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Overlapping Scopes of Practice: An Interview Examining the Relationship between Audiologists and Physiotherapists Who Specialize in Vestibular Rehabilitation

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In this edition of "Striking the Right Balance," two Audiology students from Dalhousie University, Justine Bentley and Katrina Folkins, interview two private practice physiotherapists from the Atlantic Balance and Dizziness Centre, Sue Ehler and Steven MacNeil. They want to learn more about including vestibular rehabilitation in audiology practice and how our two professions overlap when managing vestibular patients.

If you are a health care professional and would like to be more involved in all things vestibular, please sign-up for the Vestibular Special Interest Group. Sign-up by emailing JanineAllison.Verge@nshealth.ca to let us know you want to be included. Also, check out our Facebook page for a free list of online vestibular resources at the CAA National Vestibular Special Interest Group page.

We are Katrina and Justine, third-year audiology students at Dalhousie University. Inter-professional education has been a focus of our studies over the last three years, and is something that we will encounter often in our careers as audiologists. This is especially true with vestibular populations. Vestibular rehabilitation falls under the scope of practice for both audiologists and physiotherapists.[1–3]

In general, there are three main types of vestibular rehabilitation exercises: adaptation, habituation, and substitution. The goal of adaptation exercises is to improve or strengthen the VOR function. The goal of habituation exercises is to desensitize the patient to certain symptom-provoking movements. The goal of substitution exercises is to use other senses to replace (substitute) vestibular input such as using additional visual or proprioceptive input.[4]

In a 2014 survey of 67 Canadian audiologists who include vestibular work in their practice, only 14% reported that they routinely guide patients through the vestibular rehabilitation process. Additionally, 27% of respondents report that they perform BPPV repositioning maneuvers. Although assessment and management both fall into the scope of practice of audiologists in Canada, the majority of respondents in this survey reported working mainly with vestibular diagnostics, including VNG and Dix-Hallpike testing.[5]

To get more information about how to offer vestibular rehabilitation services and to better understand the roles of both audiology and physiotherapy, we decided to interview two local physiotherapists, Steven MacNeil and Susan Ehler of the Atlantic Balance and Dizziness Centre in Nova Scotia, Canada. They are both well-respected community-based physiotherapists who routinely perform vestibular rehabilitation.

Katrina and Justine: Can you tell us about the history of the Atlantic Balance and Dizziness Centre? Why did you decide to open this business and focus on patients with vestibular and balance problems?

Steven and Susan: Atlantic Balance and Dizziness Centre is a private physiotherapy clinic. We opened in 2008 and is owned by physiotherapists (Susan Ehler and Steven MacNeil). The clinic specializes in the assessment and treatment of dizziness and balance disorders, known as vestibular rehabilitation. We were both working separately in the community in the field of vestibular rehabilitation and in early 2008 the doctors of Dartmouth ENT Associates approached us with a vision of a community-based multi-disciplinary centre where patients could get the full care they need for vestibular dysfunction.

We opened Atlantic Balance and Dizziness Centre to help address a need for comprehensive care for people with dizziness and imbalance. Although we all operate independently from one another we work closely with Dartmouth ENT and with the audiologists of Connect Hearing to give our patients the best care we can. As we began to grow, more physiotherapists joined our team and we eventually expanded into other communities including Halifax, Truro and Bridgewater.

Katrina and Justine: What kind of patients do you typically see? What percentage of your patients are looking for help with BPPV, peripheral vestibular disorders, central vestibular disorders, and/or general help with their balance?

Steven and Susan: Not surprisingly, we see a lot of people with vestibulopathy, both peripheral (as in BPPV and vestibular neuronitis) and central disorders including vestibular migraine. Over the last several years we have seen a significant increase in patients with mild traumatic brain injury (concussion). One of their most prevalent complaints is dizziness. As the population in Nova Scotia is steadily aging, a large percentage of our caseload is older adults who are at increased risk for falls. Older adults want to stay in their own home as long as they can and proper balance is one of the more important factors in being safely independent.

At our clinic, we see approximately 30% BPPV, 20% other vestibulopathy including vestibular neuronitis, Meniere’s disease and vestibular migraine, 20% generalized imbalance, 15% concussion and cervicogenic dizziness and 15% neurological dysfunction.

Katina and Justine: What symptoms should audiologists in general practice be looking for to help determine if their patient may be a candidate for vestibular rehabilitation?

