GeriNotes

August 2020 • Vol. 27 No. 4

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

GeriNotes

August 2020 • Vol. 27 No. 4

In This Issue

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

From the President

Greg Hartley
President,
APTA Geriatrics

A global pandemic has exposed the long-buried roots of ageism in the US. A string of brutal deaths of black men and women has repeatedly exposed systemic racism leading to protests and activism not seen since the 1960s. Our society has a lot to deal with. While a pandemic and racial injustice are separate issues, there is some intersectionality that all PTs and PTAs working with older adults need to reflect upon. Ageism and racism are but two -isms on a long list of social determinants that contribute to poor health outcomes. Racism and ageism are systemic; meaning substantive political, cultural, economic, and legal changes must occur to even begin to rectify them. However, prejudice or discrimination based on race or age (and many other characteristics) is individual. Healthcare provider behavior is powerful. We can alter health outcomes, in both directions, based on our actions.

"APTA Geriatrics stands against racism and brutality." This is the opening sentence of a special statement from the APTA Geriatrics Board of Directors. In response to social justice concerns, coupled with long-standing goals to end ageism and ableism, APTA Geriatrics has created a Diversity, Equity, and Inclusion Task Force that will conduct a sweeping review of all of its documents, course curricula, and digital media to ensure that, as an organization, we are intentionally inclusive; and as an educational provider, we openly address disparities in healthcare. We intend to change the outcome; to improve the health of society through our actions as an association. I challenge every APTA Geriatrics member to do this on an individual level. Here are three steps you can take right now.

Educate yourself on these issues, for they are likely more important to the patient outcome than any intervention you provide.

Reflect on your behaviors. How might we be ageist? (Look here and here for examples). How might we be racist? (Look here and here for examples).

Advocate for your patients, your profession, and society. Ask yourself what you can do, personally, to improve the likelihood of success in your patients? Further, what can you do to improve diversity within our profession? Could you participate in elementary and middle school events in minority communities to talk about physical therapy as a profession? Lastly, how could you improve the health of society knowing these disparities exist? Could you offer health fairs or fall screens in underserved areas rather than at the upscale mall or the "luxury" continuing care community?

In response to social justice concerns, coupled with long-standing goals to end ageism and ableism, APTA Geriatrics has created a Diversity, Equity, and Inclusion Task Force.

I have a sincere hope that we will emerge from these crises as a better society, a better profession, and as better individuals. #AgeOn

APTA Geriatrics, An Academy of the American Physical Therapy Association
1818 Parmenter St.
Ste 300, Middleton, WI 53562
geriatricspt.org · 866-586-8247

GeriNotes

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 aging 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 aging adults move, live, and age well.

From the Editor

Michele Stanley
Editor,
GeriNotes

There are so many things happening in the world — including the world specific to physical therapy — that are just plain out and out scary and NOT GOOD: A pandemic forcing using all to embrace and enhance PPE and restrict our contact with patients, colleagues, friends. Economic factors that impact many PTs through loss of jobs/hours of work, and loss of patient access to services through loss of insurance. Gyms, recreation areas, and many community resources are closed or restricted, limiting alternative access to healthy choices for our patients. Clients that reside in residence facilities for older adults (senior housing, assisted living facilities, and long term care) are effectively isolated and locked down indefinitely with predictable loss of their functional skills, endurance, and emotional reserve. There are almost daily news and research reports detailing the persisting deficits that affect those who actually contract often even "mild" forms of the disease.

To add insult to the injury of COVID-19, on August 3, 2020, CMS issued its 2021 Medicare Physician Fee Schedule proposed rule. CMS advances the policy discussed in 2020 PFS rule-making to increase the values of the Current Procedural Terminology (CPT®) office/outpatient evaluation and management codes. Despite APTA's persistent advocacy, both with HHS/CMS and Congress, the combined impact of the reduction slated for physical therapy, occupational therapy, and speech-language pathology services in 2021 is -9%. **APTA will have template letters for members, non-members, and patients to use to submit comments to CMS in response to the proposed rule in the coming days.** Stay tuned as advocacy will be needed to mitigate this cut.

Journal Club

I got a little depressed myself just writing the above paragraph. It is a good thing that I can counter this with some good and exciting developments within APTA Geriatrics: Journal Club! Journal Club, you say? Yawn? No, really . . . you should try it! On the third Tuesday of alternate months, there is an ongoing collaboration between all the SIGs, *JGPT,* and *GeriNotes* to bring you something free, fun, and informative.

Have you ever read (even just skimmed the abstract maybe) of a Journal article and thought: interesting but how would I use that information, actually? (True confession: I have.) Or thought that you might like to know why the author chose that project, using those methods, and why they thought it would be helpful to real, practicing therapists?

In each Journal Club, one or more of the authors presents their article including methods, questions, and problems, as well as results, and then a clinician presents a case example that illustrates how to use that information, and why the answer matters. Participation is by ZOOM, questions are welcomed, and some cool slides are shown. It is a bit like a good talk at CSM except the seats and sound are always good and you can participate as much as you like (and watch in your jammies, if you wish).

Journal Club is a bit like a good talk at CSM except the seats and sound are always good and you can watch in your jammies, if you wish.

You can find Zoom connection info published in *GeriNotes*, on the Facebook Discussion page, and in the e-newsletter. If timing isn't good, you can watch the recorded talk the next day (or whenever). In fact, I encourage you to watch the July JClub recording. If you don't think that analyzing posture and bone health is your own clinical strength, or shudder at the thought of measuring kyphosis or discussing bladder issues, you need to watch and see what you may be missing in your offerings to your "chronic back pain" patients. As an adjunct, Sherri Betz's complete case report is also published here on page 26. Complete information on the next JClub is on page 28.

You might ask, Who chooses the Journal articles and topics? Starting in 2021, each SIG will have a regularly-assigned responsibility for choosing the JClub topic: January 19 – Bone Health; March 16 – Global Health; May 18 – Residency; July 20– Balance and Falls; September 21 – Health Prevention and Wellness; November 16 – Cognitive and Mental Health. If you have any input or desire to see a particular article that highlighted and explained, reach out to one of the SIG leaders with your suggestion. And, you are always welcome to drop in and participate as much as you'd like in each JClub session. See you on the Zoom!

PICTURES! Send your favorite photos of active interesting older adults or therapy sessions for possible future use on the cover of GeriNotes. We'd love to feature the work of the photographers amongst us. You must own the copyright to the photo and be able to obtain a subject's release. Complete the Photo Release Form *and send to* gerinoteseditor@gmail.com.

Scrutinize the Reports of a Research Study: A Commentary Regarding the STRIDE Study

by Leslie K. Allison, PT, PhD and Jennifer L. Vincenzo, PT, MPH, PhD

Recently, the *New England Journal of Medicine* (NEJM) published the results of STRIDE study (**St**rategies to **R**educe **I**njuries and **D**evelop Confidence in **E**lders), concluding, "A multifactorial intervention, administered by nurses, did not result in a significantly lower rate of a first adjudicated serious fall injury than enhanced usual care."[1]

Numerous physical therapy clinicians and researchers with fall prevention expertise have immediately expressed serious concerns about the interpretation of results of the STRIDE study. Specifically, these physical therapists are critical of (1) the study methods, and (2) the conclusive interpretation of inconclusive results. Further, they share substantial apprehension about how members of the public and payers may misinterpret the stated study conclusions. Consequently, APTA Geriatrics would like to address the major concerns raised about this study.

This multi-site, pragmatic randomized controlled trial investigated a primary care model of fall prevention in which older adults (age 70 years and older) were assessed for fall risk factors; those at high risk were provided with individualized, multifactorial intervention recommendations to reduce their risk, by a specially trained nurse manager. The control group received enhanced usual care (informational pamphlet). Participants were followed, on average, for 30 months. The primary outcome measure was whether or not the participant sustained a serious fall injury. Note that the "intervention group" received assessment, recommendations and motivational interviewing, an individual care plan targeting 1-3 risk factors chosen by the participant, referrals, and follow up telephone calls or visits (at least once a year), and re-assessment yearly. The nurse manager provided no actual fall prevention interventions (eg, exercise, medication management, home safety modifications, vision care, etc.). Rather, the nurse manager directly provided, for example, recommendations for safe footwear and instructions for simple home exercises. The nurse manager referred the participant elsewhere for care outside the nurse's scope of practice, for example, medication management and physical therapy. The study ***did not*** collect data on older adults' implementation or adherence to the recommendations. Yet the abstract states, "A multifactorial intervention, administered by nurses, did not result in a significantly lower rate of a first adjudicated serious fall injury than enhanced usual care."[1]

This study, like every study, has both strengths and limitations. The strengths of this study are many. In particular, the worthy intent of the primary care program delivery design was to find a feasible method for integrating evidence-based fall prevention care into the health-care mainstream so that fall prevention services could be available to many, many more older adults than currently receive such services. (More on this later.) This study was a large scale (more than 5,400 participants at 86 sites), longitudinal (participants were followed for a mean of 30 months), pragmatic trial (pragmatic trials are designed to determine the effectiveness of interventions in actual clinical practice, versus a research lab). The authors are renowned experts in geriatric health care and highly esteemed investigators. The study participants were older (mean age 80 years) and at high risk for future falls. The nurse managers received special training in fall prevention and motivational interviewing. The statistical analyses were sophisticated and comprehensive.[1] The enormous amounts of time, effort and funding that were required to conduct this trial are certainly recognized.

There are also, unfortunately, several major limitations of this study that make it difficult to accept the study conclusions as written. The authors list the following limitations:

1. Adherence to the intervention plan may have been lower than in previous efficacy trials because of difficulties that participants faced in implementing recommendations that required transportation, copayments, or insurance coverage.

Comment: Prior studies have identified these sorts of barriers (time, transportation, cost, etc.) to the adoption of, and adherence to, fall prevention intervention programs.[2-5] Studies reporting successful fall prevention outcomes provided either direct or indirect support for overcoming these barriers. Examples of direct support include resources to overcome barriers such as public transportation vouchers, gas cards, no-cost or very low-cost home safety modifications, or no cost exercise classes. Indirect support is often provided through frequent contact with a "fall prevention case manager" who obtained information and/or made arrangements for the participants, for example, ordering durable medical equipment, locating appropriate exercise programs, organizing transportation, arranging for snow removal from driveways and sidewalks, etc. Despite this available evidence, this study design did not include the provi-

sion of such support mechanisms. This may have been because the primary care system into which this fall prevention program was inserted does not typically offer these necessary supports. In short, the unsuccessful outcome of this study was perhaps predictable given the lack of support to overcome known barriers to adoption/adherence of falls prevention.

2. Participants were referred to existing services provided by local health or community centers, but the trial provided no additional resources.

Comment #1: Substantial evidence indicates that to reduce falls in high risk older adults, four interventions are beneficial: a sufficient dose of moderate to high intensity exercise (for lower extremity strength, balance, and gait with balance challenges), medication management, home safety modifications, and vision care.[6,7] Recommendations and referrals by themselves are not evidence-based interventions for fall prevention, and again, prior research has shown that merely providing recommendations and referrals may not lead to successful outcomes. Many of these studies are included in a recent Cochrane Review by Hopewell et al. (2018), which indicates that referral only is a limitation to determining the effectiveness of multifactorial falls prevention.[8] With the exception of medication management (an intervention accepted by less than 1/3 of participants), no evidence-based intervention was delivered in this study. Despite the available evidence about what interventions are successful for falls prevention outcomes, this study design did not include the provision of exercise, home safety modifications, or vision care. In short, the unsuccessful outcome of this study was perhaps predictable given the almost complete lack of any actual fall-prevention interventions.

Comment #2: Study participants were referred to "existing services." This included referral to community programs or physical therapy. According to the National Council on Aging (ncoa.org), evidence-based falls prevention programs vary in availability and each program is appropriate for different levels of risk or abilities. Physical therapists striving to help our patients make the necessary clinic-to-community exercise transition know evidence-based community exercise programs are sparse to non-existent.[9] Therefore, an older adult may not have had access to a program or may have attended a program that was not appropriate for them; hence, these factors may have impacted the effectiveness of the "multifactorial intervention." Regarding the referral to physical therapy; presuming the patient followed-up and attended physical therapy, it is unknown if the therapists had expertise in geriatrics and fall prevention. In other words, the "existing services" may not have been available or appropriate.

3. Adherence to behavior modification interventions (e.g., exercise) was not routinely monitored therefore, participation may have fallen below the thresholds needed to achieve an exercise benefit.

Comment #1: It is difficult to understand how the authors reached the conclusion that the intervention was unsuccessful when the investigators did not determine whether or not the exercise intervention was appropriate, was received in a sufficient dose, or was even delivered at all.

Comment #2: Participants in the "usual care" group were also not monitored, so we do not know if they actually received only usual care. It is possible that some of them also engaged in appropriate exercise and medication management, had home safety modifications, and received vision care. If that is the case, improvement in some portion of the control group would contribute to the lack of between-group differences.

4. The participant-centered intervention used motivational interviewing that encouraged participants to choose recommendations they were willing to address. consequently, some potentially valuable recommendations were not implemented. For example, only 29% of the participants who were taking a medication identified as a risk factor agreed to address this risk factor, and only half the participants who had a home safety hazard agreed to mitigate this risk.

Comment #1: Without additional information, it is not possible to know why participants did or did not select a certain risk factor to address. However, the lack of support discussed in limitation #1 may have negatively influenced participants' willingness to address certain risk factors if a participant perceived the demand to be greater than the benefit. Further, even if a participant agreed to address a risk factor, this study did not measure whether or not they actually did address the risk factor.

Comment #2: The authors acknowledged, "Additional measures (e.g., interventions to increase adherence to exercise programs and more intensive strategies to encourage people to discontinue certain medications) may be needed to increase the effectiveness of strategies to prevent fall injury in the clinical practice setting." Yet, they concluded that the multifactorial intervention was not effective.

5. Participants or their physicians may have chosen to implement less effective approaches to address risk factors (e.g., choosing calcium or vitamin D supplementation rather than medications for osteoporosis, or choosing community exercise programs that were not evidence-based).

Comment: As above, without additional information, it is not possible to know why participants chose the approaches they did to address their risk factors. However, the lack of support discussed in limitation #1 may have negatively influenced participants' willingness to choose the most effective approaches to address their risk factors.

6. Among the participants randomly assigned to intervention practices, 14.2% did not receive the intervention because of a change in health care provider, withdrawal

from the trial, inability to complete the initial visit, or death.

Comment: A high rate of participant loss is common in longitudinal studies of older adults. This reduction in sample size may have negative consequences. In this study, statistical analysis predetermined that at least 6,000 participants were needed to calculate true changes in falls injuries based on the intervention. Yet, with the 14.2% attrition rate, only 4,700 participants were included in the statistical analysis and half of those were presumed to have received the 'multifactorial intervention'. Therefore, the number of participants was lower than needed to statistically calculate if the intervention was effective or not, notwithstanding the presumption that all of the participants randomized to the intervention were presumed to have received and implemented the intervention. Therefore, the interpretation of results by the study authors that "A multifactorial intervention, administered by nurses, did not result in a significantly lower rate of a first adjudicated serious fall injury than enhanced usual care,"[1] is inaccurate. A more appropriate interpretation of these results is, "It is inconclusive if a multifactorial intervention, administered by nurses, results in a lower rate of a first adjudicated serious fall injury compared to enhanced usual care."

7. Improving quality of care for falls may not be sufficient to reduce serious fall injuries.

Comment: Is it true that no amount of improvement in quality of care for falls may be sufficient to reduce serious fall injuries? Technically, that might be true, but we certainly cannot know that based on this study. Rather, we can only determine that *the degree of improvement in quality of care for falls achieved in this study* was not sufficient to reduce serious fall injuries. Perhaps if the degree of improvement in quality of care was expanded to include or ensure actual "treatment" intervention delivery, a more successful outcome would be achieved.

Summary

The authors of the STRIDE study concluding that, "A multifactorial intervention, administered by nurses, did not result in a significantly lower rate of a first adjudicated serious fall injury than enhanced usual care,"[1] is an **inaccurate** interpretation of the "intervention" and results of the study. The article used the term "intervention" to refer to the delivery of evidence-based fall prevention services not routinely offered by primary care providers. Yet, with the exception of medication management received by fewer than 1/3 of participants, the components of the study "intervention" did not include any direct evidence-based procedural interventions (i.e. "treatment," including exercise, home safety modifications, vison care), did not provide support to ensure the delivery of these evidence-based procedural interventions, and did not measure whether or not participants (who were expected to act on their own) received these procedural interventions. The authors concluded that their "intervention" of *recommending* actual interventions produced no better outcome than usual care. This interpretive outcome is further impacted in that an insufficient number of participants received the appropriate procedural interventions known to reduce fall risk. The most important components of a true multifactorial falls prevention program were not included in order to "fit" the program into our current primary care system, because our current primary care system is not able to provide patients with the procedural interventions the evidence says they need. Finally, the results of this study indicate that quality care in falls prevention needs to be addressed; at least we can all agree on that.

