other professional (26%). There were also privately run sites owned solely by a physician (5%) or an audiologist (12%). How patients are triaged also varied among respondents. Some sites pre-screen incoming referrals with a test battery to decide who is the most appropriate physician to manage the patient (i.e., ENT or neurology) (5%), some complete a full standardized battery of tests on each patient (63%), some perform individualized vestibular testing depending on how they present (35%), while others perform individualized vestibular testing depending on what the referring physician wants (43%). Future investigation of which set-up delivers the best standards of care within an acceptable wait time will be essential in the development of recommended vestibular protocols.

Regarding interpretation: one of the most important questions asked in the survey was how vestibular testing is analyzed. Approximately a third of all respondents (27%) send the raw data to the referring physician with no interpretation, or an ENT on-site analyzes the raw data and sends it to the referring physician. This is disappointing, as it is akin to an audiologist testing hearing and requiring an ENT to analyze and write the report on the hearing assessment. What sets an audiologist apart from a technician is the ability to understand how vestibular tests work, and what the results mean. Of those audiologists that do interpret the results, most either interpret the data (49%) or interpret and make recommendations (49%).

These findings show that Canada has some ENTs, who perform analysis on raw data and report-writing, instead of the staff audiologist. If vestibular testing and analysis are within an audiologist's scope of practice, then the fact that 1/3 of us are not interpreting our own results may lead one to ponder our working relationship with otolaryngologists and the use of supportive personal or technicians. For example, what are the ramifications when a physician hires minimally trained or untrained staff to perform vestibular testing? What if that staff member is not an audiologist yet performs the duties that are within an audiologist's scope of practice?

Conversely, has our profession done enough to ensure the participation of sufficient numbers of properly trained audiologists in vestibular testing and management? Does the profession of audiology in Canada support a structured environment (with national policies, procedures and continuing education) that empowers clinicians to complete vestibular testing and analysis with

confidence? The results from our survey would indicate that the answer to the last question is a resounding “no”.

Supportive Personnel

Survey results were mixed about whether or not supportive personnel should be allowed to perform vestibular testing. This is despite SAC’s newly revised supportive personnel guidelines for audiologists,[7] as of January 2014, which includes assisting an audiologist with vestibular testing. Interestingly, not only were vestibular audiologists divided on whether or not there should be support personnel, but opinions on both sides of the discussion were strong.

Fully 72% of vestibular audiologists do not currently work with a vestibular technician, while the other 28% do. When asked should they be permitted to conduct testing the results were split at 57% yes and 42% no. Comments supporting the use of technicians cited decreased workload to improve wait times, more time for audiologists to interpret test results, and a good fit in sites that offer a standardized battery of tests due to less interpreting required at the time of testing. Many commented that as long as the technician was properly trained, monitored, and performed tasks inside their scope of practice, then it would be acceptable to have a technician on the team. Those who were against the use of technicians suggested a lack of necessary background knowledge which could affect clinical decision-making skills. Also, concerns were noted about restricted scope of practice affecting quality of care of the patient. An inability to perform counseling, which is not within their scope of practice, was seen as a big weakness with the use of technicians. Further work is required to better standardize the use of technicians in vestibular testing and more specifically defining what is and is not acceptable standards of practice.

Conclusion

So, is Canada prepared to handle the influx of patients expected in our near future? Survey results suggest that much work is needed in creating a structure that better prepares, supports, and monitors audiologists with managing vestibular patients. Is our future all doom and gloom? Dr. Gans of the American Institute of Balance reports that, “this burgeoning demographic will provide unprecedented opportunities to create and implement new and innovative evidenced-based protocols and delivery of care.”[8] Although the survey results revealed areas that need improvement or further examination, the good news is Canada is lucky to have many talented audiologists, long-standing university programs, and national associations and regulating bodies who care deeply about the future of our profession and achieving high standards of care for our patients. By all working together, we can work on better standardizing this quickly evolving speciality of audiology for the betterment of our patients as well as ourselves.

Maxine and I would like to thank CAA and Marshall Chasin for deciding to have a vestibular-themed issue of *Canadian Audiologist*, inviting us to co-edit, and providing a forum to highlight our efforts with the national Vestibular Special Interest Group. We would like to thank all of the contributors who volunteered their time to provide thoughtful well written articles for this issue. We would also like to thank SAC-OAC for making their members aware of the vestibular group and our survey. We look forward to communicating with you all in the future and ask that you keep an eye out for a Facebook page we are developing to help audiologists better discuss vestibular issues on a national level. If you have not joined the national vestibular special interest group but would like to become a member, please contact Janine Verge (vergej@cdha.nshealth.ca) or Maxine Armstrong (maxine.armstrong@uhn.ca).

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