GeriNotes

August 2022 • Vol. 29 No. 4

APTA Geriatrics
An Academy of the American Physical Therapy Association
Age on.™

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In This Issue

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From the President

Cathy Ciolek
President,
APTA Geriatrics

As I write this, we are in the middle of a busy summer. When you get this, we will be starting to think about kids going back to school with September just around the corner. With September comes the Autumnal Equinox, the day of equal sunlight and darkness and the first "official" day of fall. The week of the equinox marks the annual Falls Prevention Awareness Week (FPAW), this year September 18-24, 2022.

I want to encourage you to consider participating in a Fall Prevention Awareness Week activity in your area. Reach out to your State Advocate or local Falls Prevention Coalition to see what is happening in your area or consider hosting your own event with our toolkit, developed by the Balance and Falls Special Interest Group, giving you everything you need to create an event of any size.

The National Council on Aging (NCOA) has been coordinating the FPAW activities for 14 years, but these events take grassroots effort. In 2021, according to NCOA data, the combined reach was over 314 million via social media, news releases, and 5.9 million education/fall risk screening and advocacy contacts (Source: NCOA Fall Prevention Awareness Week 2021 Impact Report). You can utilize the NCOA social media assets and other media materials (like the one pictured right) to help get the word out. Materials can easily be found here.

Our partnership with NCOA has been moving forward with shared educational offerings (webinars, materials) and NCOA actively distributing this article in May about the role of physical therapy. Thank you to Tiffany Shubert and members of the task force for strengthening this partnership and increasing awareness of what PT can offer — that of leading the interprofessional team to address physical activity and falls prevention.

As you will see in this issue of *GeriNotes*, another partnership, with the National Senior Games, has created opportunities to volunteer and conduct SAFE screenings at your local, state, or national games. Every time you share your skills with a falls screening or senior athlete screening, you are helping to increase public awareness of our profession AND helping an older adult take the steps necessary to maintain or improve their health and wellbeing. You are living the vision of APTA Geriatrics: Empowering adults to move, engage and live well!

APTA Geriatrics, An Academy of the American Physical Therapy Association
1818 Parmenter St, Ste 300 Middleton, WI 53562

From the Editor: Inform/Endorse/Advertise

Michele Stanley
Editor,
GeriNotes

GeriNotes has a proud tradition of encouraging members to write about their innovations in clinical practice settings, product or service development, and novel patient management. This is a clinical magazine and sharing ideas is what we do. There is a difference, however, between communicating ideas (informing) and promoting (endorsing) or advertising (getting paid to publish). Sometimes this gets confusing.

In this issue, Jennifer Brach and colleagues share information about a proprietary program for community engagement to bridge the gap between end of "skilled services" and the "exercise black hole" that we've all often witnessed clients falling into. It is based on evidence, is a novel approach, and is interesting. A hyperlink is provided for readers who want to explore this further. This is information sharing. The authors have also chosen to advertise their program trainings; this does not constitute an endorsement by APTA Geriatrics – providing advertising space is a business service that reimburses a little bit of our operating fees.

In the March issue, a home-care preventative program (HOP-UP PT), also based on evidence, novel, interesting, and proprietary was presented with hyperlinks, but the authors did not choose to advertise. The stories were treated identically; publication of information without advertisement does not constitute endorsement nor imply that it is not worthy of recommendation. Both ideas are worthy of further investigation by readers.

The January 2022 issue detailed the APTA tools for an Annual Physical Therapy Visit, a proprietary tool set free for members, developed in response to the 2018 House of Delegate's charge for PTs to provide an annual broad health and wellness exam. This is a set of evidence-based outcome measures with a reporting tool and intake form. Hyperlinks are provided. The Annual Physical Therapy Visit process, itself, is not a standardized tool with documented reliability, validity, or responsiveness.

This issue documents a case report developed for the July Journal Club that discussed a research project that used the AFIT, a proprietary annual visit tool developed by Carole Lewis prior to development of the APTA Annual Visit Tool. It is also based on solid evidence- based outcomes but is not, itself, a test that has documented reliability, validity, and responsiveness. Carole graciously wrote a commentary on the JClub and answered questions that arose during this presentation. There is a hyperlink provided within her commentary for readers who want more information about the AFIT.

The concept of an annual visit is an exciting development for our profession, especially for those who work with older adults. The truism at the end of almost all research reports: "Further research is needed" holds true for both tools. Clinicians need the assurance that tools they administer are not just a collection of evidence-based components but are, themselves, a reliable, valid, and responsive test.

Definition of inform *transitive verb*: to communicate knowledge to

Definition of endorse *transitive verb*: a: to approve openly as in to endorse an idea; especially: to express support or approval of publicly and definitely; b: to recommend (something, such as a product or service) usually for financial compensation}

Definition of advertising: the action of calling something to the attention of the public especially by paid announcements

[Merriam-Webster (www.merriam-webster.com/dictionary. Accessed July 26, 2022)

GeriNotes

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Michele Stanley, PT, DPT
gerinoteseditor@gmail.com

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Mission: To provide engaging content that empowers the community of physical therapy clinicians to build expertise and expand the delivery of evidence-informed care that promotes health and wellness in ageing adults.

Vision: To create an evolving online community through which clinicians develop their knowledge and skills based in shared ideals that are person-centered; and promote a world where ageing adults move, live, and age well.

Presenting the Candidates for the 2022 Election

The nominating committees of APTA Geriatrics present to the membership the following list of candidates for the 2022 election. Our governance is only as good as the people and ideas that we vote for. This is as true in volunteer and professional organizations as it is in your local, state and national government. These generous volunteers who are stepping up for positions in the APTA Geriatrics family deserve our respect and thanks. Please review the candidates in preparation for the election that will be held in **October 2022** and feel free to reach out to them should you have any questions. Presented in alphabetical order, using APTA's Appropriate Use of Designations.

Board of Directors: Secretary

Sarah Kidd, PT, DPT

Board-Certified Geriatric Clinical Specialist

I have been a proud member of the APTA since I became a physical therapy student in 2013. Since then, my involvement in my professional affiliations has grown. I felt called to pursue my specialization in geriatric physical therapy early – by the second semester of graduate school. As a result, while still a Student Physical Therapist I flourished as an Albert Schweitzer Fellow as I taught dance-infused exercise to retirees in an assisted living and long-term care facility, sought election to and won Board Membership on the OPTA Student SIG, and was a solo presenter at the OPTA Annual Conference. I also supported the APTA Organization as a student by being a CSM Student Volunteer. From 2016-2017, I was a Geriatric Physical Therapy Resident at The Ohio State University, and have earned my GCS credentials. The last time I attended CSM in-person (2019), I enjoyed being an APTA Geriatric Academy booth volunteer also. My most recent professional endeavor has been working as the Wellness Director at a local retirement community (which is also open to the 55+ y.o. public). From this position, I collaborate with personal trainers, clergy, massage therapists, physicians, nutritionists, social workers, out-patient rehabilitation, and others to holistically serve our local older population. This position has given me the pleasure of educating all my collaborators on the services and benefits of physical therapy. If I am elected as the APTA Geriatrics Board of Directors Secretary, I will have the opportunity to serve the Geriatric Academy with my skills in attentive listening, organization, goal-driven mindset, and detail-oriented thought processes. As I interviewed for this role, nothing but joy, excitement, and vigoration was ignited in me. I look forward to partnering with the Board, our members, and greater society in this era of geriatric physical therapy.

Stefany Shaibi, PT, DPT

Board-Certified Geriatric Clinical Specialist; Board-Certified Orthopedic Clinical Specialist

It is an honor to be considered for a position within APTA Geriatrics. I am a Board Certified Geriatric Clinical Specialist with almost 20 years of experience. My professional experiences have been in outpatient clinics, home health, and as an educator. I have served in numerous roles to prepare me for this opportunity, including as an item writer for the Geriatric Clinical Specialty Exam and as the Arizona State Advocate for APTA Geriatrics. As an educator, I have worked to successfully integrate geriatric content into entry-level education and to promote APTA Geriatrics to my students. My vision for APTA Geriatrics is to see increased student involvement to encourage best practices for geriatric patients. I would like to see more opportunities at the local level for clinicians to become involved. These include mentorship, educational programming, and community events to provide a service and to promote the academy. Additionally, this would create a network of clinicians to provide resources and support for some of the difficult challenges we face today. During these unparalleled times, it is important to stay connected and have a sense of community. I appreciate this opportunity to serve the APTA Geriatrics community and your patients.

Mariana Wingood, PT, DPT, PhD, MPH

Board-Certified Geriatric Clinical Specialist; Certified Exercise Expert for Aging Adults

Since graduating in 2012, I have had the honor and pleasure of serving APTA-Geriatrics in various capacities, including being the APTA-Geriatrics Vermont State Advocate, Balance and Falls SIG Chair, GeriEDGE Chair, and CSM Programming Co-Chair. These leadership roles provided me with the opportunities to focus on my passion, providing solutions to problems that clinicians see in day-to-day clinical practice. One such problem was difficulty keeping up with research, therefore I started the APTA-Geriatrics' Journal Club. In 2018, I made the difficult decision to temporarily decrease my involvement with APTA-Geriatrics and complete my PhD and MPH.

My dissertation focused on identifying clinical barriers and developing related to incorporating physical activity into geriatric physical therapy. With this knowledge, I am equipped to collaborate with our membership and leadership team, and work towards APTA-Geriatrics' commitment of advancing the PT profession and optimizing the experience of ageing. I hope to further advance this commitment by promoting collaboration with other national organizations I am actively involved with, such as ACSM and Exercise is Medicine. Furthermore, as the APTA-Geriatrics' Secretary, I will use my strong communication and organizational skills to bring your voices to the table and help us meet the APTA-Geriatrics' vision of embracing aging and empowering adults to move, engage, and live well.

Board of Directors: Chief Delegate

Beth Black, PT

Board-Certified Geriatric Clinical Specialist

My past roles in APTA Geriatrics, APTA, my chapter, and the New Mexico Adult Falls Prevention Coalition have informed and prepared me to be the APTA Geriatrics Chief Delegate and a member of the Board of Directors. I'm committed to advocating for optimal ageing and our value as Physical Therapists and PTAs in helping ageing adults to stay as active and independent as possible. This is evident in my work as a West Region State Advocate Coordinator, a New Mexico APTA Geriatrics State Advocate, a member of the APTA Geriatrics/National Senior Games task force, with promotion of our participation in SAFE in state Senior Games and nationals, a member of the National Home Safety and Home Modification Work Group, and as a falls prevention activist and leader in the New Mexico Adult Falls Prevention Coalition. My familiarity with the House of Delegates, many current delegates, Robert's Rules, and advocating for motions will allow me to excel in this role. I enjoy representing our profession, mentoring of members, assisting in access to resources, research, and ideas, while listening and learning from others.

Jill Heitzman, PT, DPT, PhD

Board-Certified Geriatric Clinical Specialist; Certified Exercise Expert for Aging Adults; Advanced Certified Exercise Expert for Aging Adults; Neurologic Physical Therapy Emeritus; Certified Wound Specialist; Certified Exercise Expert for Aging Adults; Advanced Credentialed Exercise Expert for Aging Adults; Credentialed Clinical Instructor

Through my career, I have lived in 13 cities across 9 states and worked in every type of setting a PT is found working. This, along with all my service (elected and appointed positions) to the APTA, APTA Geriatrics and various state chapters has equipped me with experiences and knowledge regarding the ageing adult. I have witnessed many forms of age bias that affects the quality of life of this population across all ethnic, cultural, geographical, ability, economical and education variations. My motto has always been to eliminate age bias. Recently, I have experienced age bias personally (myself and family members) and professionally across many healthcare professions. This has led me to submit my nomination for the Chief Delegate for the APTA Geriatrics. We must be a voice for the ageing populations we serve. Being an active voice within the House of Delegates we can help shape the present and future of all of us; as people and professionals. As Chief Delegate for APTA Geriatrics, I believe I can be a strong advocate for the Academy and the Profession in changing the way society and health professionals (including Physical Therapist) view the ageing process. Together we can eliminate age bias.

Gretchen Jackson, PT, DPT

Board-Certified Geriatric Clinical Specialist

I graduated from Ohio University Physical Therapy School in 1990, then received my Master's Physical Therapy from University of Indianapolis in 1994 and the transitional doctorate from College of St. Scholastica in 2021. I am board certified in Geriatrics Physical Therapy since 2012 through the APTA. I have had the privilege of being the Tennessee state advocate for geriatric physical therapy which has led me to opportunities of providing fall prevention events. My career started in outpatient orthopedic and sports medicine facilities and then progressed to geriatric population in a skilled nursing facility with inpatient and outpatients. I also became involved with Tennessee Senior Olympics providing the Senior Athlete Fitness Exam screenings for the senior athletes. After 6 years of volunteering, I am privileged to be a member on the Board of Directors for the TN Senior Olympics. I presently work for HealthPro-Heritage in an independent/assisted/memory care living facility in Middle Tennessee. I am involved with the Care Solutions Committee which investigates the latest technology options that may be beneficial for different geriatric settings. I also provide health and wellness to private clients that want to be as active as possible. I would like to be more involved with geriatric physical therapy on the national level such as provided by the APTA Geriatrics.

Director

Christine Childers PT, PhD

Board-Certified Geriatric Clinical Specialist; Certified Exercise Expert for Aging Adults

Anyone who knows me, knows that I am passionate about the older adult population. I promote outside the box thinking and student service learning to encourage a broader understanding of the older adult. I am always pleased when I hear from former students that my courses helped change their perspective towards the geriatric population. In our current healthcare environment, it is extremely critical that Physical Therapists provide appropriate, individualized care and advocate for their clients to ensure sufficient treatment time is approved. As America ages, we need to ensure that all PT and PTA training programs prepare their students to work with the older adult in all settings, and all licensed PTs and PTAs are competent in providing care to this amazing cohort of individuals.

Scott William Doerhoff, PT, DPT

Board-Certified Geriatric Clinical Specialist

I am running for Director of the AGPT because I have a passion for serving others. In 2014, I received the Volunteers in Action Community Service Award. I know how to work with others to move people forward. Over the past 10 years I have been a volunteer for the American Board of Physical Therapy Specialties (ABPTS), initially serving as an item writer where I was named the 2015 ABPTS, Item Writer of the Year and then with the Geriatric Specialty Council and now as Chair of ABPTS. I have also served the APTA and the Academy of Geriatric Physical Therapy, volunteering as a State Advocate for Arkansas for three years. I have gladly given back to my home state and community as an elected official and as the Vice Chair of the Arkansas Governor's Advisory Council on Aging, advocating for aging adults. I have experience founding and managing a not-for-profit foundation. I have founded and managed a therapy contract company and I know that without bold leadership, challenges will continue to overwhelm our colleagues in geriatric clinical practice. As Director, I will never stop advocating for those willing to help our aging adults live their highest quality of life.

Annalisa Na, PT, DPT, PhD

Board-Certified Clinical Specialist in Orthopaedic Physical Therapy

I am Assistant Research Professor in the Department of Physical Therapy and Rehabilitation Sciences at Drexel University. I completed a postdoctoral fellowship in the Department of Orthopaedic Surgery and Division of Rehabilitation Sciences at the University of Texas Medical Branch in Galveston focused on ageing, clinical outcomes and multimorbidity management in older adults. I received my doctorate in Physical Therapy at Duke University and PhD in Biomechanics and Movement Sciences at the University of Delaware. While at Delaware, I served as Nominating Committee and Federal Affairs Liaison to the Delaware Physical Therapy Association and worked in the Neurological and Older Adult Clinic at University of Delaware. Before pursuing research, I worked in outpatient orthopedics and geriatric physical therapy, and completed an orthopedic physical therapy residency board certification as an orthopaedic clinical specialist. Currently, at Drexel, my research focuses on chronic pain management for community-dwelling older adults with dementia - with an emphasis on promoting health equity and clinical translation. I look forward to serving as Director for the AGPT and hope to bring varying perspectives that intersects research, education, and clinical practice.

Nomination Committee

F. Scott Feil, PT, DPT, EdD

I am a husband, a father, a business owner, a physical therapist, a professor, and most recently an amazon best-selling author. I am also a business coach and mentor despite starting my journey as an English major before landing as a Physical Therapist. I have been a clinical instructor to several students over the years in both home health and SNF settings. I am a creator and co-host of the Healthcare Education Transformation Podcast which aims at breaking down the silos between healthcare professions and trying to find best practices in teaching and learning throughout healthcare academia. I also host the Professors of Profit Vlogcast on Youtube and in podcast form. I am currently a full-time core faculty member at the University of St Augustine teaching Geriatrics and have begun progressing my research agenda in service based learning and geriatrics.

Laura Z. Gras, PT, DPT, DSc
Board-Certified Geriatric Clinical Specialist
I have been active in scholarship in geriatrics and interprofessional education for over 20 years with many presentations and publications as well as a book chapter on Geriatrics in Introduction to Physical Therapy. I am the Department Chair and Program Director at Ithaca College where I have supported faculty and students who are doing great things at the state and national level. I am currently serving on the Geriatric Movement System Task Force and I am on the nominating committee of the National Interprofessional Education Consortium (NIPEC) for ACAPT and am the secretary-elect. I have served nationally on APTA's Awards Committee- Subcommittee on Lectures and APTA's Scholarship and Awards Committee, both for 2 terms, and at the state level as the chair of the Research Committee for APTA New York. I was an ABPTS Specialization Content Experts item writer and have been a reviewer for the Journal of Geriatric Physical Therapy for 10 years. I am currently a fellow in the APTA Fellowship for Higher Education. I have enjoyed my time on the Geriatric Movement Systems Task Force and I would like to become more involved in APTA Geriatrics.