References

1. Bhasin S, Gill TM, Reuben DB, et al. A randomized trial of a multifactorial strategy to prevent serious fall injuries. *N Engl J Med*. 2020;383(2):129-140.
2. Stevens JA, Noonan RK, Rubenstein LZ. Older adult fall prevention: Perceptions, beliefs, and behaviors. *Am J of Lifestyle Med.* 2010;4(1):16-20.
3. Stevens JA, Sleet DA, Rubenstein LZ. The influence of older adults' beliefs and attitudes on adopting fall prevention behaviors. *Am J of Lifestyle Med.* 2018;12(4):324-330.
4. Bunn F, Dickinson A, Barnett-Page E, Mcinnes E, Horton K. A systematic review of older people's perceptions of facilitators and barriers to participation in falls-prevention interventions. *Ageing & Society.* 2008;28(4):449-472.
5. Dickinson A, Machen I, Horton K, Jain D, Maddex T, Cove J. Fall prevention in the community: What older people say they need. *Br J Community Nurs.* 2011;16(4):174-180.
6. Grossman DC, Curry SJ, Owens DK, et al. Interventions to prevent falls in community-dwelling older adults: US preventive services task force recommendation statement. *JAMA*. 2018;319(16):1696-1704.
7. Gillespie LD, Robertson MC, Gillespie WJ, et al. Interventions for preventing falls in older people living in the community. *Cochrane Database Syst Rev.* 2012;9(11).
8. Hopewell S, Adedire O, Copsey BJ, et al. Multifactorial and multiple component interventions for preventing falls in older people living in the community. *Cochrane Database of Syst Rev.* 2018(7).
9. Schrodt, L, Shubert, TE, Sidelinker, JC, et al. Part 3 - answers the question: What do I do if my community does not have access to evidence-based programs? *GeriNotes.* 2019;26(5):28-31.

Leslie Allision is an Associate Professor of Physical Therapy at Winston-Salem State University and the Editor in Chief for the Journal of Geriatric Physical Therapy. She has extensive clinical and research experience in falls prevention.

Jennifer Vincenzo is an Associate Professor of Physical Therapy at the University of Arkansas for Medical Sciences. She is a KL2 mentored research scholar who conducts research on fall prevention;and is a Member of the National Council on Falls Risk Awareness and Prevention.

Staying Active after Stroke: A Customizable Community Resource Guide for Stroke Survivors

by Julie Carr, MSN, RN; Katherine Callanan, PT, DPT; and Julie Swanson MN, RN

Stroke is a leading cause of disability in the United States. Many stroke survivors are at high risk for falls and deconditioning after their stroke. Their impaired mobility may contribute to a sedentary lifestyle affecting their ability to perform activities of daily living and increasing their risk for recurrent stroke and other cardiovascular complications. To prevent these complications, the American Heart Association (AHA) recommends that stroke survivors get 60+ minutes of cardiovascular exercise per week in addition to general strengthening, flexibility, and balance exercises.[1,2]

The best evidence-based types of exercise programs for stroke survivors include walking, tai chi, yoga, aquatic therapy, and general strengthening.[1] Each exercise affects a different aspect of stroke survivor's health. Walking improves endurance and cardiovascular health.[3] Tai chi improves balance, mood, and blood pressure.[4] Yoga improves balance, mood, perceived motor function, and decreases their anxiety.[5] General strengthening improves walking speed and lower extremity muscle strength.[6] Evidence shows that each of these types of exercise is most effective when it is modified to each stroke survivor's level of function.[7]

Importantly, post stroke education has a great impact on promoting positive behavior patterns and increasing long term physical activity, especially when it comes from multiple health care professionals (HCPs) throughout the hospital stay, and includes a discharge plan with referrals to specific community resources.[8] Although HCPs are aware of the need for stroke survivors to continue to exercise after discharge from formal therapy, they are not always aware of the community-based resources available. In a recent study, HCPs expressed a need for a centralized source of information to provide to their stroke survivors.[9]

The purpose of this project was to create and evaluate an education resource called *Staying Active after Stroke: A Community Resource Guide* which can be customized by the HCP for each individual stroke survivor. The community resource guide includes customized exercises prescribed by the therapists, referral to specific community-based exercise programs appropriate for that stroke survivor with information on location, time, and cost, as well as information on transportation options. In addition, it also includes education on fall prevention, nutrition, signs and symptoms of stroke, and other stroke-specific information.

Method

Practice Question

The Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model was used to determine the best exercises for stroke survivors, as well as the best method for consolidation of evidence for HCPs. JHNEBP is a model that guides clinicians to find, evaluate, and implement the best evidence-based practices. This model provides a three-step process and tools to ensure the best practices are incorporated into the care of the patient. The 3 steps are characterized by the acronym PET: Practice question, Evidence, and Translation.[10] The practice questions for this project were:

- What does the evidence say are the best exercises for stroke survivors?
- What is the baseline knowledge of HCPs regarding community resources and known barriers to referring patients to them?
- What resources are available for HCPs to refer stroke survivors to the best evidence-based community exercise programs?
- Does the SAAS guide help stroke survivors to stay active?

Evidence

A review of the literature was conducted using search terms specific to the practice questions. Using the JHNEBP tools, the articles were leveled and rated for quality. Where level I equals highest ranking research such as randomized clinical trials and level V equals lowest ranking, non-research evidence such as expert opinion. Each article was also rated for quality where A equals High Quality, B equals Good Quality, or C equals Low Quality/Major Flaws. Articles were then synthesized using only those with an A or B quality rating and recommendations were made.[10]

The evidence clearly indicated stroke survivors would benefit from participation in the following types of exercise as long as they are modified to their abilities: walking, yoga, tai chi, aquatic exercises, and general strengthening exercises.[1] Evidence also indicated stroke survivors can benefit from individualized education and exercises from multiple HCPs at periodic intervals throughout their treatment. The education should begin at admission and continue throughout their hospital stay, culminating in a discharge plan that includes referral to specific community resources. This approach encourages early positive behavior patterns and increases long term physical activity.[8, 11 -18]

Translation Into Practice

Prior to beginning this work, a proposal was submitted to the organization's medical director of research and medical education for research determination. Formal determination was conducted. The work was determined not to meet criteria for human subjects' research but was an EBP process improvement project.

Next, using the organization's Fit and Feasibility Tool assessment, the recommendations were shown to be a "good fit" and "very feasible" with a combined score of 21/24. This score indicates that our program aligns well with organizations mission and has a high chance of achieving the intended outcome.

To assess HCPs' current understanding of AHA guidelines of exercise for stroke survivors, referral patterns to community-based exercise programs and potential barriers for stroke survivors, a survey was deployed to the referring HCPs working in the rehabilitation hospital. Based on the survey results, a resource guide was developed. The EBP team determined a web-based resource was needed (for ease of up-dating the information) but could also be available as a hard copy (for HCPs to customize in a binder for stroke survivors). The *Staying Active after Stroke (SAAS): A Community Resource Guide* was thus created for HCPs to customize with individualized home exercise programs, referral to evidence-based community exercise classes, and education on post stroke health, fall prevention, accessible transportation, and caregiver support. A meeting was scheduled during which the referring HCPs were educated regarding the availability of and implementation process for using and customizing the guide.

Local community exercise classes for walking, tai chi, yoga, aquatic therapy, and general strengthening were located, contacted and visited to assess schedule of classes, cost, and ease of access. These classes were then added to the SAAS guide along with an evidence based rational for inclusion.

Action Plan

SmartSheet was used as the web-based platform to launch the SAAS guide. This format was ideal because it is designed to allow for ease of collaboration, updating, and sharing.[19] Patient education binders of the SAAS guide were developed to include tabs to customize the education for the specific patient. The binders included tabs for home exercise programs, referral to evidence-based community exercise classes, and education on post stroke health, fall prevention, accessible transportation, and caregiver support.

After the SAAS Guide has been in use for three months, stroke survivors will be surveyed to determine the effectiveness of the guide in helping them remain active and utilize community resources. A follow-up survey of HCPs is also planned to determine usage pattern and perceived effectiveness of the SAAS Guide as well as to obtain feedback to make modifications.

Results

The practice questions for this study were as follows:

1. What does the evidence say are the best exercises for stroke survivors?
2. What is the baseline knowledge of HCPs regarding community resources and known barriers to referring patients to them?
3. What community exercise programs are available for HCPs to refer stroke survivors?

4. Does the SAAS guide help stroke survivors to stay active?

To this end, the authors created and evaluated an educational resource called *Staying Active after Stroke: A Community Resource Guide,* customizable by the HCP for each individual stroke survivor.

Evidence shows that walking, yoga, tai chi, aquatic, and general exercise programs provide various benefit to stroke survivors. Regarding the first question, the evidence focuses on the following exercises for stroke survivors. Each was assimilated in the resource guide in easy to understand, third-person language:

Walking: A walking program may help heart health and increase walking speed and ability. It can also help stroke survivors be more independent with activities of daily living. A therapist can help stroke survivors determine if there is a need to use a cane or walker to help walk safely, and help to find the best speed, distance, and amount of time to walk. [3, 20-22]

Yoga: Yoga is an exercise that focuses on breathing while moving into positions. It may help stroke survivors be more aware of their body and feel more confident when doing daily activities. It may help decrease anxiety and fear of falling. There are many different types of yoga. A trained instructor can change the yoga positions so stroke survivors can safely do them.[23-26]

Tai chi: Tai chi is a form of exercise based on slow, graceful movements that flow into one another. Tai Chi may help stroke survivors improve balance and prevent falls. It can decrease blood pressure and improve mood. Traditional Tai Chi is usually done while standing. A trained instructor may adapt the movements so they can be done seated, or by holding onto something stable.[27-29]

General exercises: Strength training will help improve muscle strength and endurance. As stroke survivors get stronger they will be less tired during activities of daily living. Stronger muscles will also help increase walking speed and distance. A therapist and/or a trained instructor can help stroke survivors decide how much weight to lift.[6, 7]

Aquatic: Water exercise is especially helpful if stroke survivors have joint or back pain that makes moving on land difficult. The warmth of the water may allow them to move more freely and decrease pressure on joints. Importantly, swimming proficiency is not needed in order to benefit from water exercise. Stroke survivors will need to be able to get in the pool safely. A therapist should review pool class options best for the individual.[31-33]

To answer the second question, "What is the baseline knowledge of HCPs regarding community resources and known barriers to referring patients to them?" a survey was created and administered electronically to approximately 20 referring HCPs in our rehabilitation facility. A total of 17 responded to the survey questions. The survey questions are shown on Table 1.

Seventy-one percent of those who responded said they were not aware of the American Heart Association rec-

Table 1

1. Are you aware of the AHA recommended guidelines for physical activity and exercise for stroke survivors? Yes or No
2. Do you refer your stroke patients to community based exercise programs when they are discharged from formal therapy? Yes or No
3. Are you aware of any evidence based community exercise programs currently offered in our community? Yes or No
4. Do you have the resources you need to provide your patients with specific information on community based exercise programs (i.e. location, time, cost, quality of instruction)? Yes or No
5. What type of educational resource would be most beneficial to you? (Pick one)
   a. Pre-printed paper copies with information on classes and education which could be inserted into a binder and customized for each patient.
   b. Access to a computer based program which would allow the user to select information on classes and education which could be printed and inserted into a binder and customized for each patient.
   c. None of the above. I do not plan to use an educational resource for my patients.
6. Please rank the following in order of most to least when selecting a community based program for your patients
   a. Cost
   b. Accessibility of the facility
   c. Location
   d. Qualification of instructor/provider
   e. A thorough understanding of the exercises and activities of the program
   f. Accessibility by public transportation
   g. Dates and times
7. What are your patients' top three barriers, in your opinion, to successfully transition to a community based program (please select 3)
   a. Cost
   b. Accessibility
   c. Transportation
   d. Motivation
   e. Caregiver support
   f. Not interested in programs
   g. Fatigue
8. What barriers do you face when referring patients to community based programs (Select all that apply)
   a. I am not sure where to find registration information to give to my patient
   b. Lack of networking opportunities with community organizers
   c. Uncertain of times and dates of programs
   d. Uncertain of how safe the program is for my patients
   e. I don't trust the instructor to provide adequate supervision of my patient
   f. Providing information about the programs takes too long and is inconvenient.

ommended guidelines for physical activity and exercise for stroke survivors. Sixty-five percent referred their stroke patients to community-based exercise programs when they were discharged from formal therapy. Only about half (56%) were aware of evidence-based community exercise programs currently offered in our community, and about one-third (31%) felt they had the resources needed to provide their patients with specific information on community-based exercise programs (e.g., location, time, cost, quality of instruction). Fifty-six percent stated they preferred a pre-printed paper copy with information on classes and education which could be inserted into a binder and customized for each patient, while 44% stated they prefer access to a computer based program allowing the user to select information on classes and education which could be printed, inserted into a binder, and customized for each patient. When asked about barriers to refer patients to community exercise classes, the majority (93%) stated they were not sure where to find registration information for the classes. Ninety-three percent also felt they lacked networking opportunities with community organizers, 64% were uncertain of dates and times of the classes, and 29% were uncertain if the classes would be safe for their patients and if the instructors would provide adequate supervision. Only 22% felt providing information about community classes takes too long and is inconvenient.

The third question, "What evidence-based community exercise programs are available for stroke survivors?" was answered by identifying stakeholders, presenting evidence review to therapists and healthcare providers, and conducting a thorough exploration of the local community via internet searches, stakeholder knowledge, and word-of-mouth. The search for programs was narrowed by including only those programs in the surrounding metropolitan area.

The final question was to determine the effectiveness of the SAAS guide in helping stroke survivors to remain active. To assist this process, a telephone survey for stroke survivors will be created and administered three months after discharge from formal outpatient therapy. (see Table 2)

Table 2

1. Did you receive a SAAS Guide?
2. Did your therapist refer you to a specific community based exercise class?
3. Did you attend the class? Which class did you attend?
4. Are you currently attending the class?
5. Has participation in this class helped you in any of the following areas? Answer yes/no
   a. Balance
   b. Strength
   c. Endurance
   d. Mood
   e. Walking
6. Which of the following sections of the SAAS Guide did you find helpful? Answer yes/no.
   a. Transportation
   b. Stroke Information
   c. Fall Prevention
   d. Caregiver Support

Discussion

This project set forth to provide HCPs with access to an updated tool to help promote the AHA guidelines for physical activities post stroke. In addition, we hoped stroke survivors and their caregivers would receive education on the community resources recommended by their HCP to help them remain active after stroke and prevent effects of a sedentary lifestyle.

Main Findings

There were several main findings from this project. The first finding was the need to network with many different entities for this project to succeed. We gained a new appreciation of the importance of collaboration between nurses and therapists in the care of stroke survivors to maximize the potential for a successful outcome. We recognize the need to provide education along the continuum of care, to this end to partner with the manager of the stroke program and the manager of the neuroscience service line program. Another finding was a need to ensure this project is sustainable and evaluated periodically. Areas that have been developed to sustain this project include:

- The SAAS guide information will be updated quarterly to ensure the classes and costs and locations are current.
- Identification of a person to update resource guide on a regular basis.
- Resource guide is accessible to HCP's via hard copy or computer data base.
- Continuing education for HCPs on utilization of the resource guide.
- Ongoing evaluation of the effectiveness of the resource guide for stroke survivors, their caregivers, and HCP's via pencil/paper surveys and/or SurveyMonkey.[34]

Barriers and Limitations

The lessons learned from this project will help future researchers develop more effective resources to assist patients to stay active after stroke. One limitation for this project was not enough user feedback in the time allotted. The SAAS guide was developed and implemented but allowing time for feedback was not included in the project timeline. Another limitation in timely user feedback was developing a system to contact stroke survivors. There are many barriers to contacting the stroke survivors. Some barriers are related to the stroke diagnosis and the survivor ability to answer questions via the phone thus requiring a caregiver to answer questions related to the

use of the guide. Another limitation is related to designating who should contact the stroke survivor. This individual would need to be identified early in the process and this individual should be in contact with the stroke survivor early in the discharge process.

Other barriers encountered were related to therapist/HCP buy-in and use. It is important when starting any project to ensure that the program planned be readily accessible by the HCP. This plan may require working with the EMAR developers to hardwire the use of the guide into the charting to remind HCPs of the guide's availability. Since the guide is geared for stroke survivors, the HCPs may not be as consistent in utilizing it because it is not part of their standardized discharge process for all patients

In conclusion, an easily accessible guide filled with pertinent information for stroke survivors that is deliverable as a hard copy or a web-based document will make referral to community-based exercise programs possible.

