

Vestibular Rehabilitation SIG

American Physical Therapy Association/Neurology Section

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Message from the Chair

Anne K. Galgon, PT, PhD, NCS

Vestibular Rehab SIG Chair

Getting it Done and Moving Forward!

It was a pleasure to see so many vestibular SIG members at CSM. Attendance at our programming and business meeting was at an all-time high. I had an opportunity to present the accomplishments of the SIG for this past year, discuss ongoing and new initiatives and thank the many individuals who contribute to the success of this group.

At this meeting I had the honor of giving out awards to our outgoing officers. Jen Nash was recognized for 3 years of service on the nominating committee. She has also contributed regularly to our group as a liaison to the Neurology Section CSM programming committee and she successfully organized the development of our new introductory course the ABCs of Vestibular Rehabilitation. Susan Whitney, who served for 5 years as the SIG chair received our Service award. In our last newsletter, there was a tribute to Susan describing all of her accomplishments and the impact she has on the practice of vestibular rehabilitation. We miss having her on our monthly calls and wish her well as a new member of the Board of Directors of the APTA. She continues to support the vestibular rehabilitation interests, as she is part of a group developing a physical therapy clinical practice

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Vestibular Rehabilitation SIG Officers:

Chair	Anne K. Galgon, PT, PhD, NCS anne.galgon@temple.edu
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Abstract of the week Coordinator:	Sara Oxborough, MS, PT sarao@stopdizziness.com

For more information go to:
<http://www.neuropt.org/go/special-interest-groups/vestibular-rehabilitation>



Vestibular EDGE Task Force

Breaking New Ground

Matthew Scherer PT, PhD, NCS, Karen Lambert MPT, NCS and Jennifer Stoskus DPT

After two years of planning, coordination, research, deliberation and writing, members of the Vestibular Evaluation Database to Guide Effectiveness (VEDGE) task force (TF) stand poised for their next opportunity. Like the Stroke, MS, TBI and SCI efforts of previous years, the findings of the VEDGE TF promise to have important implications for the measurement of patient outcomes across the spectrum of vestibular physical therapy practice settings.

The VEDGE TF was organized in 2012 and met for the first time at CSM 2013. Team composition was carefully considered to ensure a balance of clinicians, academicians and scientists to reflect the primary practice areas within vestibular Physical Therapy. The members of this 8 person team were competitively selected from across the Vestibular Rehab SIG based on individual experience, areas of practice and expertise, and with great consideration to ensure diversity in perspective.

Members of the TF included: Linda B. Horn, PT, DScPT, MHS, NCS, (Co-Chair) from University of Maryland School of Medicine, Physical Therapy and Rehabilitation Science, Baltimore, MD; Elizabeth Dannenbaum, MScPT, Jewish Rehabilitation Hospital, Laval, Canada; Jennifer L. Fay, PT, NCS, NYU Langone Medical Center, Rusk Institute for Rehabilitation Medicine, Vestibular Rehabilitation Department, New York, NY; Karen H. Lambert, PT, MPT, NCS, Bodies in Balance Physical Therapy, Wilmington, NC; Teresa A. Rice, PT, MPH, NCS, West Virginia University, Division of Physical Therapy, Department of Human Performance, Morgantown, WV; Jennifer L. Stoskus, PT, MSPT, DPT, Kessler Institute for Rehabilitation, Outpatient Physical Therapy Department; Diane M. Wrisley, PhD, PT, NCS, Wingate University, Department of Physical Therapy Wingate, NC; and Matthew R. Scherer, PT, PhD, NCS, (Chair), Andrew Radar U.S. Army Health Clinic, Joint Base Fort-Myer Henderson Hall, Physical Therapy, Arlington, VA.

The Back Story...

The VEDGE TF initially met face to face in 2013 at CSM in San Diego. During this organizational meeting, Task Force members met to develop vestibular-specific criteria to evaluate measures and to assess their utility in clinical, academic, and research

practice settings. The members of the team began the day with a list of seventy-six potential measures that had been identified in the vestibular literature by the TF Chairs, from the Neurology Section tool kit and other clinical support tools, as well as measures that had been identified by previous EDGE groups. By the end of the organizational meeting, the VEDGE TF had narrowed that list for further research and consideration down to forty-six tests and measures commonly used for the assessment of persons with vestibular dysfunction.

