

GERI NOTES

Academy of Geriatric Physical Therapy

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Publication Title: *GeriNotes*

Statement of Frequency: Bi-monthly; January, March, May, July, September, and November

Authorized Organization's Name and Address: Orthopaedic Section, APTA, Inc.

For Academy of Geriatric Physical Therapy, APTA., 2920 East Avenue South, Suite 200, La Crosse, WI 54601-7202

Newsletter Deadlines: January 10, March 10, May 10, July 10, September 10, November 10

Note: *GeriNotes* will transition from 6 editions to 5 editions in 2017. Please watch for updated deadlines for 2017 in the November 2016 issue.

Editorial Statement: *GeriNotes* is the official magazine of the Academy of Geriatric Physical Therapy. It is not, however, a peer-reviewed publication. Opinions expressed by the authors are their own and do not necessarily reflect the views of the Academy of Geriatric Physical Therapy, APTA. The Editor reserves the right to edit manuscripts as necessary for publication. Copyright 2016 by the Academy of Geriatric Physical Therapy, APTA.

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IN HONOR/MEMORIAM FUND

Each of us, as we pass through life, is supported, assisted and nurtured by others. There is no better way to make a lasting tribute to these individuals than by making a memorial or honorary contribution in the individual's name. The Academy of Geriatric Physical Therapy has established such a fund which supports geriatric research. Send contributions to:

The Academy of Geriatric Physical Therapy | 3510 East Washington Avenue | Madison, WI 53704

Also, when sending a contribution, please include the individual's name and any other person you would like notified about your contribution. If you are honoring someone, a letter will be sent to that person, and if you are memorializing someone, the surviving family will be notified of your contribution.

In the field of geriatric physical therapy, we receive many rewards from our patients, associates, and our mentors. A commemorative gift to the Academy of Geriatric Physical Therapy In Honor/Memorial Fund is a wonderful expressive memorial.

PRESIDENT'S MESSAGE: DEHYDRATION

William H. Staples, PT, DHS, DPT, GCS, CEEAA



Before I get to this issue's topic, congratulations go out to Keith Avin, PT, DPT, who was honored by the APTA as the Academy's 2016 recipient

of the Emerging Leader Award. The Emerging Leader Award was established to honor individuals who have demonstrated extraordinary service to the profession and APTA early in their careers. Keith has been an active member of the Practice Committee for many years and serves on the AGPT's inaugural Editorial Board for Evidence-based Documents. He also serves as leader of the newly formed Guideline Development Group for Osteoporosis and recently volunteered to represent the Academy as a panel member of the AAOS consensus statement process for Surgical Management of Osteoarthritis of the Knee. His numerous contributions to peer-reviewed publications, abstracts, and conferences in the field of geriatrics proves his commitment to research to improving the lives of our aging adults. I am impressed with Keith's contributions to the Academy and to the profession.

I took my annual week to hike the Appalachian Trail again this year. The goal was to hike through the state of Georgia. Starting at Amicalola Falls and getting past the official start of the trail to Springer Mountain about 9 miles was a successful day one. Northwest Georgia has not seen much rain this summer and streams noted in the guidebook were dry leading to less water intake in order to save water to cook the dehydrated dinners I had packed for the hike. Three days later and another 40 miles of vigorous ascents and descents in the heat of summer while climbing down Blood Mountain I became nauseous and vomited. As I pitched my tent that night, I noticed a rapid heart rate and

eventually had to call 911 and ended up in the emergency room diagnosed with dehydration and rhabdomyolysis. I was only able to complete part of my hike.

So, why am I bringing this up? Dehydration occurs easier as we age and we lose the ability to control our homeostatic level. According to WebMD, "the signs and symptoms of dehydration in adults range from minor to severe and include increased thirst, dry mouth and swollen tongue, weakness, dizziness, cardiac palpitations, confusion, sluggishness, fainting, inability to sweat, and decreased urine output."¹ Loss of skin recoil is another sign to commonly test for dehydration. We need to be observant in our patients, especially those who are not used to vigorous physical activity, and in the summer months. There is substantial evidence to show that aging causes changes in body water composition, and that renal function and thirst perception on average decline among older adults.²⁻⁴

Unfortunately an early diagnosis is often difficult because the classical signs of dehydration may be absent or misleading in an older patient. I only had 2 of the 12 signs noted above. If my heart rate and rhythm had not been so disconcerting, I might have continued my hike possibly causing even more liver or kidney damage. Dehydration is often due partly to inadequate water intake as in my case, but can also happen for other reasons, a side effect of prescribed medication like diuretics, diarrhea, excessive sweating, loss of blood, and diseases such as diabetes. Aging itself makes people less aware of thirst and also gradually lowers the body's ability to regulate its fluid balance. Drinking enough fluids every day also is essential for people who exercise. The National Institute of Aging has an excellent PDF handout for your patients entitled "Drinking Enough Fluids" and can be found at: https://go4life.nia.nih.gov/sites/default/files/DrinkingEnoughFluids_0.pdf. Make sure your patients (and possibly yourself)

drink plenty of fluids throughout the day to stay hydrated.

REFERENCES

1. WebMD.com. Dehydration. <http://www.webmd.com/a-to-z-guides/dehydration-adults>. Accessed July 19, 2016.
2. Lindeman RD, Tobin J, Shock NW. Longitudinal studies on the rate of decline in renal function with age. *J Am Geriatr Soc*. 1985;33(4):278-285.
3. Malmrose LC, Gray SL, Pieper CF, et al. Measured versus estimated creatinine clearance in a high functioning elderly sample: MacArthur Foundation study of successful aging. *J Am Geriatr Soc*. 1993;41(7):715-721.
4. Davies I, O'Neill P, McLean KA, et al. Age associated alterations in thirst and arginine vasopressin in response to a water or sodium load. *Age Ageing*. 1995;24(2):151-159.

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EDITOR'S MESSAGE: HEALTH CARE SYSTEM IN THAILAND PROMOTES HEALTHY LIFESTYLES

Meri Goebring, PT, PhD, GCS



In January 2014 and again in January 2016, I attended and presented research at the Prince Mahidol Award Conference in Thailand.

During these visits, I learned a great deal about how Thailand provides community health and wellness. I believe they provide an example for the world and decided to try to articulate what this may mean for physical therapists in the Geriatric Academy.

To do this, it is important to understand a bit about Thailand. The land itself covers an area of about 514,000 square kilometers, or a bit larger than California or a bit smaller than Texas. There are 77 provinces, 876 districts, 7,255 Tambons (sub-districts), and 68,839 villages. There about 68 million people in Thailand, with 9 million in Bangkok—the capitol and largest city. There are somewhere between 8,000 and 9,000 primary health care clinics and there is a large, centralized hospital with a medical school.

At the local level, there is a community health fund committee in each sub-district (Tambon). Some people are paid and some volunteer their services. Taxes are used to help fund the committee health activities, and the Thai National Health Services Association help co-finance the health fund. So, each Tambon has a Community Health fund with specific objectives. These objectives are to support and promote health care services of the primary health care unit or other public health care services of local authority or health activities of schools and religious institutions. This includes health organizations in the community to insure that all vulnerable groups and chronic patient groups can

efficiently and widely get access to health care service with proper participation of the community according to their needs.

The “Community Health Fund” or “Sub-district Health Fund” was launched in FY2006. The fund is made up of matching contributions from the National Health Security Office and local government organization to promote community health activities. Each community decides how funds are used. Below are 3 examples of how this community health fund was used in different areas.

Youth Example:

In one area, school children aged 10-18 were asked to elect 3 representatives of different ages to serve on a local Tambon community board. These representatives administered a health survey to find what health problems were present and to prioritize these problems. The students identified a number of issues, but felt that the Internet and gaming addiction were the most important problem to address and recommend



Thai traditional medicine farmer speaking about herbal medicine.



Meri Goebring at Prince Mahidol Award Conference.

solutions. The board initiated an after school tutoring program and purchased equipment that would allow children to participate more in outdoor sports of all kinds. They also provided counseling services to individuals who felt they needed help with the Internet and/or gaming addiction.

Traditional Medicine Example:

The Prince Mahidol Award Conference provided optional field trips for participants. On one of the field trips, small groups toured a small farm where traditional herbs were cultivated and prepared for use. The local community health fund supported this effort. It was fascinating to hear how the local community embraced and accepted the use of traditional herbs in health practices.

Elderly Involvement In Community Health Example:

When the tour ended, older adult women performed a traditional dance. They wore traditional Thai silk costumes

and performed Thai dance that was quite elegant and was accompanied by older adults playing traditional Thai musical instruments. As it turns out, this group of women was also supported by the Community Health Fund and was often asked to perform for other ceremonies and occasions. The goal was to keep these women active and healthy by participating in an activity that was important to the community and that they clearly loved.

These trips made me consider how I might better help my community. Certainly, there is a lot of inequity in how health care dollars are spent. The Thai government has much to offer in terms of a model for Universal Health Care, but this model cannot work in the same way everywhere. There is much work to be done. But, through education and cooperation we can empower people to develop more resilient communities and create fairer societies.

We can learn a great deal from involvement in the global community as well as our local community. I thank the people of Thailand and the Prince

Mahidol Award Committee for allowing me to participate and learn more about how some countries are moving towards improving the health of their societies.



Seminar session at Prince Mahidol Award Conference.



Academy of Geriatric Physical Therapy CSM 2017 Preconference Courses

Working with Cognitive/Mental Health Issues Across the Care Continuum - 1.6 CEUs

Tuesday, February 14 and Wednesday, February 15, 2017

Presenters: Lise McCarthy, PT, DPT, Michele Stanley, PT, DPT, Laura White, PT, DScPT, Nicole Dawson, PT, Betsy Ross, DPT, Grace Knott, PT, Michelle Criss, PT, DPT, Christine Ross, PT, DPT and Lynn Steffes, PT, DPT

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Tuesday, February 14 and Wednesday, February 15, 2017

Presenter: Kristi Hallisy, PT



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2016 ACADEMY OF GERIATRIC PHYSICAL THERAPY ELECTION

Those elected will take office at the AGPT Member Meeting in February 2017 at CSM in San Antonio, TX. Online voting will begin on October 1, 2016. Please watch your email and www.geriatricspt.org for more details. Contact karen.curran@geriatricspt.org to request a paper ballot. Per bylaws, only PTs and PTAs are eligible to vote.

Candidate Questions

SECRETARY (Vote for 1)



Ann Medley, PT, PhD, CEEAA

Current Position:

- Professor and Director, School of Physical Therapy, Texas Woman's University

Education:

- PhD in Cognition and Neuroscience from University of Texas at Dallas
- MS in PT from Texas Woman's University
- BS in PT from University of Texas Health Science Center at Dallas
- BA in Biology from University of Texas

1. What experiences would you bring to the position of AGPT Secretary that makes you a strong candidate?

I have been a licensed physical therapist for 37 years. I started my career in the acute care setting working primarily with older adults as well as people following stroke. I moved to a home health setting after about 10 years in acute care and then to skilled nursing after that. I have been on the faculty at Texas Woman's University (TWU) in the School of Physical Therapy for the past 26 years. My research interests

include functional assessments for older patients and patients following stroke. I was the coordinator of the entry-level program for 12 years and was appointed the Associate Director for the School of PT on the Dallas campus in 2012. In 2014, I became the Director of the School of PT. I have served on numerous committees at the departmental as well as university level. I have been a member of the APTA since 1978 and served the Neurology Section as Secretary of the Stroke SIG for two 3-year terms. I just completed service on the Finance Committee for the Neurology Section after 6 years. I also served on the AGPT Public Relations Committee for 4 years. Currently, I am in the final year of a 3-year term as the AGPT Secretary. I was the Chair of the AGPT Bylaws Task Force that was charged with conducting a thorough review of the Bylaws. Amendments to the Bylaws were approved at the Members meeting in 2015. At the state level, I am on the Board of Directors for the Texas Physical Therapy Foundation (TPTF) and review grants for the Grant Review Committee. I also served as a reviewer of continuing education for the Texas Physical Therapy Association. I have been a member of the AGPT since 2009 and earned my CEEAA in 2010. I enjoy being a member of the Academy and have learned a lot through conference courses as well as volunteer activities. Section activities in both sections have taught me a lot about the APTA as well as the individual sections. I especially enjoy the opportunity to interact with other physical therapists who also share a love for treating older people. All of

my administrative positions at TWU require strong organizational skills, clear communication, and the ability to work with multiple individuals simultaneously. My strengths include attention to detail, strong organization skills, timely completion of tasks, and very good interpersonal skills. I also have a long history of service activities both at the University and within our professional organization. It has been my pleasure to serve the Academy as the Secretary, and I welcome the opportunity to serve for another term.

2. How would you promote communication to enhance participation of and responsiveness to members?

I would continue to encourage the use of social media and email communication as well as printed materials to communicate with the membership. We have become better at communicating with non-members but we have room to improve. Our website has been undergoing revision and this will greatly help communication with both members and non-members. The Board is working to increase the number of posts on our Facebook page. *GeriNotes* and *JGPT* are also great ways for us to reach out to our members and we use these two quite frequently.

3. What is the greatest challenge facing the geriatric practitioner and how can the AGPT help?

I see several challenges for the geriatric practitioner:

First, we must continue to ensure that PTs are viewed as the exercise experts for our aging population. The Academy CEEAA courses fill up almost as quickly as they are scheduled. We now have over 1000 PTs who have completed the certification. The CEEAA faculty are to be commended for their work. This is great news but we have a long way to go to ensure that the aging population is treated using the most current information. We need to continue to encourage all members of the Academy to earn the CEEAA.

In some way, we should determine whether current practitioners can meet the Partnership for Health in Aging *Multidisciplinary competencies in the care of older adults at the completion of the entry-level health professional degree*. As a section, we must develop opportunities for clinicians who have identified areas of deficiency in these competencies. Lastly, putting research into practice is essential to quality care for our patients. The Journal of Geriatric Physical Therapy has more manuscript submissions than ever. This means PTs are conducting and disseminating research. But changing practice based on current research continues to lag. We must develop ways to translate the research into practice. Academy continuing education opportunities such as EXPAAC, CEEAA courses, regional courses, and home study courses are all good ways to do this and should be continued.