Future Work

The next steps include collaborating with Inpatient acute and inpatient rehab units to implement the SAAS Guide at the beginning of care. It has been determined that there is a need for this type of intervention in other areas as well. This template/model of education and customized recommendations for activity can be developed for other neurologic conditions, e.g. Parkinson's, Multiple Sclerosis, and spinal cord Injury.

In recognition of the need for accessible community-based exercise programs for stroke survivors and others with neurologic challenges, a wellness program for persons with neurologic challenges has been developed in partnership with the local YMCA. This program incorporates the AHA recommendations for cardiovascular exercise and strengthening in a group format modified for individuals based on their need. It allows for individual and group coaching on wellness topics including sleep, nutrition, social and emotional health in a format that allows participants to reflect and develop their own goals

References

1. Mozaffarian D, Benjamin E, Mackey R, et al. Executive Summary: Heart Disease and Stroke Statistics--2016 Update: A Report From the American Heart Association. Circulation [serial online]. January 26, 2016;133(4):447-454. Available from: CINAHL Complete, Ipswich, MA. Accessed June 11, 2018.
2. Billinger, S. A., Arena, R., Bernhardt, J., Eng, J. J., Franklin, B. A., Johnson, C. M., & ... Tang, A. (2014). Physical activity and exercise recommendations for stroke survivors: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke (00392499)*, ***45***(8), 2532-2553 22p. doi:10.1161/STR.0000000000000022
3. Gordon, C. D., Wilks, R., & McCaw-Binns, A. (2013). Effect of Aerobic Exercise (Walking) Training on Functional Status and Health-related Quality of Life in Chronic Stroke Survivors: A Randomized Controlled Trial. *Stroke (00392499)*, *44*(4), 1179-1181 3p. doi:10.1161/STROKEAHA.111.000642
4. Taylor-Piliae, R. E., & Coull, B. M. (2012). Community-based Yang-style Tai Chi is safe and feasible in chronic stroke: a pilot study. *Clinical Rehabilitation*, ***26***(2), 121-131 11p. doi:10.1177/0269215511419381
5. Immink, M. A., Hillier, S., & Petkov, J. (2014). Randomized Controlled Trial of Yoga for Chronic Poststroke Hemiparesis: Motor Function, Mental Health, and Quality of Life Outcomes. *Topics In Stroke Rehabilitation (Thomas Land Publishers Incorporated)*, ***21***(3), 256-271 16p. doi:10.1310/tsr2103-256
6. Cramp, M., Greenwood, R., Gill, M., Lehmann, A., Rothwell, J., & Scott, O. (2010). Effectiveness of a community-based low intensity exercise programme for ambulatory stroke survivors. *Disability & Rehabilitation, **32***(3), 239-247 9p. doi:10.3109/09638280903095916
7. Harrington, R., Taylor, G., Hollinghurst, S., Reed, M., Kay, H., & Wood, V. (2010). A community-based exercise and education scheme for stroke survivors: a randomized controlled trial and economic evaluation. Clinical Rehabilitation, 24(1), 3-15 13p. doi:10.1177/0269215509347437
8. Cameron V. Best practices for stroke patient and family education in the acute care setting: a literature review.*Medsurg Nurs*. 2013;22(1):51-55.
9. Lau, C., Chitussi, D., Elliot, S., Giannone, J., McMahon, M., Sibley, K. M., & ... Salbach, N. M. (2016). Facilitating Community-Based Exercise for People With Stroke: Cross-Sectional e-Survey of Physical Therapist Practice and Perceived Needs. *Physical Therapy, **96***(4), 469-478 10p. doi:10.2522/ptj.20150117
10. Dang, D., & Dearholt, S. (2017). Johns Hopkins nursing evidence-based practice: model and guidelines. 3rd ed. Indianapolis, IN: Sigma Theta Tau International
11. Eames S, Hoffman T, Worrall L, Read S. Stroke patients' and carers' perception of barriers to accessing stroke information. ***Topics** Stroke Rehab.* 2010;17(2):69-78.
12. Eames S, Hoffmann T, Worrall L, Read S. Delivery styles and formats for different stroke information topics: patient and carer preferences. *Patient Educ Counsel.* 2011;84:e18-e23.
13. Lowe D, Sharma A, Leathley M. The CareFile Project: a feasibility study to examine the effects of an individualized information booklet on patients after stroke. *Age Ageing.* 2007;36:83-89.
14. O'Connell B, Hawkins M, Botti M, Buchbinder R, Baker L. Providing information to stroke survivors: lessons from a failed randomised controlled trial. *J Austr Rehab Nurses' Assoc.* 2009;12(3):4-10.
15. Rose T, Worrall L, Hickson L, Hoffman T. Aphasia friendly written health information: content and design characteristics. *Int J Speech-Lang Pathol.* 2011;13(4):335-347.
16. Korner-Bitensky N, Roy M, Teasell R, et al. Creation and pilot testing of StrokEngine: a stroke rehabilitation intervention website for clinicians and families. *J Rehab Med.* 2008;40(5):329-333.
17. Sullivan K, White K, Young R, Scott C, Mulgrew K. Developing a stroke intervention program: what do people at risk of stroke want? *Patient Educ Counsel.* 2008;70:126-134.
18. Danzel et al 2015 "A lot of things passed me by": a rural stroke survivors and caregivers experience of reciving education from hcps Journal of rural health
19. SmartSheet https://www.smartsheet.com/s/smartsheet. Accessed September 13.2016
20. Ada, L., Dean, C., Hall, J., Bampton, J., & Crompton, S. (2003). A treadmill and overground walking program improves walking in persons residing in the community after stroke: a placebo-controlled, randomized trial. *Archives Of Physical Medicine & Rehabilitation, **84***(10), 1486-1491 6p.
21. Mayo, N. E., MacKay-Lyons, M. J., Scott, S. C., Moriello, C., & Brophy, J. (2013). A randomized trial of two home-based exercise programmes to improve functional walking post-stroke. *Clinical Rehabilitation, **27***(7), 659-671 13p. doi:10.1177/0269215513476312
22. Nissan-Lavi, L., & Carmeli, E. (2009). Stroke patients in the community: comparison of the effect of physical therapy group training and walking training. *Journal Of The Israeli Physical Therapy Society (JIPTS)*, *11*(1), 28-28 1p.
23. Bastille, J., & Gill-Body, K. (2004). A yoga-based exercise program for people with chronic poststroke hemiparesis. *Physical Therapy, 84*(1), 33-48 16p.
24. Lynton, H., Kligler, B., & Shiflett, S. (2007). Yoga in stroke rehabilitation: a systematic review and results of a pilot study. *Topics In Stroke Rehabilitation (Thomas Land Publishers Incorporated), **14***(4), 1-8 8p
25. Miller, K. K. (2013, January). Therapeutic-yoga after stroke: Effect on walking recovery. *Therapeutic-yoga After Stroke*, 73 p.
26. Schmid, A., Van Puymbroeck, M., Miller, K., & Schalk, N. (2012). P02.166. Group yoga intervention leads to improved balance and

balance self-efficacy after stroke. *BMC Complementary & Alternative Medicine, 12*(Suppl 1), 1-1 1p. doi:10.1186/1472-6882-12-S1-P222
27. Hart, J., Kanner, H., Gilboa-Mayo, R., Haroeh-Peer, O., Rozenthul-Sorokin, N., & Eldar, R. (2004). Tai Chi Chuan practice in community-dwelling persons after stroke. *International Journal Of Rehabilitation Research, 27*(4), 303-304 2p.
28. Taylor-Piliae, R., & Haskell, W. (2007). Tai Chi exercise and stroke rehabilitation. *Topics In Stroke Rehabilitation (Thomas Land Publishers Incorporated), 14*(4), 9-22 14p.
29. Taylor-Piliae, R. E., Hoke, T. M., Hepworth, J. T., Latt, L. D., Najafi, B., & Coull, B. M. (2014). Effect of Tai Chi on Physical Function, Fall Rates and Quality of Life Among Older Stroke Survivors. *Archives Of Physical Medicine & Rehabilitation, 95*(5), 816-824 9p. doi:10.1016/j.apmr.2014.01.001
30. American Heart Association. (April 2018) American Heart Association Recommendations for Physical Activity in Adults. https://www.heart.org/en/healthy-living/fitness/fitness-basics/aha-recs-for-physical-activity-in-adults
31. Tripp, F., & Krakow, K. (2014). Effects of an aquatic therapy approach (Halliwick-Therapy) on functional mobility in subacute stroke patients: a randomized controlled trial. Clinical Rehabilitation, 28(5), 432-439 8p. doi:10.1177/0269215513504942
32. Zhang Y, Wang Y-Z, Huang L-P, Bai B, Zhou S, Yin M-M, Zhao H, Zhou X-N, Wang Aquatic Therapy Improves Outcomes for Subacute Stroke Patients by Enhancing Muscular Strength of Paretic Lower Limbs Without Increasing Spasticity A Randomized Controlled Trial Am J Phys Med Rehabil 2016;00:00Y00. 10.1177/0269215515593392
33. Zhizhong Zhu1, Liling Cui1, Miaomiao Yin1, Yang Yu1, Xiaona Zhou1, Hongtu Wang1 and Hua Yan2 Hydrotherapy vs. conventional land-based exercise for improving walking and balance after stroke: a randomized controlled trial DOI: 10.1177/0269215515593392
34. SurveyMonkey® https://www.surveymonkey.com/?ut_source=sem_lp&ut_source2=home&ut_source3=header. Accessed August 12, 2016.

Julie Carr MSN, RN, NPD-BC is a rehab nurse educator involved in the multidisciplinary study to improved stroke survivors return to activity post stroke.

Katherine Callanan PT, DPT, GCS, CEEAA works in outpatient neuro rehab specializing in providing clients with individualized treatment to maximize their functional mobility while promoting overall wellness and community reintegration.

Julie Swanson, MN, RN, NEA-BC is a program manager who is involved in the work of designing, improving and innovating clinical practice to achieve patient centered outcomes through engagement in project-based activities.

Clinical Considerations in the ICU and Resources to Promote Patient Advocacy in the Reduction of Delirium

by Kathryn Reeves PT, DPT

The intensive care unit in any hospital can be a daunting place to practice as a physical therapist. In order to do so safely and effectively there are many things to take into consideration. If you prepare your knowledge base and master the "art" of communicating precisely within the fast-paced ICU team, then it can also be a very rewarding place to work.

There is a litany of evidence available that favors early mobility in the ICU and its impact on decreasing ICU length of stay and overall hospital length of stay.[1,2,3,4] I cannot express enough how important the role of physical therapy is for patients in this setting. Physical therapists have advanced knowledge in human movement, rehabilitation of injury, and the ability to perform differential diagnosis.

In the grand scheme of medicine and critical care, everyone involved in caring for these patients wants them to do well and obtain the best quality of life possible. So why do so many perceived barriers seem to exist when physical therapy enters the arena? Barriers such as the placement of lines and tubes, the support of the nurses and other team members, the presence of advanced life support equipment or medications to maintain hemodynamic stability, and the arousal level of patients, just to name a few, all play important roles in determining someone's ability to participate in therapy services. The reality is, you may always encounter potential barriers, but with the right knowledge and confidence to speak to the team you can reduce them. The culture shift starts with you.

Be an Advocate for PT

You have to remember that it is your responsibility to represent the profession and your role as a *consultant* in the ICU. When PT is consulted many staff assume it's to exercise a patient. As you know, it is much more complex than that, but can you describe to another healthcare provider what our role entails? Define this and begin advocating for your profession. Do not simply ask for permission to see a patient. Instead explain why you are there, what you know about the patient, and what you plan to do with them. Request feedback from the other team member to see if they have any concerns or if they agree with your plan of care. If they do not agree find out why. That way you are encouraging interdisciplinary collaboration to achieve the best intervention for your patient at that time.

Physical therapists must understand how and why the ICU is different from acute level floors and what ma-

chines or medications exist here that make this setting unique. I encourage you to find a mentor in this setting and learn from them. A colleague on your rehab team is a good place to start, but I would also encourage you to get to know someone on the ICU team such as an NP, PA, RT, or critical care MD that would be willing to engage in discussion and mentoring with you. This encourages teamwork and will facilitate their trust in your role as a consultant on their team. Once you are comfortable with that aspect of going into the ICU it is time to focus your attention on the person in the bed.

For purposes of this publication, I want to pay closer attention to the treatment of elderly patients in the critical care setting, how we can play a role in the detection and treatment of ICU delirium, and how to have the necessary discussions with the team to effectively advocate for patients. I call these "critical conversations."

The average length of hospitalization for older adults greater than 65 is twice that of patients younger than 50.[8] With advancing age, older patients tend to have more comorbid chronic illnesses and disability, making them more vulnerable during hospitalization to adverse events, including nosocomial complications, adverse drug reactions, and ICU acquired delirium.[9] Another caveat to consider is that despite the disproportionate prevalence of hospitalized patients who are in the older age range, hospitalist programs often do not emphasize the need for geriatric skills.[10] As you prioritize your patient list, your patients over the age of 65 should be a higher priority, as they will face more obstacles to recovery and need your expertise and patient advocacy to get moving again. This is especially true in the days of rising COVID-19 cases and lengthened recoveries where many hospitals are not allowing families or visitors at bedside to advocate for their loved ones.

Delirium

Delirium in the intensive care unit (ICU) represents an acute form of organ dysfunction; this manifests as a rapidly developing disturbance of both consciousness and cognition that tends to fluctuate throughout the course of a day.[5] Mechanically ventilated patients are more likely to develop ICU delirium than non-mechanically ventilated patients, and their risk will increase by 2% per year after the age of 65. [6,7] Multiple studies have found that the number of days an ICU patient is delirious is associated with numerous adverse outcomes including cognitive impairment, physical disability, and death in the year following a critical illness.[7]

While prevention of delirium would be ideal, it is important to understand that often, the insult causing the delirium is the critical illness leading to ICU admission. As a physical therapist, you can play an active role in the treatment of delirium once detected to reduce a patient's time on mechanical ventilation, reduce risk of requiring tracheostomy, reduce ICU length of stay, and improve overall functional and cognitive outcomes.

Three risk factors that should be targeted for delirium prevention and treatment are immobility, the use of sedatives, and sleep disruption. Understanding the involvement of these risk factors will better serve you in opening a dialogue of discussion with your medical team.

Sedation

How often do you have to hold your intervention because a patient is intubated and sedated? Discuss with the team the reason for the sedation and if it is possible to reduce their sedation for you to assess their cognition and arousal levels. Some patients can participate while on sedatives. Some are sedated because of agitation which may be treated simply instead by waking them up and allowing them to get out of the bed — yes, even on the ventilator. The ABCDEF bundle, which is an ICU Liberation initiative through the Society of Critical Care Medicine, promotes daily sedation holidays. Two common assessments used at the bedside include the CAM ICU assessment for delirium and the Richmond Agitation-Sedation Scale (RASS) to assess arousal. I often use these scores to discuss participation goals with the team. For example, a patient who has a RASS of -3 means they are under moderate sedation and may not be ready for PT due to inability to purposefully participate. I would let the team know that if we could improve their score to a RASS of -2, I would be ready to initiate therapy. I follow up with a question regarding what could be done to get them to that point. Evaluate the person's ability to participate with a RASS of -2 and let the team know how they tolerated it. This provides the feedback they need to determine if it's time to reduce sedation further.

Early Mobility

The push for early mobility in the ICU is gaining momentum across the country but when you hear this term what does it mean to you? The obvious response is that PT and OT should be consulted as early as possible. But the ICU Liberation campaign through the Society of Critical Care Medicine takes this further. They have created the ABCDEF bundle that lays out objectives to promote early mobility for patients. It places responsibility on other team members to prioritize the treatment of pain, reduce sedation, be selective on the choice of sedatives used to prevent delirium, encourage family engagement and empowerment, and, of course, early mobility and exercise.

I also consider the placement of lines and equipment to be essential in promoting mobility. For example, if a barrier to the person getting out of bed is femoral access for CRRT (continuous renal replacement therapy, a slower type of dialysis for medically unstable patients), I will speak with the nephrologist and let them know. I open a dialogue to discuss the possibility of moving this access. Or I discuss timing with the nurses to complete a patient's

out-of-bed treatment when they have paused CRRT to change the filters. It is absolutely in your scope of practice to identify potential equipment or medication barriers and discuss these with the medical team to reduce bed rest in order to promote mobility.