Frances E. Kistner, PT, PhD
Certified Exercise Expert for Aging Adults
My professional experiences have prepared me for a role in leadership in the Academy. I am currently the Program Director of the DPT program at MCPHS University and a Central District Representative for the APTAMA. I am an inaugural member of the ACAPT Advocacy Committee, and I belong to several ACAPT consortia. As an academic leader and a graduate of the Educational Leadership Institute Fellowship, I have developed organizational and leadership skills that have served me well, especially through the pandemic. I have spent the last 2 years as a primary caregiver of my mother, who was diagnosed with Lewy Body Dementia & atypical Parkinson's. It has been an incredible journey and one that has given me a perspicacious perspective on geriatric physical therapists, and the huge need for PTs who are prepared with comprehensive knowledge and skills to treat geriatric individuals. It is imperative that physical therapists be prepared with the best and most current evidence in order to advance a profession that "optimizes the experience of ageing". I am motivated to support AGPT, contribute to the committee, and assist with the future of the Academy of Geriatric Physical Therapy.

Chair, Bone Health SIG

Lisa Hamilton, PT, DPT
I believe strongly in physical therapists demonstrating leadership in disease prevention and health promotion, as well as providing wellness oriented, value-based care. Throughout my career as a PT, I have both created and presented community-based programs on bone health basics, safe exercise for osteoporosis and fall prevention, as well as promotion of bone health throughout the lifespan. I feel that my expertise in community programming, as well as experience facilitating collaboration across clinical, academic and community settings are strong skills needed to serve in this role. I have been a practicing physical therapist for 24 years in a variety of practice settings. I am a PT graduate of Northwestern University Medical School in Chicago, Illinois, and the DPT program at Regis University in Denver Colorado. I also hold a BS in Exercise Science from the University of Colorado, Boulder. I am a Nationally Certified Pilates Instructor, and a Master Instructor for Balanced Body Education. I am the founder of FlourishPhysio, providing physical therapy, intelligent movement, health, and wellness coaching, as well as bone health education and programming virtually, and in Montana and Colorado. I would be pleased to serve as the APTA Geriatrics Bone Health SIG chair, continuing to build membership and participation in the SIG across a variety of practice settings.

Kaitlin Ava-Marie Mullen, PT, DPT
Board-Certified Geriatric Clinical Specialist
Being of service and inspiring change are what make my heart sing. As a physical therapist, I get to do that daily. I started my career in inpatient rehab and became the Physical Therapy Team Lead within a year. I am now transitioning to treating in the outpatient setting and utilizing my new Pilates instructor training to help older adults not only recover, but truly gain strength and power to thrive. Over the last two years, I've expanded my ability to impact older adults through founding The Senior Centered PT blog and YouTube channel, where I actively collaborate with other healthcare professionals to provide awareness, education, and resources for topics that affect older adults. As a co-advocate for the state of Nevada for the Academy of Geriatric Physical Therapy, I have also been able to serve my home-town community through presentations for the Alzheimer's Association, writing letters for Letters Against Isolation, and teaching Tai Ji Quan Movement for Better Balance. I believe that older adults can accomplish anything they desire and that physical therapists can empower them to do so.

Alyssa Seeling, PT, DPT

My name is Alyssa Seeling PT, DPT and I graduated from Wayne State University. During my time there I was able to participate in many opportunities to help advocate for the PT profession. I had the honor of presenting research at CSM and Student Conclave for APTA Michigan. Recently I have assisted in proctoring exams at WSU and being a clinical instructor for PT students. I believe advocacy through research and active mentorship is essential for driving the PT profession forward.

Chair, Global Health SIG

Christine Salmon, PT, DPT, EdD

Board-Certified Geriatric Clinical Specialist; Certified Exercise Expert for Aging Adults

I have been a physical therapist for over 15 years, working primarily in inpatient settings and with the Geriatric population. I am currently an assistant professor for a residential DPT program, an FPTA Assembly Representative, and the FPTA Geriatric SIG secretary. I am a Board Certified Geriatric Specialist and a Board Certified Expert for the Aging Adult. I am a team player and always willing to learn more from others to succeed in any role that I assume. My significant accomplishment as a leader and advocate for my profession relates to my role as an educator. Every time I teach, it is an opportunity to advocate for our profession by planting seeds of awareness and consciousness to support the physical therapy profession in future physical therapists. Though I do not have experience with leadership in the APTA, I feel that I have the determination to flourish.

Shweta Subramani, PT, MHS

Certified Exercise Expert for Aging Adults; Certified Lymphedema Therapist

I am honored to be slated for this position. I am a Physical Therapist with 8 years of experience in Geriatrics. I am extremely passionate about serving the older adult population through evidence-based practice. I have served as the past Vice Chair of the Balance and Falls SIG, where I led the Bi-weekly Balance and Fall blurb and contributed to the revision of the Outcomes measures toolkit. I have been a part of the knowledge translation committee for the Osteoporosis CPG developed by the Academy. I currently serve as the Secretary of the APTA Oncology Balance and Falls SIG wherein I am part of clinical and research projects on Cancer and fall risk, and serve as the Director of membership and communications for the APTA Oncology Lymphatic Diseases SIG. I have recently become the Arizona State Advocate for APTA Geriatrics, and I am also part of the leadership team for a CPG for COPD being developed through the Academy of Cardiovascular and Pulmonary Physical Therapy. My education, my experience both in the US and abroad as well as my involvement in different APTA academies have given me a unique outlook. If given an opportunity to serve as the chair of the GHAA SIG, it would be my goal to further partnerships and collaborations between international groups and organizations involved in the care of older adults, and to advance the practice of Geriatric Physical Therapy globally in line with the strategic plans of the SIG and the Academy. I humbly ask for your vote.

Shih-Chiao Tseng, PT, PhD

I have been a faculty in the doctoral physical therapy (DPT) programs over 10 years in Texas. I have contributed to DPT education for geriatric population in both academic and research fields. I have taught life-span development and clinical neuroscience courses. My research focuses on gait and postural control in older adults with and without neurological disorders. My community service aims to promote successful ageing for older adults by wellness and fall prevention education. I believe serving in APTA Geriatric session will allow me to make bigger impacts on the society.

Chair, Residency and Fellowship SIG

Cynthia Barros, PT, DPT

Board-Certified Geriatric Clinical Specialist; Advanced Certified Exercise Expert for Aging Adults

Excellence in physical therapy care of the older adult can be established through geriatric residencies and fellowships. I am currently the Program Coordinator for the Geriatric PT Residency program at my workplace, and have served as faculty on the program since it's initiation. I am a mentor for geriatric residents, and clinic instructor for students over the last few years, I believe in the importance of post-professional education and fostering lifelong learning. I would like to collaborate with like-minded individuals to continue to promote excellent care for older adults, which is demonstrated through my involvement in my state's Geriatric Special Interest Group, currently serving as vice chair, being a part of my state's Access Committee to promote diversity, equity, and inclusion, and as secretary for the APTA Geriatrics Bone Health SIG.

Michelle (Missy) Criss, PT, DPT, PhD
Board-Certified Geriatric Clinical Specialist
As a 30-year APTA member, I have worked alongside phenomenal colleagues through service to our profession and patients. I lead by example, striving for lifelong learning as a way to improve my own PT practice and the experience our patients have. My leadership strengths include organization, dependability, and a commitment to reflective practice as a team member and leader. I have been honored to contribute to APTA-Geriatrics' committees: Program, Regional Courses (chair), Nominating, GeriEDGE (currently co-chair), and also to the Balance and Falls SIG's Outcome Toolkit revision and the Best Practices Taskforce. Through my service in both leadership and non-leadership roles and my clinical work, I learned that choosing just 1-2 things at a time to focus on intensely can bring great results. This focused practice allows me to make changes habitual and inspire those around me to do the same because they see it works. I approach leadership similarly – looking to focus on a few key things and gathering a team to help reach those goals. Focus on our new Best Practice Guiding Principles in Geriatric PT, especially patient-centered care with an anti-ageist mindset, I believe will move PT practice forward and reap huge benefits for our patients.

Vice-Chair, Cognitive and Mental Health SIG

Katherine Lee Hrezo Daniels, PT, DPT
Board-Certified Geriatric Clinical Specialist; Certified Fall Prevention Specialist; Certified Dementia Care Specialist
My name is Katherine Daniels and I have a passion for working with the geriatric population. I work heavily with fall prevention and dementia care to assist as an advocate for our elderly for safe transitions between the hospital, skilled nursing, and home. I believe strongly is providing the best quality of care that I can and being the extra voice they need.

Rashelle Marie Hoffman, PT, DPT, PhD
Board-Certified Geriatric Clinical Specialist
I share the mission of APTA Geriatrics to embrace ageing and empower older adults to maintain a healthy lifestyle. Additionally, I envision APTA Geriatrics being the ideal source for ageing with optimal health and wellness. My present research focuses on behavioral methods to improve physical activity in older adults with cognitive impairment. My background affords a diverse skillset in neuroimaging, biomechanics, and several clinical practice settings. I also demonstrate a passion for service and strong communication skills evidenced by pro bono work and translation of research findings for clinical application. My past research team collaboration has led to awards spanning pediatrics, neurology, and geriatrics. Within APTA Geriatrics specifically, I served as a Nebraska Co-State Advocate and authored an article for Gerinotes. Currently, I am an APTA Geriatrics CSM Programming Committee Member, an ad-hoc reviewer for the Journal of Geriatric Physical Therapy, and a Cognitive and Mental Health SIG Nominating Committee Member. Upon election, I plan to bolster the SIG's networking from within and with other SIGs/Academies and expand the SIG's research resources.

Michelle Lea Keller, PT, MPT
Board-Certified Geriatric Clinical Specialist; Certified Exercise Expert for Aging Adults
I am a 2003 graduate of the University of Mary, Bismarck, North Dakota, with a Master's in Physical Therapy. I have furthered my education by obtaining a certified competency in vestibular rehabilitation in 2013 from the APTA and Emory University in Atlanta, Georgia. In 2017, I became a certified exercise expert for the ageing adult through the APTA and Academy of Geriatrics. I have advanced this knowledge and in 2017 became a board-certified clinical specialist in geriatrics through the APTA. I hold additional certifications including LSVT BIG®(2013), and V2FIT® in concussion management (2019). I am an active member of the American Physical Therapy Association (APTA), both the Academy of Geriatrics and the North Dakota Chapter. I serve as a member of the continuing education committee for the NDPTA since 2019. I am currently working on completion of my terminal degree from the University of North Dakota in the Doctor of Educational Leadership and Practice program. As a physical therapist, I have experience providing care to patients in outpatient neurological rehabilitation, outpatient orthopedics and holds a special interest in geriatrics, vestibular rehabilitation, and concussion management.

Vice-Chair, Health Promotion and Wellness SIG

Stephanie Eton, PT, DPT
Board-Certified Geriatric Clinical Specialist
I am a Latina woman and first generation American with a passion for the geriatric and underserved populations. I am a graduate of the University of South Florida and have been practicing PT for 10 years in the outpatient setting. I have been an assistant professor for 5 years and completed an ABPTRFE accredited faulty residency in 2020 which provided me experience at the governance level. I also became board certified in Geriatrics in 2020. I would like to serve as a leader within the APTA Geriatrics board by recognizing and selecting other leaders who can help and advocate for our profession. I aim to use my position to serve as a role model for other minorities with the hope of encouraging

their involvement in governance positions within the APTA. Additionally, I wish to inspire former, current, and future students by supporting APTA Geriatrics and enabling student involvement within our profession's governing board.

C. Vicki Gold, PT, MA

Certified in Advanced Competency in Home Health

I am a retired physical therapist with more than 50 years of active practice. I have been on the faculty of several PT programs and am a former Director of the Physical Therapist Assistant Program at LaGuardia Community College. For all those years, up to the present, I actively promoted programs in back injury prevention. Current programs have larger mind-body connections. My background includes trainings in Yoga, Pilates, Tai Chi, Alexander and Feldenkrais techniques, among other mind-body approaches physical and mental well-being. The focus of my current trainings is on older adults and the people who serve them. These programs include virtual and phone-fitness classes. Their focus is on improved safety, fitness, fall and injury prevention using a simple ABC system I developed, Alignment, Breathing and Centering. In addition to the APTA, I am an active member of the National Aging In Place Council (NAIPC). My mission is to enhance the physical and mental well-being of individuals so they can "age-in-place." If I am selected, it would be my honor to serve the APTA Geriatrics Section, Health Promotion SIG as Vice-Chairperson.

Amy Walters, PT, DPT

Board-Certified Geriatric Clinical Specialist

Certified Exercise Expert for Aging Adults

I have practiced as a physical therapist for almost 20 years and as physical therapy faculty for seven years. I teach pharmacology and geriatric physical therapy and use these platforms to advocate for our older adults. I believe that we need to focus on more holistic approaches to caring for older adults with an appreciation for the need to consider psychosocial changes with ageing in addition to physical changes. This aligns with my current work in obtaining my PhD in Health Psychology. I believe that the greatest way I can advocate for the profession is by challenging and changing students views of older adults. Through participation in balance programs, exercise classes, and screens in the community, students can gain a more expansive view of the very diverse population that are our older adults. One of the best ways to challenge ageism is through multi-generational activities. This connection allows for an appreciation of and awareness that we can and should do better for our older adults.

*Watch your email for the electronic ballot this October and **please vote.** Newly elected officers take office at the close of CSM. As per APTA Geriatrics bylaws, only PT and PTA members are eligible to vote. More details to come as the election approaches.*

Application of the Guiding Principles: An interdisciplinary Approach to Home-Based Geriatric Rehabilitation

by Keith Barrett, PT, DPT; Katie Cooper, MS, OTR/L; Lori Lantzy, PT, DPT; and Shannon Stocks, MS CCC-SLP

In a country where 9 out of 10 Americans, aged 50 to 80, will experience one or more forms of ageism daily, believing a clinician possesses the tools to rehabilitate may feel like a trust fall for an older adult.[1] For this reason, clinicians should approach each encounter with dignity and excellence. Focusing primarily on Medicare Part B house calls, FOX Rehabilitation clinicians share a goal to empower patients during a return to their valued lifestyles and optimal function.

The *Journal of Geriatric Physical Therapy* recently published an article highlighting guiding principles for treating the current and future generations of older adults[2]. An interdisciplinary team from FOX Rehabilitation joined to extrapolate the essence of this article and apply the 6 guiding principles to 2 real-life case studies.

Case 1

Henry, age 85, living in a senior living community (SLC), presents with occasional instances of confusion and agitation. He has a medical history significant for Lewy Body Dementia and Parkinsonism presentations including rigidity and tremor. Henry has had 3 falls within the past 2 months; his caregivers have noted he requires increased assistance for transfers and activities of daily living (ADLs).

Principles 1 & 2: Person-Centered Care and Anti-Ageist Practice

With multisystem involvement, Henry's case is challenging. Yet utilization of the Patient-Specific Functional Scale, or PSFS, could be a means to prioritize person-centered care. This tool identifies 3 to 5 activities, selected by the patient or caregiver, and scores them on an analog scale from 0 (unable to complete a task) to 10 (complete the task without difficulty). Evidence suggests that any patient to score below 6.9 on the PSFS is at higher risk of hospitalization.[3] After 14 visits, if the scale reveals at least 6.9, this can be a meaningful prediction for a higher level of independence.

In addition to implementing the PSFS, each discipline attends to the patient's focal areas of deficit, producing meaningful goals. The Speech-language Pathologist (SLP) assesses the patient's communication with SLC staff, remote recall for daily activities, and assesses both vocal and swallowing function due to the presentation of Parkinsonism symptoms. The Occupational Therapist (OT) discusses specific occupations with family and caregivers. In this case, Henry's family identifies his enjoyment of fine dining, and emerging feelings of frustration surrounding spillage at meals. With this knowledge, the OT generates self-feeding and caregiver training goals. The Physical Therapist (PT) evaluates the patient's ambulation and current knowledge of assistive devices. Henry shows a clear aversion to wheelchair use; therefore, the PT assesses for alternate devices.

To strive for anti-agist practice, FOX clinicians provide in-services to SLC staff and education to caregivers and family members throughout the plan of care (POC) to promote independence and the highest level of function possible for the patient. In this case, an in-service on the topic of adaptive feeding for individuals with cognitive-related decline and a high-level tremor is presented.

Principle 3 & 4: Holistic Assessment for Sound Outcome Measures and Evidence-Based Practice

In choosing an assessment, consider both the condition being assessed and the functional goals of the person. Positive outcomes occur when completing interventions that are based on the best available evidence.