The second and more challenging goal of the initial meeting was to develop appropriate categories and to develop a system to assess and rate these outcome measures. As with previous EDGE groups, the Neurology Section leadership directed the VEDGE TF to independently and internally develop criteria to rate the utility and psychometric strength of outcome measures used to assess persons with vestibular dysfunction. After careful consideration, the TF divided outcome measures into six categories based on the clinical presentation of patients with suspected vestibular pathology. The categories reflected measures of postural stability, dynamic stability, gaze stability, VOR function, symptom severity, and activity and participation measures. The team additionally evaluated the strength of each measure for use in patients with acute versus chronic symptoms with peripheral, central, BPPV, and "other" vestibular pathology. Similarly, specific recommendations regarding the clinical and psychometric strength of each measure were identified for recommended use in academic and research domains.

To efficiently address the work, the TF divided into four, two-person teams. Teams paired members of differing practice areas, experience levels and interests. Each team was assigned a set of outcome measures from the total and was directed to perform a comprehensive literature review on all candidate measures.

Over the course of the next year, these "buddy teams" compiled descriptive and psychometric data on each measure and developed the data into two forms – one for the Rehab Measures database and a VEDGE TF evaluation form. Each two-person buddy team worked together to cross-check and

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Atypical Vestibular Disorders: Beyond BPPV, Vestibular Neuritis, and Acoustic Neuroma • Rachel Trommelin DPT, NCS

When I first started treating patient with vestibular disorders, all diagnoses were new and challenging. As time progressed I began to feel very confident managing patients with the typical vestibular disorders: BPPV, Vestibular Neuritis, post concussive dizziness, Vestibular Migraine, Acoustic Neuroma, etc. As I advanced in my practice, I received referrals from physicians for more atypical diagnoses. Being the only vestibular PT at my clinic, there was no one who could help me with those cases, so I turned to the literature. There often was little or no literature guiding management of these patients. What should a therapist do in this situation?

All three presenters, Laura Morris, Janene Holmberg, and myself, highlighted a clinical management algorithm through use of cases. I presented 2 cases of patients with Superior Semicircular Canal Dehiscence (SSHD), Laura presented a case on saccadic pursuit dysfunction, and Janene on a patient with complex vestibular migraine with cervicogenic dizziness components initially misdiagnosed as BPPV.

In management of these patients, all of us all of us relied on our knowledge of vestibular system anatomy and physiology and pathophysiology of these disorders. Depending on the pathophysiology, each of us chose to apply a combination of restorative, compensatory, and/or preventative interventions in order to maximize function and quality of life for these patients. For example, in Laura's case of saccadic eye movement dysfunction, she used substitution of other eye or body movements to compensate for the faulty saccadic system. In my case, both patients had a mild unilateral vestibulopathy resulting from the SSCD so I used restorative interventions for gaze stabilization and balance for habituation and adaptation to address dizziness and balance dysfunction.

Another important aspect of management is the need for careful examination, evaluation, and clinical reflection. Janene discussed analyzing eye movements with fixation removed in a variety of tests and positions, and compared her findings to pathologic eye movement patterns of various vestibular disorders to assist with differential diagnosis. All participants discussed the need for objective examination items, both to establish baseline status and track progress and outcomes with intervention.

As the saying goes, two minds are always better than one, and for that matter the more input you add the better. It's important for therapists to build a network of colleagues to bounce ideas and questions off of. It's also important for us as a profession to spread the word about management of these rarer disorders through scholarship, such as journal articles, abstracts, or poster presentations, so that another therapist can learn and build upon what each of us has discovered. Every vestibular therapist I've ever met has been very enthusiastic about treating patients, trying new techniques, and sharing knowledge. Because of this, I feel optimistic that the field of vestibular rehabilitation and the skill of vestibular therapists will continue to grow and flourish without limits, and thousands of future patients with vestibular disorders will have a better life thanks to this.