Director (Vote for 1)



**Patricia D. Brick,
PT, MS, GCS, CMC**

Current Position:

- TLC Rehab and Wellness:
Co-Owner/President/Staff Therapist
- Atlanticare Home Health Agency:
PRN Physical Therapist

- Select Rehab: PRN Physical Therapist
- Cerebral Palsy of North Jersey: PRN Physical Therapist

Education:

- AAS Physical Therapy, Atlantic Cape Community College 1981
- Bachelor of Arts Psychology, Richard Stockton College 1988
- Master of Science Physical Therapy, Neumann University 1998
- Board Certified Geriatric Clinical Specialist 2006, 2016
- Geriatric Care Manager Certified 2010

1. What experiences would you bring to the position of Director that make you a strong candidate?

As a long-time member of the AGPT, I have watched the section grow and evolve over the years. And after 15 years in leadership roles in New Jersey, I had been looking for a place to land that would allow me to focus on the patient population I am most passionate about. So it was an honor for me to be appointed to serve the last year and a half on the Board of Directors of the Academy of Geriatric Physical Therapy. I have been able to learn the moving parts of the Board and the Academy at a much more intimate level and believe that I can be of value to the members. I bring a thoughtful leadership style that is inclusive of all practitioners at all levels and realize that we all give what we can when we can for the good of the group. I have previously served in areas of practice, legislation, education, as state chapter president and have enjoyed the privilege of being a delegate for more than 15 years. Perhaps my proudest moment of all of the Houses was the passage of the new Vision. I served on the task force that brought that statement to the BOD and helped to guide it through the debate and voting process. I see the new Vision as a platform to enhance our role in the lives of our patients, especially the older adult. The idea of optimizing movement and improving the human experience should be the corner stone of interactions with older adults and those who care for them.

2. What current or future Academy activities would like to advance as a member of the Board of

Directors and how would you plan on achieving this?

In my role as Director, I have interacted with the state liaisons chair, membership chair, and more recently the student assembly and PTA representatives. I believe there is room for retrospection, introspection and growth within all of these groups. I do believe we can enhance membership satisfaction and growth by demonstrating physical therapist impact on society utilizing the guiding principles of the new Vision. I would work with State Advocates to find opportunities in their state to participate at a level that shows the true value of PT for the patients and clients we serve and society as whole. I would work with the Physical Therapist Assistants in our membership to realize their potential in the care of the older adult and encourage greater participation in the Academy. I would also work with the Student Assembly to encourage greater participation in the Academy that will translate to a desire to participate after graduation. If elected, I would work with these groups as well as other areas in the Academy to help it continue to evolve to meet the demands of the older adult population as well as the members we serve.

3. What is the greatest challenge facing the geriatric practitioner and how can the Academy help?

We must meet the challenges of the aging body and both the failing and alert mind with new and out of the box approaches to service delivery and collaboration with others. But perhaps our greatest challenge is demonstrating our value inside and outside our intervention box. We must bring our vast body knowledge and innovative application style to the people who need us the most. The Academy is positioned to provide education and avenues for societal change. A recent McMillan lecturer challenged us to “to practice to the top of our licenses and be prepared for the Silver Tsunami.” I would like the opportunity to continue to serve the Academy of Geriatric Physical Therapy as an elected Director to help us meet those challenges.



**Tamara N. Gravano,
PT, DPT, GCS, CEEAA**

Current Position:

- Associate Professor and Director of Clinical Education
- Marshall University School of Physical Therapy

Education:

- Doctor of Education, Marshall University, August 2011-present, Dissertation in progress (anticipated completion Dec. 2016)
- Doctor of Philosophy, University of New Orleans, August 2009-August 2011, Matriculated to Marshall University August 2011
- Residency in Geriatric Physical Therapy, St. Catherine's Rehabilitation Hospital and Villa Maria Nursing Center, North Miami, FL, March 2003-March 2004
- Doctor of Physical Therapy, University of Miami School of Medicine, Coral Gables, FL, 2003
- Master of Science in Physical Therapy, University of Miami, School of Medicine, 2002
- Bachelor of Health Sciences, University of Miami, 2000

1. What experiences would you bring to the position of Director that make you a strong candidate?

Greetings to the members of the Academy of Geriatric Physical Therapy. I enthusiastically welcome the opportunity to serve as one of your Directors. I am deeply honored to be considered to continue to work within the Academy to advance the major goal of our Strategic Plan: Support autonomous physical therapist practice with the aging population. The role of Director allows me to collaborate with the AGPT leadership and other voluntary Directors and work with our 5 SIGs, 17 Committees, and all stakeholders of the academy. This is an exciting time to serve my profession, as the AGPT continues to experience

membership growth and progress. I seek to carry on serving the section that has provided me with so much inspiration to serve my profession.

I earned my Bachelor of Health Sciences, Master of Science in Physical Therapy, and transitional Doctor of Physical Therapy from the University of Miami in Coral Gables, Florida. Over the last 16 years of APTA membership and service, I have had the privilege of serving on several committees in the AGPT: as Founding Chair of the Residency and Fellowship Special Interest Group (RFSIG), Chair of the Residency & Fellowship Subcommittee of the AGPT Practice Committee, and as Chair of the AGPT Membership Committee. Currently I am on the Editorial Board of the *Journal of Geriatric Physical Therapy* and am one of the Core Faculty of the Certified Exercise Expert for Aging Adults (CEEAA). I was thrilled to be recognized for my service to the AGPT with the President's Award in 2016.

Besides my leadership roles in the AGPT, I have served my profession in other APTA Sections, especially in the areas of post-professional education. As one of the initial graduates of the first geriatric physical therapy residency program (2004), my interest in promoting geriatric patient care is evident in the service roles I have chosen. Recently I have recertified as Board Certified Clinical Specialist in Geriatric Physical Therapy, and since earning the APTA Emerging Leader award in 2007, I have sought after and enjoyed many opportunities to align my interests in geriatric education and practice. I am on the Board of Directors of the American Board of Physical Therapy Residency and Fellowship Education (ABPTRFE) and for the past 8 years have reviewed and accredited residency and fellowship programs. I have participated on the Specialty Council on Geriatric Physical Therapy of the American Board of Physical Therapy Specialties (ABPTS), culminating as Chair in 2012. During this period, I was privileged to co-author the current Geriatric Physical Therapy Description of Specialty Practice. Previous to that I was an item writer for the Geriatric Specialty Board Exam as a member of the ABPTS Geriatric Specialization Academy of Content Experts (SACE). Joining SACE allowed me to participate in the creation and

management of the Geriatric Specialty board examination, which is the ultimate goal of most, if not all, geriatric residency programs, and afforded me the opportunity to collaborate with related APTA committees.

My interest in promotion of geriatric patient care is not limited to post-professional specialty educational development; as I am also a trainer for the Credentialed Clinical Instructor Program of the APTA and have been an item writer for the Federation of State Boards of Physical Therapy (FSBPT), which helps me to close the loop from entry-level to advanced clinical practice education in geriatrics. In my role as Associate Professor at the Marshall University School of Physical Therapy in Huntington, WV, I am the Director of Clinical Education, and I teach clinical skills, geriatrics, and wound care in the DPT curriculum and I practice in the skilled nursing unit at St. Mary's Medical Center. Currently, I am completing my EdD dissertation in Leadership Studies with an emphasis in Higher Education Administration from Marshall University. My research interests are Fall Prevention, Generational Differences, Healthcare Literacy, and Best Practices in Adult Education.

2. What current or future Academy activities would you like to advance as a member of the Board of Directors and how do you plan on achieving this?

The Academy of Geriatric Physical Therapy is about to renew our strategic plan. The existing plan emphasizes "support[ing] autonomous physical therapist practice with the aging population." My experiences in the ABPTRFE, ABPTS, and AGPT focus on promotion of geriatric education and practice. I see my role as Director as one that aligns the educational committees together to work toward the common goals to pursue best physical therapy practice for optimal aging. To this end, I support geriatric-specific continuing education like the CEEAA, and other continuing education forums to help clinicians learn the skills necessary to provide the best patient care. I would like to see the CEEAA course expand and also increase our regional course offerings. In addition, continued recognition of Advanced Proficiency of

PTAs in geriatrics and other specialty areas is important to include in our new strategic plan in order to encourage more PTAs to seek quality geriatric continuing education. As the former Membership Chair, I believe that collaboration with other professional associations that serve the geriatric community such as National Council on Aging and the American Geriatrics Society is another potential avenue to improve not only our own patient outcomes, but also to promote the profession of physical therapy among the greater health care community.

After years of service to the Academy, I understand the needs of the Academy as it grows as well as the challenges each member faces as we move forward together to embrace our common vision. I support the sharing of resources between committees and establishing clear lines of communication between sections to allow us to work together to meet our mutual goals. I plan to maximize efficiency through communication with the rest of the BOD and leadership. Our profession as a whole is facing an aging population, represented as an increase in the complexity of our client/patient population. The AGPT is working to increase student and new professional membership to help prepare current and new geriatric practitioners with the best up-to-date evidence for treatment of this growing area of practice.

3. What is the greatest challenge facing the geriatric practitioner and how can the Academy help?

The AGPT has identified several challenges facing today's geriatric practitioner, and it will take a coordinated effort from all stakeholders to continue to move forward. The Academy is a valuable source of information to help clinicians navigate the recent health care changes and its current and future impact on practice. The AGPT can help the geriatric practitioner by promoting educational resources for clinicians to elevate their practice to keep up with the changing needs of our patients. Providing increased access to resources to support patient advocacy, interdisciplinary practice teams, increase reimbursement, improved documentation, and professional community partnerships would go a long way toward better serving our patients and clients. It is

more important than ever to promote and provide evidence-based practice, specific to the geriatric population. To that end, the Academy needs to continue to educate the consumer as well as other health care professionals that the physical therapist is the practitioner of choice for many older adult health and wellness needs.

DELEGATE (Vote for 1)



Jane Jackson, PTA, MS

Employer:

- Spooner Physical Therapy; position: staff Physical Therapist Assistant, level 2

Education:

- AAS in PTA; BA in Applied Biology in Physical Education; MS in Exercise Physiology; Fellow of Applied Functional Science
- My undergraduate degree (BA in Applied Biology in Physical Education) was earned from Westminster College in Fulton, MO, 1992. My graduate degree (MS in Exercise Physiology) was earned from the University of Arizona, Tucson, AZ 1994. My PTA degree (AAS in PTA) was earned from State Technical College of Missouri, Linn, MO in 2003.

1. What skills and experiences qualify you to serve as Section Delegate?

For the past 11 years, I have worked in outpatient settings that focus primarily on treating geriatric clientele. This work environment has provided me an opportunity to appreciate the multi-faceted approach necessary to fully understand my patients' needs. During this time, I have also organized community balance screenings; provided community lectures on balance, posture, and fitness; coordinated multigenerational community exercise events; and advocated for patients in

regard to Medicare reform so that they are allowed access to services which are paramount to keeping them safe and healthy.

Within the Arizona chapter, I have served 6 years as the PTA Caucus Representative where I worked within the PTA Caucus and alongside the Arizona delegates on motion discussions and development in preparation for the House of Delegates. This opportunity taught me a great deal on different nuances leading up to the House, as well as gave me a greater appreciation of how various motions impact different groups. I also served two years as the Alternate Delegate for the PTA Caucus where I worked closely with the PTA Caucus Delegates and Representatives in preparing for discussions during the House. In working with the PTA Caucus I have learned the importance of being a part of a group that focuses on serving as content experts, a role that is necessary to the House of Delegate discussions. This experience will translate to a role similar to what I will play as the Geriatric section delegate. I have also seen first-hand while working with the AZ delegates how a component can be leaders in actively producing RC content to focus on professional association improvements. Through all of these experiences I have learned more about Parliamentary procedures and how the House of Delegates operates, and I now have a broader understanding of the importance of representing others.

2. How do you envision the role of Section Delegate?

I envision the role of the Section Delegate as being the voice of all the Academy of Geriatric Physical Therapy members. The sections serve as content experts to the House, and the Section Delegate will be the voice of this group, relying on input from committees and special interest groups in order to be fully prepared and aware of all points of view. The Section Delegate will serve as the voice of the content experts for geriatric-specific issues to facilitate transformation of the profession and the Association. The Section Delegate, working alongside the board of directors of the AGPT, will represent the Academy on geriatric-specific issues across all areas of the Association, bringing forward motions when necessary and

appropriate, as well as keeping AGPT members informed on pertinent issues.

In the role of Section Delegate, being an advocate for the Academy of Geriatric Physical Therapy and its members will be my primary focus. Emphasizing the importance of serving as content experts for topics specific to geriatric patients is my first priority.

3. Are there particular issues facing the profession currently that will require leadership by the Delegate for the Academy of Geriatric Physical Therapy?

In the most recent McMillan lecture, Carole B. Lewis hit the nail on the head when she identified some very specific areas to focus on so that people can age more gracefully. To me, some of the most important areas that can provide a huge impact are to emphasize the importance of preventative services, as well as postural awareness and education throughout the lifespan. These two areas are not just specific to our geriatric clients, but to all people. Taking a more proactive approach to educating the public on the benefits of physical therapy to prevent the negative ramifications of poor posture later in life, implementing biannual functional assessments to identify issues early on, and providing easier access to care would be examples of specific issues beneficial for all patients. Physical therapists as movement system specialists should be the primary drivers in making these transformations. And the Academy of Geriatric Physical Therapy can be the driving force to ultimately help to transform society.



**Ellen R. Strunk,
PT, MS, GCS, CEEAA, CHC**

Employer/Position:

- President and Owner, Rehab Resources and Consulting, Inc.
- Rehab Resources and Consulting, Inc. (RRC) is a company that provides consulting services and training to

providers in post-acute care settings. RRC specializes in helping customers meet regulatory guidelines in the skilled nursing facility, home health setting, and outpatient clinics. In addition to assisting clients meet their operational & clinical goals, Ms. Strunk lectures nationally on the topics of pharmacology for rehabilitation professionals, exercise & wellness for older adults, the importance of functional outcomes and coding/billing/documentation to meet medical necessity guidelines and payer regulations, and how to prepare for the transition to a value-based payment system.