The role of rehabilitation services in the hospital and intensive care setting is needed now more than ever. Changes in health care reform and reimbursement for post-acute rehab settings continue to shift with a resultant decline in the availability of services after someone is discharged from the hospital. On the opposite end of the spectrum, medical care is advancing at an exponential rate. People are surviving critical illness and returning to the community, but at what cost? I urge you to ask yourself, "What can I do now to get ahead of the curve and impact the recovery of these patients?" Consider this question early and advocate for those who are the most at risk.

Familiarize yourself with the following website www.icudelirium.org as this gives extensive up-to-date resources for clinicians and goes into detail regarding the ABCDEF bundle including tools to support your ability to implement this at your institution. More importantly, share this with your patients and their families so they can also feel empowered to make better decisions involving their care.

Suggested Reading:

Hodgson et al. Expert consensus and recommendations on safety criteria for active mobilization of mechanically ventilated critically ill adults. *Critical Care* (2014) 18:658

References

1. Stiller K: Physiotherapy in intensive care: towards an evidence-based practice. Chest 2000, 118: 1801-1813.
2. Stiller K: Physiotherapy in intensive care: an updated systematic review. Chest 2013, 144:825-847.
3. Burtin C, Clerckx B, Robbeets C, Ferdinande P, Langer D, Troosters T, Hermans G, Decramer M, Gosselink R: Early exercise in critically ill patients enhances short-term functional recovery. Crit Care Med 2009, 37:2499-2505.
4. Denehy L, Skinner EH, Edbrooke L, Haines K, Warrillow S, Hawthorne G, Gough K, Hoorn SV, Morris ME, Berney S: Exercise rehabilitation for patients with critical illness: a randomized controlled trial with 12 months of follow-up. Crit Care 2013, 17:R156.
5. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. Fourth edition, text revision. Washington, DC: American Psychiatric Association; 2000.
6. Fischer M, Harb J, Josef, K: Delirium prevention, assessment, and treatment by the physical therapist. GeriNotes Vol. 23, No. 6 2016
7. Brummel, N, Girard, T. Preventing delirium in the intensive care unit. Crit Care Clin 29 (2013) 51-65.
8. http://www.cdc.gov/nchs/data/series/sr_13/sr13_165.pdf#table. Accessed July 9,2020.
9. Landefeld CS. Care of hospitalized older patients: opportunities for hospital-based physicians. J Hosp Med 2006; 1:42.
10. Landefeld CS. Care of hospitalized older patients: opportunities for hospital-based physicians. J Hosp Med 2006; 1:42

Kathryn Reeves is a Senior Staff Physical Therapist at Memorial Hermann Hospital in Houston, TX. She is the Program Coordinator for the Acute Care Physical Therapy Residency Program at Memorial Hermann Hospital. She has been a clinician in the acute care setting for eight years with advanced proficiency in the ICU following graduation from Houston Methodist Hospital's Critical Care Fellowship program in 2016. She has included a suggested reading reference.

Presenting the Candidates for the 2020 Election

The nominating committees of APTA Geriatrics present to the membership the following list of candidates for the 2020 election. Please review the candidates in preparation for the election that will be held in October 2020 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: President

Christine Childers, PT, BSc (Hons), MS, PhD

Board-Certified Clinical Specialist in Geriatric Physical Therapy

Change is here – Change is happening! When APTA Geriatrics launched the new branding amid concerns of payment systems, little did we know that weeks later members would be struggling to home school children, work from home, teach online, be laid off or coping with increased PPE and telehealth.

Moving forward, change is essential. Every PT will need geriatric skills – the Boomers are here. Geriatrics must become the most influential APTA section, as geriatric clients will dominate the profession. How do we do this? The answer: Together. My goal is to bring members and leaders together to adapt and elicit change.

Why me? Why not? I am British, reserved and respected. I am a hard-working, innovative leader who thinks outside the box. I take calculated risks, analyze outcomes and will admit mistakes. I lead by example. I develop strong teams which will be the section membership. I embrace change as the opportunity to learn and grow. Can I lead the section through change? Try me.

Cathy Ciolek, PT, DPT, FAPTA

Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults

Over the last 2.5 years as Vice-President I have tried to lay the groundwork for an improved APTA Geriatrics, one that continues the excellent continuing education and advocacy, while re-framing the image of "geriatric PT" and supports members' passion for what we do. Too often, our members' work has been under-valued and under-appreciated by our peers and society, I believe APTA Geriatrics' recent rebranding and partnership efforts are starting to change that.

My vision for the association is that every member finds the resources, support and community they need to be the best clinician, educator or researcher. COVID may impact some of our operations, so I believe we must find innovative ways to expand learning opportunities and connect our clinical community together. Thank you for your continued support for the work of APTA Geriatrics and for the care you provide your patients every day. I ask for your vote for President, so together we can continue to help society #AgeOn.

Board of Directors: Vice President

Michelle Criss, PT, DPT, PhD

Board-Certified Clinical Specialist in Geriatric Physical Therapy

Thank you for considering my candidacy. While I have been on a service hiatus due to my PhD, I remained connected to APTA Geriatrics by involvement in the Program Committee and GeriEdge work groups. I have served APTA Geriatrics as Regional Course Chair (2002-2009) and on the Nominating Committee (2011-2014). My biggest strengths are that I am organized and dependable – When I say I will get something done, it gets done. I enjoy group brainstorming and am open to creative solutions and thinking. These qualities make me well suited for one of the main VP duties: liaison to the SIGs. For vision, I want APTA Geriatrics to be known as a collaborative leader in the care of aging adults, that provides valuable services to members and the public. We already lead with excellent resources, a peer-reviewed journal, and partnerships fostered by our Board and SIGs. I am concerned with the low level of interest in geriatrics and social media postings from young PTs/PTAs who question why they went into the PT field in the first place. This points to a need to continue clearly articulating this value.

Greg Hartley, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults, Fellow National Academies of Practice

I have served as President since 2018. During this time, we completed many large projects including a rebranding campaign, changing association management, advancing social media, contributing to national advocacy efforts, establishing partnerships with other organizations, and forming task forces on Best Practice, Diversity (DE&I), and Governance. 2020 brought new challenges: a pandemic and struggles with racial injustice. Both impact the Academy. I am committed to our long-term sustainability. I believe we should consider changes in governance to include succession planning. In that spirit, I am running for VP instead of a second term as President. If elected, my tenure as VP will facilitate the completion of many tasks already started while allowing other members the opportunity to steer the ship. I care deeply about APTA Geriatrics and I hope to continue in a leadership role. I kindly ask for your vote. #AgeOn

Mindy Oxman Renfro, PT, DPT, PhD

APTA Geriatrics has been the focus of my service to our profession throughout my career in geriatric physical therapy. My active research, community service, and clinical focus on fall prevention, aging-in-place, home modifications, and public health for our rapidly aging society has been pivotal and interdisciplinary at local, state, national and international levels. Our profession must step up and be the primary service provider to preserve and/or restore active independence and safe mobility for our large Baby Boomer population. As educators for our profession, we must engage our students in a world without ageism that understand the needs during aging and values the health and wisdom of our elders.

I pledge to continue to work closely with and to be a positive representative of APTA Geriatrics and APTA in my continued work with the National Council on Aging, the American Society on Aging and the Gerontological Society of America. As a member of the NCOA/USC Home Modifications expert panel, I will bring PT back into the team for home modifications to allow our elders to age-in-place. Thank you.

Board of Directors: Director

Keith G. Avin, DPT, PhD

I am excited for the opportunity to be considered for the position of Director. I am currently an Associate Professor in the Department of Physical Therapy at Indiana University. In 2011, I began working with APTA Geriatrics as a member of the Falls work group. I have since gained further experience as the lead for an evidence-based osteoporosis document, continued Falls working group member and as the AGPT Practice Chair from 2017-2019. My evolution from working group member to Practice Chair has allowed me to capture the Academy from different lenses, learning how to effectively work at the macro and micro levels to achieve our mission. I am able to communicate well with others, problem-solve with unique approaches and appreciate other perspectives when developing equitable resolutions. The Academy is not a stagnant organization, but rather one that continually tries to improve and identify novel ways to impact older adults. I want to help lead this continued evolution.

Jacqueline Osborne, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy

I have been a member of APTA Geriatrics for over 17 years. As a member of your current Board of Directors, I have led exciting initiatives including implementing partnerships (NSGA, NCOA), transitioning *GeriNotes* to a digital platform, leading efforts to appoint our *JGPT* Editor-in-Chief, and facilitating our collaborative Journal Club that translates research knowledge into clinical practice. I have contributed to *GeriEDGE* and *GeriNotes*, served the Residency and Fellowship SIG, appealed to the CMS for PTs and PTAs to deliver telehealth services, and contributed to resources to safeguard high quality care during COVID-19. As a clinician, I want to continue to work for the resources you need. Even though our society is full of ageism, I have hope because of your commitment to our organization. My vision for APTA Geriatrics includes positioning ourselves as an indispensable geriatrics resource to all PTs and PTAs, other health care providers and the community of aging adults we all serve.

Michael L. Puthoff, PT, MPT, PhD

I have served APTA Geriatrics through task forces, special projects, and providing education. This includes the Exercise and Physical Activity and Aging Conference I and II steering committee, presentations at CSM, publishing in *JGPT,* and most recently a task force to create an Annual Visit for Aging Adults. I want to do more and now is the time. I am a faculty member at St. Ambrose University, served as program director for seven years and am now the Dean of Graduate Studies. Through these positions, in addition to my service to the community, I believe I have the experience, knowledge of issues facing our profession and passion to be an effective leader in our organization. My vision for APTA Geriatrics is we continue to reframe aging as a gift and that our members have a duty to support a meaningful aging experience. This means working at the personal level, but also at the societal level. As a Director, I want to help lead efforts such as these and contribute to the work already being done.

Pradeep Rapalli, PT, MBA

I feel honored to be considered for the director position for the Academy. I will do my very best to serve its stakeholders. I have volunteered for APTA Geriatrics in the past in various roles. I am focused to promote the rehabilitation services through telehealth, and education through online learning, even after this pandemic ends as our nation adjusts to the "New Normal." I am a strong believer and promoter of the annual PT exam and involving rehab in primary care. I envision constant innovation and evidence-based practice to counter the setbacks and challenges that we face. I am also committed to increasing the PT and PTA memberships in our Academy including students at different levels. Recently, I have been getting involved as one of the administrators in the Canvas platform which is being built by the Academy to help the aspiring GCS exam candidates. I am confident that my knowledge, leadership skills, and compassion will help me to serve the Academy to achieve its vision.

Nominating Committee: Member

Frank Bates, PT, DPT, MBA

Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults

I enthusiastically welcome the opportunity to support the APTA Geriatrics mission "building a community that advances the profession of physical therapy to optimize the experience of aging" by serving on the Nominating Committee. I desire to further the Academy's growth by contributing what I have learned during my professional service, which includes two terms on my state chapter executive committee, representing my state as delegate, and serving on state and national task forces and committees, as well as roles in FSBPT and CAPTE.

I am continually impressed with the strong, enthusiastic leadership of the Academy. However, based on my previous nominating committee experiences in my chapter and another academy, some qualified individuals never considered an elected leadership position. Sometimes they simply need a personal "ask". Through networking, a nominating committee member can also find volunteers for open appointed positions and can even encourage nonmembers to join membership.

Haim D. Nesser, PT, DPT

As a passionate member of APTA Geriatrics and APTA New Jersey, I am committed to fulfilling the role of Nominating Committee to the fullest extent of my abilities. My CV demonstrates a consistent track record of leadership roles that achieved positive results for our older adults, our profession, and members of APTA Geriatrics and APTA New Jersey. I continuously work to improve, maintain and pursue new professional relationships and partnerships in and out of our professional realm in order to benefit our profession, APTA members and general public at large. I appreciate hard work, professionalism, commitment to personal and professional growth, evidence-based practice and team work.

Jennifer Rouse, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults

I am honored to be considered for this position. I have been privileged to learn from strong leaders at the state and national level. Due to their efforts, we have continued to push our profession forward. My vision for the future is to continue to advocate for the aging adult by supporting research, developing quality education, reimbursement, and working to continue to expand community-based programs to ensure underserved areas have improved access. If elected, I hope to identify future strong leaders to continue to push our profession forward.

I have worked in a wide variety of settings including acute care, SNF, outpatient, and management. I am Co-chair for the State of Iowa Academy of Geriatric Physical Therapy Advocates. I have also continued serving in community-based fall prevention programs such as *A Matter of Balance*. I have lived and worked in both rural and metropolitan Iowa, giving me an understanding on many issues facing the aging adult.

Eleazar Tayag, PT, DPT, MPH

Board-Certified Clinical Specialist in Geriatric Physical Therapy

Being both a minority and a foreign-educated physical therapist, my journey of learning another culture, starting my family, working on my professional advancement and establishing my own businesses all at the same time in a foreign land, equipped me with perseverance to lead, humility to learn from failures and the appreciation of community in the pursuit of success.

APTA opened the doors for me to be heard. I became more engaged and advocate for what matters in our industry. I realized that it is about time for me to give back to the profession and the country that provided me all the opportunities that I never imagined possible. I became a laboratory assistant/volunteer with the Advanced Competency in Home Health and commit to volunteering more time for APTA. When I become a member of the Nominating Committee of APTA Geriatrics, I will endeavor toward equal representation of all minority groups, steering towards a more diverse, equal, and inclusive leadership.

Balance and Falls SIG: Nominating Committee Member (will elect 2)

Deborah Constantine, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy

My passion is to promote optimal aging for the older adult. As such, I have been involved in community, regional, and state level organizations which share the same goal. I bring over 30 years of clinical practice, five years' teaching experience and interpersonal collaboration to the position of Nominating Committee. My skill set additionally involves positive interpersonal skills, diplomacy, honesty and fairness.

I anticipate promoting the goals of APTA Geriatrics by encouraging fellow physical therapists to serve their professional board by utilizing their experience, gifts, and talents. I will seek opportunities to help colleagues promote their professional values and support for older adults in their sphere of influence and beyond. Many physical therapists desire to serve but are unaware of the steps to take to become leaders. My role on the Nominating Committee will be to empower therapists with vision and courage to seek personally compatible positions in APTA Geriatrics.

Emily Polakowski, PT, DPT

As a recently certified Geriatric Clinical Specialist with three years of PT experience, I am looking for ways to become more involved in APTA. As a relatively new member to the Geriatrics Academy and field of physical therapy, I may not have as much experience in an APTA leadership role as others, but I am passionate about the older adult population and improving care by providing best practices.

I believe that my lack of experience can serve as a strength as it will help me engage with others who are also looking to get involved in APTA Geriatrics and the Balance/Falls SIG. I have recent experience as a new-grad looking to find my place in APTA and I currently serve as Program Coordinator for the Geriatric SIG in Connecticut's APTA chapter. I've assisted the Academy with several small volunteer projects and I look forward to meeting new members and finding ways for everyone to engage with the SIG.

Anandbabu Ramadass, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy

I am Anandbabu Ramadass, academician and clinician in geriatric setup. I am a member of the Diversity, Equity & Inclusion Review Task Force of APTA Geriatrics. I have also completed an MS in psychology, PG Dip in yoga and hospital administration. I am an Advanced Credentialed Clinical instructor and Advanced Credentialed Exercise Expert in Aging Adults (ACEEAA). I am a recipient of the IAP Oration award 2015 from the Indian Association of Physiotherapists.

With multiyear experience I feel that my teamwork and coordination skills, passion and organization are best suited and well aligned with the goals and requirements of this position. My goal is to encourage clinicians and other caregivers to provide effective care to reduce falls and promote health and wellness aligning with current evidence. I always wish to give my best to my patients and community. Given my experience in a variety of settings and educational background in psychology, yoga and administration, I can be a valuable asset to the SIG.

Bone Health SIG: Nominating Committee Member (will elect 2)

Bethany Ann Castellini, PT

When I graduated from PT school in 1988, I had no idea where my career would take me. My professional path has been almost exclusively with older adults. I started in acute care and proceeded to follow the clients to SNF, HH, and OP on ALF campuses. Each position has started at the beginning - as a staff therapist that often progressed to management roles. My experience expanded into involvement with data analytics of outcome measures specific to OP in AL/IL settings. In 2018, I had the pleasure to participate in a year-long Leadership Academy program. My Core values of passion, fairness, balance, kindness and responsibility led to my realization that it was time to be more involved with our profession, as well as advocating for the clients we are essential in serving by becoming the APTA Geriatrics CO State Advocate. Our current healthcare crisis further supports my commitment to unite and engage our peers in showcasing our skills to promote health and wellness for the older adult.