In this case, the SLP finds that Henry coughs and clears his throat throughout the meal, prompting utilization of the Eating Assessment Tool-10 (EAT-10), an assessment describing the extent of swallowing impairment through a subjective patient and caregiver report.[4] Henry is additionally provided with a 3-oz water test, a sensitive screening tool for identifying patients at risk for aspiration.[5] He demonstrates 2 immediate coughs on the 3-oz water test and received a 21/40 on the EAT-10, indicating a reason to suspect dysphagia. The SLP recommends an instrumental swallow examination, such as a modified barium swallow study (MBSS) or a fiberoptic endoscopic evaluation of swallowing (FEES) to obtain sound clinical reasoning for therapeutic interventions related to swallowing.

Throughout the POC, the PT closely monitors Henry's vital signs and rating of perceived exertion (RPE) with any endurance-based treatment presented and changes the interventions based on his response. Focusing on gait speed and the dosage guide, the PT recommends fifty hours of balance training (6). The one repetition maximum (1RM) principle was utilized to create an exercise plan catered to this patient for optimal functional gains.

The OT assesses this person using the Modified Barthel Index due to the patient's and caregiver's desire for increased independence.[7] This index is a scale measuring one's performance across 10 ADLs. The scores range from 0-100 with a lower score indicating more dependence on caregivers. Specifically, a score of less than 40 indicates an inability to live at home, while a score of 60 demonstrates the patient is transitioning to a level of more assisted independence. Henry scores a 45/100, indicating a high level of dependence. The OT trials 3 types of adaptive feeding utensils with Henry and determines the weighted utensils with built-up grips to ultimately be the best device for him, as this utensil results in the most successful self-feeding.[8]

Principle 6: Interprofessional Collaboration

Identifying when to refer to other healthcare professionals is vital. To champion interprofessional practice is to be inclusive of other therapy disciplines, patients, caregivers, and involved SLC staff. Communication and collaboration allow for the patient's optimal functional improvement.

For example, Henry's SLP and OT collaborate regarding safe swallow strategies for meals. His SLP emphasizes the promotion of adequate hydration during PT and OT exercises to promote vocal health and good oral hygiene. When Henry suddenly experiences hip abduction pain during the POC, this information is noted to his doctor to ensure no new co-morbidity, such as a possible hip fracture or acute muscular pathology.

Case 2

73-year-old Annabelle is a widow and lives independently in her three-bedroom apartment. Annabelle is presenting with generalized poor balance and muscle differences, with a medical history significant for a previous myocardial infarction. One month ago, she fell in her kitchen, resulting in a left-scapular fracture. She notes that since the fall, she has been having increased difficulty with some cognitive-related activities, including using her phone, managing online billing, and navigation to the bank.

Principle 1 & 5: Person-Centered Care and Prioritization of Physical Activity

Living independently, Annabelle performs higher-level activities such as laundry, cooking, and gardening. A multi-system review and the PSFS lead to further discussions respecting Annabelle's driving goals. Annabelle is provided with an explanation of age-based norms, a discussion of the POC, and education regarding the principles that facilitate her physiological and emotional-cognitive well-being, including life-long plans.

For rehabilitation to be effective, the patient and caregivers must develop an understanding of the diagnoses and compliance for an early introduced Home Exercise Program (HEP). An HEP should be initiated within the first few treatment sessions to emphasize the importance of personal functional gains which can be made with increased independence in the home setting. With Annabelle, an HEP is introduced which includes a walking program that incorporates preferred activities such as hiking and playing with grandchildren. This program progresses over the course of care as her endurance and strength improve. A weekly email chain between the clinician and Annabelle reminds her to complete this activity, as well as updates the program incrementally, adjusting to her progress over time.

Principle 2: Anti-Ageist Practice

Testing reveals that Annabelle has begun to seclude herself from community activities; she expresses she no longer feels safe while walking and has lost her confidence while engaging in balance-related tasks. Furthermore, when questions arise regarding walker use, she asserts, "only old people use walkers." Understanding the principle of sedentary lifestyle choices can impact further degradation of her physiological systems. Developing conversations to remove the stigma of assistive devices can be turned into positive communication strategies, indicating that engaging in community activities can improve self-confidence, and lower the risk for falls.

Principle 3 & 4: Holistic Assessment for Sound Outcome Measures and Evidence-Based Practice

To complete a holistic evaluation that was specific to Annabelle[9], the BERG Balance Scale, and Activities-Specific Balance Confidence (ABC) assessment are used to assess her status, appropriate goals, and patient-specific priorities. Proper dosing then occurs by determining she is frail (Freid's Phenotype) and using guidelines from the American College of Sports Medicine (ACSM) related to strengthening and motor learning. Finally, a full plan of care (POC) is developed with an emphasis on patient values.[10]

FOX clinicians provide support, mentorship, and training to our treatment teams. These training programs include recommendations for dosage types, intensity levels, and frequencies, as well as providing the autonomy to make independent clinical decisions. Building an affinity with this population and creating lines of communication, realities align in ways that provide value to the patients and clinicians treating them.

Principle 6: Interprofessional Collaboration

It is imperative to refer to other professionals when a noted problem can be best addressed by another type of clinician. For example, Annabelle demonstrates balance issues when folding laundry, therefore the PT referred her to OT services to address safety. When Annabelle misses several therapy appointments due to difficulty maintaining her schedule efficiently, a referral is made to SLP services to address communication and executive functioning. And when Annabelle suffers from a mild fall in her bathroom and divulges this information to the SLP,

the SLP collaborates with the PT to develop a written external memory aid sequencing the steps for getting up safely after a fall.

Conclusion

While remaining conscientious of the person-centered care approach in the ways framed above, clinicians across all disciplines can ostensibly utilize the 6 principles to guide best practice and uphold clinical excellence. Through the delivery of appropriate dosage, intensity, and frequency of evidence-based interventions, all rehabilitation specialists can elevate professional standards, providing the best care for the older adult population.

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Shannon Stocks M.S. CCC-SLP is a licensed speech-language pathologist (SLP) in the states of NY, NJ, and PA. She currently works for FOX Rehabilitation in Philadelphia, as the lead SLP in two Senior Living Communities (SLCs), as well as throughout the community. She has a background as a writer and Managing Editor for Quill and Scope, the Student Medical Journal at her alma mater New York Medical College.

Keith Barrett, DPT, GCS is a Regional Quality Assurance Liaison at Fox Rehabilitation. He has been a physical therapist with Fox for 7 years in Pittsburgh, PA, providing geriatric rehabilitation to his community with a focus on Senior Living Communities (SLCs).

Katie Cooper MS, OTR/L, CDP is an occupational therapist and Regional Quality Assurance Liaison at FOX Rehabilitation in central New Jersey. In addition to working with the geriatric population, Katie is a certified health coach with a passion for helping health care professionals improve work life balance and reduce burn out.

Lori Lantzy PT, DPT, CSCS has been a Physical Therapist for FOX Rehabilitation in New York City for 10 years. She is also a Documentation Review Specialist for FOX Rehabilitation.

The Buzz Around Health Equity

by Ellen R. Strunk, PT, MS

The issue of health equity is receiving increasing amounts of attention. There are good reasons for it. There is more and more evidence illustrating that belonging to a racial or ethnic minority group, living with a disability, being near or below the poverty level, or being a member of the lesbian, gay, bisexual, transgender, and queer (LGBTQ+) community living in a rural area, being a member of a religious minority, or being near or below the poverty level is often associated with worse health outcomes.[1,2,3,4,5,6,7,8] The COVID-19 pandemic certainly exacerbated this trend; evidence shows higher rates of infection, hospitalization, and mortality among Black, Latino, and Indigenous and Native American persons relative to white persons.[9]

However, it is worthwhile to note that discussions of race, culture, and privilege may elicit strong emotional reactions from some, and even go so far as to disenfranchise others. But it is an important discussion to have at all levels of physical therapy because it is critical to our future as a health profession and to the health of the people and communities we seek to serve.

Background

Before embarking on a discussion of health equity, it is important to define terms and terminology in order to foster transparency and understanding. One challenge, however, is that health equity is defined differently across organizations and the literature. These different definitions can have different implications in various practice settings. Table 1 provides definitions of health equity from various authoritative sources. The World Health Organization's (WHO's) definition is limited to the *elimination* of health disparities. The National Academies of Sciences, Engineering and Medicine (NASEM) and Centers for Disease Control and Prevention (CDC) definitions are focused on everyone having the *opportunity* to maximize their health but doesn't necessary require that everyone takes advantage of the opportunity, and therefore does not require equity in health outcomes. Both the Centers for Medicare & Medicaid Services (CMS) and Office of Minority Health (OMH) definitions reference "the attainment of the highest level of health for all people."

Each of these definitions mention in some way the elimination of health disparities. Frequently, health disparities refer to different clinical outcomes across patient populations. Sometimes, they are strictly clinically based, such as recovery rate from an elective procedure between two age groups. However, disparities can also be found between 2 populations where there is no clear clinical explanation. When inequities are closely linked with social, economic, and/or environmental disadvantages, they are called a health disparity.[15]

Rehabilitation practices are not immune to health disparities. Sholas[16] described racial disparities in access to and outcomes from rehabilitation services in 2020. She found that all practices of physical medicine and

Table 1. Definitions of Health Equity

Organization	Definition
Centers for Disease Control and Prevention (CDC)	**Health equity** is the state in which everyone has a fair and just opportunity to attain their highest level of health.[10]
Centers for Medicare & Medicaid Services (CMS)	**Health equity** means the attainment of the highest level of health for all people, where everyone has a fair and just opportunity to attain their optimal health regardless of race, ethnicity, disability, sexual orientation, gender identity, socioeconomic status, geography, preferred language, or other factors that affect access to care and health outcomes.[11]
National Academies of Sciences, Engineering and Medicine (NASEM)	**Health equity** is the state in which everyone has the opportunity to attain full health potential and no one is disadvantaged from achieving this potential because of social position or any other socially defined circumstance.[12]
Office of Minority Health (OMH)	**Health equity** is the attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities.[13]
World Health Organization (WHO)	**Health equity** is the absence of unfair and avoidable or remediable differences in health among population groups defined socially, economically, demographically or geographically.[14]

rehabilitation were susceptible to "personal, institutional or systemic realities that bias care against key groups within our patient populations."[16] One study found Black and Latinx adult patients were less likely to be discharged from acute care hospitals to rehabilitation centers as compared to whilte patients following significant brain injury.[17] Another study found rehabilitation use was significantly lower among blacks and higher among those with higher education, chronic medical conditions, pain, history of falls, and severe limitations in physical performance.[18] Finally, a secondary analysis of the 2016 National Health and Ageing Trends Study (NHATS) found that after controlling for gender, dual eligibility for Medicaid, number of chronic conditions, prior functional mobility, income, and geographic region, white people had 1.38 times odds of receiving rehabilitation in any setting compared to black people. Among those receiving therapy, black people were less likely to receive home-based and inpatient rehabilitation services. It is important to note, however, that this study found no racial differences in improvement in function.[19]

Across the CMS Notices of Proposed Rulemaking for the Fiscal Year (FY)/Calendar Year (CY) 2023, there is an abundance of information on measuring and improving health equity. In each of its major rules, CMS shared information on how they are working to advance health equity (See *Table 2*). Two proposals for new quality measures directed at screening and addressing social determinants of health can be found in the Inpatient Prospective Payment System (IPPS) proposal. Additionally, the IPPS, Long-Term Care Hospital (LTCH) PPS, Inpatient Rehabilitation Facility (IRF) PPS, Skilled Nursing Facility (SNF) PPS and Home Health Agency (HHA) PPS proposed rules collectively contain 7 requests for information seeking stakeholder feedback. These requests include design, implementation, and operationalization policies and programs that support health for all the people served by the Medicare programs. The goals are eliminating avoidable differences in health outcomes experienced by people who are disadvantaged or underserved.

Table 2. FY/CY 2023 Notice of Proposed Rule-Making

Setting	Reference	Title
Inpatient Rehabilitation Facility Quality Reporting Program (QRP)	87 FR 20247	Overarching Principles for Measuring Equity and Healthcare Quality Disparities Across CMS Quality Programs—Request for Information https://www.federalregister.gov/d/2022-07019/p-256
Skilled Nursing Facility QRP	87 FR 22754	Overarching Principles for Measuring Equity and Healthcare Quality Disparities Across CMS Quality Programs—Request for Information https://www.federalregister.gov/d/2022-07906/p-372
Skilled Nursing Facility Value-Based Purchasing Program	87 FR 22789	Request for Comment on a SNF VBP Program Approach To Measuring and Improving Health Equity https://www.federalregister.gov/d/2022-07906/p-915
Inpatient Prospective Payment System Hospital Readmissions Reduction Program	87 FR 28424	Request for Public Comment on Possible Future Inclusion of Health Equity Performance in the Hospital Readmissions Reduction Program https://www.federalregister.gov/d/2022-08268/p-2641
Inpatient Prospective Payment System Inpatient Quality Reporting	87 FR 28479	Overarching Principles for Measuring Healthcare Quality Disparities Across CMS Quality Programs—Request for Information https://www.federalregister.gov/d/2022-08268/p-3180
Inpatient Prospective Payment System Inpatient Quality Reporting	87 FR 28492	Proposed Hospital Commitment to Health Equity Measure Beginning With the CY 2023 Reporting Period/FY 2025 Payment Determination and for Subsequent Years https://www.federalregister.gov/d/2022-08268/p-3412
Inpatient Prospective Payment System Inpatient Quality Reporting	87 FR 28497	Proposed Adoption of Two Social Drivers of Health Measures Beginning With Voluntary Reporting in the CY 2023 Reporting Period and Mandatory Reporting Beginning With the CY 2024 Reporting Period/FY 2026 Payment Determination and for Subsequent Years https://www.federalregister.gov/d/2022-08268/p-3483
Long-Term Care Hospital QRP	87 FR 28570	Overarching Principles for Measuring Equity and Healthcare Quality Disparities Across CMS Quality Programs—Request for Information (RFI) https://www.federalregister.gov/d/2022-08268/p-4513
Home Health Agency QRP	87 FR 37664	Request for Information: Health Equity in the HH QRP https://www.federalregister.gov/d/2022-13376/p-266

So with all of this "buzz" around achieving health equity and addressing health disparities, where does anyone begin? What can one physical therapist or one physical therapy clinic do to make a difference? How will the practice of physical therapy be impacted? No one can conclusively say. One place to start is with awareness. For example, do the functional outcomes in your practice differ by race or ethnicity of the patient? Do they differ for patients who come from a high socioeconomic level versus a lower level? Answer to these questions requires data. Collecting information to inform physical therapy practice will go a long way in understanding whether health outcome disparities may exist in our practices. Equipped with this information, practitioners can begin to analyze their practice and evaluate what they can do to minimize disparities in their care outcomes.

Current Efforts to Measure Health Equity

Along these lines, there are changes that physical therapy will observe soon, especially in those settings that treat a significant number of older adults. Specifically, several standardized social determinants of health (SDOH) items were adopted for the PAC Quality Reporting Programs (QRPs) in response to the Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014. SDOH, also known as social risk factors (SRFs), or health-related social needs, are the socioeconomic, cultural, and environmental circumstances in which individuals live that impact their health. These items were scheduled to be collected in the IRF, LTCH, SNF beginning October 1, 2020, and in the HHA beginning Jan. 1, 2021. The COVID-19 public health emergency (PHE) temporarily stalled that effort, and CMS waived the requirement to begin collecting the information at that time to give providers relief during the early days of the PHE.

Two years have now passed. CMS announced the decision that post-acute care (PAC) settings will begin collecting these SDOH in the next fiscal and calendar year. Beginning with admissions and discharges on/after Oct. 1, 2022, IRFs and LTCHs will begin collecting certain standardized patient assessment data elements that capture SDOH using their standardized assessment tools, the IRF Patient Assessment Instrument (PAI) Version 4.0 and the LTCH Continuity Assessment Record and Evaluation (CARE) Data Set (LCDS) Version 5.0. Home Health agencies will begin collecting these SDOH elements beginning Jan. 1, 2023, using the Outcome and Assessment Information Set (OASIS) – Version E. Finally, in the FY 2023 SNF PPS proposed rule, CMS proposed to revise the initial SNFs collection of the items from Oct. 1 of the year that is at least 2 full FY after the PHE to Oct. 1, 2023 (87 FR 22750). The SDOH items to be collected were recommended by a 2016 NASEM panel report titled, "Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors,"[20] that concluded the best way to assess how social processes and social relationships influence key health-related outcomes in Medicare beneficiaries is through a framework of social risk factors instead of socioeconomic status. Subsequently, NASEM framed the results of its report in terms of "social risk factors" rather than "socioeconomic status" or "sociodemographic status."[20] CMS, however, uses the term SDOH to denote social risk factors, which is consistent with the objectives of Healthy People 2020.[14]

The PAC settings will collect information on 7 proposed SDOH data elements relating to race, ethnicity, preferred language, interpreter services, health literacy, transportation, and social isolation (see Table 3).

PAC settings currently collect a Race and Ethnicity data element in the Minimum Data Set (MDS), LCDS, IRF-PAI, and OASIS, but it only consists of a single question. The new data element assesses both race and ethnicity through 2 separate data elements: one for Race and one for Ethnicity. Another important aspect to health outcomes is speaking to patients in their preferred language. Yet individuals with limited English proficiency (LEP) have been shown to receive worse care and have poorer health outcomes, including higher hospital readmission rates.[21] Communication with individuals with LEP is an important component of high-quality health care; this starts by understanding the population in need of interpreter services. Unaddressed language barriers between a patient/client and provider negatively affect the ability of a healthcare professional to identify and address individual medical and non-medical care needs. It also makes it much more difficult to convey clinical information and discharge and follow up instructions, all of which are necessary for the patient/client to be in charge of their health outcomes after care ends.