Education:

- The University of Alabama at Birmingham, Birmingham, AL
- January 1990 – December 1991; MS Physical Therapy
- The University of Tennessee, Knoxville, TN
- June 1985 – May 1989; BS Kinesiology/Biomechanics

1. What skills and experiences qualify you to serve as Section Delegate?

I have been a member of the Academy of Geriatric PT for over 20 years, but more importantly I have been an active member for most of those years. I have had the opportunity to participate at the Task Force, Committee, and Board levels, and have gained a perspective that I think will support me in serving as the Academy's Delegate to the House.

2. How do you envision the role of Section Delegate?

I envision the role of Delegate has having two priorities: (1) Advocate and (2) Leader. As advocate, I believe the Delegate should insure that the goals of the Academy are reflected in all House positions. As leader, I believe the Delegate should collaborate with other component and section delegates to develop policies that are meaningful and relevant to the practice of geriatric physical therapy.

3. Are there particular issues facing the profession currently that will require leadership by the Delegate for the Academy of Geriatric Physical Therapy?

I believe we are in a difficult time where the historical structure of how we practice and where we practice is fading away. Our traditional models of education, payment, health care teams, membership, and public service are being challenged from both inside and outside the profession. What will replace those structures is not yet clear and provides an opportunity for physical therapists/physical therapy assistants to advocate. During this period of change, I believe the Delegate for the Academy should be ready to identify and prioritize the issues that are being debated by the House as well as identify gaps that may require new motions to be brought before the House for action.

NOMINATING COMMITTEE (Vote for 1)



Tiffany Hilton, PT, PhD

Employer/Position:

- Associate Professor and Vice Chief of Education, Doctor of Physical Therapy Division, Duke University School of Medicine

Education:

- BS in Exercise Science from Wake Forest University
- MPT from University of St. Augustine
- PhD in Rehabilitation Sciences from the University of Florida
- Post Doc-Washington University in St. Louis

1. What skills and experiences qualify you to serve on the Nominating Committee?

The most relevant experience that qualifies me to serve on the Nominating Committee is that I served as a section program co-chair for the past 4 years. In this role, I had an opportunity to connect with a lot of our members. In addition, I learned a lot about the Academy of Geriatric

Physical Therapy and the roles and responsibilities for the elected positions.

2. How would you identify and mentor new leaders within the Academy?

I will identify new leaders within the Academy by communicating with our membership. There are many individuals that may be interested in becoming more involved, but may not know the process or the roles and responsibilities of the different positions. I will attend membership meetings and reach out to members to encourage candidates for the annual elections. I will also make myself available to new leaders to answer questions or link them to the most appropriate individuals.



Carleen Lindsey, PT, MSc, GCS

Current Position:

- Owner/partner - Administrator and practicing physical therapist Bristol Physical Therapy, LLC

Education:

- BA in Physical Education with minor in Psychology – 1971 - University of California, Berkeley
- BS in Physical Therapy – 1973 - University of California Medical Center, San Francisco
- Advanced Masters of Science - 2003 - Musculoskeletal Allied Health - University of Connecticut

1. What skills and experiences qualify you to serve on the Nominating Committee?

My experiences as an AGPT member since 1996 qualify me to serve on the Nominating Committee because as a BHSIG member and officer, I have been a part of Board, SIG and committee meeting service to the AGPT during most of that time. I value dedicated service to the AGPT and have come to recognize those who are oriented likewise.

2. How would you identify and mentor new leaders within the Academy?

Over the years, I've had the opportunity to identify service-oriented colleagues in several settings:

- AGPT Members who ask thought-provoking questions and/or volunteer

for work opportunities in the BHSIG

- AGPT Members who ask thought-provoking questions and/or volunteer for work opportunities in AGPT member meetings
- AGPT members who facilitate or attend my continuing education courses (Geriatric exercise, manual therapy and osteoporosis management)

Thank You

I want to give a big “Thank you!” to the Academy of Geriatric Physical Therapy for such an amazing opportunity to speak on behalf of our profession on Capitol Hill last April at the Federal Governmental Affairs Forum. I am a first year student in the Doctor of Physical Therapy program at the University of Miami, and this experience helped me to see the importance of getting involved in the legislative side of the profession. I enjoyed getting to talk to the legislators about physical therapy (PT), and engage them in reasons why they should offer their support to the legislation we were advocating for: repeal of the therapy cap, preventing interruptions in PT treatment (the locum tenens arrangements), including PT in the National Health Services Corp, and increasing PT roles in rehab research.

Because of this experience, I want to get my classmates more involved with the advocacy event next year. This experience made it clear to me that I need to stay up-to-date with the issues in our profession and do my best to get involved with fixing them.

I now understand the importance of this advocacy event in getting our profession closer to our 2020 vision.

Joey Miller, SPT
University of Miami



Federal Advocacy Forum

From L to Right

Joey Miller, SPT, University of Miami

Ellen Strunk, AGPT Federal Affairs Liaison

Jennifer Webb, SPT, Texas Women's University

IMPACT OF MOTOR IMAGERY ON FEAR OF FALLING IN A 76-YEAR-OLD FEMALE: A CASE REPORT

Shweta Gore, PT, DPT, CLT, PhD Student; Jennifer Blackwood, PT, PhD, GCS, CEEAA

BACKGROUND AND PURPOSE

Fear of falling (FoF) defined as “a lasting concern about falling that leads to an individual avoiding activities he/she remains capable of performing” has been reported to be one of the major consequences of a fall.¹ Falls and FoF both have been identified as predictors of each other meaning that an individual who develops one of these outcomes is at greater risk for developing the other providing evidence of a spiraling effect of increasing falls, fear, and functional decline.²

Fear of falling is common in older adults with prevalence ranging from low 12% to 20% to as high as 65%.³⁻⁵ Fear of falling appears to increase with age and affects women more than men.^{1,3} Fear of falling has been documented to cause changes in gait performance marked by mild-to-moderate slowing, reduced mean stride length, and widening of the base of support, not typically associated with a well-defined disease.^{3,6}

Motor imagery is defined as using the imagery of a motor act in an attempt to learn and improve outcome without an overt sensory input-motor output relationship.⁷ Motor imagery practice is especially recognized for its role in enhancing the relearning of once-mastered skills and in reducing anxiety and enhancing attention.⁸

Although motor imagery has been studied in rehabilitation, its role in reducing FoF has not been well researched. It is also not clear whether an outpatient evidence-based exercise intervention in combination with motor imagery would have an impact on reducing the FoF in older adults. Therefore, the purpose of this case report was to describe the impact of a 5-week outpatient supervised exercise program in combination with motor imagery on FoF in a 76-year-old female.

CASE DESCRIPTION

History and Systems Review

The patient was a 76-year-old female who was referred to outpatient physical therapy with complaints of lightheadedness and imbalance that gradually worsened in the last few years. A gradual decline in function was reported including a significant increase in FoF over the last two years to the point that it limited her ability to perform daily activities without assistance.

Patient denied any history of previous falls, tinnitus, or associated symptoms such as hearing loss, fullness in the ear, ear infections, etc. Her MRI scans revealed evidence of prior infarcts in the cerebellum, multiple white matter densities, and decreased blood flow in the right vertebral artery. She was previously prescribed the Brandt Daroff’s habituation exercises by her physician that she performed at home for a few months with no relief. The patient was then referred to a specialized otolaryngology clinic where she was tested negative for hearing loss. Also, no nystagmus was evoked on Dix Hallpike maneuver, Frenzel lens examination, or videonystagmography. Caloric testing revealed symmetric responses bilaterally with no asymmetry on rotational chair testing. She failed the dynamic posturography testing on conditions with unstable foot support. Based on her findings, she was diagnosed with disequilibrium related to vestibular hypofunction and referred to outpatient physical therapy for balance training.

Her past medical history included prior cerebellar infarcts, transient ischemic attacks, congenital heart defect, anxiety, arthritis, diabetes, hypertension, hyperlipidemia, and hypothyroidism. Past surgical history included bilateral hip and knee replacements, cervical spine fusion surgery, and bladder suspension surgery. Her current medication included

metformin 500 mg twice daily and clopidogrel 75 mg, levothyroxine 88 mg, potassium chloride 10 meq, lovastatin 20 mg, lisinopril 5 mg, vitamin B12 500 mg, and vitamin D3 1000 IU once daily.

The patient lived with her husband in a 2-story house with 13 steps to the first floor. The patient previously used the bedroom on the first floor but had been sleeping on the main floor since last year due to increased difficulty climbing stairs. The patient was previously very active physically and socially. However, she was noticing increased dependence on her husband for all activities at home and was afraid of going out alone unassisted. She also reported increased anxiety due to her symptoms. Patient used a 4-wheeled walker for ambulation and additionally required her husband’s help for sit-to-stand transitions, chair and car transfers, and for movement initiation during ambulation.

Cardiovascular systems review revealed hyperlipidemia and hypertension. Neuromuscular and musculoskeletal review demonstrated impaired mobility with shortened stride, shuffling gait, slow speed, and difficulty in movement initiation. Upon standing, she demonstrated a forward head and forward trunk lean with slight bilateral knee flexion and high guard positioning of the upper extremities.⁷ The patient demonstrated increased anxiety especially during movement initiation. Her primary goal for physical therapy was to improve her ability to walk so she could perform her usual tasks without FoF.

EXAMINATION

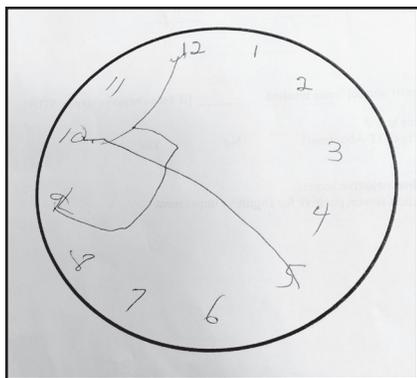
The findings from her history and systems review, including dizziness from disequilibrium, increased hesitation during movement, anxiety, high guard posture, and ‘cautious gait’ as well as imbalance demonstrated on posturography were consistent with FoF.⁹

The patient's motivation to improve her functional status and willingness to adhere to the plan of care made her a good candidate for this report. Based on the history and systems review, the examination was to assess the functional impairments, activity limitation(s), and participation restriction.

Mini Cog: The Mini Cog was performed as a screen for mild cognitive impairment based on her history of confusion. The Mini Cog is a reliable and valid 2-part assessment tool that includes the 3 item recall for memory and the clock drawing test that demonstrates high sensitivity and specificity for detection of cognitive impairment.¹⁰ The patient tested positive for cognitive decline with an abnormal clock drawing test and word recall, scoring 2 points (see drawing below).

Activities Specific Balance Confidence scale (ABC)-6: Balance confidence has been termed as the "mediator" between FoF and consequences of fall risk and activity or participation restriction.¹¹ The ABC-6 was selected as it focused on a narrow spectrum of activity difficulty, emphasizing situations most challenging to postural control, thereby providing an efficient method of assessing FoF.¹² At initial evaluation, the patient reported an ABC-6 score of 0 reflecting poor balance confidence.

Dynamic Gait Index (DGI): The DGI was performed to assess dynamic balance during gait and to assess the patient's ability to modify balance while walking in the presence of external demands. Initially, the patient scored 8 out of 24, which was lower than the cut off score of 19 for community dwelling older adults indicating a high risk of falling.



The DGI has been documented to be a reliable and valid tool for assessment of dynamic balance in older adults.^{13,14}

Timed Up and Go (TUG) cognitive: Considering the dynamic interplay between the cognitive and motor tasks during divided attention tasks, the TUG cognitive was performed by asking the patient to count backward by threes from 50 while performing the TUG and recording the time taken to complete the test.¹⁵ The patient's baseline scores on the TUG and TUG cognitive (18.20 and 22.50 seconds respectively) were lower than the cut off score of 15 on the TUG indicating a high risk of falling.¹⁶

Five Times Sit To Stand (FTSTS) and gait speed: The FTSTS has been used as a measure of functional lower limb muscle strength and has been demonstrated to be a reliable and valid measure of functional mobility in older adults.¹⁷ The patient completed the FTSTS in 17 seconds at initial evaluation that was lower than the cut off of 12.6 seconds established for the patient's age range indicating weakness, impaired functional mobility and falls risk.^{16,17} In addition, the patient demonstrated a gait speed of 0.78 meters per second further indicating falls risk.^{16,18}

Dizziness Handicap Inventory (DHI): The DHI was performed as a reliable and valid self-assessment tool to evaluate the self-perceived effects imposed by dizziness.¹⁶ The patient scored 66 on the DHI indicating severe handicap.¹⁶

INTERVENTIONS

The patient's baseline assessment revealed poor functional mobility and low balance confidence indicative of a high risk of falling. She also demonstrated cognitive decline based on her TUG cog and Mini Cog scores adding to her risk of falling. Her impairments and functional limitations affected her participation and increased her frustration that was reflected on her DHI scores. Physical therapy diagnosis from the *Guide to Physical Therapist Practice* was "Neuromuscular Pattern 5A: Primary Prevention/Risk Reduction for Loss of Balance and Falling."¹⁹

Based on the findings of the examination and patient's goals of being independent with mobility related

tasks, a plan of care was formulated that included a structured exercise intervention comprising of strength and balance training as well as cognitive motor and dual task training. A 5 week intervention at 3 times a week (15 visits) for 60 minute sessions was planned based on previous evidence on balance and dual task training.²⁰

Therapy sessions began with a 5-minute warm up on the Nustep level 5, followed by seated exercises and then when standing and walking. The sessions ended with 1 to 2 minutes of stretching exercises.²¹ Lower extremity strength training was performed at an intensity of 80% of 1 RM using free ankle weights.²⁸ Exercises comprised of long arc quads and hamstring curls, hip abduction and straight leg raises as well as closed chain exercises in the form of sit to stand transitions, step ups (4 inches progressed to 8 inches), squats, and lunges. All exercises were performed at 1 to 2 sets of 10 repetitions.²²

Balance training was provided 3 times a week and progressed from simple postural control exercises such as weight shifts, standing with a narrow base of support in eyes open and closed conditions with and without foam to complex tasks such as single leg standing on firm and foam surfaces, modified tandem stand on firm and foam surfaces, tandem walking, and task specific activities such as picking up cones placed around the gym area, throwing and catching a ball, multidirectional reach outs, standing on toes to reach for items placed on top shelves, and stepping up on stools of different height.^{22,23}

Dual task training were incorporated also increasing in complexity from simple to more complex in order to challenge the cognitive motor function.²⁴ Dual tasks included walking with head turns; carrying a glass of water while walking forwards, backwards, or around cones; and cognitive motor tasks such as counting numbers backwards and subtracting/adding 3 or 7 from a given start number, tandem walking carrying an object while simultaneously counting and walking over obstacles while simultaneously trying to list names or numbers.^{20,23} Each exercise task was individually adjusted by increasing difficulty when the task became easy to challenge postural control.²⁴ Gait-related activities were structured to progressively

withdraw support from therapist or assistive devices. Markers on the floor and hurdles were used to increase step length and provide visual feedback to the client.²¹

At the end of the second week, no changes on the ABC-6 scores were found. She continued to demonstrate hesitation with initiation of movement, especially gait and an increased tendency to seek support. At the 7th visit, a mental imagery technique was added to the existing plan of care with goals of improving gait initiation, functional walking, and reducing FoF.²⁴ Motor imagery training was provided for 15 minutes where the patient was asked to imagine how she would stand from her chair and how she would walk in the hallway.²⁵ She was then asked to imagine how she would overcome obstacles in her way and turn directions while returning back to her chair. Each practice session was composed of 1 to 2 minutes of breathing and muscle relaxation, 1 to 2 minutes of detailed instructions and information on task characteristics followed by 10 minutes of imaging of walking activity.²⁵ Imagery practice increased in complexity based on patient's performance beginning with gait on level surface, obstacle course, and turning.