Marissa Lynn Cruz, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Brain Injury Specialist

I am a Board Certified Geriatric Clinical Specialist with several years of experience in various clinical settings. Throughout my career I have been able to advocate and promote the geriatric population through direct patient care, FSBT item writing, administrative roles, participation in the Bone Health, Cognitive and Mental Health and Balance and Falls SIGs, CSM Nominating Committee, CSM presentations, and through my work with the Home Health Section Practice Committee on various projects including development of the Geriatric Toolbox II.

This experience has afforded me the ability to not only advocate for the geriatric person, but also to appreciate the necessity for engaging and innovative representation. In this role I envision a collaborative and open approach to ensure the best candidacy for Bone Health SIG officers. I anticipate that this position will allow me to help promote the best representation for both out patient population and profession at large.

Anand Vyas, BPT, MS, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults

I believe working for the BHSIG, can not only be helpful to the Academy, but it will also help me to increase my knowledge. I have worked in the home health setting for the past 10 years and have enjoyed it even more after receiving my CEEAA and GCS. Certainly, the Academy has helped my practice a lot by increasing my knowledge in geriatric rehab. My main reason for running for this position is that I want to be connected and associated with the Academy and give back for helping me grow professionally. I would like to assist in anyway I can. As a leading organization in geriatric rehabilitation I think, together, we can provide a lot to the community in the coming years by changing the guidelines of geriatric rehabilitation; providing more resources, information and guidance; improving the geriatric population's over-all well-being; and, certainly, improve geriatric physical therapists' ability, knowledge and confidence.

Cognitive and Mental Health SIG: Nominating Committee Member (will elect 2)

Jean D. Miles, PT, DPT

Although I've been a PT for over four decades, I'm still so energized by the opportunities in our profession! As a home care PT and member of the Quality Assurance Performance Improvement team I focus on optimal mobility for persons with neurocognitive impairment to keep people engaged instead of hopeless. I believe we're all students because we all still have so much to learn about dementia, but my strength might lie in my passion for moving us forward as I advocate for new approaches. My workplace granted me funds to obtain four Cubii floor elliptical machines to start a program for our most impaired residents. I'm working on a purple bag program which is a comfort item specific to the person, plus information/photos to show the essence of who they are if they can't do it verbally. My vision is a future that values older persons and sees their full capacity. If elected to the nominating committee I will do my best to find candidates who will serve with optimism and enthusiasm. Thank you!

Rashelle Hoffman, PT, DPT, PhD

Board-Certified Clinical Specialist in Geriatric Physical Therapy

I share the mission of APTA Geriatrics to embrace aging 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 fellowship research focuses on biobehavioral methods to improve physical activity in several older adult populations. After completing my fellowship, I plan to progress intervention approaches for older adults with dementia.

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. Within APTA Geriatrics specifically, I served as a Nebraska Co-State Advocate and authored an article for *GeriNotes*. Upon election, I plan to bolster the SIG's networking from within and with other SIGs/Academies and expand the SIG's research resources.

Melissa Allen, PT, DPT, PhD

Board-Certified Clinical Specialist in Neurologic Physical Therapy, Certified Exercise Expert for Aging Adults

As a clinician and PT educator, I am passionate about Geriatric clinical practice, wellness, and health promotion. My goal is to become more involved with APTA Geriatrics to share my enthusiasm and vision for shifting our professional paradigm from a primarily reactive approach to more prominent emphasis on proactive, wellness and preventative screening strategies. I value the use of holistic screening measures that identify community members at risk for progression along the continuum of frailty. As PTs, our role as primary care providers should guide us to view our clients through a holistic lens including social determinants of health (such as food security, cognitive and mental health, and access to community resources) that have direct impact on an individual's physical performance and overall quality of life. I am motivated to advocate for the positive change in trajectory that our communities can experience when we emphasize holistic wellness for older adults.

Global Health for Aging Adults SIG: Vice Chair

Richard A. Black, PT, DPT, MS

I have been involved in international volunteer work for over 20 years and have been a part of the Global Health for Aging Adults SIG since it began in 2017. I wish to continue as the Vice Chair of the GHAA SIG to press on with our work developing and improving the SIG and enhancing the benefit it brings to members of APTA Geriatrics. We're still in our infancy as a SIG and have many things to do, but there is great enthusiasm in the Academy for developing international relations and sharing information with our colleagues around the world. The Global Health for Aging Adults SIG is an excellent vehicle for making these associations. I believe that this SIG can help us leverage the energy, skills, and knowledge of our members to promote connections and projects that improve the lives of older adults all over the globe. I ask for your support in this endeavor.

Jennifer Cruz Garcia Youssef, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults, Certified Lymphedema Therapist - Manual Decongestive Therapist, Certified Kinesio Taping Practitioner

I created a Balance and Falls Support group in Aging Adults using Facebook as a platform. It is a community of clients, caregivers and healthcare clinicians specializing in geriatrics and neurologic cases, that provides health and wellness content, highlights great clinicians and provides evidence-based fall prevention strategies. I hosted and moderated the Geriatric Rehab Summit that provides current knowledge and innovations in geriatric settings. I am also a Board of Trustee of FUTURE Foundation, a nonprofit organization that aims to uplift the global PT profession, mainly through education and fostering camaraderie and support for Filipino PTs practicing locally and internationally.

My vision for the APTA Geriatrics is to continue to hone great clinicians and developed Ambassadors who will educate aging and older adults regarding health and wellness using evidenced-based practice.

Paras Goel, PT, DPT, MEd

Post Graduate Diploma in Yoga Science, Diploma in Nutrition & Health Education , Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults, Certified Stroke Rehabilitation Specialist

I have been involved with APTA Geriatrics for the past few years and most recently as a California Geriatrics State Advocate. With my passion to serve the global physical therapy community and experience of working in various leadership positions internationally, I am closely aware of the role and responsibilities of Vice-Chair of APTA Geriatrics SIG Global Health for Aging Adults. Having served as a physical therapist, yoga therapist, and diabetes and health educator internationally, I am equipped to lead the community of APTA Geriatrics Global Health for Aging Adults in a position of leadership, to share my expertise and spread awareness about the physical therapy profession globally. My international educational and professional background along with specialized certifications in geriatrics and international healing methods, combined with 12+ years of physical therapy experiences in various settings, provides me with the skill set and communication tools to connect clinicians all over the world.

Global Health for Aging Adults SIG: Secretary

Hannah Johnson, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy

As a longtime member of APTA Geriatrics, I appreciate the Academy's roles in promoting the development and visibility of specialist practitioners within the larger healthcare community. I have over six years of experience working in skilled nursing facilities (SNFs), speaking to students on holistic management of persons with dementia, and publishing work related to aging adults with mental illness. Currently, I am working on my dissertation related to team documentation of restorative exercise programs for SNF residents. Based on these and other accomplishments, the strengths I bring to this role within APTA Geriatrics include attention to detail, conflict management, and communication skills.

Over the next five to ten years, I see the Academy working systematically through whatever obstacles may come, in order to grow the expertise of the physical therapy profession as a whole in caring for aging adults. Change takes time, insight and effort, and Academy members have all three.

Becca D. Jordre, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy

I graduated from Duke University in 2002 and practiced in rural Minnesota before taking a faculty position at the University of South Dakota 12 years ago. Along with teaching, I engage in research related to aging athletes and include PTs and student PTs from all over the country in this effort. My recent experience with APTA Geriatrics was chairing a task force for our partnership with the National Senior Games Association. That effort increased the visibility of the physical therapy profession to aging athletes and made me realize the importance of serving my profession more widely. It is my hope that by serving on the Global Health for Aging Adults SIG I will find opportunities to assist in their goals as they relate to a more global view of our profession. I love the idea of engaging both students and clinicians in more international outreach and learning. If given the opportunity to serve on this SIG I will apply my clinical and academic experience to help foster those goals.

Global Health for Aging Adults SIG: Nominating Committee (will elect 2)

Sushil Ramchandani, PT

Masters in Health Administration, Board-Certified Clinical Specialist in Orthopaedic Physical Therapy

The current global health crisis requires physical therapists to play a critical role in the health of aging adults. My physical therapy degree from the University of Alberta in Canada and MHA at the Gillings School of Public Health, UNC-Chapel Hill brings a unique perspective from two countries. The goal for physical therapists to become educators and implementers of programs to improve the quality of life for aging adults with chronic conditions is essential. My role will be to bring clinicians from different specializations together to be a part of the committee to help the active senior be independent, reduce their comorbidities and have a healthy lifestyle. I can accomplish this as I have served and have been involved with a variety of associations. I have been the Public Relations Chair with NCPTA. I have presented at CSM regarding E-vision. I am currently a committee member with the NC Tennis Adaptive Committee and Diversity and Inclusion Committee.

Soshi Samejima, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy

I am a foreign-trained PT (in Japan) and have worked in various settings as a PT in the United States, Japan, and Cambodia. My goal for this position is to develop a platform where PTs in the United States can contribute to the rehabilitation community in developing and developed countries. Further, I would like to create an opportunity for you to learn beneficial information about aging populations from other countries. For the last three years, I have contributed to this SIG as an NC with our excellent team with joy. We have created an infrastructure as a liaison of the international organization. I also plan to hold an educational session at CSM 2021 to introduce the Japanese strategy for health in an aging population. As a scholar, I have some projects which I would like to launch from this SIG, such as a formal translation of clinically meaningful outcomes like PROMIS into other languages. As mentioned, I would like to continue to work as a team member. Thank you so much for your consideration.

Ka-Chun (Joseph) Siu, PT, PhD

I have been serving the Global Health for Aging Adults SIG with global passion in care of geriatric populations since 2018. With my current academic leadership role in global education in physical therapy, I am well equipped in providing my extensive knowledge and experience to make a difference in the Global Health for Aging Adults SIG and APTA Geriatrics. My intent to serve is unstoppable!

Health Promotion and Wellness SIG: Secretary

Cassandra Hill, PT, DPT

Certified Wellness Coach

I am the proud daughter of two parents with English degrees, one of whom has over 25 years of experience as an editor so being a staunch and organized purveyor of the English lexicon was a requirement in my household, even as my heart was pulling me toward science and medicine. In three years of clinical experience working with older adults, I have adopted a holistic patient care management approach using additional skills from my Wellness Coaching Certification. I recognize the importance of intrinsic motivation and readiness for change not only in the therapist-patient relationship but within the fabric of organizations such as the HPWSIG. For the future of APTA Geriatrics, I'd like to see young, invigorated, Black professionals be able to serve the physical therapy community in spaces that are not just labeled "diversity and inclusion." I will provide good stewardship to the HPWSIG and carry out the mission and duties of the Secretary position, both passionately and conscientiously.

Katherine O'Malley, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults

I am a physical therapist who has a passion for treating older adults. In addition to patient care, I have been active in community outreach to educate older adults on fall prevention, diagnoses common with age and the benefits of physical activity for healthy aging at a local YMCA and senior centers. I have been a regular speaker at Matter of Balance courses. My vision for the future of APTA Geriatrics is for the organization to be more active with prevention of illness and promoting optimal aging.

Jennifer C. Sidelinker, PT, DPT

Board-Certified Clinical Specialist in Geriatric Physical Therapy

Thank you for considering me for this position. Regarding relevant experience, please consider that I currently serve as HPWSIG Secretary. I led development and dissemination of my organization's evidence-based care approach for fall risk management and helped guide organization-wide implementation of core standards for effective transitions in care. I am an APTA Geriatrics task force member, working with the NCOA to promote effective clinical-community partnerships. My experience with geriatric physical therapy in multiple care settings is extensive. Personal strengths include: organization, effective verbal and written communication and professionalism. I always strive to be a good listener, be open-minded and to be practical.

My ultimate aim is to model and facilitate integration of patient-driven care that supports sustainable health promotion and wellness across the continuum. This is what I believe should be the focus of APTA Geriatrics now and the vision for the future.

Health Promotion and Wellness SIG: Nominating Committee (will elect 2)

Michael Braitsch, PT, DPT

I am thrilled to run for the APTA Geriatrics Health Promotion and Wellness SIG Nominating Committee. My passion for our work has led me to many similar (unpaid, but really fun) roles. Currently, I serve on the nominating committee for the Texas Physical Therapy Association, on the planning committee for the UT Southwestern Adaptive Sports Expo, on the board of the Dallas Area Parkinsonism Society, and on the medical advisory board for the Adaptive Martial Arts Association and Dallas Area Parkinsonism Society. In addition to patient care, I lead nine group wellness programs each week for people with PD, to live well. I hope to harness this passion and relevant experience to encourage the best possible candidates to consider taking leadership positions so we can better position ourselves as movement experts and, in the future, can help shape the way community wellness programming works for seniors and those with chronic conditions.

David Michael Morris, PT, PhD, FAPTA

Currently, I am the Professor and Chair of the Department of Physical Therapy at the University of Alabama. I've held multiple leadership roles in several APTA components including President for the APTA Aquatic PT Section, Vice President/President for the Alabama Chapter of the APTA, Nominating Committee for Alabama Chapter of APTA, and I am currently Chair of the Catherine Worthingham Fellows Council. I have served as Chair of the HPW SIG and am currently on the Nominating Committee for the SIG; current term will end at CSM 2021. I've been an active member of the APTA for 36 years. These experiences and others have given me first-hand experience with leadership roles at multiple levels which will allow me to identify those with qualifications to fulfill these roles. I have also become well-connected with members throughout the APTA and can network effectively to identify potential leaders. I have extensive experience with and a passion for promoting the role of PT practitioners to integrate health promotion and wellness into their professional duties.

Nola Peacock, PT, MPT, DSc
Board-Certified Clinical Specialist in Geriatric Physical Therapy

Decades ago, as a new PT, I had a lot to learn. I did however know two things for sure. I enjoyed working with older adults and loved health promotion. These certainties shaped my early practice and the focus of my work today. I am Board Certified in geriatric physical therapy and a Board-Certified health coach. I am the Lifestyle Medicine Coordinator at St. John's Health in Jackson, Wyoming. I work with Age Friendly, a group that ensures inclusivity of older adults. I volunteer as an ambassador for the National Osteoporosis Foundation.

I have served as an APTA Geriatrics state advocate since 2014. I am active in APTA's Council on Prevention, Health Promotion, and Wellness. I serve on the American College of Lifestyle Medicine Rehab Member Interest Group steering group. As a nominating committee member, I will create relationships that promote APTA Geriatrics' and the SIG's goals. My vision is that all geriatric PTs will promote and provide wellness services for older adults.

Residency and Fellowship SIG: Vice Chair

Jill FitzGerald, PT, DPT
Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults, Certified Strength and Conditioning Specialist

If elected to this position, I am committed to further educating our community on the importance of evidence-based practice with older adults. My appointment as an Associate Professor at Saint Louis University allows me to teach entry-level DPT students with a focus on basic skills, geriatrics, and wellness, and serve on the clinical education team. I am a team member of the SLU-SSM orthopedic residency, participating as an interviewer, lab instructor mentor, and geriatric educator. Recently, I played an integral role in developing a geriatric residency program with a local hospital system and will provide learning experiences for their resident in the community and academic settings. I have also taught the SLU geriatric medical fellows and gained insight into the medical model of fellowships. Finally, as a co-investigator on a HRSA geriatric education grant and in clinical practice, I promote evidenced based interprofessional health and wellness practices to the geriatric population.

Frances E. Kistner, PT, PhD
Certified Exercise Expert for Aging Adults, Certified Ergonomic Assessment Specialist

I started my career 26 years ago working with primarily older adults, stroke survivors, and post joint replacements. More recently, my experiences with older adults and their therapists have been far more personal, revealing that advanced skills are essential for PTs providing care to an expanding geriatric population. My background in academia, APTA SIG, and patient care will support my success as Vice Chair of the RFSIG. I am a founding, core faculty and current Director of the School of Physical Therapy at MCPHS University with experience in the accreditation process. I am CEEAA and LSVT certified. I am a 2019 graduate of the APTA Education Leadership Institute (ELI) Fellowship. My experiences as a Fellow gave me a clearer understanding of the structure, standards, and requirements of fellowships and enhanced my leadership skills. As a former Chair of Research in another SIG, I believe evidence and education promotes best practice in caring for aging adults.

Residency and Fellowship SIG: Secretary

Cynthia Barros, PT, DPT
Board-Certified Clinical Specialist in Geriatric Physical Therapy

I have been an active member of the APTA since PT school, where I discovered my passion for working with older adults. In my short time as a physical therapist, I have had opportunities to be a clinical instructor and work closely with the neuro PT residents, and have felt my workplace would make a great place for a geriatric residency. So, after working toward becoming a Board-Certified Clinical Specialist in Geriatric Physical Therapy in 2019, I am now, with other staff, working toward establishing an accredited Geriatric Physical Therapy Residency. I am excited in furthering my participation in the APTA. I have secretarial volunteer experience with my workplace, and am currently the note taker to write up our staff's meeting minutes for our Geriatric PT residency program, again, ensuring the minutes have been uploaded in a timely manner after each in person or telecommunications meetings. I believe my strengths of timeliness, and open communication will ensure accurate dissemination of information.