Neurology Section Spring Elections Are Here!

The VR SIG Nominating Committee was excited to present a slate of qualified candidates who have offered their time and service to the SIG. Elections were held electronically during May.

We would like to sincerely thank all of the candidates for their interest in serving the Vestibular Rehab SIG. We hope all SIG members took part in the elections. Stay tuned for updates on the election results

2014 Nominees Are:

Chair

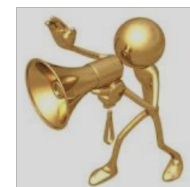
Anne Galgon PT, PhD, NCS

Nominating Committee

Rebecca Bliss MPT

John Heick DPT, OCS, NCS

Meleah Murphy PT, DPT



Volunteering as VR SIG officer is an excellent opportunity for involvement in the APTA leadership and to grow as a clinician.



Vestibular Rehabilitation in Acute Care

Colin R. Grove, PT, MS, NCS and Britta Smith, PT,

Bedside Examination

By Colin R. Grove, PT, MS, NCS

Patients with acute dizziness present with a constellation of additional signs and symptoms such as visual changes, hearing changes, imbalance, nausea, and vomiting. Drilling down to a very specific description of the patients “dizziness” is a key objective in the process of determining if the patient has a vestibular disorder. Gathering information about factors that provoke dizziness and imbalance may aid in lateralization of the patient’s problem. Furthermore, information about changes in vision and hearing also guides sorting of the differential diagnosis. The severity of autonomic symptoms has implications for management. Finally, the presence of red flags guides decision making with regard to medical referrals.

There are several ways in which physical therapists are uniquely qualified to care for these individuals. First, we can help the physician make an accurate diagnosis by taking a thorough history and performing a targeted clinical exam with the right equipment. Second, we can make sound recommendations for follow up after hospitalization by using knowledge of the natural course of vestibular disorders. Third, we can initiate appropriate treatments such as canalith repositioning for benign paroxysmal positional vertigo (BPPV), vestibular adaptation exercises for patients with hypofunction, or habituation for those with central problems. Fourth, having an understanding of the functional impact of vestibular disorders allows us to facilitate a safe transition home. Lastly, complete, thorough, and accurate written and verbal communication facilitates continuity of care across the continuum.

The patient interview is the single most important step in this process of accurately diagnosis the cause of dizziness. We need to help the patient tell his/her story, and really listen for the clues they provide. The major components of a thorough history include characterization of dizziness such as onset, duration, frequency, and intensity. We must also inquire about provoking and alleviating factors. Information with regard to past medical history, family history, and social history are often helpful. Additionally, we also must collect information from the medical work up and medication list.

How our patient describes his/her “dizziness” will be a key driver in our clinical decision making. The words he/she uses guide our differential diagnosis, facilitate the prioritization of the examination, and suggest whether or not physical therapy is appropriate. Specific characterizations of dizziness are associated with one or more possible underlying diagnoses. For example, a primary symptom of nausea may be associated with post-operative or medication-related issue. If our patient’s main concerns are related to visual field anomalies, we must consider stroke, brain trauma, and tumors. Lightheadedness upon rising is likely to be associated with orthostatic hypotension. When used correctly, vertigo it is not a diagnosis, but rather indicates a false sense of motion, such as spinning, rocking, or tilting. True vertigo likely indicates the presence of a vestibular disorder.

If we suspect that our patient has a vestibular disorder, we need to listen for other clues to help us determine if the problem is peripheral, central, or mixed in nature. Two critical clues are related to hearing and eye movements. Auditory symptoms are much more likely to be associated with a peripheral problem. However, abnormalities in smooth pursuit and saccadic eye movements are associated with central problems.

Our examination must be prioritized and modified based on what we glean from taking the patient’s history. The battery of tests presented in the Table takes approximately 15-20 minutes to complete in its entirety. We may not need to or be able to perform the entire battery in one session. Additionally, various tests may need to be modified based on who we are evaluating, our setting, and the equipment available. Completing these tests in the order listed provides the best results. No single test stands alone; rather, each provide unique information about our patient.