OUTCOMES

Outcomes assessment was performed at initial visit and then at the end of 2 weeks and 5 weeks using outcome measures addressing fall risk, balance confidence, dynamic balance, and participation restriction from symptoms of dizziness. At the end of 2 weeks,

the patient showed no improvement on the ABC-6 indicating poor balance confidence. With the exception of gait speed, patient's improvements on other outcome measures (DHI, DGI, and FTSST) were below the minimal detectable change (17.18, 2.9, and 2.5 respectively) at the end of two weeks.^{12,13,15,16} After addition of motor imagery, the patient demonstrated an improvement on all outcomes at the end of 5 weeks (Table 1). Her ABC-6 improved from 0 to 45% and DHI improved to 34, indicating improved balance confidence and participation. Patient switched from a walker to a wide base quad cane and then to a tripod cane. By the end of 5 weeks, she was using the cane for most of her mobility related tasks at home and in the community. She also demonstrated improved cognitive motor function reflected on her TUG cog scores that improved from 22.50 to 17.48 seconds (Table 1). She demonstrated improved gait initiation and self-efficacy that also reflected subjectively in her statements such as "I walked from the car to the entrance of Walmart and told myself that I didn't need to hold on to a cart. I was able to walk just with a cane." Patient was discharged from therapy at the end of 5 weeks with a tailored home exercise program.

DISCUSSION

This report highlights the impact of integration of motor imagery practice to physical therapy program of strength, balance, and cognitive motor training to address FoF in a 76-year-old female. This patient demonstrated improvements

in functional mobility, gait speed, and dynamic balance as well as her balance confidence, frustration, and depression as reflected on the DHI. Motor imagery requires conscious activation of areas of the brain that are involved in movement preparation and execution, while at the same time inhibiting actual movement.²⁴ Cognitive rehabilitation strategies such as mental imagery training including both visual and kinesthetic imagery training performed at a frequency ranging from every day to 3 times a week have been previously demonstrated to improve postural sway and gait speed as well as gait symmetry.²⁴ Motor imagery practice has been incorporated into rehabilitation for patients with stroke with promising results.²⁵ Although studies using motor imagery used training for 4 to 6 weeks, 3 weeks of training with motor imagery was used as it was reported that improvements from imagery can be obtained after 3 weeks of training.²⁴

Walking at a normal pace requires minimal cognitive involvement, however, additional cognitive demands are introduced during walking. Attention resources have to be shared between both the cognitive and the motor tasks as suggested by decrements on gait performance.²⁰ The patient showed improvements in cognitive motor functioning with cognitive motor and dual task training as evidenced by improved TUG cognitive scores. Although her scores by the end of intervention were still below the cut off of 15 seconds indicating fall risk during tasks of divided attention, this was a promising finding as she improved from her initial score of 22.50 to 17.48 seconds. Motor imagery practice has been shown to activate primary cortex, premotor cortex, supplementary motor area, cingulate and parietal cortical areas, the basal ganglia, and cerebellum both during imaginary tasks as well as during movement execution.²⁴

Impaired dual task performance is associated with impaired physical and cognitive function as well as increased risk of falls. Dual task training has been shown to have superior effects on improving dual task gait speed in older adults by improving integration and coordination between two tasks.²⁰

This case report provides preliminary findings to highlight the impact of motor imagery in reducing

Table 1. Baseline to Posttreatment Changes in Outcome Assessment

Outcomes	Baseline	2 Weeks	4 Weeks
Mini Cog	Abnormal CDT 2 word recall	Not tested 3 word recall	Normal CDT 3 word recall
DGI	8/24	10/24	15
TUG	18.20 seconds	14.00 seconds	12.30 seconds
TUG cog	22.50 seconds	20.90 seconds	17.48 seconds
Gait Speed	0.78 m/sec	0.89 seconds	0.97 m/sec
FTSST	17 seconds	15.40 seconds	10.00 seconds
DHI	66	54	34
ABC 6	0%	0%	45%

Abbreviations: CDT, clock drawing test; DGI, Dynamic Gait Index; TUG, Timed Up and Go; FTSST, Five Times Sit to Stand; DHI, Dizziness Handicap Inventory; ABC, Activities Specific Balance Confidence scale

FoF and can be used as a foundation for further research in this area. Larger studies should be completed in order to assess the effectiveness of this approach on FoF.

REFERENCES

- Scheffer AC, Schuurmans MJ, van Dijk N, van der Hooft T, de Rooij SE. Fear of falling: measurement strategy, prevalence, risk factors and consequences among older persons. *Age Ageing*. 2008;37:19-24.
- Friedman SM, Munoz B, West SK, Rubin GS, Fried LP. Falls and fear of falling: which comes first? a longitudinal prediction model suggests strategies for primary and secondary prevention. *J Am Geriatr Soc*. 2002;50:1329-1335.
- Ayoubi F, Launay CP, Annweiler C, Beauchet O. Fear of falling and gait variability in older adults: a systematic review and meta-analysis. *J Am Med Dir Assoc*. 2015;16:14-19.
- Kendrick D, Kumar A, Carpenter H, et al. Exercise for reducing fear of falling in older people living in the community. *Cochrane Database Syst Rev*. 2014;11:CD009848.
- Tinetti ME, Powell L. Fear of falling and low self-efficacy: a case of dependence in elderly persons. *J Gerontol*. 1993;48 Spec No:35-38.
- Brach JS, Perera S, Studenski S, Katz M, Hall C, Verghese J. Meaningful change in measures of gait variability in older adults. *Gait Posture*. 2010;31:175-179.
- Iosa M, Fusco A, Morone G, Paolucci S. Development and decline of upright gait stability. *Front Aging Neurosci*. 2014;6:14.
- Tamir R, Dickstein R, Huberman M. Integration of motor imagery and physical practice in group treatment applied to subjects with Parkinson's disease. *Neurorehabil Neural Repair*. 2007;21:68-75.
- Herman T, Giladi N, Gurevich T, Hausdorff JM. Gait instability and fractal dynamics of older adults with a "cautious" gait: why do certain older adults walk fearfully? *Gait Posture*. 2005;21:178-185.
- Carolan Doerflinger DM. How to try this: the mini-cog. *Am J Nurs*. 2007;107:62-71; quiz 7-12.
- Da Silva CP, Carlegis M, Suchma K, Ostwald SK. Falling, balance confidence, and fear of falling after chronic stroke. *Phys Occup Ther Geriatr*. 2014;32:353-367.
- Peretz C, Herman T, Hausdorff JM, Giladi N. Assessing fear of falling: Can a short version of the Activities-specific Balance Confidence scale be useful? *Mov Disord*. 2006;21:2101-2105.
- Karajgi A, Writer H, Mehta A. Evaluating two scales, FEMBAF (Fast Evaluation of Mobility, Balance and Fear) & DGI (Dynamic Gait Index) to test balance in fallers and non fallers in geriatric population. *Indian J Physiother Occup Ther*. 2014;8:141.
- Romero S, Bishop MD, Velozo CA, Light K. Minimum detectable change of the Berg Balance Scale and Dynamic Gait Index in older persons at risk for falling. *J Geriatr Phys Ther*. 2011;34:131-137.
- Maranhão-Filho PA, Maranhão ET, Lima MA, Silva MM. Rethinking the neurological examination II: dynamic balance assessment. *Arq Neuropsiquiatr*. 2011;69:959-963.
- Rehabilitation Measures Database. www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=1015. Accessed May 25, 2016.
- Goldberg A, Chavis M, Watkins J, Wilson T. The five-times-sit-to-stand test: validity, reliability and detectable change in older females. *Aging Clin Exp Res*. 2012;24(4):339-344.
- Fritz S, Lusardi M. White paper: "walking speed: the sixth vital sign." *J Geriatr Phys Ther*. 2009;32:2-5.
- American Physical Therapy Association. *Guide to Physical Therapist Practice*. 2nd ed. Alexandria, VA: American Physical Therapy Association; 2003.
- Silsupadol P, Shumway-Cook A, Lugade V, et al. Effects of single-task versus dual-task training on balance performance in older adults: a double-blind, randomized controlled trial. *Arch Phys Med Rehabil*. 2009;90:381-387.
- Vendrey A, Messmer E, Moseley J. Integration of cognitive-behavioral therapy with gait training for a 58-year-old male with a fear of falling: A case report. *Physiother Theory Pract*. 2012;28:232-237.
- Hauer K, Rost B, Rüttschle K, et al. Exercise training for rehabilitation and secondary prevention of falls in geriatric patients with a history of injurious falls. *J Am Geriatr Soc*. 2001;49:10-20.
- Halvarsson A, Olsson E, Farén E, Pettersson A, Ståhle A. Effects of new, individually adjusted, progressive balance group training for elderly people with fear of falling and tend to fall: a randomized controlled trial. *Clin Rehabil*. 2011;25:1021-1031.
- Mulder T. Motor imagery and action observation: cognitive tools for rehabilitation. *J Neural Transm*. 2007;114:1265-1278.
- Dickstein R, Dunskey A, Marcovitz E. Motor imagery for gait rehabilitation in post-stroke hemiparesis. *Phys Ther*. 2004;84:1167-1177.



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Jennifer Blackwood is an Assistant Professor and Coordinator of the Geriatric Certificate and Residency Program at the University of Michigan-Flint. She

is a member of the AGPT's Practice Committee and serves as Chair of the Michigan Physical Therapy Association's Eastern District. She continues to practice in geriatrics in home health and community wellness settings.

THE USE OF AN ANTI-GRAVITY TREADMILL GAIT TRAINING PROGRAM TO IMPROVE FUNCTIONAL MOBILITY OF AN 89-YEAR-OLD FEMALE IN A SKILLED NURSING FACILITY SETTING: A CASE STUDY

Caitlin Deanne Deems, SPT, ATC; Ellen Perlow, PT, DPT

INTRODUCTION

Walking speed, or gait speed, is informally considered to be an additional vital sign, along with heart rate (HR), blood pressure, respiratory rate, and body temperature.¹ Gait speed can be used to objectively measure an older adult's physiologic reserve.² Physiologic reserve is described as "the excess or redundant physiological capacity present in all human tissues, organs, or organ system"³ leading to the ability to prevent, recover, or adapt to illness or injury. Low physiologic reserve can lead to frailty and mortality in older adults.⁴ The operational definition of "frailty" according to Topinkova et al is "the clinical syndrome characterized by multiple pathologies: weight loss, and/or fatigue, weakness, low activity level, slow motor performance, balance and gait abnormalities, and potential cognitive component."⁴ Cardiovascular (CV) endurance and rate of decline in gait speed, as well as gait speed, are correlated to frailty and mortality in older adults.^{4,6} Frailty is a major cause of re-hospitalization rates and rising health care costs today. As health care providers, we must strive for innovative and safe solutions to this problem.

Research shows that increasing gait speed can improve health in frail adults.⁷ Body weight supported treadmill training (BWSTT) has been used in rehabilitation of adults who are frail or deconditioned. For older adults who are unable to participate in the recommended dose of 30 minutes/5 days a week of cardiovascular exercise, BWSTT is a viable alternative to over-ground ambulation.

BACKGROUND

The Alter G anti-gravity treadmill is an emerging type of BWSTT system that allows patients to "improve their mobility and strength in a fall safe

environment."⁸ The Alter G treadmill is an enclosed system that uses total contact suspension via neoprene shorts donned by the patient to ensure patient comfort. A pre-selected amount of weight is off-loaded via lower body positive air pressure (LBPP) within the enclosed system. Physical therapists can adjust speed, incline, and percentage of body weight parameters. Patients ambulate on the treadmill with the pre-selected settings and have the option of monitoring foot placement by watching a monitor as they ambulate. The Alter G anti-gravity treadmill (2005) is an evolving therapeutic tool used to increase CV endurance and gait speed in older adults. This treadmill allows patients to ambulate longer distances and for a longer amount of time.⁹ It also promotes consistent cadence and step length. By improving CV and muscular endurance, lower extremity strength, and gait speed, physiologic reserve can be increased and disability and mortality related to frailty may be prevented.

A case study of a 72-year-old male using the Alter G treadmill for gait training reported significant improvement in function and achieved goals related to general strength, endurance, and quality of gait.¹⁰ Following initiation of this program, the level of assistance needed for transfers decreased from moderate assistance (mod A) to stand by assistance; ambulation with assistive device increased from 80' to >500'; and oxygen saturation was consistently maintained in a typical range for the first time since admission.¹¹ An additional study by Rockwood showed that the rate of increase in HR and rate of perceived exertion (RPE) during ambulation are not altered by the use of LBPP systems in healthy adults. The study implies that objective measures taken during anti-gravity treadmill ambulation are translatable to over-ground ambulation.¹²

The effects of LBPP exercise have been shown to be positive in postsurgical patients with weight bearing restrictions and in populations with specific diagnoses such as osteoarthritis, Parkinson's disease, and adolescents with neurologic disorders. Little research has been performed on the effects of LBPP exercise on elderly adults. However, the available research reports statistically significant positive short- and long-term effects in this population. The long-term effects of weekly 6-minute bouts on an anti-gravity treadmill include increased walking speed, 6 minute walk distance, and activity tolerance (daily activity measured by a pedometer); the short-term effects included increased quadriceps muscle strength and decreased pain on the Visual Analog Scale on acute knee pain.¹³ Anti-gravity treadmill exercise programs have also been shown to improve CV endurance in breast cancer survivors (mean age 51) with no adverse effects noted.¹⁴ Most of the available research regarding anti-gravity treadmill exercise programs focus on patients with specific diagnoses or they are case studies/series that are under-powered due to small sample sizes.