Similar to language barriers, low health literacy can interfere with communication between the provider and patient/client and the ability for patients/clients or their caregivers to understand and follow treatment plans, including medication management. Health literacy is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions[22] Poor health literacy is linked to lower levels of knowledge about health, worse health outcomes, the receipt of fewer preventive services, higher medical costs, and higher rates of emergency department use.

Access to transportation for ongoing health care and medication access needs, particularly for those with chronic diseases, is essential to successful chronic disease management. Having a data element to collect and analyze information regarding transportation needs across PAC settings may facilitate the connection to programs that can address identified needs. Transportation barriers often affect access to necessary health care, causing missed appointments, delayed care, and unfilled prescriptions, all of which can have a negative impact on health outcomes.[23]

Finally, there is a data element to collect and analyze information about social isolation across PAC settings. Distinct from loneliness, social isolation refers to an actual or perceived lack of contact with other people, such as living alone or residing in a remote area.[24] Social isolation tends to increase with age, is a risk factor for physical and mental illness, and a predictor of mortality.[25] Collecting this information would facilitate the identification of patients/clients who are socially isolated and who may benefit from engagement efforts. PAC providers and especially physical therapists are well-suited to design and implement programs to increase social engagement of patients and residents, while also taking into account individual abilities and preferences.

Historically, efforts to improve health in the United States have depended on health care systems as the driver of health and health outcomes. There is increasing recognition that achieving health equity will require broader approaches, ones that address social, economic, and environmental factors. What might you be able to do with the information collected by these 7 SDOH items? Would it help you to analyze your health outcomes? Would it help you to develop more targeted plans of care? Would it help you to communicate with your patients? Consider what you might be able to do if you were to ask some of these simple questions as a part of your examination and assessment.

In the next Policy Talk, we will look at the measures of health equity and activities to improve health equity that are included in the Quality Payment Program for Medicare Part B providers. If you are interested in learning more about this topic, I encourage you to read the resources as well as an article published in APTA Magazine on *Addressing Social Determinants of Health* that spotlights several PTs and PT organizations that are working hard to reduce disparities in their communities' health outcomes.[26]

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Table 3. PAC Social Determinants of Health

ETHNICITY

A. No, not of Hispanic, Latino/a, or Spanish origin

B. Yes, Mexican, Mexican American, Chicano/a

C. Yes, Puerto Rican

D. Yes, Cuban

E. Yes, another Hispanic, Latino, or Spanish origin

X. Patient unable to respond

SOCIAL ISOLATION

0. Never

1. Rarely

2. Sometimes

3. Often

4. Always

8. Patient unable to respond

RACE

A. White

B. Black or African American

C. American Indian or Alaska Native

D. Asian Indian

E. Chinese

F. Filipino

G. Japanese

H. Korean

I. Vietnamese

J. Other Asian

K. Native Hawaiian

L. Guamanian or Chamorro

M. Samoan

N. Other Pacific Islander

X. Patient unable to respond

LANGUAGE

A. What is your preferred language?

B. Do you need or want an interpreter to communicate with a doctor or health care staff?

- 0. No
- 1. Yes
- 9. Unable to determine

HEALTH LITERACY**

0. Never

1. Rarely

2. Sometimes

3. Often

4. Always

8. Patient unable to respond

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TRANSPORTATION*

A. Yes, it has kept me from medical appointments or from getting my medications

B. Yes, it has kept me from non-medical meetings, appointments, work, or from getting things that I need

C. No

X. Patient unable to respond

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Ellen R. Strunk is President and Owner of Rehab Resources & Consulting, Inc., a company providing consulting services and training to providers in postacute care settings with a focus on helping customers understand the CMS prospective payment systems. She also lectures nationally on the topics of pharmacology for rehabilitation professionals, exercise and wellness for older adults, and coding/ billing/ documentation to meet medical necessity guidelines and payer regulations.

Dr. Jordre poses with Ellen Jaffe Jones, 69, a track and field athlete competing in the games and participating in the SAFE for the third time.

The Senior Athlete Fitness Exam

Improving the perception of ageing

by Becca Jordre, PT, DPT, PhD and Wendy Viviers, PT, DPT, MPhil, BS

Over 13,000 older adults gathered in Ft. Lauderdale, Fl., May 9-20, 2022. They were not there to work on their tans. They came to compete! These athletes were registered to compete in one of the 20 sports offered by the 2022 National Senior Games Association (NSGA). This also marked the sixth consecutive games where the Senior Athlete Fitness Exam (SAFE) was provided to athletes.

The SAFE is a screening tool designed to assess cardiovascular, muscular, flexibility, and balance fitness. It utilizes challenging thresholds and norms born from years of research and testing on National Senior Games Athletes. Athletes move through a battery of tests which are divided into stations. Throughout the screen they are scored on a report card which reflects their performance in each area, culminating in a composite score out of 10 points. It is difficult to score a perfect ten on the SAFE; athletes are being compared against norms and thresholds that are population-specific. Athletes take their report card to a final education station where their performance on the SAFE is explained and education appropriate for their needs is provided. This education is not the standard advice typically given to adults aged 50 and above. Rather, athletes are coached on enhancing their training and preventing injury so that they can remain competitive. At any given moment in the education station, one might hear advice on power training, adequate protein consumption, or optimizing exercise intensity to maximize muscular fitness. One may also see a volunteer guiding

"What are you waiting for? You need to be here!" — SAFE participant

an athlete in jumping, sports-specific dynamic stretching, or improving their form with planks. Athletes leave the SAFE armed with new insights into their physical fitness and how they can improve.

This year 850 athletes underwent the SAFE screen during the games. On exit surveys, 99% agreed with the statement, "The Senior Athlete Fitness Exam is valuable to me as an athlete." The SAFE adds value by giving these athletes the knowledge, and the confidence, to train like athletes, whether for the first time, or again. More than 99% agreed that they would recommend the SAFE to other athletes, and 87% agreed that a consultation with a Physical Therapist was likely to improve their score on the SAFE. The SAFE is a rare opportunity for these athletes to engage with clinicians who are selling a very different message from what they are used to hearing. Gone is the sentiment of being too old to be competitive! These athletes are tired of searching Google for information related to their health and sport. The SAFE is making headway in filling that void and the athletes love it.

Athletes report that they track their progress on the SAFE between games, with many attributing performance gains to the education and information provided.

"I've been participating since the test was first introduced at the National Senior Games, said one athlete. It's a great way to track fitness levels over time. I loved the educational component introduced during the 2019 Games. I hope that our test results will be used to raise the recommended minimum standards of fitness, not only for senior athletes, but for the overall population. Never underestimate the ability of older adults to stay fit throughout their lives!"

This year, the SAFE welcomed the assistance of 134 mostly Florida-based volunteers. This included DPT students from 6 different programs and PTA students from one; physical therapy residents from neurological, cardiopulmonary, geriatric, orthopedic, and sports specialties; and several practicing physical therapists. Volunteers consistently relayed their surprise at the distinct differences found when interacting with this population. On exit surveys, more than 98% said they would both volunteer at the SAFE again, and that they would recommend this experience to their colleagues.

"What are you waiting for? You need to be here!" was the response Dr. Marangela Prysianzny Obispo, PT, DPT gave when asked what advice she would give prospective volunteers. Dr. Prysianzny Obispo, a board-certified geriatric clinical specialist, brought 25 student volunteers from the Keiser University – Miami PTA program, and assisted with athlete education over a 3-day period.

Beyond enjoying the experience, more than 99% of volunteers agreed with the statement, "Interacting with Senior Athletes during the SAFE has improved my perception of ageing." This statement deserves a re-read. Consider the immense value for the future of our profession, if eyes are opened and minds are changed when providers are exposed to the potential of older adults.

As a profession focused on optimal movement, the SAFE event is an excellent opportunity for engaging with this unique and often overlooked population. It provides an experience unmatched in typical clinical settings and can help to establish physical therapists as the providers of choice for older athletes everywhere.

"We have so much to offer this population that is often so very underserved," says Rosanna Gelaz, PT, DPT, a board-certified geriatric clinical specialist and faculty at the University of Miami - St. Catherine's Rehabilitation Hospital Geriatric Physical Therapy Residency program. Dr. Gelaz brought residents to assist with the SAFE in Ft. Lauderdale, and after spending the day educating athletes, she offered the following advice to anyone considering being involved with the SAFE event: "These athletes don't get the education that they want, but they want to keep working, they want to keep doing more, and they want to keep getting better, and we totally have the skills and the knowledge to provide that. We need to have the time for them. This is a wonderful opportunity. I would recommend it one thousand percent!"

How to Get Involved

The SAFE is currently offered at State Senior Games events in many states. E-mail Becca Jordre at becca.jordre@usd.edu for information on how to initiate the SAFE in your state.

The SAFE will be offered again in 2023 at the National Senior Games in Pittsburgh, Penn. July 7-16. Watch for calls to volunteer through APTA Engage or the Pennsylvania Physical Therapy Association.

Dr. Jordre, PT, DPT, Ph.D. is a professor of Physical Therapy in the Department of Physical Therapy at the University of South Dakota (USD). She is board certified in Geriatric Physical Therapy and is a Certified Exercise Expert for Aging Adults. Dr. Jordre spends her time teaching DPT students at USD and conducting research on successful ageing.

Dr. Viviers, PT, DPT, MPhil is board certified in Geriatric Physical Therapy. She is a clinician and adjunct professor for multiple Doctor of Physical Therapy (DPT) programs in North Carolina, where she instructs on the Older Athlete. She hails from South Africa where she earned a Sports Physiotherapy Specialization degree from the University of Cape Town. She founded and ran a successful multidisciplinary clinic in South Africa for several years, focusing on management of athletes 35 and older.

On the Move: Bridging the Gap between Clinical Practice and Community

by Jennifer S. Brach, PT, PhD, FAPTA; Valerie Shuman, PT, DPT; Gardenia A. Juarez, MA; Corey S. Flynn, MPPM; and Kaitlin Sweeney, BS

The ageing baby-boomer generation requires alternative models to extend care for wellness, health promotion, and maintenance of independence. High quality community programs address 2 key concerns in the ageing process: primary prevention, (through chronic disease self-management, physical activity, behavioral health, and fall prevention programming); and tertiary prevention, as a continuation of care for people when skilled physical therapy ends. The Agency for Healthcare Research and Quality (AHRQ) highlights the need for sustainable links between clinical and community settings to enhance prevention and improve care of those with chronic disease. Community-based organizations such as area agencies on ageing, senior centers, faith-based organizations, and YMCAs, offer various evidence-based programs (EBPs) to address this need of the ageing population. Yet there is a lack of EBPs extending clinical physical therapy care as patients transition from skilled therapy to the community. On the Move (OTM), a group-based exercise program founded on key physical therapy principles, fits this need.[1]

On the Move is a motor learning, group-based exercise program designed to improve the quality of walking. We translated a motor learning rehabilitation program originally delivered by a physical therapist 1:1 with patients into a group-based exercise program for community-dwelling older adults.[1] The OTM program is based on stepping and walking patterns to promote appropriate timing and coordination of stepping throughout the gait cycle. In contrast to traditional impairment-based exercise programs, which focus on building capacity of the musculoskeletal and cardiopulmonary systems, OTM improves the efficiency of movement by integrating movements and postures during walking (Figure 1).[2] The OTM program encourages high quality movement through accurate practice instead of high repetition of practice.

The OTM program is delivered twice a week for 12 weeks for a total of 24 classes. Each class is approximately 60 minutes long and encompasses a warm-up, stepping and walking patterns, strengthening exercises, and a cool-down (Table 1). The exercises are done to music selected to complement or facilitate the activity. Though a group class, the exercises can be modified or adjusted to meet the individual needs of the participants. For example, the backward stepping task can be modified by using upper extremity support or increasing or decreasing the pace of the stepping. OTM is a progressive program. The instructor will modify the activity/task to make it more challenging as participants master the activity. The goal is for participants to achieve high loads of accurate practice (i.e., quality over quantity). Once an activity is completed accurately at least 80% of the time, it is progressed and made more challenging. If the participants struggle with an activity and are not completing it accurately, the activity is modified to make it less challenging, even within the group setting. Completing heavy repetition of the most basic walking patterns with

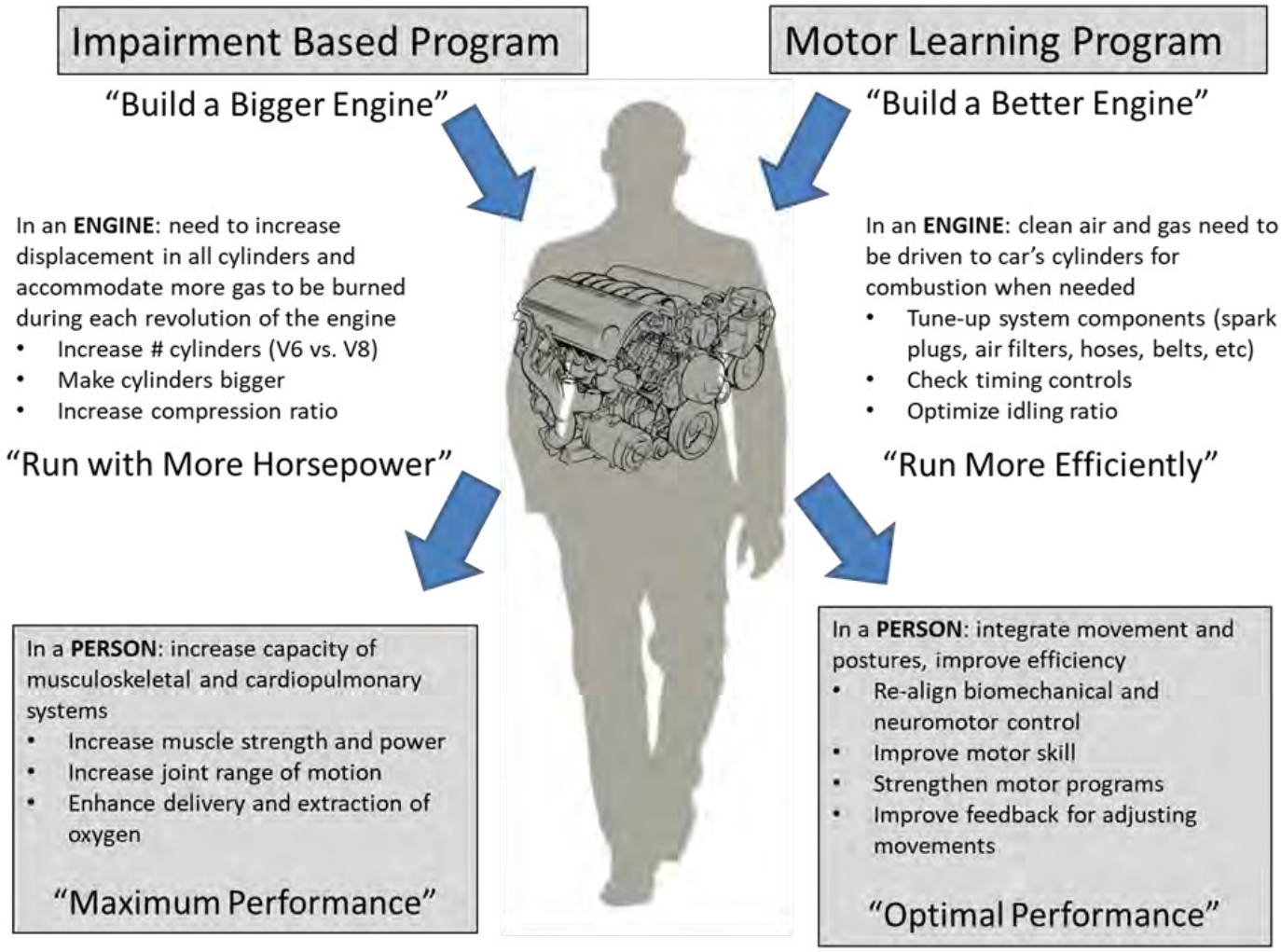
accurate movements by any individual is more valuable than progression to a more intense pattern if they cannot maintain their "form."

On the Move differs from other evidence-based exercise programs in several important ways. First, it was developed by physical therapists. Principles of motor control were used to enhance the "skill" of walking or smooth automatic movement control. These walking and stepping patterns are unique in that they are based on the biomechanics of good walking. Each exercise was designed with a specific purpose in mind (Table 1). Whereas many exercise programs include strengthening and aerobic exercises to target the musculoskeletal and cardiovascular systems, the OTM program includes walking and stepping patterns that are timing and coordination exercises to target the nervous system. The goal of OTM is to improve the timing and coordination or quality of movement (i.e., improve efficiency) instead of building endurance and strength (i.e., build capacity). Second, OTM was based on physical therapy clinical practice. The developers took exercises that were delivered 1:1 by a physical therapist to improve walking and converted them into exercises that could be delivered in a group setting. We recognize the value of allowing participants to progress at an individual pace, therefore our exercises can be adapted for each person despite the group all performing related tasks (e.g., walking patterns). Importantly, this allows participants to feel the benefits of group exercise while adhering to the principles of progressing at an individual pace.