Table: Recommended Bedside Examination (* = HINTS exam component)


Function	Test: Rationale for Inclusion
Head Posture and Eye Alignment	Ocular Range of Movement Cover Tests*
Static Vestibular Function	Spontaneous nystagmus <u>with</u> fixation (Primary and <u>eccentric</u> gaze)* Spontaneous nystagmus <u>without</u> fixation (Primary and <u>end</u> gaze)
Functional Eye Movement	Saccades
Dynamic Vestibular Function	Head Impulse Test*
Postural Control	Modified Clinical Test of Sensory Interaction in Balance (mCTSIB)
Locomotor Control	Four Item Dynamic Gait Index
Positional Change	Vertical and Lateral Canal Tests

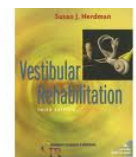
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2014 Vestibular Rehabilitation SIG Business Meeting Give-Aways

Lots of fun was had by all at the Vestibular Rehabilitation SIG business meeting for CSM 2014 and many wonderful prizes were awarded through our **Raffle Giveaways**. Every attendee received a raffle ticket upon entering the meeting and many fantastic items donated by VRSIG supporters went home with some very lucky attendees. We would like to acknowledge and send a sincere **thank you** to the individuals and companies who generously contributed to the Raffle giveaways this year.

AND THE WINNERS ARE...

- 👂 Amy Fong of Woodland, CA won **Micromedical InView Goggles**.
(<http://www.micromedical.com>)
- 👂 Andrea Griffith of Pittsburgh, PA and Peggy Roller of Northridge, CA each won **VHI Vestibular and Balance Exercise kits**. (<http://www.vhikits.com>)
- 👂 Ashlee Shupe of Queen Creek, AZ won Fay Horak's BESTest DVD. 
- 👂 Leesa Henderson of Bellevue, NE won IOS Press one year **online subscription of Journal of Vestibular Research**.
- 👂 Connie Rasmussen of North Wales, PA won "**Balance Function Assessment and Management**" by Gary Jacobson and Neil Shepard from Plural Publishing
(http://www.pluralpublishing.com/publication_bfaam.htm)
- 👂 Liz Ulanowski of Louisville, KY and Barbara Darkangelo of Riverview, FL each won a 1 year membership to VEDA (<http://www.vestibular.org>)
- 👂 Pat Flemming of Brentwood, TN won "**Vestibular Rehabilitation, New Edition**" by Susan Herdman from FA Davis Publishing



**Thank you to all those who
donated so generously!**



Vestibular Rehabilitation in Acute Care Continued from page 4

Three of the tests in the battery comprise what is known as the HINTS exam - Head Impulse (HI), Nystagmus (N), and Test-of-Skew (TS) (Kattah et al, 2009). HINTS is a bedside screening test for acute infarct. The danger signs on the HINTS exam that indicate an acute infarct may be present are: a normal head impulse test, spontaneous nystagmus with the fast phase alternating directions depending on the angle of gaze, or a vertical re-fixation seen on the alternate cover test (Kattah et al, 2009). When taken collectively, this exam has a sensitivity of 100% and a specificity of 96% for central lesions when any danger sign is present (Kattah et al, 2009).

There is specific rationale for performing each test in the battery. Ocular range of movement is performed in order to rule out a cranial nerve or ocular muscle impairment, central lesion localization, consideration of abnormalities on any nystagmus seen, and in order to be aware of a poorer prognosis for recovery. Cover Tests are conducted to determine the presence of a skew deviation or strabismus, which, if present, also suggests a poorer prognosis for recovery. Spontaneous nystagmus with and without fixation is primarily used as part of the HINTS examination component of this battery to differentiate between central and peripheral causes of dizziness. If done properly and with experience, testing saccadic eye movements greatly enhances the ability to localize central lesions. The Head Impulse Test may suggest whether or not a vestibular-ocular reflex impairment is present. Assessing postural control via the Modified Clinical Test of Sensory Interaction in Balance (mCTSIB) allows one to determine how well the patient uses somatosensory, visual, and vestibular sensory inputs. Use of the Four Item Dynamic Gait Index provides you with good sensitivity and specificity to detect the presence of a vestibular impairment (Marchetti & Whitney, 2006). The test also allows us to speak to the patient's risk for falls (Marchetti & Whitney, 2006). Finally, we use the positional tests for the vertical and lateral semicircular canals to differentiate peripheral, central, and benign paroxysmal positional vertigo.