The purpose of this case study is to investigate the use of an Alter G anti-gravity treadmill gait training program as an effective adjunct to therapeutic interventions in increasing CV endurance, gait speed and safety, and overall functional mobility for an 89-year-old female with general deconditioning, a history of falls, and recent pelvic fracture.

CASE STUDY

The patient is an 89-year-old Caucasian female who was admitted to a skilled nursing facility (SNF) due to a pelvic fracture after falling in her home. She remained at the SNF for

9 weeks and received physical therapy (PT) 6 days a week and occupational therapy 5 days a week. The patient has a complicated past medical history with multiple physical, visual, and auditory comorbidities. She had a lumbar spinal fusion 3 years prior to this incident, which resulted in 12 months of bed rest and the inability to ambulate or perform bed mobility independently for an additional 12 months.

The patient was alert and oriented x4 with impeccable communication skills and memory. Upon initial evaluation, she ambulated 650' (gait speed 0.16 m/s) with contact guard assist and a 4-wheeled walker with brakes engaged, which she preferred for safety. The patient ambulated with multiple gait deviations that increased her fall risk. She required minimal assistance (min A) for transfers and maximal assistance for bed mobility. Bilateral lower extremity strength was generally 2-/5 – 2+/5. Upon initial evaluation, the patient scored 21/28 on the Tinetti Balance Assessment Tool, which indicates a moderate fall risk. This score decreased to 19/28 two weeks after admission due to functional decline. The patient scored a 56-second Timed Up and Go (TUG) score 4 weeks after admission (two weeks after beginning the anti-gravity treadmill gait-training program).

The patient met 5 out of 7 criteria to be considered frail according to Topinkova.⁵ Furthermore, this patient was considered “moderately frail” according to the Canadian Study of Health and Aging (CHSA) Clinical Frailty Scale developed by Rockwood et al.⁷ Finally, the patient identified with 5 out of 6 factors that cause older adults to be more likely to experience a “fast

decline trajectory of gait speed,” leading to 1.9-2.1 times higher risk of mortality.⁶

INTERVENTION

Therapeutic exercises throughout her stay at the SNF included seated lower extremity strengthening exercises: hip flexion and knee extension, hamstring curls and hip abduction with theraband, adduction with ball, and toe/heel raises. These exercises were progressed using increasing resistance, repetitions, and transition from sitting to standing in the parallel bars when she was able to move against gravity. An endurance training program included the patient’s use of a recumbent stepper or bicycle for increasing amounts of time, and ambulating with a 4-wheeled walker in- and outdoors on a variety of surfaces for increasing distances. She performed therapeutic activities to improve balance and protective reactions such as batting a balloon while standing on a blue foam pad.

The patient was extremely motivated to return to her home environment and walk independently with her walker. However, she experienced a functional decline in all mobility skills, and subsequent depressed mood, at week two. This was caused by increased pain and swelling in both legs caused by hypernatremia, bilateral calcaneal pressure ulcers, and ear infections. The plan of care was re-evaluated, and basic postural and core retraining in sitting and standing were added, as well as an Alter G treadmill gait-training program. The Alter G treadmill gait-training program was progressed by changing one of the following parameters during each session: gait speed (mph), percentage of body weight being managed by patient, total time of gait training, and

number of rest breaks (determined by the patient’s tolerance). Heart rate, rate of perceived exertion (RPE), and shoes on and off were also observed during the second half of the intervention program; progression of each parameter over time was documented to show improvement in all impairments (Table 1). During early gait training sessions on the Alter G treadmill, she was given verbal and visual cues to increase and equalize step length by watching her activity on a monitor and using targets for foot placement. She was given verbal and tactile cuing to maintain upright posture and engage core musculature with diminishing feedback that led to patient self-correction more frequently than cues that were given by discharge.

OUTCOME

The patient improved from 0.13 m/s to 0.36 m/s on the Alter G treadmill and from 0.16 to 0.94 m/s over ground, demonstrating an 83% increase in gait speed. Prior to the start of gait training on the Alter G treadmill, the patient demonstrated decreased foot clearance, step length, cadence, and unequal stance time with heavy upper extremity reliance during gait. By discharge the patient demonstrated complete bilateral step-through and foot clearance, equal stance time, and the ability to self-correct her posture.

After 6 weeks of gait training on the Alter G, the patient began to make improvements in sit-to-stand and stand pivot transfers, bed mobility, and self-care activities. The patient’s Tinetti Balance Assessment Tool score increased from 19/28 (lowest score in moderate fall risk) to 23/28 (highest score in moderate fall risk) at discharge and her TUG score decreased from 56s to 33s. (A TUG score greater than 32.6 seconds indicates a fall risk in elderly adults who are considered frail.³) At evaluation, she was able to ambulate 650' in 20 minutes. At discharge, she ambulated this distance in 3:30 minutes while conversing (Table 2).

Interpretation of total gait training time, RPE and HR show an improved CV response. During the first Alter G session, the patient ambulated at 0.3 mph for 8 minutes while managing 50% of her body weight. She required two standing rest breaks during this time. During the last Alter G session, she ambulated at 0.8 mph for 30 minutes

Table 1. Alter G Measures

Alter G	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Trial 11	Trial 12
Speed (mph)	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.8
Time (min)	8	16	30	20	30	26	21	29	32	30	30	30
Gait Speed (m/s)	0.13	0.18	0.18	0.18	0.22	0.22	0.22	0.22	0.22	0.27	0.31	0.36
% Body Weight	50%	50%	75%	85%	85%	85%	90%	90%	95%	95%	95%	95%
HR	-	-	-	-	-	88	86	84	88	92	84	92
RPE	-	-	-	-	-	16	17	20	17	18	15	20
Rest Breaks	2	3	2	2	3	1	1	3	1	2	2	1
Shoes	No	No	No	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Two trials unaccounted for due to administration by PTA												

Abbreviations: HR, heart rate; RPE, rate of perceived exertion

Table 2. Week by Week Results

Functional Outcomes	Week 1 - Evaluation 5 sessions	Week 2 - Functional Decline 3 sessions	Week 3 - Intro to Alter G 2/4 sessions	Week 4 - No Alter G 2 sessions	Week 5 - Alter G 4/5 sessions	Week 6 - Alter G 4/5 sessions	Week 7-9 - Alter G 4/7 sessions
Transfers	CGA - min A Multiple attempts Slow speed	Min - mod A Total A bed mobility	CGA - min A SBA bed mobility	CGA - min A	SBA Increased speed Mod I bed mobility	Supervision - SBA	Supervision
Gait AD	Locked 4WW	RW	Locked 4WW	Unlocked 4WW	4WW → HHA → CGA	4WW	4WW
Gait Assist	CGA	SBA - CGA	SBA - CGA	SBA	4WW SBA HHA x 1-2 CGA no AD	Mod I	Mod I
Gait Distance	100' - 650'	25' - 550'	650' x2	650' x2	4WW 650' HHA100' CGA 50'	650' x2	Comm. Dist. in./outdoors HHA x1 100'
Gait Speed (m/s)	Approx. 0.16	-	-	-	0.83	0.55 with conversation	0.94
Gait Quality	Step-to pattern ↓ clearance L > R ↓ L stance time	Rest breaks needed during gait trials	Decreased reliance on UEs during gait	↑ cadence ↑ fluidity of gait	Variable speed & steadiness with HHA	B Step through B Foot clearance	No major gait deviations
Time to Ambulate 650'	Approx. 20:00	Slightly increased (no measurement)	Noticeable decrease (no measurement)	Noticeable increase (no measurement)	4:00	6:00 with conversation	3:30
Subjective	Motivated to participate in order to return home	Reports of increased fatigue Flattened affect	Request for Alter-G Reports of ↑ self- efficacy	Patient states, "I feel like I can learn to walk again."	Patient states goal is to ambulate I with no AD	Patient decided to pay OOP to stay for PT/Alter G	Patient discharged home with daily PM caregiver assist

Abbreviations: CGA, contact guard assist; SBA, stand by assistance; 4WW, 4-wheeled walker; RW, rolling walker; AD, assistive device; HHA, hand-held assist; UE, upper extremity; OOP, out of pocket

managing 95% of her body weight with one request to rest. Decreasing HR with increasing RPE showed an increase in CV endurance.

The patient increased her health status from physiologic “failure” (<0.3 m/s) to “function” (0.8-1.3 m/s).⁴ By discharge, the patient showed improvements in each parameter that Topinkova et al used to define “frailty.”⁵ She showed an objective increase in frailty level from “moderately frail” to “mildly frail” due to ability to perform basic activities for daily living with increased independence.⁷

The patient also experienced a decrease in bilateral lower extremity swelling when she consistently ambulated on the treadmill, leading to the ability to don shoes and ambulate outdoors. The visual feedback monitor enabled the physical therapist to instruct the patient in proper biomechanics and gave the patient the opportunity to focus on specific impairments. This intervention also increased the patient’s self-efficacy, leading to a greater initiative to perform exercises in her room and ambulate within the facility. The psychosocial aspect of this intervention was particularly beneficial to this patient since she experienced a functional decline in mobility during week two.

A 6-month follow-up visit revealed that the patient continued to improve in her functional ability. She is currently able to ambulate up to 60’ with no assistive device. She is independent

within her home, though experienced one fall due to standing water on her kitchen floor. She reports that she feels more confident in her ability to function than she did prior to receiving PT in the SNF. She stated that the Alter G gait training program “helped me feel confident in walking independently, more freely.”

DISCUSSION

A rapid decline in gait speed, as demonstrated in this patient after pelvic fracture and subsequent hospitalization, is correlated to an increased risk of mortality.⁶ Conversely, increased gait speed in older adults is correlated with an increased rate of survival.⁵ The addition of gait training on the Alter G treadmill with conventional PT interventions in this case study showed positive carry-over to over-ground ambulation and led to increased gait speed, quality of gait, modified independent ambulation, and improved independence in all other aspects of functional mobility. Ambulating on the Alter G treadmill was highly enjoyed by the patient, who reported improved confidence in her ability to reach her goals of becoming more independent. The patient often brought visitors to see the device and explained the benefits.

The use of the anti-gravity treadmill provided a safe area that allowed this patient to ambulate for longer periods of time, building her endurance, while also mitigating the risk of falls. This in turn decreased the burden on the physical

therapist and risk of injury by supplying the patient with necessary support, especially early in the intervention program.

CONCLUSION

The anti-gravity treadmill should be a strong consideration for older adults who are generally deconditioned, or who have a weight-bearing precaution, amputation, or neurological impairment to allow for safe ambulation sooner than over-ground ambulation. Use of an anti-gravity treadmill may prevent further physical and medical complications related to immobility, increased CV endurance, and improvement of safety and quality of gait. This intervention may also increase motivation and self-efficacy in patients due to the patient’s ability to ambulate with more independence and for longer periods of time. Gait training on the anti-gravity treadmill not only improved this patient’s ambulation over ground it also led to improvements in transfers and bed mobility, possibly due to her increased strength and improved muscular and CV endurance.

Barriers to incorporating an Alter G treadmill system into a clinical environment include the high cost of the equipment, a large area needed with access to an appropriate set-up area, and training of personnel in use of the system. Future research should be done to address the long-term functional outcomes of the use of an anti-gravity treadmill system such as the Alter G as a gait training and endurance-building intervention, specifically within the “oldest-old” population (85+ years).¹⁵

ACKNOWLEDGMENTS

The authors wish to thank Amy Bannon, PT, for her guidance and mentorship in the treatment of this patient, as well as the patient who participated in this case study.

REFERENCES

- Franklin BA, Brinks J, Sacks R, Trivax J, Friedman H. Reduced walking speed and distance as harbingers of the approaching grim reaper. *Am J Cardiol.* 2015;116(2):313-317.
- Hardy SE, Perera S, Roumani YF, Chandler JM, Studenski SA. Improvement in usual gait speed predicts better survival in older adults. *J Am Geriatr Soc.* 2007;55(1):1727-1734.

3. Taylor D. Overview of aging: social and psychological aspects of aging. 2015.
4. Sternberg SA, Schwartz AW, Karunanathan S, Bergman H, Clarfield AM. The identification of frailty: a systematic literature review. *J Am Geriatr Soc.* 2011;59(11):2129-2138.
5. Topinkova E. Aging, disability and frailty. *Ann Nutr Metab.* 2008;52(suppl 1):6-11.
6. White DK, Neogi T, Nevitt MC, et al. Trajectories of gait speed predict mortality in well-functioning older adults: the health, aging and body composition study. *J Gerontol A Biol Sci Med Sci.* 2013;68(4):456-464.
7. Sui X, La Monte MJ, Laditka JN, et al. Cardiorespiratory fitness and adiposity as mortality predictors in older adults. *JAMA.* 2007;298(21):2507-2516.
8. Studenski S, Perera S, Patel K, et al. Gait speed and survival in older adults. *JAMA.* 2011;305(1):50-58.
9. Cutuk A, Groppo ER, Quigley EJ, White KW, Pedowitz RA, Hargens AR. Ambulation in simulated fractional gravity using lower body positive pressure: cardiovascular safety and gait analyses. *J Appl Physiol.* 2006;101(3):771-777.
10. AlterG staff. Rehabwww.alterg.com/products/anti-gravity-treadmills/m320-f320/skilled-nursing-facility. Accessed November 1, 2015.
11. Hill G. Functional Decline. *Alter G.* www.alterg.com/case-study/functional-decline. Accessed November 1, 2015.
12. Rockwood K, Song X, MacKnight C, et al. A global clinical measure of fitness and frailty in elderly people. *CMAJ.* 2005;173(5):489-495.
13. Hoffman MD, Donaghe HE. Physiological responses to body weight-supported treadmill exercise in healthy adults. *Arch Phys Med Rehabil.* 2011;92(6):960-966.
14. Fairman C. Effectiveness of a training program using an Alter-G treadmill to improve physiological and psychosocial measures in female breast cancer survivors. *Electronic Theses & Dissertations.* 2013;Paper 877:1-114. www.digitalcommons.georgiasouthern.edu/cgi/viewcontent.cgi?article=1873&context=etd. Accessed October 5, 2015.
15. U.S. Census Bureau. Sixty-five plus in the United States. *U.S. Census Bureau.* https://www.census.gov/population/socdemo/statbriefs/agebrief.html. Accessed November 13, 2015.