On the Move History

It has taken many years and significant research to develop On the Move. The exercises were first developed to be delivered 1:1 between a physical therapist and a patient. Several research studies we conducted demonstrated the effectiveness of this individualized approach.[3-6] With the goal of reaching a greater number of individuals in the community, our stakeholders (manage-

Figure 1. Building a bigger engine versus a better engine: A comparison between impairment-based and task-specific motor learning exercise programs. Reprinted with permission from Brach JS, Vanswearingen JM. Interventions to Improve Walking in Older Adults. Curr Transl Geriatr Exp Gerontol Rep. 2013 Dec;2(4):10.1007/s13670-013-0059-0. doi: 10.1007/s13670-013-0059-0. PMID: 24319641; PMCID: PMC3851025.



ment of senior living) encouraged us to translate this rehabilitation program into a group exercise program.[7] The translation process involved multiple phases, including meetings with experts in the field, focus groups with older adults, and pilot testing the newly developed program.[1] Based on the feedback from experts in the field and the older adults we made adjustments to various aspects of the program including format/length, music, education, and group interaction. For example, participants reported enjoying interacting with each other during the exercises, therefore we incorporated interaction through partner and group stepping activities. Pilot testing of the program in thirty-one older adults demonstrated the program was safe and acceptable and resulted in potentially clinically meaningful improvements in mobility. The next step in the process involved a large cluster-randomized trial in which we compared OTM to a standard sit-and-be-fit group exercise program.[7] OTM was superior to the standard program in that older adults who participated in OTM could walk farther (as measured by the 6-minute walk test) and faster (as measured by 4-m gait speed) than older adults who participated in the standard program. In addition to the mobility outcomes, the participants were highly satisfied with the program.[8]

OTM Recognized as an Evidence-Based Program

In February 2018, OTM was designated as an evidence-based program by the Administration for Community Living (ACL). This official designation differs from the general concept of evidence-based practice, broadly defined as interventions supported by research. The ACL determines if a program qualifies for evidence-based designation based on the quality of the scientific evidence, evidence that the program has been fully translated in one or more community sites, and the availability of developed dissemination products that are available to the public. The designation is important because senior community centers can receive government funding from the Older Americans Act (i.e., Title III D funding) to support evidence-based programming. Having obtained the evidence-based designation for OTM promotes the sustainability of the program, as centers can utilize government funding to pay for the delivery of the program. Part of the process for obtaining evidence-based status included developing a "packaged program" with a variety of supportive materials so the program can be consistently delivered with high fidelity and developing a system for training instructors.

Training of OTM Instructors

The On the Move program is delivered by certified OTM instructors. Individuals who can be trained as OTM instructors include health professionals (PTs, PTAs, OTs, etc.) and group fitness instructors. We find individuals who have an interest in fitness and a love of older adults make the best instructors. Training of OTM instructors

Table 1. On the Move: Program Components purpose and rationale

Program Component	Purpose/Rationale
Warm-up	Prepare the cardiovascular, musculoskeletal, and most importantly the nervous system for the upcoming exercises.
Walking patterns (curves) • Ovals • Spirals • Serpentine	Promote the appropriate timing and coordination of stepping throughout the gait cycle by enhancing proper weight shift during stepping and interlimb timing during walking. • Facilitates appropriate muscle recruitment (hip adductors on the stepping leg and hip abductors on the trailing leg) • Induces extension of the stance limb behind the body • Encourages maintenance of enhanced forward momentum while moving
Stepping patterns • Backwards • Forward and across • Combination patterns	Promote the appropriate timing and coordination of stepping during gait using accurate repetitions of real steps. • Loads trailing limb • Shifts the center of pressure posterolateral • Encourages hip extension and the neural signal for stepping • Generates momentum to stance leg • Activates hip abductors with opposite side adductors • Facilitates neural stepping signal through stance
Strengthening exercises	Increase lower extremity muscular strength specifically targeting lower extremity muscles important for walking (e.g., hip abductors, hip extensors, ankle plantar flexors, etc.)
Cool-down	Allow the body systems, specifically the cardiovascular system, to slowly return to a resting state. Also includes stretching exercises that address flexibility in lower extremity muscles related to walking.

was initially conducted as an in-person course. To expand the reach of the training, we transitioned to include virtual and hybrid training options. The training includes approximately 12-14 hours of material which includes lectures, laboratories, group activities, and case studies. Core principles of motor control and appropriate progressions based on accurate practice are emphasized; clinicians and fitness instructors alike can deliver the program appropriately. Trained instructors have access to recorded lectures, a written manual, a video exercise library, and the OTM support team. Training occurs 3-4 times a year with additional trainings conducted on request. The next virtual training is Nov. 2 and 3, 2022. Details at www.onthemove.pitt.edu.

Bridging the Clinic-Community Gap

Walking difficulty is related to negative outcomes such as falls, mobility disability, hospitalization, nursing home placement, and death.[9-11] Recent studies have shown improvements in walking may mitigate these negative outcomes.[12] Older adults are often not referred to treatment for mobility problems and seniors may seek solutions for mobility issues through community resources. Community-based programs to improve mobility can serve as an extension of skilled therapy (once therapy ends) or prevention of the development of walking difficulty. On the Move, which translated a novel motor learning exercise program into a group-based exercise program, allows it to be offered as a community-based program. Hence, providing evidence-based therapeutic exercise to older adults who would benefit, whether they would qualify for, have access to, or have been referred for physical therapy services. The On the Move program provides the opportunity to reach more individuals in a cost-effective manner. Many community-based organizations need instructors who can deliver these high-quality evidence-based programs, which provides the perfect opportunity for physical therapists interested in improving the health and wellness of older adults.

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Jennifer S. Brach, PT, PhD, FAPTA is a Professor in the Department of Physical Therapy and Associate Dean for Faculty Affairs and Development in the School of Health and Rehabilitation Sciences at the University of Pittsburgh. Dr. Brach has over 20 years of experience conducting research to improve the mobility of older adults. She is one of the creators of the On the Move program.

Valerie Shuman, PT, DPT, GCS, is an assistant professor in the Department of Physical Therapy at the University of Pittsburgh. Dr. Shuman has worked clinically and in research with older adults with mobility limitations and has been involved with On the Move for the past 5 years.

Gardenia A. Juarez, MA is a Kinesiologist and a second-year doctoral student researcher in the Department of Physical Therapy at the University of Pittsburgh. Ms. Juarez has worked in community-based programming for older adults and has been involved with On the Move for the past two years.

Corey S. Flynn, MPPM is a Research Coordinator in the Department of Physical Therapy at the University of Pittsburgh.

Kaitlin Sweeney, BS is research staff in the Department of Physical Therapy at the University of Pittsburgh.

5 Commonly Missed Principles for Treating Osteoarthritis

by Morgan Nolte, PT, DPT; Beth Smith, PT, DPT; and Alyssa Kuhn, PT, DPT

Osteoarthritis (OA) is the most common joint disorder in the United States, with approximately 10% of men 60 and older and 13% of women 60 and older affected in 2010.[1] Osteoarthritis is a chronic progressive disease involving degradation of joint cartilage, joint capsule changes, and bone remodeling. It causes pain, extremity dysfunction, and joint deformities.

Insulin resistance is one of the most common and under-diagnosed chronic disorders, with up to 88% of adults experiencing some degree of metabolic dysfunction, or insulin resistance.[2] Insulin resistance occurs when insulin levels are too high for too long, so the body requires more insulin to maintain blood glucose levels.

Historically, many physicians have thought that OA was caused primarily by increasing the "wear and tear" on the joints. However, studies have shown that those with osteoarthritis are more likely to have insulin resistance.[3,4] These 2 common disorders can have a big impact on quality of life. The primary questions addressed in this article are how is OA and Insulin Resistance related and how can we help?

Etiology of Osteoarthritis

Every cell in the body has an insulin receptor, including the cells of the joints. The main cells of the cartilage in the joint are called chondrocytes. Chondrocytes are responsible for creating and maintaining the main lining of cartilage called the matrix, which is made largely of collagen and other substances that require glucose to create. Chondrocytes require insulin to take in glucose. A chondrocyte that is insulin resistant cannot make the matrix, which results in weak cartilage.[5,6]

Synovial fluid acts as grease for our joints, which is made up of cells called synoviocytes. When synoviocytes are exposed to high levels of insulin, they experience an influx of immune cells that ramp up inflammation in the joint and reduce synovial fluid production. Without the "grease," the joints grind on each other and wear down the cartilage, which is also weakened due to insulin resistance.[5,6]

While obesity is certainly a risk factor for developing OA, this shows that insulin resistance also plays a large role in OA development and progression as it causes changes in synovial fluid production and in the joint cartilage.[7] This knowledge gives us another tool in our toolbox of pain management interventions. General nutrition education is within our PT scope of practice.[8] Patients may not be receiving this information from any other health care providers. Some patients may also feel a sense of hopelessness and feel as if there is nothing they can do to help with their joint degradation. However, we can provide education regarding certain foods that increase and decrease inflammation, as well as advice on lifestyle modifications to help prevent or reverse insulin resistance that contributes to OA.

General Nutrition Education

An inflammatory that increases oxidative stress and Insulin resistance increases perceived pain from osteoarthritis. There are certain foods we can try to increase as well as decrease to reduce insulin resistance and lower joint inflammation.

A recent 2019 study compared the effect of low-carbohydrate and low-fat diets on pain in individuals with knee osteoarthritis. They assessed functional pain, self-reported pain, quality of life, depression, and oxidative stress. Over a period of 12 weeks, the low carbohydrate diet reduced pain intensity and unpleasantness in some functional pain tasks, as well as self-reported pain, compared with the low-fat diet and control group who ate as usual. The low-carbohydrate diet group also significantly reduced oxidative stress and the adipokine leptin compared with the low-fat group and control group. Reduction in oxidative stress was related to reduced functional pain.

The authors presented evidence suggesting that oxidative stress may be related to functional pain and lowering it through a low-carbohydrate intervention could provide relief from pain and be an opioid alternative with fewer side unpleasant effects.[9]

A low-carbohydrate diet can still be high in antioxidant-rich fruits and vegetables while prioritizing healthy protein and fat in the diet to support bone, muscle, and hormone health.

A 2019 study noted that higher adherence to Mediterranean diet was associated with a significantly lower risk of pain worsening and symptomatic knee OA. No significant effect was observed on the incidence of radiographic knee OA. The authors hypothesized that this observation might be mediated by the anti-inflammatory properties typical of a Mediterranean diet, which is particularly rich in some nutrients that may have a protective effect on OA outcomes, such as fiber, which may lower oxidative stress markers. Fiber-rich diets are the main fermentable sources for short-chain fatty acids, (SCFAs) which

contribute to the attenuation of systemic inflammation by inducing regulatory T cells. SCFAs are also involved in a gut-brain axis which may contribute to pain modulation.[10]

Increase These Foods to Lower Inflammation and Insulin

Salmon and other fatty fish

Salmon and other fatty fish are high in omega-3 fatty acids, which help reduce inflammation. They are also high in protein, which is essential for weight management and building lean muscle. Most people do not consume enough omega-3 fatty acids in their diet.

Berries

Berries, specifically blackberries and raspberries, are high in antioxidants, which help reduce the oxidation, or damage, of cells in your body. Blueberries and strawberries are also high in antioxidants, but do not contain as much fiber as other berries. This makes them higher in net carbohydrates, so blackberries and raspberries are a better option when trying to decrease insulin resistance.

Broccoli and other cruciferous vegetables

Broccoli and other cruciferous vegetables, such as brussels sprouts and cabbage, are also high in antioxidants to help cells repair damage. They have fiber and contain less starch as some other vegetables such as potatoes, making them another excellent choice to incorporate regularly in a low carbohydrate diet to lower insulin resistance and inflammation.

Avocados

Avocados are high in healthy fat, fiber, potassium, and magnesium to help decrease insulin resistance.

Bell peppers

Bell peppers are high in vitamin C and antioxidants. They also contain about half the net carbs as other good sources of vitamin C, such as oranges.

Reduce These Foods to Lower Inflammation and Insulin

Added Sugar

Processed and refined sugars and starches cause blood sugar levels to spike, which leads to a spike in insulin. There are over 70 different names for added sugar so learning these different names and reading food labels and ingredient lists are important to reduce added sugar. While they are "sugar-free" some sugar substitutes such as sucralose, acesulfame potassium, saccharin, aspartame, and maltodextrin have been shown to still cause a blood sugar response either directly following consumption, or they may have a post-oral glucose response due to changing the gut microbiome making it less efficient and processing carbohydrates.[5,11]

Refined Flours & Starches

Refined flours have been stripped of the fiber, protein, and fat from the whole grain. These refined starches contain mostly glucose, a simple sugar that spikes blood sugar, and thus insulin to push the rush of blood glucose into cells for storage. Foods that are high in refined flours include pasta, bread, pizza crust, chips, pretzels, cereals, bars, and many packaged foods. Coconut flour and almond flour are lower carbohydrate substitutions for these refined flours because the high fat content does not cause a blood sugar or insulin spike.[5,11]

Vegetable and seed oils

Vegetable and seed oils include soybean, canola, corn, safflower, cottonseed, grapeseed, and sunflower oils. These oils contain linoleic acid, a type of omega-6 fatty acid which can increase inflammation when consumed in excess. Most of the time these oils aren't consumed by themselves; many foods are cooked in or contain these oils. Foods high in these oils include many salad dressings, fried foods such as chicken fingers, donuts, and french fries, many condiments, and packaged foods. Healthy oil alternatives include olive oil, avocado oil, or animal fat such as butter. Consider the smoke point when selecting oils to avoid free radicals that can be harmful to cells.[5,11]

Smoking and excess alcohol

A 2021 study found that smoking has a negative impact on several rheumatic and musculoskeletal disease-specific outcomes and that moderate or high alcohol consumption is associated with increased risk of flares in rheumatoid arthritis and gout.[12]

Processed meats

Protein is essential for building lean muscle mass and weight maintenance. Most of this dietary protein should come from sources that are not highly processed. Unprocessed sources of protein such as chicken, eggs, beef, fish, or tofu are better sources of protein than highly processed sources of protein such as deli meats or cured bacon.[5]

This is by no means an exhaustive list of all the foods that can help decrease or can increase joint pain due to OA, but these foods are a great place to start when educating patients about other strategies for pain management related to OA.

Exercise Buy-In

Exercise has been proven to be one of the most effective ways to help patients with osteoarthritis find relief and avoid surgeries. According to Henriksen et al, "This meta-epidemiological study provides indirect evidence that for knee osteoarthritis pain, the effects from exercise and from oral analgesics are comparable."[13] This is powerful, but adherence to exercise is one of the most difficult things to achieve.

One of the most important things to improve buy-in is to start with movements your patient can do with minimal pain. Especially for patients with years of chronic pain or

with higher levels of pain, if you can show them, they can actually do something without flaring up pain, they will be more likely to continue with an exercise. Once this happens, they can start building confidence and self-esteem towards exercise which then can fuel motivation. The first step is to get them moving without flaring their pain.

Understanding Pain

The next step towards exercise adherence and osteoarthritis pain relief is to help your patient understand which type of pain is "normal" or "okay" and which is not. For most people, pain is negative and undesired. Pain means something is wrong. In terms of chronic pain that is not always the case. But many people don't understand exactly what their pain means.

Consider pain as a way of communication. Your body sends pain signals when it is trying to tell you something. Significant pain levels mean you should modify or stop the movement. Mild pain levels are your body's way of saying it is unsure but doesn't always mean stop the activity. Once they understand this distinction and can differentiate pain intensity, pain becomes less scary.

Sharing Patient Stories

With osteoarthritis, your patient needs to know what is possible. Use other patient examples to help them see what's possible for them. Without hope of what activities can be done with OA, patients tend to think the worst. It is vital to educate on why you're recommending each exercise. Help link how the exercise will allow them to continue or return to doing what they love. Point out tangible results to know what they are doing is working.

If you have a patient with osteoarthritis, think of a previous patient you've had who found relief to return to activities they love, or now can sleep through the night. Think of that patient that maybe doesn't have to use a cane anymore or hasn't fallen in a year. Find a meaningful experience that relates to your patients' goals and share it with them in the first few visits to show them what they are working towards.

OA is one of the most common diagnoses for physical therapists to treat, as well as one of the most detrimental to quality of life. Including these five principles in your treatment plan can help patients get the most out of physical therapy to return to activities they need or love to do.