Visualizing nystagmus is fundamental to this exam. However, it is not always necessary or possible to spend a lot of money on equipment. What we need is the ability to see what the patient's eyes behave while he/she is not fixating. There are a variety of tools we can use to help us visualize nystagmus. These range from the crude Ganzfeld to high-tech video-oculography systems. A Ganzfeld is simply a large plain screen, sheet, or backdrop that prevents your eyes from fixing on a specific point.

There are certain limitations to consider with regard to the specific components of the test battery described above. For example, the ability to perform each of the tests is subject to the patient's ability to pay attention and follow instructions. Thus, the presence of cognitive impairments may impact testing. Additionally, visual impairments, such as macular degeneration, cataracts, and field cuts may lead to false positive findings on any of the visual tests. Furthermore, equipment is required for testing nystagmus, the mCTSIB, and performing positional tests. Saccades and vestibular-ocular reflex function will be impaired if spontaneous nystagmus is present. The head impulse test and 4-Item DGI cannot be performed if c-spine precautions are indicated. Patients must be able to stand without support in order to perform the mCTSIB. The need to adhere to spinal precautions necessitates modification of positional testing. Finally, intra-cranial or -ocular

and/or weight bearing precautions have an impact on positional testing.

A targeted bedside examination specifically designed to help us accurately diagnose patients with acute dizziness may be performed in the time constraints found in acute care settings. Appropriately categorizing our patients is critical to developing an effective intervention strategy. The following case example depicts how this process played out for one man admitted to an acute care hospital.

Case Presentation

By Britta Smith PT, MMSc

Marvin is a 65 year old male with acute onset vertigo with nausea and vomiting after running about 10 miles early on the morning of presentation. He called 911 from the end of his run and was subsequently transported to emergency department via ambulance. Marvin was received as a "stoke alert" and work up proceeded under the facility's stroke protocol. His initial CT and MRI were negative for hemorrhage or infarct. He was admitted with diagnosis of "vertigo". Marvin's past medical history was significant for hypertension. He denied any recent respiratory illness, but SaO₂ was decreased to 88% - 91%.

Marvin was referred to physical therapy for possible BPPV. His initial physical therapy examination was conducted the same afternoon. A detailed subjective history revealed: constant room spinning vertigo of less intensity than earlier that morning; nausea with any head/body movement; denial of change in strength, range of motion, sensation or hearing; and denial of problem with speech or swallowing.

Observational findings included the following: well developed, well nourished male in bed, continuous nystagmus observed with eyes open, eye movement visible with eyes closed, he was on O₂ at 2 lpm, and he had been given IV Zofran about 1 hour prior to his evaluation. Marvin was found to be cognitively intact.

At this point, BPPV was ruled out. His spontaneous nystagmus was not suggestive of BPPV since most cases of BPPV do not present with nystagmus at rest. Additionally, patients with BPPV have the perception of vertigo with position changes, not continuously.

The possibility of an acute infarct was considered. Even though both CT and MRI were negative, this may be the case within the first 48 hours (Kattah, et al. 2009). In order to rule out an acute infarct, he was evaluated for central signs, visual changes, direction changing nystagmus, and a skew deviation. None of these were found. The possibility of acute vestibular neuritis or labyrinthitis was also considered based on the onset and characterization of his dizziness. Vestibular neuritis was considered more likely since he did not report a change in hearing unilaterally.

His head posture was normal and he did not have a vertical re-fixation on alternate cover testing. A limited exam was conducted since continuous nystagmus was observed in room light. Saccades and the head impulse test

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Thank You and Welcome!