Caitlin Deems graduated from University of West Florida in 2013 with a BS in Athletic Training and received her DPT degree from Mercer University in 2016. She plans to become a licensed PT in July at which time she will begin working in the pediatric and orthopedic environments.



Ellen Perlow graduated from Washington University in 1980 with a BS in Physical Therapy. She received her DPT in 2012 from the University of Tennessee at Chattanooga. Dr. Perlow has over 30 years of clinical experience and is currently a Clinical Assistant Professor in the Department of Physical Therapy at Mercer University in Atlanta, GA.

2016 HOUSE OF DELEGATES RECAP

Patty Brick, PT, MS, GCS, CMC



The 2016 House of Delegates was held in Nashville, Tennessee, June 6-8, 2016. There were 19 motions presented and national elections were held. The elected delegate Steven Chesbro started the process of monitoring motions and interacting with other delegates on behalf of AGPT at the end of the 2015 House. In the spring of this year, Steven informed the AGPT BOD that he would not be able to attend the HOD due to a change in his career path. Steven is now the Vice President of Education at APTA. As the appointed alternate delegate, I picked up the ball and ran with it. I reviewed the motions in preparation to attend the House and sought input from other BOD members and members I knew. The topics of some motions were potentially controversial and others seemed like slam dunks, but I knew from many Houses before that you never know what will happen when 400 delegates, House officers, APTA BOD, and staff discuss and debate issues up for a vote. The people in that room take their work seriously as delegates and what the outcome of their decisions means to the profession of Physical Therapy. I also readied myself for candidate interviews by reviewing statements and materials from each candidate. I formulated questions for each office to be ready for the rotation of sections asking questions. On behalf of the AGPT, I want to thank Steven Chesbro for serving as delegate. His knowledge and thoughtful deliberation has been appreciated by the BOD and the members.

What follows is an unofficial record of the votes or actions taken on the motions presented to the 2016 House of Delegates with my interpretation of intent as well as the results of the National election.

Motion	Title/Topic and Intent	Result
RC 1-16	Rescind: House session and annual conference scheduling (HOD Y06-94-28-43) Intent: That the House session and scheduling be rescinded	Passed
RC 2-16	Amend: The Associations role in advocacy for prevention, wellness, fitness, health promotion, and management of disease and disability (HOD P06-15-22-14) Intent: To more broadly define the term advocacy	Passed
RC 3-16	Amend: The Associations role in advocacy for prevention, wellness, fitness, health promotion, and management of disease and disability (HOD P06-15-22-15) Intent: To better describe the role of the physical therapist	Passed
RC 4-16	Amend: Consumer protection through licensure of Physical Therapists and Physical Therapist Assistants (HOD P06-14-08-18) Intent: To support state regulatory designation of PT or PTA to take precedence over other credentials	Passed
RC 5-16	Charge: Educational campaign regarding designations Intent: Encourage profession wide compliance to regulatory designation	Passed
RC 6-16	Charge: Recognition of Board Certification by American Board of Physical Therapy Specialties –Packet II Intent : To assist consumers in identifying certified clinical specialists	Passed
RC 7-16	Adopt: Definition of professional scope of practice- Packet II Intent: As stated	Referred to the BOD
RC 8-16	Adopt: Oncological Physical Therapy as an area of specialization Intent: Clinical specialization in physical therapy	Passed unanimously
RC 9-16	Charge: Analysis of American Board of Physical Therapy residency and fellowship education and structure, function and accreditation process – Packet II Intent: As stated	Withdrawn
RC 10-16	Charge: Accurate representation of Physical Therapist practice and research- Packet II Intent: To pursue strategies that accurately reflect available evidence	Passed
RC 11-16	Charge: Evaluation and plan to address student debt in physical therapy- Packet III Intent: To identify effects of student loan debt on the profession and identify options to address it	Passed : unanimously
RC 12- 16	Charge: Plan for achieving practice authority for ordering and performing imaging studies- Packet II Intent: To develop and promote a plan for this practice option	Passed
RC 13-16	Election to honorary membership in the American Physical Therapy Association: Richard L. Lieber PHD	Passed
RC 14-16	Charge: Consideration of Board- adopted policy for the profession- Packet II Intent: Review all documents, separate operational form professional and house them to be acted on by staff or HOD as appropriate	Passed
RC 15- 16	Charge: Preserving and accessing the past, present and future histories of the American Physical Therapy Profession and Association – packet II Intent: Develop and implement plans to preserve history	Passed
RC 16-16	Amend: Bylaws of the American Physical Therapy Association to change the definition of a post professional student Intent: To expand member category to cover current post professional program available	Passed
RC 17-16	Amend bylaws of the American Physical Therapy Association to change the bylaw deadline to coincide with the main motion deadline Intent: To allow delegates more time to submit bylaw motions	Passed
RC 18-17	Charge: Public statement on laws permitting discriminatory practices- Packet III Intent: For APTA to make obvious statement for choosing venues for national events based on discriminations policies of those sites	Postponed indefinitely
RC 19-16	Adopt: Endorsement of national efforts addressing the opioid health crisis- Packet III Intent: To promote the use of PT first or instead of opioids for pain	Passed unanimously

2016 National Election Results:

Roger Herr, PT, MPA, was elected secretary.

Stuart Platt, PT, MSPT, was re-elected vice speaker.

Carolyn Oddo, PT, MS, FACHE, and **Sue Whitney, PT, DPT, PhD, NCS, ATC, FAPTA**, were re-elected director and **Kip Schick, PT, DPT, MBA**, was elected director.

Holly Clynych, PT, DPT, MA, GCS, and **Chris Petrosino, PT, PhD**, were elected to the Nominating Committee.

As you can see the House did some thoughtful and valuable work on behalf of the members and the entire profession. The official House minutes will be available in August and additional information can be found on the APTA website under Communities-House of Delegates. It was my honor to fill in as the AGPT Delegates; and once again I thank Steven Chesbro for his work before me.

REIMAGINE ACTIVE AGING

Explore what the International Council on Active Aging Annual Conference Has to Offer

Lori A. Schrodt, PT, MS, PhD

Are you looking to connect with other active aging professionals? Learn more about promising practices? Share successes and discuss challenges of programming? Generate ideas for expanding your practice focus for health promotion and wellness?

If so, consider attending the International Council on Active Aging Annual Conference in Orlando, FL, November 17-19, 2016. This year's conference theme, "Reimagine Aging," promises to move the needle for better aging and health forward. With programming across several tracks (big picture, cognitive and emotional health, physical activity, management and marketing, programming, and outdoors), poster presentations, social receptions, and a new "speed problem-solving" session, you will find a variety of networking opportunities and tips for expanding your programming toolbox. You can find out more at: www.icaa.cc.

Last year's Annual Conference provided opportunities to learn about the successes and challenges of programs "on the ground" in an energized atmosphere that encouraged forward thinking. Sessions and poster presentations included those from exercise and wellness professionals and many by physical therapists working in senior communities and clinical practice. There was also special emphasis on the continuum of function for older adults and not just programs for the relatively healthy community-dwellers. For example, an interactive session outlined an exercise program for individuals with movement disorders created by a team of physical, occupational, and speech therapists in collaboration with wellness staff from a retirement community. This particular program used evidence-based principles across the continuum of care to engage individuals of varying functional levels. Another session described a pilot

program for implementing strength and power training to reduce frailty and hospital readmissions. This example of translating research into successful programs illustrated that participants liked the program, improved their mobility, and none of the initial pilot participants returned to the hospital. Great news! Some of the other sessions of the 2015 conference focused on pelvic fitness, bone health, sleep solutions, meditation and mindfulness, brain health and dementia care, partnering with parks and recreation departments, and increasing program participation.

The interactive poster session is always something to look forward to. Last year's poster session included works in 3 categories (research, promising practice, and programming). The specific topics varied from intervention studies of live vs. virtual programs, cardio-drumming for individuals with dementia, pain monitoring for older musicians, a program for implementing the Triple Aim approach into a senior living environment, and a wellness on wheels program. With a smaller number of posters and the time before the networking reception, there is plenty of opportunity to talk with presenters and exchange experiences and ideas.

The keynote address is always a highlight of the ICAA Annual Conference. Last year, Shawn Achor presented an engaging address titled, "The Happiness Advantage: Linking Positive Brains to Performance." His address promoted the interplay of different aspects of wellness. Perhaps you've heard his [TED talk](#)...If not, check it out for a glimpse of what you missed.

Dr. John Ratey, author of two recent books (*Spark: The Revolutionary New Science of Exercise and the Brain* and *Go Wild: Free Your Body and Mind from the Afflictions of Civilization*), will present

the keynote address titled, "Exercise: a daily tonic for the brain to get it to its fullest potential and keep it there" at the upcoming conference. So plan to attend to hear more!



Lori Schrodt currently serves as Chair of the Health Promotion and Wellness SIG and as the AGPT Liaison to the International Council on Active Aging.

She specializes in community-based healthy aging and fall prevention programs. She is a professor in the Department of Physical Therapy at Western Carolina University where she teaches geriatric and neuromuscular rehabilitation courses and treats clients in a balance and fall prevention specialty clinic. She can be contacted at lschrodt@email.wcu.edu.

IT'S ACTIVE AGING TIME

Lori Schrodt, PT, MS, PhD

The fall brings great opportunities to join the International Council on Active Aging (ICAA; an Academy of Geriatric Physical Therapy Promotional Partner) in celebrating and promoting active aging.

ACTIVE AGING WEEK 2016: EXPLORE THE POSSIBILITIES

September 25 - October 1, 2016

Active Aging Week® (AAW) is an international celebration of positive, active aging. This year's AAW *Explore the Possibilities* theme challenges adults 50 years and older to try something new and challenges institutions and agencies to join AAW. Each day of AAW also has a specific theme highlighting aspects of skin health, healthy eating, walking, and AquaYoga. During AAW, individuals have the opportunity to experience exercise and other healthy aging activities throughout their communities. Senior centers, retirement

communities, area agencies on aging, health care, and other aging and wellness partners celebrate AAW by offering a variety of free (and fun!) programs. Programs often include group exercise classes, health fairs, educational events, group walks, dances, and arts and craft classes. Last year over 3000 organizations across 6 countries, including the United States, participated in AAW. If you've missed planning to join AAW this year, be sure to check out the website to plan for next year. And be sure to check with your partners and agencies to find out about AAW programs in your area.

The ICAA offers support to organizations and participants through a dedicated AAW website (www.activeagingweek.com). Organizations can join in special theme days, register their AAW events, and download AAW promotion materials. Individual participants can also access a variety of health and activity tips and videos.

Visit www.activeagingweek.com to learn more and register your event(s). You can also follow AAW on Facebook (www.facebook.com/ActiveAgingWeek) and Twitter (@AAW_ICAA).



Lori Schrodt currently serves as Chair of the Health Promotion and Wellness SIG and as the AGPT Liaison to the International Council on Active Aging.

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PRACTICE CHAIR UPDATE

The following updates are provided by the APTA Practice Department and have been edited by the AGPT Practice Committee for relevance to Academy members. We hope you find this information useful.

Submitted by Greg Hartley, AGPT Practice Committee Chair

1. COMPREHENSIVE CARE FOR JOINT REPLACEMENT MODEL (CJR)

- CJR Model focused on elective primary hip and knee replacement patients begins on April 1, 2016 and will run for 5 years.
- Model includes inpatient stay and post discharge care 90 days after discharge.
- The average Medicare payment for hip and knee procedures ranges from \$16,500 to \$33,000, according to the CMS.
- For more information related to CJR please visit APTA's website at <http://www.apta.org/CJR/>.

2. INNOVATION 2.0 LEARNING LABS

- The Innovation 2.0 Learning Labs are a series of interactive educational experiences in which prospective model developers can gain insight and learn tangible steps for implementation of an innovative model with physical therapy as a central focus within their organization. In addition to the Learning Labs, APTA will also provide templates as a resource for all members in order to replicate this great work.
- Due to the interactive nature of the learning labs, registration is limited.
- For more information related to Innovation 2.0 please visit APTA's website at <http://www.apta.org/Innovation2/>.

3. IMPLEMENTING ICD-10 IN THE CLINIC

- APTA is aware of the many questions about the first-listed diagnosis for patients receiving outpatient physical therapist services. For clarification, APTA contacted the ICD-10 Cooperating Parties, which include the American Hospital Association (AHA), the American Health Information Management Association (AHIMA), CMS, and the Centers for Disease Control and Prevention. The Cooperating Parties agree that with the transition to ICD-10 it is important that all health care providers code consistently.

The Health Insurance Portability and Accountability Act (HIPAA) requires assigning ICD-10-CM diagnosis codes according to the ICD-10-CM Official Guidelines for Coding and Reporting. The ICD-10-CM Official Guidelines for Coding and Reporting FY 2016 state:

“Codes for symptoms, signs, and ill-defined conditions from Chapter 18 are not to be used as principal diagnosis when a related definitive diagnosis has been established.” Page 96.

“List first the ICD-10-CM code for the diagnosis, condition, problem, or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided. List additional codes that describe any coexisting conditions.” Page 102.

“Codes that describe symptoms and signs, as opposed to diagnoses, are acceptable for reporting purposes when a diagnosis has not been established (confirmed) by the provider.” Page 101.

APTA recognizes that payers have not been consistent with instructions on the first-listed diagnosis, and physical therapists may not have been coding according to the guidelines above. Going forward with ICD-10, APTA believes the first-listed diagnosis should be consistent with the ICD-10 Coordinating Parties, payers, and other organizations.