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Morgan Nolte, PT, DPT, Board Certified Geriatric Clinical Specialist (ABPTS) is the founder of Zivli, LLC and a PRN home care physical therapist for Hillcrest Rehab Services. She graduated from the University of Nebraska Medical Center in 2014 and completed the Creighton University Hillcrest Health Systems Geriatric Physical Therapy Residency Program in 2015. mnolte@zivli; www.zivli.com

Beth Smith, PT, DPT, Board Certified Geriatric Clinical Specialist (ABPTS) is a health coach for Zivli, LLC and home care physical therapist with Hillcrest Rehab Services. She graduated from Creighton University in 2018 and completed the Creighton University Hillcrest Health Systems Geriatric Physical Therapy Residency Program in 2019. bsmith@zivli.com

Alyssa Kuhn, PT, DPT is a physical therapist and an osteoarthritis specialist. She is based in Sandy, Utah and loves playing in the mountains. She founded Keep the Adventure Alive to break through the doom and gloom of osteoarthritis and bring a motivating perspective with the possibility of adventure. She helps people across the world find pain relief, regain confidence, and lead very active lives. www.keeptheadventurealive.com

CABG: A Recipe for Therapists

by Mallory D. Gagliano-Barnhart PT, DPT

Coronary Artery Bypass Grafting (CABG) is the most common cardiac surgery performed in the United States, with 400,000 procedures performed each year.[1] There are 3 different ways the procedure can be performed: Traditional CABG, Off-pump CABG, and Minimally Invasive Direct CABG. Traditional CABG involves splitting the sternum, stopping the heart, and utilizing a heart lung bypass machine to keep blood oxygenated and flowing. Once the vessels are bypassed the sternum is wired back together. With Off-pump CABG the heart is allowed to continue beating throughout the surgery and no bypass machine is needed. More recently, Minimally Invasive Direct CABG has been developed but is less common, as it is not appropriate for those needing more than one or two bypasses and can only be used to bypass anterior coronary arteries. This procedure is performed through small incisions between the ribs, and as with Off-pump CABG does not require the heart to be stopped.[2]

After graduating from cardiac rehab the author's father is back to golfing two times a week and fishing with his grandchildren. He was amazed at how much better he felt after the procedure due to the improved blood flow.

Regardless of which type of procedure is performed a new vessel will need to be harvested to perform the bypass. Most of the time it is the saphenous vein,[3] however on occasion the left internal mammary artery can be rerouted and utilized to bypass the affected coronary artery.[2] Arterial grafts also have the benefit of being less likely to become blocked over time. With the use of the saphenous vein the risk of thrombosis and atherosclerosis are increased. A recent study determined that "both complications result in significantly decreased duration of vessel patency–graft failure is as high as ten to twenty-five percent after twelve to eighteen months postoperatively, with a 5 percent increase in failure rate for each year beyond 5 years post-bypass."[3] One of the main causes of the failure of the saphenous vein graft is how it is handled when it is being harvested. Until recently the saphenous vein was harvested by making a full-length incision. Now it is more common for the surgeon to make a small incision near the medial aspect of the knee, insert a balloon tip trocar and create a tunnel around the saphenous vein to isolate it and allow it to be harvested. Regardless of the method used the graft must be handled carefully to avoid excessive manipulation or mechanical trauma of the vein during and after harvest.[3] The vessel will then be used to bypass any blockages by attaching the proximal end to the aorta[4] and the distal end to the coronary artery just past the blockage to restore full blood flow. Once all of the blockages have been bypassed, drainage tubes will be inserted in the chest cavity, the sternum will be wired back together, the incision will be sutured or glued, and the recovery process begins.[2]

The importance of medication cannot be overstated when it comes to the overall wellbeing and health after CABG surgery. In a time where more and more medically complex patients are being operated on, not only are the risks of surgery increasing but the long-term prognosis after CABG surgery is also being affected. CABG surgery does not prevent progression of CAD in both native vessels and the bypass grafts. It is essential that the person reduce their risk of a repeat procedure through lifestyle changes as well as medication. A recent study determined that people who had had CABG were less likely to fill their prescriptions and use medication as secondary prevention than people who had received angioplasty. Indeed, this study found that after 8 years the prescription rates for statins, beta blockers and antiplatelet drugs decreased between 13-15% which subsequently resulted in higher mortality rates. In addition to this, when it came to statins specifically it was found that every additional year of statin use was linked to a 10% lower relative risk of mortality. Similar results were found for platelet inhibitors.[1]

In the weeks and months after CABG surgery there are many guidelines regarding how the patient can safely progress. Generally, there will be a lifting restriction for the first few weeks, which will limit the patient's ability to perform weightlifting until around 10-12 weeks. The pa-

tient's care team will dictate their progress and clear them to begin an exercise program. Aerobic exercise should be performed most days of the week from 30-60 minutes with the goal of increasing time rather than intensity. The patient should demonstrate an increase in heart rate and breathing rate but be able to carry on a conversation while exercising. On the BORG scale they should remain between 11-13. Interval training can also be utilized to help the patient progress up to 30 minutes of continuous exercise. Once the surgeon clears the patient to perform weight training, light training can begin, with the goal being high repetitions 2-3 days a week. A 5-10 minute warm up and cool down is also recommended.[5]

Most people with CVD will be prescribed beta-blockers; it is important to remember that the HR response to exercise will be reduced. Additionally, these patients also do not often achieve VO2 max. With these 2 measures being limited, the emphasis should be on monitoring for blood pressure changes (both high BP and BP fall with exercise), arrhythmias, syncope, moderate to severe dyspnea, and angina or claudication especially in the first 4 months after surgery. In the later stages of recovery, specifically more than 2 years after surgery, aerobic training should be emphasized. This can be performed using 2 types of exercise: continuous method and interval aerobic training. With the continuous method (CAT), exercise is performed without rest periods. In the case of interval aerobic training (IAT), intervals of rest are incorporated. Functional capacity determines if either active or passive recovery intervals can be used. In recent years, IAT and high intensity interval training (HIIT) have been trialed in patients in rehab after CABG. One such protocol that was shown to be effective involved an 8-minute warm up, 4x4 minute intervals at 90% max HR, with 3-minute pauses of walking at 70% max HR, and a 5-minute cool down.[6]

Many studies have shown a significant quality of life improvement after CABG surgery lasting for many years, with the effects of the surgery tending to positively affect physical factors more than mental aspects[7] over time. In general, a decrease in depression, reduced symptoms up to 15 years, decreased risk of death from cardiovascular causes, and the reduction of hospital admissions can be seen in long term follow up studies. The risks of this surgery have decreased significantly over the years, ensuring that the risk of this surgery is worth the reward in most cases. With the increase in the prevalence of obesity, diabetes, and ageing (all risk factors for CAD),[8] it is more than likely that therapists will continue to see more patients with CABG surgery in their medical history. Recent advancements in surgical procedure and technology present an opportunity for therapists to educate and assist in improving and maintaining long term cardiovascular health in all people with CABG in their history.

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Mallory Gagliano-Barnhart PT, DPT has been a physical therapist for 9 years, working primarily with older adults. She was inspired to research and write about CABG after her father received a triple bypass in early 2022.

A Perfect Partnership: PTs and Senior Athletes

by Brittany Decker DPT; Cabell Wilbraham MSPT; and Holly Shaw DPT

Athletes aged 50 and older compete in sports including archery, golf, pickleball, swimming, triathlon, racquetball, basketball, cycling, softball, volleyball, tennis, and shuffleboard, to name a few, through competitions that qualify them to participate in the National Senior Games. In May, the Brooks Rehabilitation Geriatric Physical Therapist Residency Program proudly served athletes at the National Senior Games in Fort Lauderdale, Fl. Along with Jacqueline Osborne (residency coordinator) we joined a team of volunteers from across the United States to deliver the Senior Athlete Fitness Exam (SAFE) to athletes at the Games.

The (SAFE) was developed by Dr. Becca Jordre PT, DPT, PhD and has been offered onsite to athletes competing in the National Senior Games since 2011. Over 3,000 athletes have been screened with the SAFE including over 850 athletes in Ft. Lauderdale !

The SAFE captures information in 4 main areas of fitness: cardiovascular, muscular, flexibility, and balance. The goals of developing the SAFE and offering it at the National Games are two-fold. First, collecting data on older adult athletes helps health care professionals better understand this unique group of individuals and how to serve their needs differently than their non-athlete peers. Second, by administering the SAFE at the Senior Games, physical therapists, physical therapist assistants, and students have an opportunity to offer advice on optimizing movement and performance as well as highlighting how the physical therapy profession can serve athletes of all ages.

Geriatric residents work continuously during the residency program to refine skills as experts who serve older adults. The 3 of us realized by participating in the Games, how necessary it is to include older adult athletes among those we serve. Physical therapists often work with older adults whose daily movements and activities are compromised by various chronic conditions and pain. This work occurs in acute care hospitals, skilled nursing facilities, private homes, and in outpatient clinics. When we do not include senior athletes among those we serve, we define a skewed and biased view of the population of older adults who would benefit from skilled physical therapy services.

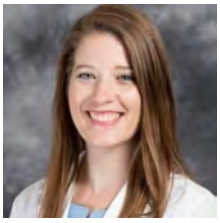
Like others receiving rehabilitation services, many athletes at the Games also had chronic conditions and other impairments. Unlike those we serve in rehabilitation settings, however, these ageing adults performed at such high levels that they overwhelmingly exceed all our standard outcome measures. For example, we try to prepare people receiving care in a skilled nursing setting to achieve a preferred gait speed that is at least 0.80 m/s. Many times, we settle for a speed that allows for a distance needed to achieve daily activities in the home environment. At the National Senior Games, we assessed athletes who easily walked a preferred pace of 1.5 m/s. It was eye opening to realize that there is a large population of older adults we are not serving in the physical therapy profession because they are too capable, are not homebound, or are able to complete their daily routines without a caregiver. We unintentionally exclude those who are not in their "prime" athletic age range or are not nationally known for their sport. One gentleman remarked as his vital signs and anthropometric measurements were being collected, that he had started playing pickleball only 2 years prior and expressed how proud he was that he was now competing at the National Senior Games. Another participant remarked that he has been assessed with the SAFE at the Games 3 times since 2017; his score has never been better despite being 5 years older!

The 2023 biennial National Senior Games will be held in Pittsburgh, Penn., July 7-18, 2023. Look for announcements from the APTA Geriatrics-National Senior Games Association Taskforce for ways for physical therapists, physical therapist assistants, residents, and students to become involved at the Games!

As a profession, PTs must include within the populations we serve, ageing adults who want to become active, improve their current mobility abilities, pick up a new sport, or refine their competitive edge. No health care professional should dismiss these goals with a "you're older so you probably shouldn't do that" comment. Instead, older adult athletes-in-training need to be supported to optimize performance whether that means performance in everyday life or performance in a sport. In Fort Lauderdale, we met many athletes who typically participate in more than 5 hours of aerobic and resistance training per week. However, many of these individuals demonstrated balance deficits. Based on the composite score on the SAFE, we had an opportunity to offer older adults of varying athletic abilities tailored advice and education to improve impairments that would lead to improved individual sport performance. Participants valued being

advised of their strengths as well as where they have room to improve upon their identified weaknesses.

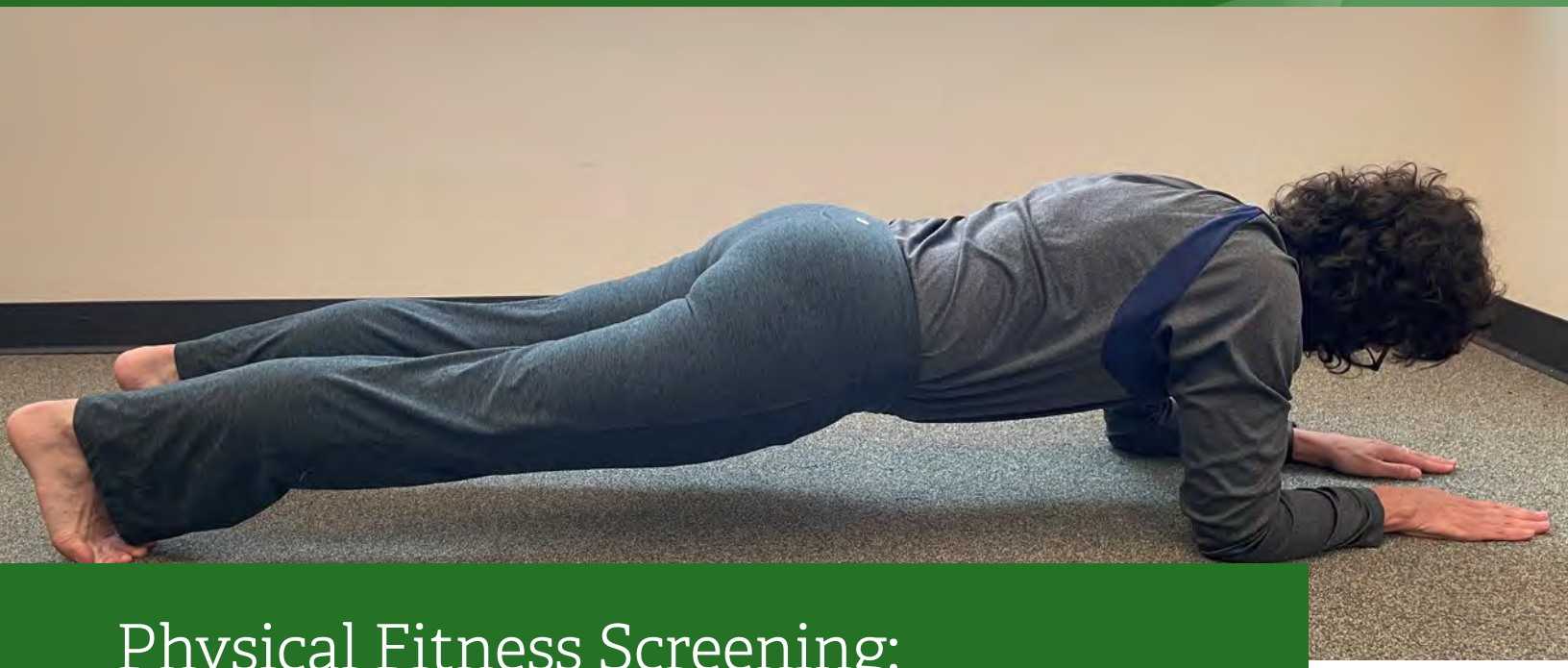
Brooks residents took from this experience the invaluable realization that many older adults we work with every day in different rehabilitation settings may appear high functioning but have untapped potential to further improve their health and fitness. It is easy to assume that if an individual can walk over 500 feet than they do not need our skilled services. Now, the call to action! We challenge every clinician to set aside biases and be instruments of change. Be open to an ageing adult's potential to optimize movement and performance. Strive to grow the population of older adults who can perform way above the minimal clinically important difference. Advocate for all ageing adults, despite age or condition, to achieve great things!



Dr. Brittany Decker is a 2022 graduate of the Geriatric Physical Therapy Residency Program at Brooks Institute of Higher Learning in Jacksonville, Florida. She graduated from the University of North Florida with her DPT in 2021 and has been an employee at Brooks Rehabilitation since. Dr. Decker has found her clinical niche in acute care and is planning to sit for the GCS in 2023.

Cabell Wilbraham is a 2022 graduate of the Geriatric Physical Therapy Residency Program at Brooks Institute of Higher Learning in Jacksonville, Florida. She graduated with her Master's Degree in Physical Therapy from the University of North Florida in 2004 and has over 15 years of clinical experience serving older adults in the skilled nursing setting. She plans to sit for the GCS in 2023 and has valued the opportunity to further develop her expertise in the residency program.

Dr. Holly Shaw is a 2022 graduate of the Geriatric Physical Therapy Residency Program at the Brooks Institute of Higher Learning in Jacksonville, Florida. She received her Doctorate in Physical Therapy and Rehabilitation Science degree from the University of South Florida in Tampa, Florida. She has been working with Brooks Rehabilitation since 2019 and serves as lead therapist for the medically complex team in skilled nursing. Dr. Shaw plans to sit for the GCS in 2023 and enjoys spending time with family, paddle boarding, and playing with her three dogs in her spare time.



Physical Fitness Screening:

Is it time for your annual evaluation?

by Vanessa J. Everett, PT, DPT

This clinical case commentary was part of content for the July 2022 Journal Club. These case studies are intended to demystify the more formal statistics and format of a peer-reviewed article and translate key concepts into clinically usable information. Join us for Journal Club on the third Tuesdays of January, March, May, July, September, and November at 8 pm ET to discuss current concepts with a wide range of peers. See archived Journal Club recordings at https://aptageriatrics.org/events/webinars/

Case study presentation based on the research article from Journal of Geriatric Physical Therapy: Puthoff, M. Participants' Perceptions and the Implementation of a Physical Fitness Screen for Aging Adults. J Geriatr Phys Ther. 2021;44(1):E1-E8.

An ageing adult is referred to you for an annual physical fitness screen. What tests would you choose to perform? How much time would you need to complete it? The following study compares the results of 2 ageing adults, on different ends of the age spectrum, who participated in a physical fitness evaluation using the Adult Functional Independence Test (AFIT).

Participant 1

Ms. Johnson is a 52-year-old female referred for an executive wellness examination as part of a comprehensive wellness program offered annually by her employer. Ms. Johnson currently works full-time in an administrative position and spends most of her time sitting at a computer. She lives at home with her husband and 2 dogs, which she takes on daily 2-mile walks. She does not participate in resistance or balance training.

Ms. Johnson's medical history includes osteoarthritis. She reports occasional pain in bilateral ankles, knees, and lumbar spine for which she is undergoing further testing. Patient Health Questionnaire (PHQ-2) was positive for depression; she did not present with suicidal ideations.