Jessica Donovan, PT, DPT
Board-Certified Clinical Specialist in Geriatric Physical Therapy

Since graduating from the Ohio State University DPT program in 2011 and the OSU Geriatric residency program in 2012, I have worked in the home health and SNF environments as both a clinician and a manager. I served as the secretary for the OPTA's central district board for 3+ years. Additionally, I have maintained an academic role in OSU's DPT program with a focus in the geriatric and neurologic curriculum content. I have recently increased my workload as a faculty member at OSU and am now an Associate Clinical Professor and lead mentor for the OSU Geriatric PT Residency Program. Aside from my experience as the OPTA Central District board secretary, I am very detail-oriented, dedicated to supporting excellence in residency programs and driven to increase my professional involvement in the Residency/Fellowship SIG for the Academy of Geriatric PT. I have maintained APTA Geriatrics membership since graduating in 2011. I am a member of the Residency/Fellowship SIG as well as the Balance and Falls SIG. I am very passionate about Geriatric PT!

Emma L. Phillips, PT, DPT
Board-Certified Clinical Specialist in Geriatric Physical Therapy, Certified Exercise Expert for Aging Adults

My physical therapy practice focuses on working with older adults with balance deficits, orthopedic injuries, and wellness programs. I obtained my DPT in 2010 from the Mayo School of Health Sciences, was the inaugural resident for The University of Minnesota's Geriatric Physical Therapy Residency from 2010-2011 and obtained my GCS in 2012. By participating in a geriatric residency, I was able to see how residencies work from the ground up. I am dedicated to improving residency and fellowship education, program growth and development. I am currently part of the GeriEDGE task force, served two years as GCS SACE Item Writer, served as Vice-Chair of the Balance and Falls SIG and am currently on the Nominating Committee of the Residency and Fellowship SIG of APTA Geriatrics. By participating in these groups, I have seen how important it is to have dedicated officers to help push for excellence and improvement in care and would find it a privilege to continue in service to the SIG.

Residency and Fellowship SIG: Nominating Committee (will elect 2)

Alex Piersanti, PT, DPT
Board-Certified Clinical Specialist in Geriatric Physical Therapy

Serving on this committee, I would be able to contribute to its vision and direction since I myself was a resident. During this last APTA conference, I was able to help during a special meeting for the Geriatrics section and connect with potential students on residency and fellowship opportunities. I am a strong advocate for residency after school due to the positive experience I had during mine. Speaking with these students sparked my interest on getting the word out on residencies and fellowships so other students can have experiences as great as mine. I envision APTA Geriatrics to have a wide range of experiences and learning opportunities to suit each member and elevate the standards of practice within our specialty.

Sarah Carolyn Smith, PT, DPT
Board-Certified Clinical Specialist in Geriatric Physical Therapy

As a graduate of a geriatric residency, I value the importance of mentorship and further education to specialize in geriatrics. Now as a faculty member of a residency, I have a greater understanding of the planning and management required and recruitment challenges. These experiences have inspired me to run for the Residency and Fellowship SIG Nominating Committee.

For the past six years I have worked as a clinical instructor at The University of Delaware and supervised over 75 DPT students. As a State Advocate, I organized students to assist with the Senior Olympics. These experiences gave students exposure to PT needs across the spectrum of aging. I believe promotion for working with older adults starts with mentoring students to build interest in completing a geriatric residency and developing future leaders for APTA Geriatrics. This position would allow me to collaborate with other officers and identify new leaders to establish goals to promote and advance residency education.

*Watch your email for the electronic ballot this October and **please vote.** Newly elected officers traditionally take office at the close of CSM (which is virtual this February 2021). As per APTA Geriatrics bylaws, only PT and PTA members are eligible to vote. More details to come as the election approaches.*

GeriNotes

Editor
Michele Stanley, PT, DPT
gerinoteseditor@gmail.com

Authorized Organization's Name and Address
APTA Geriatrics, An Academy of the American Physical Therapy Association
1818 Parmenter St.
Ste 300 Middleton, WI 53562

ISSN 2692-1588

Newsletter Deadlines:
February 10
April 15
July 10
September 1
November 15

Statement of Frequency
5x/year:
January
March
May
August
November

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

APTA Geriatrics does not endorse, publish, or promote products, services, or events sponsored or hosted by for-profit commercial entities. For-profit companies and corporations may request to advertise on any of APTA Geriatrics' platforms at the published rates. All advertisements that appear in or accompany GeriNotes are accepted on the basis of conformation to ethical physical therapy standards. Advertising does not imply endorsement by APTA Geriatrics.

Back Pain Post Kyphoplasty? What Can PT Do?

by Sherri Betz PT, DPT

Editor's Note: this is a case report that was presented during the July Journal Club. Dr Betz's graciously shared the full components of her assessment, treatment approach and rationale as an example of a skilled, comprehensive approach to "back pain" with planned community group exercise maintenance with demonstration of applied EBP

76 yo Caucasian Female

Diagnosis:

- Susie M is a 76 yo female complaining of persistent chronic low back pain and with referral diagnosis:
- M47.26 Other Spondylosis with Radiculopathy, Lumbar Region,
- M48.54 Compression Fracture L3, S/P Vertebroplasty, Osteopenia.

PMH includes consistent BMD DXA exams (2001, 2004, 2008, 2010, 2012, 2014, 2017, 2020) that have shown small changes in BMD but all in the osteopenic range. However, in late 2019, she experienced the onset of low back pain and radiating L leg pain and went to see her doctor. Radiographs revealed a vertebral compression fracture at L3; she underwent vertebroplasty 1/30/20 which did not decrease her low back pain.

Chief complaint: L sided low back pain with radiation into the L buttock and L greater trochanter. Her main complaint is L greater trochanteric pain and L buttock pain in standing, sitting at work, and while driving. Her pain also increases when she is raking, mopping, sweeping, vacuuming and while washing dishes. She reports that she obtains relief in supine or sidelying and usually sleeps well. She related an interesting observation that when her L low back is painful, she notices a crease off to the left in the pad that she wears to catch any urinary leakage

Social History: Susie works part time as a bookkeeper. She is a widow who lives alone in a one-level home with her five cats. She meditates and rides a stationary bike for at least 20 minutes daily; she enjoys yoga. She is a well-informed, intelligent lady who is motivated to be proactive about her bone health and general health

Findings at Initial Evaluation

Posture: Collapsed posture in standing with increased thoracic kyphosis, increased lumbar lordosis and an anterior pelvic shift with a concomitant posterior thoracic shift. L posterior ilial torsion, L LE 1" longer than R in supine and prone.

Breathing Assessment: Pt is predominately a diaphragmatic breather with poor ability to perform thoracic expansion with costal breathing (1" expansion, ½" contraction)

SIJ Cluster is positive for SIJ Dysfunction: Gaenslen's, Thrust, Compression, Distraction and Faber all generated pain at the L lumbar region and radiating pain into L buttock.

Occiput to Wall Distance = 0 (Tragus to Wall was used in this paper). Rib to Pelvis Distance=1 finger B.

Kyphotic Index: 17.3

4 Stage Balance: Romberg: 10s, Semi-Tandem: 10s, **Tandem:** 10s, Single: R=4s, L=2s

5x Sit to Stand = 12 seconds. (With increased thoracic flexion)

Functional Reach = 9" (With increased thoracic flexion)

MMT 5/5 in B LE

Abdominals and Abdominal Wall Control: 3/5 (Abdominal Bulge and Lumbar Extension with legs at 90/90 angle in supine)

Neurologicial testing:

- Sensation, deep pressure, sharp/dull all WNL.
- Reflexes: Patellar B 2+, Achilles R 2+ and L 1+.
- SLR: L + at 45 degrees and provokes familiar c/o pain, R negative

Bowel/Bladder: Pt experiences occasional incontinence and wears a pad daily.

Function: Poor pelvic girdle stability with 90/90 supine, single leg bridging and bent knee fallout test. In standing, especially in L single leg stance, pelvis drops on R. (She cannot maintain pelvis level in single leg stance-L is weaker than R). L >R Leg strength is diminished in all functional tasks involving lower extremity musculature (Squats, lunges heel raises/reaching). The pelvic asymmetry seems to aggravate the L greater trochanteric symptoms. She has crepitus and shearing of the lumbar spine with functional movements as noted with a stethoscope.

Treatment and Intervention

We began with manual therapy interventions to address and correct her pelvic girdle dysfunction and focus on reducing low back pain. As recommended in (Jang et al, 2019), diaphragmatic and costal breathing were implemented to expand the ribcage 3-dimensionally. Since this patient was experienced in meditation and was predominantly already a diaphragmatic breather with poor control of the abdominal wall, we focused more on costal breathing with a strap around the lower ribs for feedback to help expand her thorax and improve thoracic mobility.

She also received Maitland Grade III-IV PA glides at the apex of her thoracic curve to improve mobility in thoracic extension. Myofascial release was performed to decrease the lumbar and piriformis spasm and reduce the pull on her pelvis. The Pilates Trapeze Table Apparatus was implemented to provide lumbar active traction and neural glides to reduce the L sciatic nerve entrapment. The Pilates Reformer Apparatus was selected to begin LE and trunk strengthening and pelvic stability in a supine non-compressive and non-painful spinal position since she did not have pain in supine. Pain only in vertical positions indicated that she had a vertical compression management issue that lead me to implement core control and axial elongation techniques that would most likely decrease her pain.

She was instructed to begin pelvic self-correction and rebalancing exercises to improve pelvic skeletal alignment and muscular symmetry initially 3 x daily for 2 weeks, then 2 x daily for two weeks and before any exercise classes or as needed for four weeks+. She was instructed in core control exercises such as: Supine 90/90 abdominal strengthening with head flat or on a small pillow, Bent Knee Opening, Bridging with articulation and lengthening and Single Leg Bridging while pressing scapula into mat. Sidelying Hip ER (Clamshells) and Abduction with knees bent progressing to knees straight, then Pilates Sidekick, Sidelift, Prone Hip Extension, Quadruped Shoulder Flexion and Contralateral Hip Extension, and ½ Downdog Stretch as in (Jang et al, 2019) were added. She also performed sidelying thoracic rotation (Book Opening) and thoracic extension on the Pilates Spine Corrector for self-thoracic mobilization as well as Foam Roller Snow Angels and Foam Roller abdominal work always followed by prone 3-part thoracic extension in prone (targeting upper, middle and lower thoracic spine) with pillow to protect her ribcage at home. (Similar to Jang et al, 2019) At home she used an 8" ball and a Foam Roller for self-mobilization of the thoracic spine. As her low back pain decreased and pelvic stability improved in supine, sidelying, prone and quadruped, we began to add standing work: single leg heel raises and lunges against a doorframe and holding two 4' dowels for support and assistance at first and squats with a dowel touching her head, midback and sacrum for spine awareness starting with 18" chair surface, working downwards toward a 12" surface, eventually adding weights up to 20# and flies in a trunk tilted forward position. We emphasized her head position against the doorframe or dowel to encourage thoracic extension improvement as shown in (Jang et al, 2019). The 4th week we added supine and standing Theraband® horizontal abduction, external rotation and flexion single and overhead as shown in (Jang et al, 2019). Additionally, I recommended that she get a "chin-up" bar to install in her home that she could use to reach up and stretch daily to decompress her spine which gave her significant relief. Interestingly, she was unable to tolerate the thoracic extension corrections until we rebalanced and realigned her pelvis.

She was instructed in awareness as discussed in (Jang et al, 2019), to avoid thoracic flexion in all functional activities and exercise especially due to the previous thoracic compression fracture. She had a hard time remembering not to flex, so we focused on using a 4 foot dowel for alignment - touching the head, midback and sacrum as a tactile feedback self-cue. Taking photographs and videos for her HEP to help with reminders for correct practice at home proved very useful.

She needed frequent reminders to stand with an elongated spine and avoid the anterior pelvic shift throughout

the PT program all the way to the discharge. The Pilates Ped-o-Pul gave her excellent feedback and significant relief with the Arm Pulls that promoted axial elongation and core control. (See photo/video) We discovered that when her pelvis was aligned and she stood with improved axial elongation, and she participated regularly in bone-safe Pilates-based exercise classes with the instructor providing feedback on her alignment and performance, her pain decreased. Interestingly, she noted that after she performs her prescribed pelvic exercises and the SIJ pain is abolished, there is no crease to the left side of the underwear pad the next day. She freely admitted that she is not good about sticking with an exercise program and found it hard to remember to correct her spine alignment when going about her usual tasks. Lifting heavy cat litter bags and cleaning the cat litter daily are some of the most difficult tasks for her that seem to strain her back the most. She was re-instructed at each PT session in proper lifting techniques using the dowel, videos and mirrors for immediate feedback.

Assessment/Discussion

She achieved all the long-term goals set for PT and we prepared her for discharge by having her join VIRTUAL bone-safe Pilates-based classes so that I could watch her alignment and even go back and watch the recording after the class was over to take a closer look at her performance. She was more encouraged to participate in the VIRTUAL class format since we started her in the classes before she was discharged from PT so we could assess her response and tolerance to the class. As of this writing, she is taking the classes 1-2x weekly and is still pain free. She continues to work on her LE and trunk strength and dynamic balance as well as awareness about her spine alignment during standing functional movement. She has been able to slowly progress her strength and stay motivated.

Regarding her thoracic hyperkyphosis, posture and balance issues, the research by Jang et al shows that we need to incorporate breathing and postural re-education, thoracic mobility and stability, and awareness of thoracic alignment. As suggested by Jang et al, 2019, we addressed her compensatory use of a hip strategy with anterior shift of the pelvis to maintain balance by incorporating "thoracic rotation, extension, rib cage expansion, scapular retraction and arm elevation with external rotation" into her clinic therapeutic exercise sessions as well as her home program. According to Jang et al, 2019, balance and posture are intimately related and their intervention group that received "corrective supervision" performed much better in outcome measures as did my patient when we incorporated postural re-education in vertical alignment with functional practice such as lifting objects from floor, reaching forward and overhead with good thoracic awareness.

Since she has had a compression fracture, her risk for future fractures above and below the site of the compression fracture greatly increases. After vertebroplasty, she has an even greater risk of fracture at the sites above and below the site of the vertebroplasty. Therefore, as Jang et, al suggest, postural and thoracic awareness is of utmost importance to incorporate in the treatment plan. The authors suggest that other studies that only included thoracic strengthening exercises and did not include postural correction activities did not perform as well in outcome measures.

Outcome Measures at 8 Weeks

Posture: Improved posture in standing with mild thoracic kyphosis, lumbar lordosis and greatly improved neutral pelvis posture. Continued to need reminders for elongation. Pelvic Girdle Alignment WNL and Leg Length = B

Breathing Assessment: Pt is predominately a diaphragmatic breather with improved ability to perform thoracic expansion with costal breathing and abdominal wall tension (↑ to 2" expansion, 1½" contraction)

SIJ Cluster = negative and non-provocative for SIJ Dysfunction

Occiput to Wall Distance = 0 (Tragus to Wall was used in Jang, et al 2019). Rib to Pelvis Distance= ↑ to 2 fingers B.

Meet the Authors: Be Part of the Discussion in the Journal Club

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 15, 2020 at 8 pm ET.

We will discuss **The Role of Physical Therapy in Multiple Risk Factor Management Poststroke: A Scoping Review**; *Journal of Geriatric Physical Therapy*: 2019;0:1-10

Watch your email or see the APTA Geriatrics Calendar for log-in information to be posted prior to the event.

Kyphotic Index: Improved from 17.3 to 13.2 in ideal cued posture

4 Stage Balance: Romberg: 10s, Semi-Tandem: 10s, Tandem: 10s, Single: R=8s, L=10s

5x Sit to Stand = Improved from 12 to 9 seconds. (without thoracic flexion and able to maintain neutral spine using dowel 3 point contact)

Functional Reach = 9" (Without increasing thoracic flexion and able to maintain neutral spine)

MMT 5/5 in B LE (No ▲ from WNL at initial evaluation

Abdominals and Abdominal Wall Control: 4+/5 (Able to control abdominal bulge and avoid lumbar extension with legs extending from 90/90 angle in supine)

Neurological testing:

- Sensation, deep pressure, sharp/dull all WNL.
- Reflexes: Achilles L improved to 2+.