Lisa Heussel-Gillig, PT, DPT, NCS • Nominating Committee Chair

We are very fortunate to have so many dedicated people in the Vestibular Rehabilitation (VR) SIG who volunteer serving on the VR SIG leadership team. Team members spend time coordinating education and disseminating the latest research in order that our vestibular patients receive the best evidence-based treatments. Each year, we take time to thank those who have shaped our past and welcome new members that are eager to shape our future.



We have only one member of the SIG leadership that has completed her term, but she will be deeply missed. Jennifer Nash PT, DPT, NCS is the outgoing Nominating Committee Chair. We would like to thank her for the enthusiastic dedication that she has contributed. She is now leading a task force, which is updating our vestibular continuing education courses in order to meet the needs of our members. She will hopefully continue to be active in the SIG to ensure the committee's service to its members

We have already welcomed Lexie Miles (vice chair) and Marylisa Dransfield (nominating committee) and will soon elect a new nominating committee member. As previously announced, we sadly say goodbye to Dr. Susan Whitney as our SIG chair and thank her for all of her service.



*JOIN THE
CONVERSATION!!*



The Vestibular Rehab SIG is actively involved in social media. Find us on Facebook at Vestibular Rehab SIG and on Twitter @VestibularRehab. Following the SIG on social media is a great way to stay up to date on the latest vestibular research, connect with the vestibular rehab community, and become an active member of the group.



Vestibular Rehabilitation in Acute Care Continued from page 6

could not be tested due to the presence of spontaneous nystagmus.

Postural testing with Modified Clinical Test of Sensory Integration also could not be completed since the patient was unable to stand without support. The therapists determined it was unsafe to assess the patient's gait as well.

However, Marvin required minimal assist to roll and come to sit. Initially, he needed moderate assist to maintain sitting. He was unable to maintain sitting without bilateral upper extremity support. Marvin needed moderate assist to come to stand, but he also needed to keep the back of his legs against the bed to maintain stance and required assistance to stand. He was able to laterally step with minimum assistance and leg support on bed. Marvin's symptoms increased with mobilization.

The continuous nystagmus in room light was right beating with a torsional component. The nystagmus increased in amplitude when looking to the right – toward the fast phase of nystagmus. Of note, this pattern of nystagmus follows Alexander's Law. The nystagmus does not change direction. Thus, the evaluating physical therapist determined Marvin's working diagnosis to be acute, left unilateral vestibular hypofunction (probable left vestibular neuritis).

Interventions began with mobilization, sitting balance, gaze fixation and slow VOR x 1. Marvin also participated in standing with assistance and getting OOB to a chair as tolerated that evening. It was recommended that he ambulate with assistance and that he may benefit from walker temporarily.

Goals for acute care physical therapy included: independence in bed mobility, independence in sitting at the edge of the bed without upper extremity support for ADL tasks, able to stand without external support for one minute, able to ambulate with rolling walker with supervision (or with no device and contact guard assistance), independence in VOR x 1 exercise. Marvin's primary goal was to return to running.

He increased his mobility as tolerated and he improved performing the VOR exercises x 30 repetitions, three times a day. He was educated regarding his disorder and that he should anticipate the nystagmus to resolve within a few days. Plans were made for him to discharge to home with wife's assistance. Outpatient vestibular therapy for vestibular retraining, including gaze stability, posture, balance, gait, household activities was recommended.

Up until the time of discharge, Marvin continued mobilization. Upon leaving the hospital, he was able to sit independently, perform the VOR x 1 exercise correctly, three times a day. He was also able to ambulate with minimal assistance in the hall without a device (he refused – preferring rather to use wife's assist). He was discharged on the second day after admission.

References:

Kattah, J. C., Talkad, A. V, Wang, D. Z., Hsieh, Y.-H., & Newman-Toker, D. E. (2009). HINTS to diagnose stroke in the acute vestibular syndrome: three-step bedside oculomotor examination more sensitive than early MRI diffusion-weighted imaging. *Stroke; a journal of cerebral circulation*, 40(11), 3504–10.

Marchetti, G. F., & Whitney, S. L. (2006). Construction and validation of the 4-item dynamic gait index. *Physical therapy*, 86(12), 1651–60.