She is independent with all ADL's and IADL's and notes no restriction in mobility. She has reported 1 fall in the last year that did not result in injury or require medical attention. She does not feel unsteady with standing or walking. She enjoyed cycling in the past but has been unable to participate in the last 2 years due to work and family demands. Her stated health goals are to improve her overall wellness and aerobic endurance.

Participant 2

Ms. Smith is a 76-year-old female who was referred for a physical fitness and balance assessment from her primary care physician. Ms. Smith initiated this referral due to her concerns with her balance, gait, and overall endurance. Her stated goal is to improve her overall walking distance and steadiness to improve her confidence and ability to go on vacations with her family.

Medical History includes hypertension, hypercholesterolemia, urge incontinence, hysterectomy. Patient Health Questionnaire (PHQ-2) was positive for depression; she did not present with suicidal ideations. She is not currently experiencing pain but has a history of left knee pain which she attributes to arthritis.

Ms. Smith is retired widow who lives in a one-story home, with 3 steps to enter and handrails on both sides. She is independent with all ADL's, driving, but receives some assistance with grocery shopping and yardwork. Ms. Smith does not require a walking aid and states that she ventures outside her home 4 times per week on average. She reports 1 fall to the ground or a lower level in the past year that did not require medical attention. Ms. Smith reports 4 instances of near falls that were either a slip, trip, or loss of balance but she did not hit the floor. She does not participate in regular aerobic, resistance, or balance training.

Assessment

Participant 1

Ms. Johnson's increased physical activity, faster gait speed, and increased confidence in her balance correlated to her higher performance on multiple testing areas. However, the fitness assessment revealed deficits in the areas of dynamic balance and muscle strength which are highlighted in Table 2. The deficit in dynamic balance correlated with her fall history. Her identified hand grip weakness was consistent with the lack of resistance training in her routine. Ms. Johnson reported an overall positive perception of the fitness assessment and agreed that she would be willing to pay for it as part of an annual screen. The fitness assessment session was completed in approximately 42 minutes. However, she was not provided with the formal results or instruction for interventions. She was scheduled for a follow-up visit to formally review the results and provide guidance on her exercise routine.

At her follow-up visit Ms. Johnson was given education on how to incorporate exercises to target the identified weaknesses and was empowered to age intentionally. Utilizing motivational interviewing techniques, she was encouraged to increase her aerobic exercise minutes and add resistance training to her exercise routine. Techniques for incorporating balance exercises were discussed. In addition, because of her peri-menopausal status, she was encouraged to add impact exercises for bone health. The fitness assessment effectively identified Ms. Johnson's current deficits and served as a guide for the physical therapist to develop a program to help Ms. Johnson prevent future problems.

Participant 2

The physical fitness assessment for Ms. Smith identified deficits in the areas of flexibility, static and dynamic balance, aerobic endurance, and strength as compared to her age-related norms. The results were consistent with her history of falls, lack of balance confidence in her balance, and low physical activity participation. Similarly, Ms. Smith reported an overall positive perception of the Adult Functional Independence Test (AFIT) and expressed that she would be willing to pay for this annual physical fitness screen. The session for Ms. Smith was completed in approximately 60 minutes without providing specific results or interventions.

The fitness assessment objectively identified areas that fell below age-related norms that required improvement (Table II). Deficits in static and dynamic balance and aerobic endurance correlate to below community-ambulator gait speed. The AFIT results indicated a need for a focused and structured program that included all areas of deficit. The patient underwent 5 visits to physical therapy that included interventions for balance and strength. The physical therapist assisted her in initiating a walking program and connected her to a community exercise-based program to prevent further decline and future falls.

Discussion

The American Physical Therapy Association (APTA) places emphasis on physical therapists as primary care providers, with the annual physical therapy evaluation being one of these initiatives. This position statement aligns with the mission of the APTA to "improve the health of society." Therefore, there is support and focus on making physical therapists the providers of choice for annual physical fitness evaluations, especially with our ageing population.[1,2] Functional fitness represents the physical capacity that is needed to undertake normal daily activities, independently, without fatigue.[3] Therefore, quantifying an individual's level of physical fitness is important to identify potential deficits in the areas of posture, flexibility, balance, mobility, endurance, and strength. Identifying deficits in these areas during an annual physical fitness screen allows both the individual and clinician to col-

Table 1: Participant Subjective Information

Baseline Information	Score	
	Ms. Johnson	**Ms. Smith**
Age (years)	52	76
BMI	21.0	30.9
Resting HR (bpm)	62	74
Resting BP (mmHg)	110/72	146/84
Resting SpO2 (%)	99%	96%
Resting RR (breath/min)	12	14
Physical Activity Vital Sign (minutes)	175	40
Activities-specific Balance Confidence (ABC) Scale	95% Confidence	66% Confidence
STEADI	Yes – (Falls)	Yes – (Falls & Worry)

Table 2: Physical Fitness Screen (adapted from AFIT: Adult Functional Independence Test ®) Results*

	Test	**Score**	
		Ms. Johnson	**Ms. Smith**
Posture			
	Wall to Occiput	0 cm	3 cm
	Rib to Pelvis	3 fingers	3 fingers
Flexibility			
	Back scratch Test	+2 inches	-6 inches
	Ankle Dorsiflexion (degrees)	R: 8 L: 11	R: 6 L: 7
Balance			
	Vestibular Hypofunction	No symptoms	Dizzy at 8 seconds
		No symptoms	No symptoms
	One Leg Stand Test (s)	L: 30 R: 27	L: 3 R: 9
	Tandem Walk – eyes open	0 errors	2 errors
	Tandem Walk – eyes closed	2 steps	Unable
Mobility			
	Timed Up and Go	6.23 sec	13.8 sec
	10M Gait Speed	1.80 m/s	0.96 m/s
Endurance			
	2 Minute Step Test:	94 steps	72 steps
Strength			
	Grip Dynamometer (kgs)	R: 11.3 L: 6.8	R: 10.0 L: 7.7
	Shoulder External Rotation (lbs)	R: 21.5 L: 19.5	R: 16 L: 13
	Plantar Flexion	R: 25 L: 25	R: 17 L: 13
	30s Sit to Stand (reps)	17	9
	Plank(s)	143	35
	Back Extension: Prone hold (s)	32	16
	Completion Time:	**42.30 min/sec**	**56.20 min/sec**

*Adapted from, "The AFIT (Adult Functional Independence Test) for Optimal Aging" by Carole B. Lewis, PT, DPT, GCS, GTCCS, MSG, MPA, PhD, FSOAE, FAPTA, CTR, TRC & Great Seminars Online

laborate and form a plan to maintain the highest level of health and wellness possible.

The Adult Functional Independence Test (AFIT) is an option that offers a comprehensive and feasible screening option for annual physical fitness screens performed by physical therapists.[4] Ageing adults who have participated in a physical fitness screen using the AFIT found value, benefit, and usefulness in completing this screen with a physical therapist.[4] The Academy of Geriatric Physical Therapy(APTA Geriatrics)has been working with the APTA to develop an annual physical therapy visit that offers another option for physical fitness screening. This form is available on the APTA and APTA Geriatrics websites with additional templates including an Intake Form and Report Card.[5]

When implementing a physical fitness assessment, consideration should be given to the amount of time for completion. A participant similar to Ms. Smith will likely require increased time for instruction, test completion, review of results, and intervention. Ms. Smith required increased time for motivational support for change due to lack of awareness of her deficits. Consideration should also be given to the equipment and space needed to complete the assessment. These 2 individuals were tested in 5.5 x 6.5-m space which did provide enough room for all testing. The use of the dynamometers was effective and required little room to transport and store. The age of the individual should be considered in test selection. Although the individual tests that make up the AFIT were effective in detecting a range of deficits in both individuals, many tests did not include age-related norms for individuals under the age of 60, making it difficult to identify deficits in those areas. This included 4 assessments for Ms. Johnson.

Overall, physical therapists should consider offering an annual comprehensive physical fitness screen to their ageing adult population. When selecting the testing for the physical screening, consideration should be given to the feasibility of the testing and the individual's personal factors that may impact their perception of the testing. It is also vital to develop a plan for follow-up to assist the individual with integrating the recommendations made after the physical fitness screening. This will help them implement the changes and keep them on the path to improved functional fitness.

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Vanessa J. Everett, PT, DPT is an Assistant Professor and Director of Clinical Education in the Doctor of Physical Therapy Program at Augusta University in Augusta, GA. She is a Board-Certified Clinical Specialist in Geriatric Physical Therapy and has been a clinician in the Augusta area for over 11 years. She has worked with older adults as a physical therapist in the home health setting for over seven years, diagnosing movement dysfunction and developing interventions to improve strength, endurance, and balance. Currently, she practices clinically by performing fitness assessments as part of annual wellness exams for select clients in the hospital system and by practicing in the general acute hospital setting. Her research has focused primarily on the management of individuals with amputations, the impact of balance impairments in individuals with various orthopedic conditions, and in health promotion and exercise for older adults to reduce hospital admissions.

The Adult Functional Independence Test (AFIT)

Commentary by Carole Lewis, PT, DPT, FAPTA

The July 19, 2022 Journal Club discussed the research article from Journal of Geriatric Physical Therapy: ***Puthoff, M. Participants' Perceptions and the Implementation of a Physical Fitness Screen for Aging Adults. J Geriatr Phys Ther. 2021;44(1):E1-E8.*** *Questions were raised by participants about the AFIT, the physical fitness screen from the research study. Carole Lewis, developer of this proprietary screening tool, and regular GeriNotes' GetLit columnist, provides this invited commentary on the webinar and questions.*

Bold, clear, forward thinking, and informative come to mind as I viewed the Journal Club webinar led by Michael Puthoff and Vanessa Everett. I was delighted to see that they both use the AFIT and find it useful.

I created the AFIT several years before the 2018 APTA House of Delegates charged PT to conduct an annual health screen of older adults. I brought up the annual screen in my 2016 McMillan Lecture. I felt that the profession needed a comprehensive measure that reflected a physical therapist's ability to get the most crucial information on the most pressing health concerns of older adults. We have the primary role in keeping older adults moving well; we need good measures that predict future independence. The AFIT is a work in progress. We have taken the comments from this webinar and will be implementing some changes such as including norms for 50–60-year-olds, where available. We recognize more measures could be included; however, we want to keep the tool as brief, yet as comprehensive as possible. To that end, along with assembling the evidence-based outcomes measures in the AFIT, a certification process for administration was also established. I personally was shocked when developing the Functional Standards for Optimal Aging Expert (FSOAE) certification by how many aspects there were to these standard tests that were being done incorrectly by therapists and could be done more quickly with guidance. That is one of the reasons both a 5 hour and 20-hour certification course is offered by Great Seminars, www.greatseminarsonline.com.

Some concern was expressed at the meeting regarding how long it takes to administer the AFIT. The time varies widely but can be expedited with training. I routinely perform the AFIT, including a full consult, in one hour. I credit my efficiency to the FSOAE certification and to practice. Before COVID, I worked in an integrative health center one morning a week and administered 5 AFITs in 5 hours without difficulty.

Some Journal Club members expressed concern as to whether the AFIT was for wealthy people and not for those of lesser means. Michael and Vanessa discussed how the AFIT has been used at community health fairs and other events designed for the public. Shortly before the Pandemic, I was contacted by the Johns Hopkins managed care plan to provide the AFIT to underserved areas, so there's potential for using the AFIT in different settings.

I hope therapists walk away from this excellent Journal Club meeting with a greater awareness of the efficacy of preventive screens for working with older adults, and that if they choose not to use the AFIT, that they will use assessment tools that are comprehensive and meaningful.

Thank you to APTA Geriatrics for developing and sponsoring the wonderful presentations to assist members in best practice; I strongly urge you all to consider participation in Journal Club. Thanks also to Mike and Vanessa for their time and skill creating such a wonderful presentation.

The Four-Square Step Test: An Applicable Tool for an Unlikely Patient

by Beth Castellini, PT; Jennifer Gindoff, PT, DPT, DHSc; and Heidi Moyer, PT, DPT

This clinical case commentary is part of content for the September 2022 Journal Club. These case studies are intended to demystify the more formal statistics and format of a peer-reviewed article and translate key concepts into clinically usable information. Join us for Journal Club on the third Tuesdays of January, March, May, July, September, and November at 8 pm ET to discuss current concepts with a wide range of peers.

Case study presentation based on the research article from Journal of Geriatric Physical Therapy: Mutchie, HL, Orwig DL, Beamer B. More Four Square Step Test performance in hip fracture patients, J Geriatr Phys Ther.2022; 45(2):81-89.

Cody is a 67-year-old male who was admitted to a skilled nursing facility (SNF) for rehab following multiple hospitalizations and a failed discharge home after a left (L) hip fracture 4 months ago requiring an open reduction internal fixation (ORIF) to correct. His primary admitting diagnosis was failure to thrive.

Past Medical History

Cody presented with multiple medical comorbidities including Type II DM, chronic low back pain (LBP) with chronic opioid use, CVA without residual deficits, obstructive sleep apnea without oxygen use, RLE cellulitis, atrial fibrillation, metabolic encephalopathy, multiple hospitalizations in past 5 months.

Subjective Interview

Following hospitalization for his L hip fracture, he was admitted to a SNF for 30 days of traditional skilled physical (PT), occupational (OT), and speech (ST) therapies. After a plateau in progress, he was discharged home with his wife with orders for home health (HH) PT/OT. His mobility was primarily at a w/c level, but able to ambulate with a front wheeled walker (FWW) for 10 feet. He was seen by his primary care physician 10 days after discharge. His wife reported that since returning home, he had fallen at least 4 times (requiring assistance from the fire department to help him off the floor), was requiring maximum assistance (maxA) for ADLs, and could no longer ambulate. Since he was unable to access the bathroom for toileting or showering, he was now using incontinence briefs and taking bed baths. His ability to follow verbal cues was becoming more difficult; his wife could not leave him alone for fear of him falling and injuring himself. Their home was not w/c accessible, and she was considering long term care placement for her husband due to an increase in caregiver burden.

Social/Environmental History

Cody lives with his wife in a ranch style home with 2 stairs to enter. Prior to his hip fracture, he used a single point cane (SPC) independently for all ambulation indoors and outdoors with cued supervision for ADLS from spouse. Since the hip fracture, he has been homebound, requires contact guard (CGA) to minimum assistance (Min A) for indoor ambulation with a FWW. To access his bathroom, he parks his walker in the hallway, side steps through a narrow doorway, continues sidestepping along an 8-foot countertop and then backs approximately 5 feet to enter a closet toilet using the windowsill for stability. Cody enjoys country music, visiting with his grandchildren, playing with his dogs, and gardening. His family purchased a four wheeled walker (4WW) recently, hoping it would improve his outdoor accessibility.

Initial Measures

Cody presented with the following deficits according to the International Classification of Functioning, Disability, and Health (ICF) model:

Body Function/Structure Impairments

- Strength: 30 second Chair Rise Test (30CRT): 0. Unable to complete with or without BUE assistance due to need for moderate assistance (modA) for sit to stand performance
- Sensation: peripheral neuropathy BLE with limited sensation to light touch below knees
- Balance: Anticipatory balance: Timed Up and Go (TUG): >60 sec with FWW including modA to achieve standing from seat surface; Functional Reach in standing: 2 inches; Four Square Step Test (FSST): Unable to complete due to severity of dysfunction
- Cognition: St. Louis University Mental Status (SLUMS) Examination 21 points, indicating mild cognitive impairment

- Endurance: 6 Minute walk test (6MWT): unable to complete due to BUE fatigue, L hip, and LBP; Modified Rate of Perceived Exertion scale (mRPE) with gait: 7-8/10 reporting UE fatigue and LBP/L hip
- BMI: 33 indicating obesity (70 inches in height and 230 pounds in weight)
- Bladder and Bowel Incontinence
- Pain: Visual Analog Pain Scale 6-7/10 pain in L hip and lower back

Activity Limitations

- Bed mobility: Required use of 1 bed rail and > 1 attempt to perform supine <> sit due to abdominal girth and poor technique during rolling
- Transfers: Sit <> stand: modA to achieve center of mass over base of support using UE on seat surface or armrests. He frequently leaned his trunk back, resulting in falling back onto the seat surface after unsuccessful attempts to achieve standing; Bed <> w/c transfer: modA to complete pivot with FWW with poor bilateral foot clearance
- Gait: 40 feet using FWW with modA for balance due to forward trunk lean. Noted heavy reliance on BUE for stability, prolonged double stance time, and short shuffling steps with foot clearance (R> L due to decreased L LE stance tolerance). Distance was limited by dyspnea on exertion (DOE) with the patient reporting UE fatigue and L low back and hip pain as his primary barriers to continue. Self-Selected Gait Speed (SSGS): 0.19 m/s (not able to compare to norms due to patient needing physical assistance for gait)

Participation Restrictions

- Unable to leave home for social activities with family or friends, doctor appointments, or running errands
- Not able to participate in ADLs without extensive help from wife

Assessment

Cody is a 67-year-old male presenting with impaired functional BLE strength based on 30CRT;[1] deficits in static and dynamic anticipatory and reactive balance resulting in high fall risk based on TUG score[2] and functional reach test;[3] and poor endurance based on mRPE report.[4] Cody also is limited by pain as well as impaired cognition based on SLUMS score of 21, further placing him at risk for falls.[5] These impairments limit his ability to participate in bed mobility (needing device), transfers (modA), and gait (40 feet with FWW at modA) resulting in high risk for falls, potential for further decline in function, increased need for caregiver support, and inability to safely return home currently.