Steven and Susan: The first most obvious symptom would be dizziness. The problem with the word “dizziness” is that it is a non-descriptive term and gives no indication of the nature of the problem. We have our patients describe the sensation without using the word “dizzy” and this helps us better identify their complaint. For example, if they describe a feeling of motion like a room spinning sensation then we would categorize their dizziness as vertigo. A symptom of vertigo would lead us toward the vestibular system or to the brainstem for their diagnosis. Most often people with vertigo are good candidates for vestibular rehabilitation.

If they describe a feeling of lightheadedness as if they could potentially faint, we would categorize their dizziness as presyncope. Complaints of presyncope should be investigated through their family physician and ultimately a cardiac work up is often required.

Quite often, patients will describe their dizziness as a feeling of imbalance, which is referred to as disequilibrium. People with disequilibrium, both from peripheral and central causes will benefit from a vestibular and balance therapy program.

Katrina and Justine: What should patients expect who are going to receive vestibular rehabilitation from one of your clinics? What is involved in the assessment, how are exercises chosen, and how long do patients typically perform exercises for before they see improvement?

Steven and Susan: Luckily we have excellent front desk staff who are great at explaining the process to our patients when they book an appointment so that they know what to expect ahead of time. In some cases, our patients can feel a little stirred up or nauseated from the assessment so we recommend that they have someone drive them to and from the appointment. Our initial assessments will on average take 60–90 minutes and consist of a subjective history, objective testing, patient education, and treatment.

During the subjective portion of the assessment we go through a complete history of their current complaints, discuss any testing or diagnostics they have already had and go over any relevant past medical history. The objective testing includes a full bedside neurological exam and screening for any "red flags." Physiotherapy is a direct access profession so in some cases we will see the patient before they have even seen their family physician and as such, we have to take the time to identify any potentially serious pathology.

The next portion of the exam is vestibular testing, which will include the head impulse test and dynamic visual acuity testing to help identify any deficits in the vestibulo-ocular reflex. Nystagmus testing is done using the infrared goggles to assess for patterns of nystagmus associated with peripheral vestibulopathy and central dysfunction.

Balance testing is a major part of our assessments and luckily there are numerous reliable and valid measures of quantifying imbalance. The testing includes measures for static balance like the Clinical Test for Sensory Integration and Balance and the Balance Error Scoring Scale (BESS) and measures for dynamic balance including the Dynamic Gait Index and Functional Gait Assessment. There are many others that also give us a measure of risk for falls.

Exercises are chosen individually based on the patient's diagnosis, their specific symptoms and complaints and based on elements from their objective exam. For example, if one of their main complaints was disequilibrium triggered by head motion then at least some of their exercise program would consist of head motion based tasks. If their exam showed a deficit in the vestibulo-ocular reflex, then they would be asked to perform exercises designed to increase the gain of the reflex. We have a number of different types of techniques and exercises to chose from; however, the program itself is individualized for each patient.

Patients can start to see improvement almost immediately depending on their diagnosis. People with BPPV will often experience symptom relief on their first visit, whereas patients with mixed peripheral and central dysfunction may not start to notice change for several weeks. This is where patient education is key. It is important that the expectations and goals of treatment are laid out early so that they know in their case how long the whole process will take and what level of recovery is to be achieved. Proper patient education is vital for informed consent and is essential for program compliance.

Katrina and Justine: What are some tips you tell patients to help improve their success with therapy?

Steven and Susan: Tips for speedy and successful therapy are condition specific. With BPPV for example, there are certain movement precautions that they should adhere to on the day of treatment that can help increase the success rate. Compliance with their home exercise program is certainly

the most important strategy for success. If a specific exercise is prescribed to be done for two minutes, three times per day then it is important for them to do that amount. We will often use analogies to help them understand certain concepts better. For instance, if someone were prescribed 10 mg of a medication to be taken twice daily then one would not likely get the desired effect if they took 5 mg once every other day. The home exercises often work in the same manner and using this type of analogy tends to increase compliance. We will also educate the patients and often their families on what they should feel during and after an exercise. If an exercise is supposed to increase their dizziness for a short period of time, then the patient has to be aware of this so that it does not cause any feeling of unease.

Katrina and Justine: What has been your experience with how physiotherapists work with ENTs, neurologists, audiologists, and occupational therapists to effectively manage patients with vestibular disorders?