SLR: Negatie B - Improved from 45 to 90 degrees on L without pain provocation

Bowel/Bladder: Still wears a pad daily for any leakage but noticed less leakage with decreased low back pain and improved core control

Important LE Strength and Performance Measures

Hip Hinge/Neutral Spine Squat with dowel: Improved from 18" to 12" as measured from buttocks to chair surface

Lunge: Able to touch back knee to floor in neutral spine with 2 dowels to assist

Heel Raises: 25x R and L with good form and 1 dowel to assist with balance

---

Sherri Betz PT, DPT is a nationally certified Pilates teacher and board certified geriatric clinical specialist specializing in orthopedics, geriatrics, and osteoporosis. Since the COVID-19 pandemic struck Sherri developed a Virtual Pilates and Yoga Bone-Safe exercise program and shifted her practice to telehealth from her private practice in Monroe, LA.

A Tale of Two Women: Geriatric Syndromes, Frailty, PDPM

by Hannah Acton PT, DPT

Geriatric syndromes, including incontinence, falls, pressure ulcers, delirium, frailty, dizziness, syncope, and functional decline, are prevalent in older adults and do not conform to specific disease diagnoses.[1] Diseases have known etiology and pathogenesis leading to symptoms. Geriatric syndromes are complicated by multiple etiologies and interacting pathways leading to specific symptom manifestations, causing decreased quality of life and disability.[1] Frailty, a notable geriatric syndrome, is defined as an increased state of vulnerability with decline across multiple physiologic systems that is measured by characteristics of unintentional weight loss, self-reported exhaustion, weakness, slow walking speed, and low physical activity.[2,3] These components align frequently in older adults . This case series compares and contrasts the implications of geriatric syndromes and frailty in the rehabilitation, outcomes, and discharge destinations for two patients receiving physical therapy (PT) in a skilled nursing facility (SNF). There is additional reference to the Patient Driven Payment Model (PDPM).

Case Descriptions

The two patients in this case series have been named Rose and Sally. Table 1 includes background information for each person. Similarities include that both were female and had a ground level fall prior to admission. In comparison, Rose's medical complications were limited to the sequela of her fall including rib fractures and pulmonary implications. Sally's clinical presentation was more complex with compounding urinary tract infection, gastrointestinal bleed, altered mental status, and non-ST-elevation myocardial infarction. Prior to hospitalization and transfer to the SNF, Rose was living independently in an Independent Living Facility (ILF) while Sally was living at an Assisted Living Facility (ALF) with assist for instrumental activities of daily living. The presence of falls as a geriatric syndrome was common in both people. Sally had additional geriatric syndromes of acute altered mental status, dizziness, and functional decline. While both Rose and Sally both experienced ground level falls, the context of each fall was different. Rose's fall occurred in the community with an external perturbation; Sally fell while exiting the shower. Rose has only one of the five characteristics of frailty; this is labelled pre-frail. Sally has four of the five characteristics so is classified as frail, Age is not a contributing component to presence of frailty and geriatric syndromes. Rose is eight years older than Sally but has fewer frailty factors and geriatric syndromes.

With reference to the PDPM and Section GG items, the evaluation for both patients included inquiry and assessment of prior and current level of function relative to the Section GG items. Table 2 highlights each patient's prior and current levels of function at evaluation. For comparison, both patients were independent or modified

Table 1: Patient Background

Patient	Age, Gender	PLOF	Reason for Skilled Nursing Stay	Comorbidities	Geriatric Syndromes	Frailty
Rose	92 years Female	Independent living facility, walking one mile/day without assistive device	Ground level fall, multiple rib fractures with small hemothorax/ pneumothorax	Hypertension, hyperlipidemia, moderate-severe spondylosis	Fall Pre-frail	Slow walking speed
Sally	84 years Female	Assisted living facility, walking and transfers with rolling walker	Ground level fall, urinary tract infection, gastrointestinal bleed, altered mental status, NSTEMI	Hypertension, hyperlipidemia, stroke, asthma, dementia, diabetes mellitus	Fall Frail Acute altered mental status Dizziness Functional Decline	Exhaustion Low physical activity Slow walking speed Weakness

Table 2: Prior and Evaluation Section GG Functional Abilities

Section GG Functional Abilities	Prior		Evaluation	
Patient	Rose	Sally	Rose	Sally
Rolling right/left	Ind	Ind	Sup/TA	Partial/Mod
Sit to lying	Ind	Ind	Sup/TA	Partial/Mod
Lying to sit	Ind	Ind	Sup/TA	Partial/Mod
Sit to stand	Ind	ModI	Sup/TA	Sup/TA
Chair/bed to chair transfer	Ind	ModI	Sup/TA	Sup/TA
Car transfer	Ind	Ind	ER	ER
Walk 10 feet	Ind	ModI	Sup/TA	Sup/TA
Walk 50 feet, 2 turns	Ind	ModI	Sup/TA	Sup/TA
Walk 150 feet	Ind	ModI	Sup/TA	Not attempted
Walk 10 feet, uneven	Ind	ModI	Sup/TA	Sup/TA
1 step (curb)	Ind	NA	ER	NA
4 steps	Ind	NA	ER	NA
12 steps	Ind	NA	ER	NA
Pick up object	Ind	ModI	Ind	Not attempted

ER: Environment Restrictions, Ind: Independent, ModI: Modified independence, NA: Not applicable, Sup/TA: Supervision or touching assistance

independent at their prior level of function, except Sally did not complete curb steps or stairs. At evaluation, Rose required supervision to touching assistance for all mobility while Sally required partial to moderate assistance for bed mobility, supervision to touching assistance for transfers and short distance ambulation, and was unable to attempt further ambulation or picking up an object. A car and stairs were not available at evaluation and thus categorized as environmental restrictions. Section GG items do capture small differences in mobility relative to geriatric syndromes and frailty: Sally was not completing stairs prior to admission due to a lower level of physical function. However, it fails to objectively capture many of the components contributing to increased frailty including weakness, lower physical activity, unintentional weight loss, slow gait speed, and self-reported exhaustion.

The physical therapy component of PDPM , irrespective of PLOF and frailty, also has implications for care. Table 3 categorizes each woman's insurance, PDPM case-mix group, frequency of treatment, and length of stay. Rose and Sally had different insurances, both were provided the same amount of PT and occupational therapy at a duration and frequency of six times a week for 45 minutes for each discipline. Rose's stay was 17 days; Sally's stay was 21 days. The case mix group, which is determined by the PT clinical category and the Section GG function score, provides insight into functional abilities and impacts the total case-mix adjusted PDPM per diem rate.[4] The Section GG function score is based on performance in the following categories: eating, oral hygiene, toileting, bed mobility, transfers, and walking.[4] Calculation of the total PDPM case-mix adjusted per diem rate is the sum of the five case-mix adjusted components (PT+OT+SLP+ NTA+Nursing) and the non-case-mix adjusted rate component.[4] Rose's case-mix-group of TG was based on her categorization into "other orthopedic" and a GG function score of 17/24. Sally's case-mix-group of TK was based on her categorization into "medical manage-

Table 3: Patient Insurance/PDPM

Patient	Insurance	Treatment	Length of Stay	Primary Diagnosis Clinical Category	PT/OT Clinical Category	PT Case-Mix Group
Rose	Medicare A	6x/week, 45 min OT/PT	17 days	Non-Surgical Orthopedic/ Musculoskeletal	Other Orthopedic	TG
Sally	HMO PDPM	6x/week, 45 min OT/PT	21 days	Cardiovascular and Coagulations	Medical Management	TK

ment" and a GG function score of 14/24. Despite these differences, each person did receive the same amount of care each week with the appropriate dose of care determined by therapists for each patient's therapeutic needs and functional goals for discharge. This appropriate dosing of care reinforces the patient driven component of the Patient Driven Payment Model.

While Rose and Sally both had ground level falls prior to admission and received the same amount of care during their stay, the interventions differed and were focused on individualized care. Rose's treatments were focused on higher level balance and community integration tasks for a safe return to an active lifestyle in ILF. The interventions for Sally were focused on safety and independence with bed mobility, transfers, and walking for a safe return to an assisted living.

Outcomes

Outcomes collected in this case series included objective outcome measures, Section GG functional abilities, and discharge setting. Tables 4 and 5 provide details regarding specific outcome measures. Different outcome measures were used between patients because of their varying levels of function and impairments. Rose's primary impairments included balance deficits and decreased endurance secondary to her rib fractures and pulmonary implications. Sally's primary impairments were generalized weakness, decreased endurance, and impaired mobility. Both people completed the Six-Minute Walk Test. Rose, who had a higher level of function and was pre-frail prior to admission, was able to walk more than twice the distance of Sally, who was frail prior to admission. While outcome measures and frailty characteristics differed between patients, both demonstrated meaningful gains throughout their episode of care. Significant improvements were demonstrated for Rose in the Berg Balance Scale and for Sally in gait speed. Additionally, Table 6 includes Section GG items at discharge, with both women achieving their prior level of function for the majority of the components and meeting their discharge goal of return to their prior living setting. The complexities of frailty and geriatric syndromes did not change discharge destination compared to prior level of care; it is likely that pre-admission living situation may be an indicator of their level of function, given these factors.

Table 4: Rose Outcome Measures

Rose	Evaluation	Reassessment
Berg Balance Scale	39/56	50/56*
Six Minute Walk Test		237 meters (0.66 m/s)

*m/s: meters/second, *clinically significant difference*

Table 5: Sally Outcome Measures

Sally	Evaluation	Reassessment	Discharge
Elderly Mobility Scale	6/20	8/20	10/20
Six minute walk test		113 meters (0.31 m/s)	
30 Second Chair Stand	0	0 (4 with UE)	0 (7 with UE)
Gait Speed	0.15 m/s	0.21 m/s	0.30 m/s*

*m/s: meters/second, UE: upper extremities, *clinically significant difference*

Discussion

There are no studies specifically looking at frailty, geriatric syndromes, and the implications for physical therapy in SNFs with the current PDPM system. There is evidence to support that frailty impacts discharge disposition especially after surgical procedures, such as elective vascular surgeries.[5] Home-dwelling older adults undergoing a procedure such as this, have a two-fold increased risk of non-home discharge disposition when they are also

Table 6: Discharge Section GG Functional Abilities

Section GG Functional Abilities	Discharge	
Patient	Rose	Sally
Rolling right/left	Ind	Ind
Sit to lying	Ind	Ind
Lying to sit	Ind	Ind
Sit to stand	Ind	ModI
Chair/bed to chair transfer	Ind	ModI
Car transfer	ER	Sup/TA↓
Walk 10 feet	Ind	ModI
Walk 50 feet, 2 turns	Ind	ModI
Walk 150 feet	Ind	Sup/TA↓
Walk 10 feet, uneven	Ind	ModI
1 step (curb)	ER	NA
4 steps	ER	NA
12 steps	ER	NA
Pick up object	Ind	ModI

ER: Environment Restrictions, Ind: Independent, ModI: Modified independence, NA: Not applicable, Sup/TA: Supervision or touching assistance, ↓: Below prior level of function

frail.[5] In these example cases, Rose and Sally were living in different levels of care prior to admission and were able to return to their same environment upon discharge. In terms of Section GG items, both patients returned at or near baseline for functional abilities with limitations in data collection due to environmental restrictions. It is difficult to account for all of the factors contributing to length of stay and return to prior level of function. Sally, who had more geriatric syndromes and frailty factors, did have a four day longer stay than Rose. It is possible to hypothesize that the presence of geriatric syndromes and frailty factors may have influenced the time required to return to prior level of function. Finally, this case series highlighted objective improvements in physical function for both Rose, who was pre-frail, and Sally, who was frail prior to admission. The individualized physical therapy interventions, impacted by levels of frailty and function, were tailored to community versus home level mobility and safety. This is supported by evidence that individualized physical therapy is an effective way to increase physical activity and decrease frailty for older adults with impairments in mobility.[6]

Assessment and understanding of frailty and geriatric syndromes are imperative in developing a comprehensive and holistic physical therapy plan of care. In a skilled nursing facility, the PDPM requires use of Section GG items throughout evaluation and discharge to determine payment. While these are valuable assessment components, further objective measures are critical to measure change for all patients: non-frail, pre-frail, and frail. Finally, discharge destination may be implicated by the combination of all of these components and must be considered for each patient.

One limitation in this case series is that different outcome measures were used between patients. It would be beneficial to track a specific grouping of outcome measures to allow for further comparison. Finally, with the new change in payment model, further research is needed comparing function with Section GG items, frailty measures, and discharge disposition to assist therapists in clinical decision making for safe and supportive discharges.

Conclusion

This case series synthesizes geriatric syndromes and frailty, PDPM, physical therapy, and functional outcomes for two patients in the SNF setting. In these examples, geriatric syndromes and frailty were contributing factors to each patient's prior and current level of care and function. Despite differences in insurance and levels of frailty, both patients received the same quantity of therapy during their inpatient stay. The interventions for each patient were individualized to their functional abilities with attentiveness to geriatric syndromes and frailty. Both patients demonstrated functional improvements as measured by the Section GG items and outcome measures. In addition to functional mobility, physical therapists must be attentive to patient's co-existing geriatric syndromes and the presence of frailty to develop a comprehensive plan of care.

References

1. Inouye SK, Studenski S, Tinetti ME, Kuchel GA. Geriatric syndromes: clinical, research, and policy implications of a core geriatric concept. J Am Geriatr Soc. 2007;55(5):780–791. doi:10.1111 /j.1532-5415.2007.01156.
2. Xue QL. The frailty syndrome: definition and natural history. Clin Geriatr Med. 2011;27(1):1-15. doi: 10.1016/j.cger.2010.1008.1009.
3. Fried LP, Tangen CM, Walston J, et al. Frailty in older adults: evidence for a phenotype. J Gerontol A Biol Sci Med Sci. 2001;56(3):M146-156. doi: 110.1093/gerona/1056.1093.m1146.
4. PDPM Calculation Worksheet for SNFs. Centers for Medicare and Medicaid Services. https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/Downloads/MDS_Manual_Ch_6_PDPM_508.pdf. Accessed April 8, 2020.
5. Arya S, Long CA, Brahmbhatt R, et al. Preoperative Frailty Increases Risk of Nonhome Discharge after Elective Vascular Surgery in Home-Dwelling Patients. Ann Vasc Surg. 2016;35:19-29. (doi):10.1016/j.avsg.2016.1001.1052. Epub 2016 Jun 1012.
6. de Vries NM, Staal JB, van der Wees PJ, et al. Patient-centred physical therapy is (cost-) effective in increasing physical activity and reducing frailty in older adults with mobility problems: a randomized controlled trial with 6 months follow-up. J Cachexia Sarcopenia Muscle. 2016;7(4):422-435. doi: 410.1002/jcsm.12091. Epub 12015 Dec 12094.

Hannah Acton PT DPT is a 2019 graduate of the Washington University in St. Louis Program in Physical Therapy. She is the 2019-2020 resident in the Mayo Clinic Geriatric Residency Program in Phoenix, AZ. Hannah has an interest in community health and wellness for older adults and plans to return to St. Louis upon completion of the residency program.

Total Hip Arthroplasty Treatment Strategies

For Post-operative Patients with Moderate to Severe Mental Health Issues

by Nora Finn PT, DPT

Mental illness is defined as sustained abnormal alterations in thinking, mood, or behavior associated with distress and impaired functioning that substantially interferes with or limits one or more major life activities[1]. Two thirds of individuals in nursing homes have a mental illness.[2] Nursing home residents with a primary diagnosis of mental illness range from 18.7% among those aged 65-74 years to 23.5% among those aged 85+ years.[3] Dementia, Alzheimer's disease and mood disorders are the most common diagnoses of mental illness in long-term care settings.[4] A common clinical sign of these diagnoses is anxiety.

Anxiety can be described as a heightened state of arousal[5] and is a generalized term associated with several mental health disorders including post-traumatic stress disorder, obsessive-compulsive disorder, panic disorder and generalized anxiety disorder. Anxiety disorders are syndromes characterized by excess fear and worry, can range from mild to severe, occur alone or associated with many chronic health conditions[6] and affect nearly a quarter of adults in their lifetime.[5]

Patients with anxiety require a level of care and handling strategies not employed in physical therapy on a daily basis. Appropriate treatment of common orthopedic conditions without concern for the co-morbid diagnosis of anxiety can lead to lower functional outcomes and readmission following surgical procedures. Common manifestations of moderate to severe anxiety disorder in patients with post-operative musculoskeletal co-morbidities (particularly hip surgeries) will be discussed along with suggested strategies to manage post-operative rehabilitation.

Background

Anxiety disorders are a common psychiatric disorder and associated with an overall decreased quality of health and diminished quality of life.[7,8] Patients with anxiety disorders are more likely to have higher health care utilization costs.[9] Anxiety can be a primary problem such as Generalized Anxiety Disorder (GAD), or a significant secondary problem in such conditions as post-traumatic stress disorder, obsessive-compulsive disorder, and panic disorder.