- If you have had issues with denials for payment of claims regarding ICD-10 coding, please use APTA’s online form as the starting point to gain assistance and/or guidance from APTA staff. Online Complaint Form: <http://www.apta.org/ICD10/ComplaintForm/>
- For more information related to ICD-10 please visit APTA’s website at <http://www.apta.org/ICD10/>

4. PTNOW

- PTNow is APTA’s evidence-based practice web portal. **MEMBER LOGIN IS REQUIRED.**
 - It has many tools to assist PTs and PTAs with easy-to-use resources to find clinically-related information of typically-treated conditions.
 - Many resources are authored by APTA members.
- PTNow has many tools to assist PTs and PTAs with easy-to-use resources to find clinically-related information of typically-treated conditions authored by APTA members. These resources include:
 - **ArticleSearch** - Formerly Open Door at APTA.org, ArticleSearch, provides members easy access to journals and other resources relevant to clinical practice, including full-text access to research and articles from more than 4,500 clinical and academic publications. Please visit the tutorial: Using ArticleSearch (<https://youtu.be/g7YMY4Zftw>) for more information. <http://ptnow.org/ArticleSearch>
 - **Clinical Summaries** - Clinical Summaries synthesize evidence on managing specific conditions in different populations. <http://ptnow.org/clinical-summaries>
 - **Test** – Test & Measures. APTA has secured permission for members to download copies of the tests/tools/instruments for the purpose of patient examination in the practice setting. <http://ptnow.org/tests-measures>
 - **CPG** – Clinical practice guidelines are systematically developed statements to assist practitioner to use the best available evidence in patient care. PTNow has links to a collection of CPG that are specifically chosen for the physical therapy profession. <http://ptnow.org/clinical-practice-guidelines>
 - **Cochrane Reviews** - The Cochrane Library is a collection of systematic reviews of research. PTNow has links to a collection of these systematic reviews that are specifically chosen for the physical therapy profession. <http://ptnow.org/cochrane-reviews>
- A recent addition to PTNow, **Rehabilitation Reference Center** (<http://ptnow.org/RRC>), has extensive clinical reviews for 1,800+ clinical conditions relevant to rehabilitation, medication information for nearly 12,000 medications, patient education handouts (in English and Spanish), and exercise images for patient distribution (the “VHI Library”). Handouts and exercises can be customized to include clinic and provider contact information. **This is an exceptional resource for members!**
 - Please visit the tutorial: Using Rehabilitation Reference Center (http://support.ebsco.com/training/flash_videos/rrc.html) for more information.



Greg Hartley is Chair of the AGPT Practice Committee and is an Assistant Professor at the University of Miami, Miller School of Medicine, Department of Physical Therapy in Coral Gables, FL.

A WAKE UP CALL FOR ALL GERIATRIC HEALTH CARE PROVIDERS

Tamara N. Gravano, PT, DPT, GCS, CEEAA

The AGS Annual Meeting is the premier forum for the latest information on the clinical geriatrics, research on aging, and innovative models of care delivery. The meeting will address the professional and educational needs of geriatrics professionals from all disciplines through state of the art educational sessions and research presentations about emerging clinical issues, current research in geriatrics, education, health policy, and delivery of geriatric care.

– American Geriatrics Society Annual Meeting Program

I recently attended the American Geriatrics Society (AGS) Annual Meeting in Long Beach, California, a gathering that is entirely focused on geriatric care, and I was surprised there was little mention of physical therapy (PT). Judging from the description on the advertising materials and in the conference program, I was looking forward to meeting other like-minded individuals who share a love of geriatrics. According to the AGS, the American Geriatrics Society supports a multidisciplinary team-based approach to health care for older adults, especially in conditions of balance impairment and fall prevention, which includes physical therapy.¹

Evidently physical therapy is known to the AGS and given our education, it would make sense that PT would be indicated in a comprehensive treatment program. As balance training and fall prevention is in our wheelhouse, why was there a lack of emphasis on PT as the interventionist of choice for balance and falls at this meeting? Why wasn't PT mentioned more often as a treatment option in the first place?

I agree that our aging patients benefit from a multidisciplinary approach to their care and I am always looking for successful examples of innovative, interdisciplinary care firsthand. Having practiced in several multidisciplinary settings, I know a team-based approach has its benefits and limits, so I chose to attend a conference where various health care disciplines would be represented to learn more about how physical therapists can work together with other health care professionals to decrease balance

and falls and other outcome measures of function. However, it was apparent to me that not all disciplines view PT as a primary approach to treating balance deficits in older adults.

So I went digging for information in the AGS program, and reviewed the credentials of the AGS Program Committee, Proposal Reviewers, and Abstract Reviewers. Nearly all members held medical degrees, with a few PharmD and RN degrees located in each committee. I found it puzzling that no physical therapists were credited with having participated in the planning and organization of the meeting. When I checked the program to see if PT would be mentioned or included, I found this statement:

The Annual Meeting Program Committee has worked hard to create an exciting program that will present high quality clinical and scientific content to our diverse audience. The 2016 annual meeting will address the educational needs of geriatrics health professionals from *all professions*. Physicians, nurses, pharmacists, physician assistants, social workers, long-term care and managed care providers, health care administrators, and *others* can update their knowledge and skills through state of the art educational sessions and research presentations.² (emphasis mine)

Surprisingly, physical therapists were not given a direct mention, and instead we were lumped together with "others." I may be reading too much into this detail, but it left me with the impression that the omission of PT speaks to a continued lack of recognition for our profession and its geriatric specialists.

However, the AGS does have a large number of special interest groups (SIGs), one of which is the "Physical Therapist and Rehabilitation Specialist" chaired by Dale Avers, PT, DPT, PhD. Dr. Avers was the founding SIG Chair and the former Academy of Geriatric Physical Therapy (AGPT) representative to the AGS. I recently reached out to Dr. Avers to corroborate my concerns about the apparent lack of PT presence in the meeting. According to Avers, she helped form the SIG within the AGS in an effort to combat the perceived exclusion of physical therapists in the AGS. A few years ago, she submitted a presentation proposal entitled "Illuminating the Black Box of the Physical Therapist's Mind" in an effort to "educate how therapists think and what we look for in our evaluations." Avers recalled that "We felt physicians didn't really understand what we do, and this proposal was to address this. However, it was not accepted, which kind of took the wind out of our sails." How disappointing. However, with an organizational panel that lacks physical therapists it is no wonder that the overall emphasis for the AGS geriatric health care conference is still physician and pharmaceutical based, with little emphasis on other PT-relevant factors such as independent function and mobility.

The Academy of Geriatric Physical Therapy has several external representatives to relevant geriatrics organizations, including Tim Kauffman, our representative to the Gerontological Society of America (GSA). Mr. Kauffman has personally been involved with the GSA since 1978, and is currently a Fellow

for the GSA. I wanted to learn more about how physical therapists are viewed in other organizations, such as the GSA, so I reached out to Kauffman to hear his opinion. According to Kauffman, "As physical therapists we know what we do but others do not really know what we do. Years ago, I joined a task force for the GSA concerning sensory deficits. I was pushing proprioception and kinesthesia, while the others were thinking, vision, sound, smell, and tactile sensation." After considering the insights from both insiders it was apparent that we have not yet made inroads into true interdisciplinary conference content.

I did not attend the meeting for the continuing education credit, as the continuing education units (CEUs) listed in the AGS Annual Conference program did not include physical therapists. Physicians and nurses were awarded the maximum 28.5 CEUs and pharmacists earned a reduced number of CEUs (18.75) for their attendance, leaving other disciplines unable to claim credit. In an interdisciplinary program, why weren't any CEUs given to the remaining health care providers?

Perhaps the potential CEUs for pharmacists were reduced due to the limited number of presentations that mentioned pharmacological management of older adults, but it was not always apparent in the title of the presentation. In fact, there were many presentations and panels that were appropriate for physical therapists and would fall into our scope of practice: "Falls Prevention in Older Adults," "Integrating Patient-Centered Goals Into the Care Of Older Persons," "Communication Strategies to Improve Interprofessional Team Functioning," "Targeting Functional Decline: Results from the Alzheimer's Disease Multiple Intervention Trial," "Training and Support for Family Caregivers of Persons With Dementia: Innovative Model Programs and Resources, Diagnose and Treat Benign Paroxysmal Vertigo (BPPV)," "Timing is Everything: When and How Long Should Patients Receive Therapy for Osteoporosis?," and several others. The titles sound like programming one would find at a physical therapist conference, but instead PT was barely mentioned if at all.

I inquired with Denise McAlpin, AGS Membership Coordinator, about

the numbers of physical therapists who attended the conference, and she told me "over 2750 primary care providers, 16 of which were physical therapists" had attended the conference this year. It is likely that historically there are not enough physical therapists to seek PT CEUs, which was the case this year as well. However, we were not presenters either. There was only one person in the program whose credentials included "PT" and that topic was wound care. Although there were numerous PhDs, the overwhelming majority of speakers were MDs.

Still, the AGS meeting is another opportunity for physical therapists to meet and collaborate with other health care professionals interested in the needs of our aging population. I would like to see more cross over into interdisciplinary conferences such as the AGS and the American Gerontological Society. Other possible educational meetings that would be an option for our profession to participate in include the American Academy of Home Care Medicine, the American Academy of Neurology, the American Federation for Aging Research, the Society for Post-Acute and Long-Term Care Medicine, the National Institute of Aging, and many others.

Coincidentally, I am currently experiencing the same lack of PT leadership roles in geriatric interest groups in my own state. When I moved to West Virginia 5 years ago, I was given the opportunity to attend the West Virginia Geriatric Education Center Annual Conference. I was surprised to find that the balance and fall prevention education and treatment was presented by a physician. I immediately asked how I could get involved. The following year, I delivered the fall prevention content and am currently on the planning committee for next year's conference. I think that taking the initiative in similar situations may be one way to make sure PT is not left out of the conversation and the conference.

I have been a member of the American Physical Therapy Association (APTA) for 16 years and attended its national meetings for the last 11 years. These last few conferences were the first time I had ventured out of my comfort zone into related organizations to learn more about geriatrics from a collaborative, interdisciplinary approach.

I challenge physical therapists to reach out to the AGS, GSA, and other similar organizations to see for themselves how to get involved and increase our visibility to other health care professionals. If you would like to become involved with the Academy through being a liaison with other outside organizations such as these, please contact the executive office and let us know. Together we can move the profession forward!

REFERENCES

1. American Geriatrics Society. *Final Program: 2016 Annual Scientific Meeting*. New York, NY: AGS; 2016.
2. Cameron ID, Murray GR, Gillespie LD, et al. Interventions for preventing falls in older people in nursing care facilities and hospitals. *Cochrane Database Syst Rev*. 2010;CD005465.
3. Guideline for the prevention of falls in older persons. American Geriatrics Society, British Geriatrics Society, and American Academy of Orthopaedic Surgeons Panel on Falls Prevention. *J Am Geriatr Soc*. 2001;49(5):664-672.



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POPULATION HEALTH: PHYSICAL THERAPISTS ROLE IN PREVENTION

Kenneth L. Miller, PT, DPT, GCS, CEEAA

The federal government initiated a revolutionary change in health care policy and health care delivery starting with the Patient Protection and Affordable Care Act of 2010 that is no longer a surprise to anyone working in health care.¹ The changes keep coming as noted through initiatives implemented by the Centers for Medicare and Medicaid Services (CMS) innovations center.² One innovation program that will have dramatic effects on physical therapist practice is a retrospective bundling model called the Comprehensive Care for Joint Replacement (CJR) Program that started in April 2016 that has already realized shifting practice patterns effecting physical therapist practice and dramatic change to care delivery.³

Therapists need to be cognizant and remain diligent of the CMS innovations programs, changing reimbursement structure, health care policy, and care delivery system in order to be prepared to be actively involved in system redesign. Otherwise, therapists face being outside of the decision making process as is the case for physical therapists in home health with regards to the CJR program. The CJR program is a shared risk model that impacts the hospitals directly through government incentives to improve efficiency while maintaining (or improving) quality care. The direct change noted has been shorter length of stays in the hospitals performing the surgeries and in each post-acute care setting. Surprisingly, some settings are being skilled altogether as some patients formerly discharged to skilled nursing facilities or home care are now being discharged home with outpatient physical therapy either in the office or making home visits.

The CJR program is modeled after a Bundled Payment Care Improvement (BPCI) Model 2 demonstration which has data available that shows the shift in discharge disposition and shorter length

of stay being seen now in CJR. Euclid Hospital realized reductions in length of stay from 3.40 days to 3.01 days in the first year along with a reduction in discharge to skilled nursing facilities from 56% to 31% and quality metrics such as the patient experience scores on Hospital Consumer Assessment of Healthcare Provider and Systems (HCAHPS) and lower readmission rates from 5% to 2%.⁴ Physical therapists working in the skilled nursing facilities that receive patients with joint replacements from Euclid Hospital may have realized a drop in patient census for those with joint replacements, but be unaware of the true reason for this change. Discharge from Euclid Hospital directly home has increased in the same time period from 39% to 68%.⁴ This shift in care provision directly impacts staffing needs from an administrative point of view, as well as changes the care needs of the patient population receiving home health care based on acuity level.

The CJR program is but one innovation model being tested as others such as the BPCI programs are being tweaked and expanded by CMS in order to reduce cost, improve patient experience, and population health. The health care policy shift towards value from volume is being driven by the institute for health care improvement's "Triple Aim" which is to improve the health of the population, patient experience, and lastly a lower cost per capital.⁵ The Centers for Medicare and Medicaid Services has been very transparent in its vision, have physical therapists been listening? The goal of CMS is to connect Medicare PPS payments to quality and to shift towards alternative payment models (30% in 2016 and up to 50% by 2018).⁶ Are physical therapists aware of these system changes and the potential impacts these changes will have on care delivery in general and on physical therapy practice

in particular? Is an awareness of the shift and being active in the care redesign critical for the practicing clinician? Physical therapists in clinical practice must demonstrate value in the services provided in order to be fully included in the new care delivery models.

There is a plethora of high quality research being published and included in the Centers for Disease Control and Prevention (CDC) guidelines. One recent guideline of particular importance to physical therapists is the "Guideline for prescribing opioids for chronic pain" published in 2016 that includes physical therapy as an alternative non-pharmacological therapy.⁷ The American Physical Therapy Association (APTA) has launched a "#choose PT" campaign to promote this recommendation to society-at-large.⁸ Physical therapists should embrace the CDC guideline and promote the value of physical therapy in terms addressing the opiate epidemic in the United States.