Steven and Susan: We are lucky to have a group of ENTs with whom we work very closely. We are referred many of their patients who require vestibular rehabilitation and they are also very good at seeing patients of ours who require their opinion or further diagnostic testing.

A proper and thorough audiological assessment is often required of many of our patients for diagnostics, overall hearing health and for ruling out central pathology. Again, in our Dartmouth location we are fortunate to have a good relationship with our audiology neighbours and we freely refer patients back and forth for assessment and consultation. In our other locations, we do not have an audiologist in the same building, however, we have built good relationships with audiologists in the various communities.

None of our locations have an occupational therapist (OT) on staff, however, OTs are an integral part of the health care team. From helping plan and pace the day for our patients with head injuries, to identifying cognitive barriers to recovery, occupational therapists are essential in the treatment of many of our patient populations.

As a significant portion of our patients have neurological involvement, the neurologists are typically involved in these cases, either as a referring source for their patients requiring balance rehab or as a place to refer our patients if a potential neurological condition is suspected. The future of healthcare is a multidisciplinary approach. It is important for all of us as professionals to be comfortable with collaboration, as it is both helpful for the patient and a great way for us to learn from one another.

Katrina and Justine: Vestibular rehabilitation is within the scope of practice of both audiologists and physiotherapists. Under what conditions would you suggest an audiologist consider referring to physiotherapy to optimize their success with treatment?

Steven and Susan: Audiologists have the expertise and unique insight to be able to offer care to patients with vestibulopathy and ear disease in general. Their knowledge of vestibular anatomy and physiology puts them in a great position to practice vestibular rehabilitation. There are many patients who will seek treatment for dizziness and balance dysfunction who either do not have vestibulopathy or have other issues contributing to their dizziness. Cervicogenic dizziness can be quite common and is believed to arise from altered proprioception from the joints and muscles of the upper neck. Cervicogenic dizziness responds well to treatment focused toward the dysfunction of the neck, such as manual therapy techniques, stretching and motor control exercises. For the older falling adult with multisensory disequilibrium, factors like lower extremity arthritis, weakness or poor core strength can contribute to their imbalance and will typically need to be addressed as part of their program. It is in these types of conditions where there are musculoskeletal concerns (even comorbid with vestibular dysfunction) that a referral to

physiotherapy may be of benefit. As in many cases, a collaborative approach is likely to better serve our patients' needs.

Katrina and Justine: Finally, what challenges did you face opening this business? What advice would you give to other physiotherapists or audiologists who are thinking about going into private practice?

Steven and Susan: When we opened Atlantic Balance and Dizziness Center it was, and continues to be, the only private physiotherapy clinic in Atlantic Canada that deals exclusively with vestibular rehabilitation. There are several clinics like ours in the some of the other larger cities in Canada but this concept was unique in this part of the country. In the early days of when we opened we concentrated a lot of time and effort on educating the public and the medical community as a whole on what vestibular rehabilitation was and what types of conditions we worked with. Fortunately, there is a wide database of evidence to support vestibular rehabilitation as an effective modality to treatment dizziness and balance disorders. Word of mouth is a powerful thing and over the years we have developed a strong reputation for being leaders in our field.

For those seeking to enter private practice in any field, it is essential to achieve a high level of expertise in your discipline. With the availability of information on the web, today's public is educated about their health and have become advocates for their wellbeing and as such, they will demand the highest level of care possible. On a business standpoint, it is important to make sure there is a market for your services, that you have the space and equipment necessary to do your job properly and that you maintain a strong relationship with your referral sources and with the other members of the health/medical community.

Extensive knowledge of vestibular disorders and rehabilitation is an integral part of practice for both audiologists and physiotherapists who work with this patient population; however, knowing the value of a collaborative management approach is equally valuable. As professionals who see individuals suffering from vestibular disorders, it is our duty to not only understand these conditions, but also be aware of who we can turn to for support and referrals. As Canada's population continues to age, the number of patients requiring vestibular rehabilitation is likely to increase in the coming years. Approximately 80% of people over age 65 report having experienced dizziness, with up to one third of these cases being caused by vestibular dysfunction.5 Given the likelihood of an increase in demand for vestibular rehabilitation services, it will become increasingly important that Audiologists are prepared to perform these duties in their daily practice. As upcoming professionals in this field, it is great to know that we will have the support of our physiotherapy peers when encountering patients with vestibular disorders.

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