Additional Recommended Reading:

Bamiou, D. E., Davies, R. A., Mckee, M., & Luxon, L. M. (1999). Symptoms, disability and handicap in unilateral peripheral vestibular disorders.

Bjerlemo, B., Kollén, L., Boderos, I., Kreuter, M., & Möller, C. (2006). Recovery after early vestibular rehabilitation in patients with acute unilateral vestibular loss. *Audiological Medicine*, 4(3), 117–123.

Enticott, J. C., O'leary, S. J., & Briggs, R. J. S. (2005). Effects of vestibulo-ocular reflex exercises on vestibular compensation after vestibular schwannoma surgery. *Otology & neurotology : official publication of the American Otological Society, American Neurotology Society [and] European Academy of Otolology and Neurotology*, 26(2), 265–9.

Herdman, S. J., Clendaniel, R. a, Mattox, D. E., Holliday, M. J., & Niparko, J. K. (1995). Vestibular adaptation exercises and recovery: acute stage after acoustic neuroma resection. *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*, 113(1), 77–87.

Strupp, M., Arbusow, V., Maag, K. P., Gall, C., & Brandt, T. (1998). Vestibular exercises improve central vestibulospinal compensation after vestibular neuritis. *Neurology*, 51(3), 838–44.

Teggi, R., Caldirola, D., Fabiano, B., Recanati, P., & Bussi, M. (2009). Rehabilitation after acute vestibular disorders. *The Journal of laryngology and otology*, 123(4), 397–402.

Telian SA, Shepard NT, Smith-Wheelock M, Kemink JL. Habituation therapy for chronic vestibular dysfunction: preliminary results. *Otolaryngol Head Neck Surg*. 1990 Jul;103(1):89-95.

Venosa, A. R., & Bittar, R. S. (2007). Vestibular rehabilitation exercises in acute vertigo. *The Laryngoscope*, 117(8), 1482–7.

CALL FOR NEWSLETTER ARTICLE WRITERS!!!

Do you want to get involved with your SIG? Consider writing an article for the newsletter!! You can write on a topic of your choosing or an appropriate topic could be assigned to you. If you are interested in getting involved with the newsletter, please contact Betsy Grace Georgelos at Elizabeth.grace@uphs.upenn.edu or Debbie Struiksma PT, NCS at dstruiksma77@aol.com.



Breaking New Ground

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re-evaluate the accuracy of the fact sheets and rated each measure based on an evaluation criteria that had been developed by the Task Force.

After rating consensus was achieved within the two- person review teams, measures were then re-considered and rated by the complete task force with all eight members using an on-line modified Delphi process. Ratings for individual measures were deliberated by the TF until 80% agreement was reached for each of the rated categories. Following the formal rating process, the team organized its results and presented the findings at the 2014 Combined Sections Meeting in Las Vegas, NV. The presentation was well received and generated a number of opportunities for further dissemination and collaboration across the section.

The Way Forward...

Throughout the process the VEDGE TF worked in close collaboration with project managers at Rehabilitation Measures.org to prepare for broad based, on-line dissemination of Task Force findings. Per their own description, "The Rehabilitation Measures Database (www.rehabmeasures.org) was developed to help clinicians and researchers identify reliable and valid instruments used to assess patient outcomes during all phases of rehabilitation. The database provides evidence-based summaries that include concise descriptions of each instrument's psychometric properties, instructions for administering and scoring each assessment as well as a representative bibliography with citations linked to PubMed abstracts. Whenever possible, [they] also include a copy of the instrument for the users to download or information about how to obtain specific instruments."

Ongoing and planned translation efforts for the VEDGE TF recommendations align with the three categories of findings presented: clinical, academic and research.