Other research demonstrating the value of physical activity is opportunities for physical therapists to demonstrate value to society as a whole in terms of the triple aim. Physical therapists have the skills to look beyond function alone and move towards improving population health in terms of prevention. Physical therapists must demonstrate value to society towards improving health. The CDC has promoted physical activity as a means of preventing/reducing the risk of developing type 2 diabetes and metabolic syndrome, reduce the risk of certain cancers, strengthen muscles and bones, improve mental health and mood, improve the ability to do daily activities and reduce the risk of falling, and lastly, increase the chances to live longer.⁹

Physical therapists should look to get involved in disease management for chronic diseases and other diseases where physical activity has been recommended

as a preventative measure or intervention. The advent of the accountable care organization (ACO) and disease specific bundling payment models offer physical therapists opportunities to get involved in exercise prescription when exercise is being recommended because the purpose of the ACO is to improve health through better coordinated care and provide services to reduce medical errors and spend health care dollars more wisely (such as providing preventative services).¹⁰ For example, when a person is newly diagnosed with diabetes, the patient might be referred to a dietitian for diet education, and be told to begin an activity program and weight loss program without any further direction on how to begin an exercise program. The physical therapy profession is uniquely qualified to educate on exercise prescription, exercise dosing, resistance training and other components of physical activity, physical functioning and health promotion.¹¹ In fact, the APTA has a position statement supporting physical therapists practice in the areas of health promotion, wellness and fitness, and in management of disease and disability.¹²

The Physical Therapy profession has a golden opportunity to realize the APTA vision statement, “Transforming society by optimizing movement to improve the human experience” and to demonstrate value in the new healthcare reimbursement world and most importantly, improve population health, patient experience at a lower cost through education on a societal level and individual level regarding the benefits of physical activity towards the prevention of many diseases and improve the health and function of the population.¹³

REFERENCES

1. Public Law 111-148. Patient Protection and Affordable Care Act. 2010. <http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/pdf/PLAW-111publ148.pdf> Accessed July 6, 2016.
2. Centers for Medicare and Medicaid Services. Innovation Center. <https://www.innovation.cms.gov/>. Accessed July 9, 2016.
3. Centers for Medicare and Medicaid Services. Comprehensive Care for Joint Replacement Program. <https://www.federalregister.gov/articles/2015/11/24/2015-29438/medicare-program-comprehensive-care-for-joint-replacement-payment-model-for-acute-care-hospitals>. Accessed July 7, 2016.
4. Mouelle, B, Higuera C, Woichevovich L, Deadwiler M. How to Succeed in Bundled Payments for Total Joint Replacements. *NEJM Catalyst*. <https://catalyst.nejm.org/how-to-succeed-in-bundled-payments-for-total-joint-replacement/>. Accessed July 9, 2016.
5. Berwick DM, Nolan TW, Whittington J. The Triple Aim: Care, Health, And Cost. *Health Aff*. 2008;27(3):759-769. <http://content.healthaffairs.org/content/27/3/759>. Accessed July 9, 2016.
6. Burwell SM. Setting value-based payment goals -- HHS efforts to improve U.S. health care. *N Engl J Med*. 2015;372(10):897-899.
7. Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. *JAMA*. 2016;315(15):1624-1645.
8. MoveforwardPT. Avoid addictive opioids. Choose physical therapy for safe pain management. #choosePT. American Physical Therapy Association. <https://www.moveforwardpt.com/choose-physical-therapy-over-opioids-for-pain-management-choosept>. Accessed July 10, 2016.
9. Centers for Disease Control and Prevention. The benefits of physical activity. <https://www.cdc.gov/physicalactivity/basics/pa-health/index.htm#LiveLonger>. Accessed July 10, 2016.
10. Centers for Medicare and Medicaid Services. Accountable Care Organizations. <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/index.html?redirect=/Aco/>. Accessed July 10, 2016.
11. Rea BL, Hopp Marshak H, Neish C, Davis N. The role of health promotion in physical therapy in California, New York, and Tennessee. *Phys Ther*. 2004;84(6):510-523.
12. American Physical Therapy Association. Physical therapists' role in prevention, wellness, fitness, health promotion, and management of disease and disability. [Position Statement]. Available at: http://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/Practice/PTRoleAdvocacy.pdf. Accessed July 10, 2016.
13. American Physical Therapy Association. Vision Statement <http://www.apta.org/Vision/>. Accessed July 10, 2016.



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BILATERAL VESTIBULAR HYPOFUNCTION IN OLDER ADULTS

Bonni Kinne, PT, DHS

Bilateral vestibular hypofunction is a situation in which both inner ears have been partially or completely damaged by an illness or injury.¹ According to a recent national cross-sectional survey,² it is estimated that nearly 65,000 Americans are living with severe bilateral vestibular hypofunction. Approximately 50% of the cases of bilateral vestibular hypofunction are caused by the use of an ototoxic medication, especially an antibiotic known as gentamicin.¹ An individual with bilateral vestibular hypofunction usually complains of visual problems and balance problems.³ Although the individual may also complain of “dizziness,” spinning vertigo is extremely rare.¹

In individuals with a normal vestibular system, visual input, somatosensory input, and vestibular input are received by the peripheral vestibular system (the inner ears), processed by the vestibular nuclei (with the assistance of the cerebellum), and transmitted superiorly along an ascending tract to stabilize the eyes through the vestibulo-ocular reflex and inferiorly along a descending tract to stabilize the body through the vestibulo-spinal reflex (Figure).⁴ The visual problems experienced by individuals with bilateral vestibular hypofunction result from a partial or complete loss of the vestibulo-ocular reflex, and the balance problems experienced by individuals with bilateral vestibular hypofunction result from a partial or complete loss of the vestibulo-spinal reflex.³

EVALUATION

A diagnosis of bilateral vestibular hypofunction is made based upon the results of a subjective examination, an objective examination, and the rotational chair test.¹ During the subjective examination, patients with bilateral vestibular hypofunction will complain of visual problems and balance problems as previously discussed.³ In severe cases, a patient will report all of the

following symptoms: (1) visual problems while moving the head; (2) balance problems while standing; (3) difficulties walking in a dark environment, on a compliant surface, or in a straight line; (4) symptoms that negatively affect function; and (5) symptoms that have persisted for more than one year.²

During the objective examination, physical therapists should administer the following tests: (1) the head thrust test; (2) the dynamic visual acuity test; and (3) the Romberg test.⁵ The head thrust test is performed as follows⁶: with the patient’s head in a slightly flexed position and the physical therapist sitting in front of the patient, the physical therapist quickly rotates the patient’s head from side to side. While the physical therapist is performing these passive rotations, the patient is instructed to visually focus on the physical therapist’s nose. A patient with bilateral vestibular dysfunction will usually demonstrate a corrective saccade to the left when the head is stopped in right rotation. When the head is stopped in left rotation, the patient will usually demonstrate a corrective saccade to the right. The dynamic visual acuity test is performed as follows⁷:

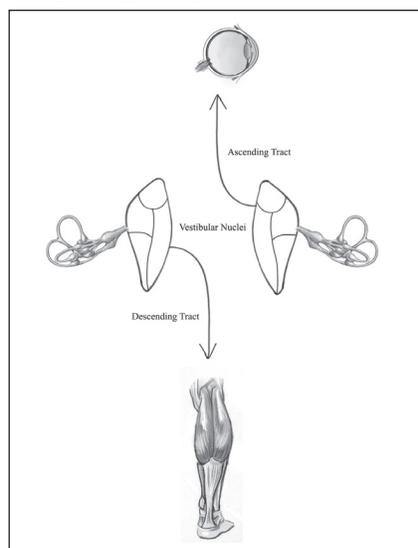
while sitting 20 feet from a Snellen eye chart, the patient reads the lowest line possible. Then, with the patient’s head in a slightly flexed position and the physical therapist sitting in back of the patient, the physical therapist quickly rotates the patient’s head from side to side. While the physical therapist is performing these passive rotations, the patient is instructed to again read the lowest line possible on the Snellen eye chart. A patient with bilateral vestibular dysfunction will usually lose 3 or more lines of visual acuity during the dynamic part of the test as compared to the static part of the test. The Romberg test is performed as follows⁸: the patient stands feet together on a firm surface with the eyes open and the eyes closed. Then the patient stands feet together on a compliant surface with the eyes open and the eyes closed. A patient with bilateral vestibular dysfunction will usually be able to independently stand on a firm surface with the eyes open, on a firm surface with the eyes closed, and on a compliant surface with the eyes open. However, the patient will usually fall while standing on a compliant surface with the eyes closed.

Although physical therapists do not generally administer the rotational chair test, it is considered the gold standard tool for diagnosing bilateral vestibular dysfunction.⁹ During the testing procedures, the patient sits in a rotational chair that is positioned inside a dark, cylindrical room. While the chair is rotated at various speeds, the patient’s eye movements are recorded through the use of infrared video goggles or through the use of electrodes that have been placed on the patient’s face. The rotational chair test is able to categorize the patient’s bilateral vestibular dysfunction as mild, moderate, or severe.

TREATMENT

Vestibular rehabilitation consists of both adaptation exercises and substitution

Figure. The Normal Vestibular System (Image designed by Tess Tobolic)



exercises.¹⁰ The purpose of adaptation exercises is to help the vestibular system accommodate to its damaged state. The purpose of substitution exercises is to help the visual system and the somatosensory system serve as the main balance mechanisms in place of the damaged vestibular system.

If a patient has experienced a partial loss of vestibular function bilaterally, adaptation exercises may be beneficial.³ In cases of mild to moderate bilateral vestibular hypofunction, patients may also need to be instructed in the avoidance of ototoxic medications to prevent an additional loss of their vestibular function.¹ If a patient has experienced a complete loss of vestibular function bilaterally, substitution exercises may be beneficial.³ In cases of severe bilateral vestibular hypofunction, patients may also need to be instructed in the use of an assistive device to prevent a fall.¹

The overall prognosis for individuals with bilateral vestibular hypofunction is generally worse than for individuals with unilateral vestibular hypofunction.³ In addition, vestibular rehabilitation may not be as effective for older adults with bilateral vestibular hypofunction as it is for younger individuals with the same diagnosis. One reason for this difference is the fact that older adults may not respond as well to adaptation exercises because of the age-related changes that may have occurred in the vestibular system.¹¹ These changes commonly affect both the peripheral vestibular system (the inner ears) and the vestibular nuclei (a component of the central vestibular system). Another reason for this difference is the fact that older adults may not respond as well to substitution exercises because of the age-related changes that may have occurred in the visual and somatosensory systems.^{12,13} Common age-related visual changes include declines in contrast sensitivity, dark adaptation, and depth perception.¹² Common age-related somatosensory changes include declines in the function of the muscle spindles and the cutaneous receptors.¹³ Many older adults also have cataracts, glaucoma, macular degeneration, and/or diabetes mellitus.^{12,13} The first 3 conditions negatively affect the individual's visual system.¹² The fourth condition may negatively affect the individual's visual system because of diabetic retinopathy

and/or the individual's somatosensory system because of diabetic neuropathy.¹³

CONCLUSION

This article presented an overview of how to evaluate and treat individuals who have been diagnosed with bilateral vestibular hypofunction. Because the overall prognosis for individuals with bilateral vestibular hypofunction is generally worse than for individuals with unilateral vestibular hypofunction and because vestibular rehabilitation may not be as effective for older adults with bilateral vestibular hypofunction as it is for younger individuals with the same diagnosis, an early detection of the associated risk factors (such as the use of ototoxic medications) should be a high priority for physical therapists who work with the older adult population.¹⁴

REFERENCES

1. American Hearing Research Foundation Bilateral Vestibulopathy. www.american-hearing.org/disorders/bilateral-vestibulopathy/. Accessed June 20, 2016.
2. Ward BK, Agrawal Y, Hoffman HJ, Carey JP, Della Santina CC. Prevalence and impact of bilateral vestibular hypofunction: results from the 2008 US National Health Interview Survey. *JAMA Otolaryngol Head Neck Surg*. 2013;139(8):803-810.
3. Herdman SJ, Clendaniel RA. Assessment and interventions for the patient with complete vestibular loss. In: Herdman SJ, ed. *Vestibular Rehabilitation*. Philadelphia, PA: FA Davis Company; 2014.
4. Hain TC, Helminski JO. Anatomy and physiology of the normal vestibular system. In: Herdman SJ, ed. *Vestibular Rehabilitation*. Philadelphia, PA: FA Davis Company; 2014.
5. Petersen JA, Straumann D, Weber KP. Clinical diagnosis of bilateral vestibular loss: three simple bedside tests. *Ther Adv Neurol Disord*. 2013;6(1):41-45.
6. Rehabilitation Measures Database Head Impulse Test/Head Thrust Test. <http://www.rehabmeasures.org/Lists/RehabMeasures/Admin.aspx>. Accessed June 20, 2016.
7. Rehabilitation Measures Database Dynamic Visual Acuity Test: Non-Instrumented. <http://www.rehabmeasures.org/Lists/RehabMeasures/Admin.aspx>. Accessed June 20, 2016.

8. Rehabilitation Measures Database Romberg Test. <http://www.rehabmeasures.org/Lists/RehabMeasures/Admin.aspx>. Accessed June 20, 2016.
9. American Hearing Research Foundation Vestibular Testing. <http://american-hearing.org/disorders/vestibular-testing/>. Accessed June 20, 2016.
10. Hall CD, Cox LC. The role of vestibular rehabilitation in the balance disorder patient. *Otolaryngol Clin North Am*. 2009;42(1):161-169.
11. Anson E, Jeka J. Perspectives on aging vestibular function. *Front Neurol*. 2016;6:269-275.
12. Salvi SM, Akhtar S, Currie Z. Ageing changes in the eye. *Postgrad Med J*. 2006;82(971):581-587.
13. Shaffer SW, Harrison AL. Aging of the somatosensory system: a translational perspective. *Phys Ther*. 2007;87(2):193-207.
14. Telian SA, Shepard NT, Smith-Wheelock M, Hoberg M. Bilateral vestibular paresis: diagnosis and treatment. *Otolaryngol Head Neck Surg*. 1991;104(1):67-71.



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