Prior to the L hip fracture, Cody was modified independent (ModI) with gait using a SPC for indoor surfaces and level grassy services to access his garden. He was able to navigate 2 stairs without a rail to enter/exit his home ModI. He was ModI for toileting including clothing management.

Cody was pleasant and cooperative, although impulsive with a tendency to want to please the nurses and therapists in order to "get a good score" so he could return home to his wife and dogs, Skippy and Snookie. He would frequently attempt to stand without locking his wheelchair brakes or waiting until all equipment was in place. Cody's goal was to return home. He was frustrated and embarrassed that he was becoming incontinent because of his immobility and knew his wife was unable to care for him at this time.

Cody presents as medically complex due to his primary diagnosis of failure to thrive, multiple comorbidities, length of current illness, and current level of function compared to prior function. This patient was to be seen 5 times per week for 4 weeks with evidence-based dosing for balance, strength, and endurance according to the following guidelines:

Balance: 3 times/week at 31-45 minutes per session at challenging intensity[6-7] to evoke the use of the anticipated balance strategy with an emphasis on limits of stability, anticipatory and reactive balance systems. A minimum of 50 hours of balance training is required to create change; therefore, he will need to receive balance training over the course of his SNF, HH, and outpatient PT within the next 6 months of his recovery.[8-9]

Strength: 2-3 times/week with at least 48 hours between sessions for each muscle group at 1 set of 10-15 reps at 60% or higher 1 repetition max using the Omni-RES scale for appropriate dosing of intervention[10-12]. High intensity strength training has been proven safe and effective in residents of SNFs.[13]

Endurance: moderate intensity activities at 60-80% of heart rate max 3-5 times/week to achieve 150 minutes per week[10] using Tanaka formula[14] or modified rate of perceived exertion scale at 7-9/10.[15]

Skilled Physical Therapy Intervention

Day 1: Patient was found on the floor beside his bed at 4 a.m. He was attempting to get up and dressed for breakfast as he "didn't want to be late." He had not called for help and his w/c brakes were not locked. Nursing placed a fall mat beside his bed and alarms in his bed and w/c to reduce his fall risk.

Week 1: The initial focus during therapeutic activities was on proper form/technique and posture/body mechanics during bed mobility and transfers. Dosing included holding 5-pound weights in both hands with arms crossed on chest to increase core engagement during supine to sit through rolling which decreased reliance on UE for functional tasks. Repetitions were completed until failure, which occurred on rep nine with two sets completed during daily sessions. Patient/caregiver education was provided with the nursing team to improve carryover of equipment set up and transfer technique to improve success with transfers to reduce risk of falls. During gait training, Cody would become anxious if the

hallway was crowded or someone was walking towards him. To increase intensity of gait training while decreasing environmental distractions, gait training occurred with repetitive trials on an outdoor concrete ramp using a 4WW to decrease forward lean and reliance on UE. Vigorous intensity was achieved based on mRPE report of 7-8/10. VAS pain rating reported to be 3-4/10 (mild/moderate pain) indicating a downward trend from initial report and pain was no longer limiting standing tolerance. The patient was seen by ST 2x/week and OT 3-5x/week during this stay with an emphasis on functional balance and strength for ADL's and sequencing tasks to improve safety and confidence during all rehab sessions.

Week 1-2: PT advanced gait training to include daily sessions on stairs in addition to outdoor ramp. Emphasis on workload to failure to achieve vigorous intensity per mRPE scale to 7-8/10 during single limb stance by slowing eccentric movements, varying height of steps from three to eight inches and progressing from two to one handrail and then using SPC on R to improve postural corrections and decrease reliance on use of BUE. Cody was able to ambulate without fear/anxiety/DOE using FWW with CGA >100 feet, so a walk to dine program was initiated with nursing 3x/day. Cody required supervision for bed mobility (without rail) and transfers, but only for equipment set up.

Week 2-3: PT utilized parallel bars for side stepping and retro gait training including stepping over varying obstacles. The patient's mRPE during this task was 3-4/10 indicating easy to moderate exertion, so the PT chose to attempt a FSST. The FSST was explained and demonstrated to the patient. He used his FWW, which is a modification of the original test. On the first attempt, he had significant difficulty with directional commands (right/left/back) and immediately requested to sit, reporting he was "fatigued" and frustrated with his performance. The PT demonstrated the test again while the patient observed. On the second attempt, he was unable to clear any pattern, kicked the first cane and stepped on the second cane resulting in a loss of balance requiring maxA to prevent a fall. To build patient self-efficacy in this task, the PT utilizes a single cane to practice stepping patterns (forward/back followed by side/side) x 10 reps each with an 80% success rate using a FWW for stability.

During the next session, the FSST was modified; instead of canes, colored weighted bars were used to improve directional cueing compliance and allow for concentration on individual components of the test such as side/side or front/back sequencing to improve Cody's self-confidence. Timed trials were only used during portions of the test. For example: "We stepped over the red bar and back in 60 seconds. Let's try to do it in 45 seconds this time." By the end of this session, Cody was able to complete the full FSST with 5 errors (hitting/stepping on bars, moving the wrong direction) in 6 minutes with MinA and tactile cues for direction.

Week 3-4: High intensity gait training sessions continued on the stairs and ramp using a SPC with improvements noted in standing tolerance and posture. Cody was able to complete 4 min of 6MWT. FSST trials continued with input from ST on communication/instruction simplification strategies. While Cody sat in his w/c, he was instructed to verbally cue the therapist on how to complete the FSST. The PT would simulate various challenges with foot placement/position/direction in which Cody was able to recognize the error and verbally instruct the therapist on how to correct the action. Sessions would finish with the patient performing the FSST with noticeably improved sequencing strategies, improved control of FWW and foot placement with less than 6 errors in 4 min 30 seconds. He no longer requested sudden seated rest breaks or reported fatigue or frustration.

Week 4: Family training completed with the patient's wife and discharge planning was completed. See below for discharge evaluation findings.

Results: Final Measures at 4 Weeks

See Table 1 for a comparison of initial and discharge performance according to the International Classification of Functioning, Disability, and Health (ICF) model.

Other notable improvements:

- Activity tolerance and transfers improved to enable car transfers to promote return to social events at church or to attend family functions.
- Simulated bathroom set up trials with OT and PT demonstrated ability to perform without physical assistance. Cody was ModI with toileting tasks including clothing management, allowing fall precautions from room to be removed.
- Wife and patient verbalized confidence with recommendations to discharge home with HH PT/OT follow-up to ensure carryover/sustainability in abilities achieved.
- Improved confidence and self-efficacy, especially when walking with nursing staff to/from meals. Cody's wife was able to observe sessions and was thrilled to see he was walking longer distances.

Discussion

With the appropriately prescribed interventions and realistic expectations, Cody was able to return home to his wife and dogs with some assistance for mobility from his wife to continue his physical therapy journey through HH and eventually transition to the outpatient setting.

Cody demonstrated improvements across several metrics through his time in PT in the SNF. While the patient's TUG was still above the 12.5 second cut-off for community-dwelling older adults,[2] he was able to improve his score from over 1 minute with minA to 42 seconds with SBA. He also demonstrated a 7-repetition improvement in the modified 30CRT, which is 7 times the MCID value[16] as well as being able to demonstrate the standard 30CRT at 2

Table 1: Comparison of initial and discharge performance according to the International Classification of Functioning, Disability, and Health (ICF) model

			Initial Evaluation	Discharge
Body Function/ Structure Impairment	Strength	**30CRT**	0: unable to complete due to needing modA for transfers	2 reps without UE support
		Modified **30CRT**		7 reps with UE support
	Balance	**TUG**	>60 seconds with FWW, needing modA for sit>stand	42 seconds at SBA with FWW
		Functional Reach	in standing: 2 inches	in standing: 10 inches
		FSST	Unable to perform safely	3 minutes, no errors, using RW. PT observing Cody intentionally taking his time and verbally instructing himself to adequately sequence his FWW and foot placement over the bars
	Endurance	**6MWT**	Unable to complete due to pain and fatigue	210 meters with FWW
Activity Limitations	Bed mobility		SBA with multiple attempts and heavy reliance in bed rail	independent without use of bed rail or cues for technique
	Transfers		modA with FWW for all functional transfers	ModI for all functional transfers with FWW
	Gait	**Self-Selected Gait Speed**	0.19 m/s with FWW, with modA	0.58 m/s with FWW 0.32m/s with SPC
Participation Restrictions	Personal/Occupational		Needs maxA for ADL assistance from wife	ModI for all self-care
	Community		Unable to leave home for social activities	Able to attend family functions and church

reps, demonstrating improvements to standard functional strength performance in his BLEs. His functional reach improved from 2 to 10 inches, indicating an improvement from high to moderate fall risk.[3] Additionally, Cody made great improvements in his gait speed, improving it from 0.19 m/s to 0.58 m/s, twice the established MCID of 0.10 m/s.[17] One area where Cody made limited progress was his FSST. Evidence has shown that people post hip fracture often demonstrate FSST scores of much greater than the 15 second cut-off for fall risk due to physical and psychological factors.[18] In Cody's case, he had both cognitive as well as physical impairments, which impacted his ability to participate in a non-modified FSST safely and effectively. This further exemplifies the need for prolonged, progressive, and skilled PT intervention to fully resolve these deficits to reduce fall risk, promote ageing in place, and decrease rehospitalization rates.

Conclusion

This case study demonstrates the problem-solving skills of therapists in "imperfect" testing conditions. Many patients, particularly those who are either in acute stages of an illness or injury or who are severely impaired, are not able to participate in many validated evidence-based outcome measures without modification. This requires therapists to use their skills and expertise to adapt assessments to meet the needs of their patients while still accurately interpreting the results to avoid misrepresenting the data. In the case of Cody, should the therapist have set a goal for him to meet the cut-off for balance and falls, he would have been set up for failure as this was not a realistic goal for him. Yet, the FSST, although modified, was a vital tool to address and assess balance and cognition to support safe return home.

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The APTA Geriatrics Journal Club is a free, facilitated webinar-based discussion about a Journal article where you interact directly with the author and a clinician with a relevant case study that demonstrates how that information could be used. It's a fun way to move yourself in the direction of life learning and beef up your evidence- based practice.

The next APTA Geriatrics Journal Club will be held **September 20, 2022** at 8 pm ET.

We will discuss **Four Square Step Test performance in hip fracture patients**, Mutchie, HL, Orwig DL, Beamer B. More, *J Geriatr Phys Ther*.2022; 45(2):81-89

Case Study: **The Four-Square Step Test:An Applicable Tool for an Unlikely Patient** by Beth Castellini, PT; Jennifer Gindoff, PT, DPT, DHSc; and Heidi Moyer, PT, DPT

Registration is FREE but required:
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Beth Castellini, PT is a 1988 graduate of Texas Woman's University PT program. Most of her career has been spent in post-acute geriatric rehabilitation. She is currently Secretary of the APTA Geriatrics SIG, Mid Region coordinator of the APTA Geriatrics State Advocate program and Co-State Advocate for Colorado. She currently works as an inpatient PT at the VAMC in Grand Junction, CO.

Jennifer Gindoff, PT, DPT, DHSc is a Board Certified Geriatric Clinical Specialist (GCS) and a Certified Dementia Practitioner (CDP). Dr. Gindoff is currently acting as the Research Liaison for APTA Geriatrics Balance and Falls Special Interest Group. She works in home health, skilled nursing, long-term care, and outpatient geriatrics in Columbus, Ohio.

Heidi Moyer, PT, DPT (they/them) is a physical therapist based out of San Angelo, Texas. As a Board-Certified Clinical Specialist in Geriatric Physical Therapy (GCS) and a Certified Exercise Expert for Aging Adults, they have worked in multiple settings including inpatient rehab, home health, outpatient, and the long-term acute care hospital. Dr. Moyer is the current chair for the APTA Geriatrics Balance and Falls Special Interest Group (BF SIG).

Multimorbidity in Older Adults: Do We Count Past One?

by Debra Gray, PT, DPT, DHS; Carole Lewis, PT, DPT, PhD, FAPTA; and Linda McAllister, PT, DPT

Multimorbidity, commonly defined as the presence of 2 or more concurrent medical conditions, is an increasing public health concern, particularly in the ageing population. Multi-morbidity has been linked to worse outcomes and increased health care utilization and costs.[1] Multimorbidity has a negative impact on a person's function and quality of life.[2]

It is estimated that the prevalence of multimorbidity in older adults may be as high as 95.9%.3 A longitudinal study of older adults followed over two years found 53.7% had multimorbidity at baseline and 71.7% at follow-up. In addition, 41.6% of those with multimorbidity had new or worsened conditions.[4] A 2015 systematic review demonstrated poorer physical function and future functional decline was associated with multimorbidity.[5]

According to the National Council on Aging, based on data from the Centers for Medicare and Medicaid Services, the 10 most prevalent chronic conditions in persons ages 65 and older are: 1) hypertension (58%); 2) high cholesterol (47%); 3) arthritis (31%); 4) coronary heart disease (29%); 5) diabetes (27%); 6) chronic kidney disease (18%); 7) heart failure (14%); 8) depression (14%); 9) dementia (11%); and 10) chronic obstructive pulmonary disease (11%).[6] A prospective cohort study using longitudinal data from the Health and Retirement Study (2010-2012), found 291 unique disease combinations with the most prevalent combinations being: hypertension and arthritis; hypertension, arthritis, and cardiovascular disease; and hypertension, arthritis, and diabetes.[7]

Traditionally, the health system has been disease-focused with emphasis on managing individual conditions. Older adults often have many different health care providers with little consideration of the interplay between their various diagnoses and interventions. Ideally, all older adults should receive a comprehensive geriatric assessment performed by an interprofessional team with ongoing communication and collaboration as they care for the aging adult. Instead, older adults typically receive "fragmented, inefficient, and ineffective care."[8] Adding to the challenges, older adults with multimorbidity are usually excluded or underrepresented in clinical trials; clinical practice guidelines may be impractical, irrelevant or even potentially harmful.[9]

Physical therapists commonly treat older adults with multimorbidity. In the likely omission of a comprehensive geriatric assessment, the physical therapist needs to obtain a thorough history and perform a careful systems review, examination, and evaluation. Additional screenings during the initial visit or subsequent therapy sessions can provide the therapist with a more inclusive understanding of the individual and indicate the need for referral to other health care professionals. Common conditions that older adults are often living with and that can impact their rehabilitation include sensory impairment, depression, cognitive decline, nutritional deficits, incontinence, chronic pain, and limited social support.[10-12]

Physical therapists should carefully and regularly assess vital signs. Numerous physiological and pathological changes may occur with age and alter vital signs; a high percentage of older adults have one or more cardiovascular conditions or risk factors. It is important to understand that older adults are less likely to fit in normative ranges for the overall population and that successive vital sign measurements for an individual are more sensitive to change. Older persons should have their vital signs assessed at rest, with activity, and post-activity.[13]

The therapist needs to consider all the older adult's health conditions when developing a therapeutic program in order to identify any contraindications, precautions, and to make appropriate adaptations. During implementation of the multimorbidity-adapted program, the patient must be monitored for their response based on the primary reason for therapy focus as well as their other health conditions. And, as discussed earlier, the therapist should address other concerns through interventions or referrals as appropriate.[14]

Physical therapy can address some of the physical problems associated with multimorbidity. The presence of chronic conditions increases the risk of falling in older adults. Those with multimorbidity are 2 times more likely to fall than those who have fewer than 2 chronic diseases.[15] Multimorbidity is associated with impaired physical function and future functional decline. Slower gait speed and weaker grip strength were shown to be significantly associated with multimorbidity.[4] Dhalwanai et al. identified an inverse dose-response relationship between levels of physical activity and multimorbidity.[16] A physical therapist prescribed program of strength, flexibility, endurance, and balance exercises may improve current physical function and lessen the risk of decline in older adults with multimorbidity.

With a high likelihood of having multimorbidity, "older adults need health care that can count past one."[17] To provide safe and effective patient-centered care for older

patients, therapists must look beyond a single condition that may have been the reason for referral to physical therapy. We can and should count past one.

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Debra L Gray, PT, DHS, DPT, GCS, CEEAA, GTCCS, FSOAE, CAPS is the owner of Gray Therapy, Education & Consulting, contributing faculty at the University of St Augustine for Health Sciences, and an instructor for Great Seminars and Books.

Carole Lewis, PT, DPT, GCS, GTCCS, MPA, MSG, PhD, FSOAE, FAPTA, is the President of and faculty for GREAT Seminars and Books and Great Seminars Online (www.greatseminarsandbooks.com and www.greatseminarsonline.com). She has her own private practice in Washington DC. She is Editor-in-Chief of Topics in Geriatric Rehabilitation and an adjunct professor in George Washington University's College of Medicine.

Linda McAllister, PT, DPT, GCS, GTCCS, CEAGN is a board-certified Geriatric Specialist and lecturer with Great Seminars and Books. She currently practices in home health with EvergreenHealth in Kirkland, WA. She is an adjunct faculty member of Arcadia University and serves as coordinator for the Geriatric Training Certification with the Geriatric Rehabilitation Education Institute.