1) *Clinical Translation*: Select Outcome measures for use in the vestibular patient population will be published in the Archives of Physical Medicine and Rehabilitation to maximize visibility of measures with outstanding clinical utility and test psychometrics

2) *Academic Translation*: Members of the VEDGE team are currently working with the Vestibular practice pattern TF within the Vestibular SIG to consolidate and organize the extensive list of measure recommendations for use by academicians in entry level PT programs

3) *Research Translation*: Members of the VEDGE TF are proposing a coordinated research agenda to the Vestibular SIG to facilitate the targeted filling of psychometric property gaps identified by the VEDGE TF. This proposed effort aims to strengthen the most promising vestibular outcome measures through clinical research to systematically enhance psychometric properties improving clinical management and research suitability for select measures used to assess vestibular dysfunction.

For a comprehensive look at the TF recommendations, Vestibular SIG members and other interested clinicians are encouraged to keep a close eye on the Neurology Section web page from which Section members will be able to reference the data sheets generated by the Task Force (www.neuropt.org). Each of these evaluation sheets contains detailed information on the psychometric properties, clinical utility and specific TF recommendations on each measure. Presently, comprehensive data and TF recommendations are also available for each of the VEDGE TF measures on the Rehabilitation Measures.org site at <http://www.rehabmeasures.org/default.aspx>. Rehab Measures templates provide additional detail characterizing comprehensive psychometric test properties, comments on clinical utility, and a full reference list. Project managers at Rehab Measures ([Rehabmeasures.org](http://www.rehabmeasures.org)) will periodically update these measures in concert with ongoing efforts from the VEDGE TF and other members of the vestibular practice community.

The VR SIG sincerely thanks the members of the Task Force for their hard work and dedication!

Message from the Chair

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guideline for the management of vestibular hypofunction. Congratulations also to Janene Holmberg, our SIG secretary, who received the Neurology Section 2014 Clinical Excellence Award at the section business meeting.

The Vestibular programing at CSM was again a tremendous success. Thank you to all the individuals who developed and presented these great programs. Our featured topics included: Vestibular Rehabilitation in Acute Care, Atypical Vestibular Disorders, ABCs of Vestibular Rehabilitation, Vestibular Edge Task Force, Translating the Biomechanics of Benign Paroxysmal Positional Vertigo to the Differential Diagnosis and Treatment. Please look ahead for the CSM recaps of these presentations in this edition of the newsletter and podcasts on our webpage. The Atypical Vestibular Disorders presentation recap podcast was posted in March.

Providing and updating resources for physical therapists that practice vestibular rehabilitation continues to be the major effort of the SIG leadership. Our webpage has undergone changes this past year. We continue to grow the number of podcasts, fact sheets, and identify resources and research with the Dizzy Pub Fare and Abstract of the Week. We added a "Frequently Asked Questions" page, which is attached the New Members page. The Newsletter editors are looking at new ways to distribute and present our fall and spring newsletters and keep providing one special topic edition each year. Our Facebook and Twitter activities, friends and followers continue to grow. There will be an upcoming vestibular topic in Neurology Section Journal Club in July of 2014.

Moving ahead there are several initiatives in the works that we hope to update you on over the next year. Our aim is to better inform practitioners and improve the quality of Vestibular Rehabilitation in this country. First, the Neurology section is supporting a task force that will develop a description of advance practice. This is the first step towards creating an application for specialization with ABPTS. Second, the vestibular hypofunction clinical practice guideline group is well on the way to complete the first clinical practice guideline within the

Neurology Section. The work of Susan Herdman, Courtney Hall, and Susan Whitney will help set the example for development of new practice guidelines in the future. Third, The Vestibular Edge Task force at CSM has identified several areas where further research in outcome measures should be developed. Therefore, we are developing a plan to support outcome measures research in vestibular rehabilitation. Lastly, we are surveying members on the use of the CPT billing code 95992 and reimbursement difficulties. The survey is still open at <https://www.surveymonkey.com/s/B2T37DQ>. We are in the process of developing a plan of action to support and educate members who may be having problems using this code.

As I look at this long list of accomplishments, ongoing activities, and future plans, I am struck by the amount of work that the leadership group and volunteers contribute to the SIG. Thank you all! Many of these individuals have been serving the SIG for years. As we seek to expand our resources and initiatives there is always opportunity for our members to get involved. Please feel free to contact me to discuss how you might fit with the SIG's efforts. You are also welcome to voice your ideas and concerns.