Generalized Anxiety Disorder (GAD), one of several types of anxiety, is a mental health disorder that is characterized by excessive worry and anxiety for a majority of days for at least six months for multiple activities/events. Individuals have difficulty managing the worry with three or more of these symptoms occurring: restlessness, irritability, difficulty focusing/concentrating, muscle tension or soreness, difficulty with sleep, being easily fatigued, and feelings of extreme powerlessness. People can also experience somatic symptoms via stimulation of the sympathetic nervous system which may include nervousness, trembling, muscle tension, dizziness, epigastric discomfort, heart palpitations, increased respiratory rate, increased blood pressure, irregular heart rhythm and chest pain.[10] Anxiety has been shown to produce a negative effect on multiple systems.[11]

Medical comorbidities and chronic diseases such as chronic obstructive pulmonary disease (COPD),[12] cardiac conditions,[12,-15] and pain[16] have been associated with high levels of anxiety in older persons without a mental health disorder. In these cases, anxiety has extended hospitalizations, contributed to lower functional outcome and poorer quality of life. Patients with GAD experience heightened pain[17] that can delay mobility unless adequately controlled; anxiety can lead to non-compliance with precautions and following instructions in self-care and management of care or conditions.

If the person is receiving physical therapy, anxiety can inhibit rehabilitation progress and outcomes if the anxiety manifestations are not managed appropriately. Recognizing the symptoms of anxiety and understanding the manifestations of the condition are necessary to effectively motivate the patient to achieve positive outcomes. Strategies for management of the common manifestations of moderate to severe anxiety disorders will be illustrated with cases involving total hip arthroplasty rehabilitation. Similar strategies can be used with other post-operative orthopedic procedures.

THA has been chosen based on prevalence among older -aged population. The Agency on Healthcare Research and Quality (AHRQ) reports over 468,000 THA procedures in 2012.[18] While many THA procedures are elective, hip fractures are a common precipitating event for non-elective THA.[19] Individuals with a moderate to severe anxiety disorder would be unlikely to voluntarily subject themselves to surgical intervention but may be at risk for falls leading to a hip fracture. The author makes the assumption that usual physical therapy care provided for someone after THA is well known to the reader[20] and no attempt to justify or specify the THA procedure or protocol will be made. This discussion focuses on the

manifestations of anxiety and the challenges to normal progression after a total hip replacement procedure.

Assessment

History may provide useful information about anxiety triggers. Post-operative assessment includes a careful review of the admitting physician's systems review and past medical history as well as the current list of medications if available. Many persons with psychiatric conditions are not forthcoming with medical history; sources to supplement the history should be contacted such as the patient's primary care or mental health providers or family members, if included in HIPAA release. Post-acute, long-term rehabilitation and skilled nursing facilities may have more extensive history information readily available than outpatient settings. Patients with moderate to severe anxiety may have an extensive past medical history of various ailments and medications; however it is important to focus on current diagnoses and current medications.

Comprehensive Assessment includes:

- Systems review
- History of present illness and past medical history
- Medication review
- Assessment of ROM, strength posture, gait, pain, neuromuscular status, vital signs, enduranc and integumentary integrity
- Cognitive assessment/mental status screen
- Utilization of objective tests and measures to quantify underlying impairments

Intervention

During the acute post-operative phase of healing, people with anxiety may require more restrictive aids to protect the surgical area than would be used in a similar patient without anxiety. After a THA, the use of an abduction pillow (if prescribed) to provide external protection to the joint may be continued longer than typical to ease apprehension of possible injury. Therapists in outpatient settings should question unnecessary continued use of such devices since the patient with anxiety may continue use beyond usual protection healing times. Clear instructions and reassurance of reduced risk must be given to the patient when discontinuing prior use of restrictive aids or mobility restrictions. Patients with moderate to severe anxiety need specific strategies provided to reduce apprehension about movement of the lower extremity. Continuous reassurance and recognition of targeted behaviors achieved are necessary to decrease anxiety and encourage mobility. Use of motivational aids such as reward systems, checklists, progress charts, or intentional positive reinforcement of small progressions may further assist in reducing anxiety.

Education on joint precautions should be delivered in both verbal and written form since anti-anxiety medications may impair short-term memory. Conscious and structured use of the principles of motor learning, to help people become successful with the acquisition and retention of skills, is essential in providing a structured approach to patients. Assigning easier and less difficult exercises at first may contribute to early success, motivating the patient and fostering adherence. Teaching an exercise program over the course of multiple visits will allow practice and time to learn new concepts. Consistency of routine and repetition of exercises minimizes external stimuli that may trigger anxiety and perceived injury or pain. Exercise programs given in small increments, usually with no more than 3-4 exercises as a time, are generally better tolerated. Consider increased repetitions with resistance of a familiar exercise rather than a new form since repetition is important to increase familiarity to the task as well as to ensure safe and proper technique. A binder or folder containing the exercises along with a checklist guiding the patient through their daily program as well as independent exercises may be reassuring. Visual aids such as pictures or checklists assist people in completion of exercises as well as provide an organized medium to which patients and caregivers can refer.

The outpatient phase of rehabilitation can be challenging for patients with moderate to severe anxiety since the focus of intervention is returning to premorbid functional status. Emphasis is normally placed on progression of exercises, gait training on various surfaces, weaning off assistive devices as indicated. Some individuals with anxiety may have improved outcomes when treatment activities are specifically task or function-based familiar activities. Some may require increased time to progress to a less restrictive assistive device due to fear of pain or falling. Therapists should acknowledge concerns yet highlight the progress that has been made in order to achieve the new functional status. Allowing post-surgical patients to select functional activities during treatment sessions improves the therapeutic relationship between therapist and patient, assigns control of the session to patients, and encourages engagement throughout the interventions.

Continuous evaluation of performance by repeat demonstration under supervision allows therapists to make adjustments and modifications as needed in order to safely demonstrate exercises and advance to the next phase of intervention. Providing specific feedback throughout treatment sessions will optimize the person's ability to self-assess current and future performance and encourage them to be active participants in the rehabilitation process.

Practice Tips

- Establsh a calm/tranquil inviting environment that may feature nature or landscapes and soft lighting
- Utilize a compassionate approach with soft tone of voice
- Be aware of personal space and do not invade without prior approval
- Ensure consistent treating therapist
- Establish consistent routine — schedule of appointments
- Body language — be aware of your posture and facial expressions
- Limting the amount of verbal and written information to avoid overwhelming your patient with anxiety
- Allow patient to lead or have some control over sessions — maybe schedule or day of the week]
- Utilize a "teach back" method to ensure patient undestanding of education/ precautions or technique instructed

Optimal pain control is necessary to mitigate the effects of surgery, encourage mobility, and reduce secondary complications of immobility such as pneumonia, blood clots, or skin ulcers. Collaboration with the referring physician or responsible mental health professional may be necessary to monitor and adjust pain and anxiety medications to provide a therapeutic effect so that post-operative rehabilitation can be initiated and continued. New anxiety medications are marketed frequently and therapists cannot rely on old information. There are numerous interactions listed for anti-anxiety medications; combining those with pain medications can produce a sedative effect or cause lability. Medications may require many adjustments by the physician in order to generate the most effective relief or symptom reduction; physicians are often guided by caregiver report of effects. Clinicians have a duty to research medications and potential interactions that will mitigate any potential complications in an already lengthened rehabilitation program. Optimizing functional outcomes and the satisfaction of the person, facility, and payor source is the ultimate anxiety reduction strategy.

References

1. What is mental illness? American Psychiatric Association website. https://www.psychiatry.org/patients-families/what-is-mental-illness Accessed June 24, 2020
2. Grabowski DC, Aschbrenner KA, Rome VA, Bartels SJ. Quality of mental health care for nursing home residents: A literature review. Med Care Res Rev. 2010; 67(6): 627-656.
3. Mental health across the life stages. Healthy people.org website. https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Mental-Health/determinants Accessed July 27, 2020.
4. Seitz D, Purandare N, Conn D. Prevalance of psychiatric disorders among older adults in long-term care homes: a systematic review. Int Psychogeriatr 2010; 22(7): 1025-1039.
5. Scopaz KA, Piva SR, Wisniwski S, Fitzgerald GK. Relationship of fear, anxiety and depression on physical function in patients with knee osteoarthritis. Arch Phys Med Rehabil. 2009; 90(11): 1866-1973.
6. Ying DG, Jiang S, Yang H, Zhu S. Frequency of Generalized Anxiety Disorder in Chinese Primary Care. J Postgrad Med. 2010; 122(4): 32-38.
7. Kessler RC, McGonagle KA, Zhao S, et al. Lifetime and 12-month prevalence of DSM-R psychiatric disorders in the United States: results from the national comorbidity survey. Arch Gen Psych. 1994; 51(8): 8-19.
8. Mendlowicz MV, Stein MB. Quality of life in individuals with anxiety disorders. Am J Psych. 2000; 157(5): 669-682.
9. DiMatteo MR, Lepper H, Croghan T. Depression is a risk factor for non-compliance with medical treatment. Arch Int Med. 2000; 160(14): 2101-2107.
10. Rolfson O, Dahlberg LE, Nilsson J, Malchau H, Garelick G. Variables determining outcome in total hip replacement surgery. J Bone Joint Surg Br. 2009; 91(2): 157-161.
11. Generalized anxiety disorder. https://www.physiopedia.com/Generalized_Anxiety_Disorder# Accessed July 27, 2020
12. Harvard Health Publications. Anxiety and physical illness. https://www.health.harvard.edu/staying%20healthy/anxiety_and_physical_illnessAccessed June 23, 2020.
13. Heslop-Marshall K, DeSoyza A. Are we missing anxiety in people with chronic obstructive pulmonary disease (COPD)? Annals of Depression and Anxiety. 2014; 1023.
14. Dogar I, Khawaja I, Azeem M, et al. Prevalence and risk factors for depression and anxiety in hospitalized cardiac patients in Pakistan. Psychiatry. 2008; 5(2): 38-41.
15. Tully P, Baker R. Depression anxiety and cardiac morbidity outcomes after coronary artery bypass surgery: a contemporary and practical review. J Geriatr Cardiol. 2012: 197-208.
16. Doering L, Moser D, Riegel B, et al. Persistent comorbid symptoms of depression and anxiety predict mortality in heart disease. Int J Cardiol. 2010; 145(2): 188-192.
17. Ploghaus A, Narain C, Beckman C, Clare S, Bantick S. Exacerbation of pain by anxiety is associated with activity in hippocampal network. J Neurosci. 2001; 21(24): 9896-9903.
18. Baumann E, Hafeez A, Lonnemann E. Generalized anxiety disorder. http://www.physio-pedia.com. Accessed September 15, 2015.
19. Fingar K, Stocks C, Weiss A, Steiner C. Most frequent operating room procedures performed in U. S. hospitals, 2003-2012. Agency for healthcare research and quality website. http://www.hcup-us.ahrg.gov/reports/statbriefs/sb186-Operating-Room-Procedures-United-States-2012.pdf. Accessed September 19, 2015.
20. Department of Rehabilitation Services, Brigham & Women's Hospital. Total hip arthroplasty/hemiarthroplasty protocol. https://www.brighamandwomens.org/assets/BWH/patients-and-families/rehabilitation-services/pdfs/hip-total-hip-arthroplasty-bwh-pt.pdf Accessed July 18, 2020.

Nora Finn PT, DPT is Director of Rehabilitation at Windsor Skilled Nursing and Rehabilitation in South Yarmouth MA. This facility serves many people with mental health problems.

Stand Up For Yourself

by Carole Lewis, PT, DPT, PhD, FAPTA and Linda McAllister, PT, DPT

With the advent of PDPM and PDGM, our work with patients in the area of transfers/ sit to stands is more important than ever. Medicare is now promoting the attainment of functional independence by boosting payment in the home care setting for patients who stay home and do not use emergency room services. And let's face it, we are crucial when it comes to keeping people independent and safe in the home.

In a study to identify the factors that are most strongly correlated with admission to a nursing home, Keene and Anderson found that a lack of cognitive ability, loss of control of the bowel and bladder, and the inability to transfer independently were the most frequent reasons for institutionalization.[1] Therefore, people who are independent in sitting to standing are more likely to be able to stay in their homes longer.

Focus on Specific Deficits

Success in sit-to-stand requires focus on the impairments specifically related to the task. For example, Eriksrud and Bohannan found that patients need 31% strength in knee extension to achieve sit-to-stand without assistance.[2] Therefore, strengthening and stretching weak or tight muscles is important.

Mental Practice

For patients too weak to perform a strictly physical strengthening protocol or for a person who may need more rests, you can add mental practice. A study by Malouin et al. found that mental practice helped to improve limb loading for the sit-to-stand movement pattern. The program they used is outlined below:[3]

Treat 3 times a week for 4 weeks

- Patients performed 5 mental repetitions separated by one physical repetition
- Session = 1 hour, structured as noted below:
  - Preparation
  - Instruction (use scales, force plates, etc)
  - Mental repetitions (shift the body to the right and then move forward and up)
  - Auto estimation of motor imagery vividness
  - Physical repetition
  - Rest

Practice, Practice, Practice

Another approach follows the adage "practice, practice, practice." In 2010, Tung et al. demonstrated the effectiveness of a simple sit to stand (STS) program administered by a physical therapist assistant (PTA).[4] The experimental group improved weight acceptance through the affected foot while the controls decreased their ability to accept more weight through the affected foot. The program worked on foot placement, forward movement of the trunk, verbal feedback, varied seat heights and surfaces. The PTA monitored progress and increased the number of STS as the patient improved.[5]

Sit-to-Stand on Steroids

The final evidence-based treatment suggestion for specifically working on the sit-to-stand addresses the needs of acutely ill patients. In 2019, Pedersen et al. published an article detailing supervised progressive cross-continuum strength training that worked progressively on the sit to stand activity.[6] The program had eight levels of sit-to-stand beginning with long arc quads, progressing to various forms of sitting to standing beginning with using armrests to stand, no armrests, no armrests and weighted vest, one leg sit-to-standing, and one leg sit-to-stands with weighted vest. All of the phases were progressed based on the patient's response and fatigue. The protocol calls for fatigue between 8-12 repetitions with the Borg as a monitor of exertion. The patient should report that the activity is somewhat hard to hard.

Pedersen's early work demonstrated that this protocol was feasible with acutely ill patients and could be progressed into the post-acute phase of rehabilitation.[7] In the 2019 study, the experimental group took more steps and was more physically active; however, in the later study of supervised progressive strength training during hospitalization and at home three days/week for four weeks after discharge, mobility, strength and balance did not improve. There is a lesson here. Four weeks is probably too short a time to see results in the areas listed. Probably more important is the fact that the experimental group had an extremely high dropout rate. What we can take home clinically is not every high-intensity program works for everyone. Sometimes strength training protocols are too difficult for our patients, at least initially. We need to monitor, and progress based on the individual.

Our patients need our skill in helping them stand up for themselves. Try some of these evidence-based approaches.

References

1. Keene JS, Anderson CA. Hip fractures in the elderly: discharge predictions with a functional rating scale. JAMA. 1982 Aug 6;248(5):564-7.

2. Eriksrud O, Bohannon RW. Relationship of knee extension force to independence in sit-to-stand performance in patients receiving acute rehabilitation. Phys Ther. 2003 Jun;83(6):544-51.
3. Malouin, F, Richards, CL, Duran, A, Doyon, J. Added value of mental practice combined with a small amount of physical practice on the relearning of rising and sitting post-stroke: A pilot study. J Neurol Phys Ther. 2009 Dec;33(4):195-202.
4. Tung FL, Yang YR, Lee CC, Wang RY. Balance outcomes after additional sit-to-stand training in subjects with stroke: a randomized controlled trial. Clin Rehabil. 2010 Jun;24(6):533-42.
5. Britton E, Harris N, Turton A. An exploratory RCT of assisted practice for improving sit-to-stand in stroke patients in the hospital setting; Britton. Clin Rehab. 2008; 22(5): 458-68.
6. Pedersen MM, Petersen J, Beyer N, Larsen HG, Jensen PS, Andersen O, Bandholm T; STAND-Cph collaborative group. A randomized controlled trial of the effect of supervised progressive cross-continuum strength training and protein supplementation in older medical patients: the STAND-Cph trial. Trials. 2019 Nov 28;20(1):655.
7. Pedersen MM, Petersen J, Bean JF, Damkjaer L, Juul-Larsen HG, Andersen O, Beyer N, Bandholm T. Feasibility of progressive sit-to-stand training among older hospitalized patients. PeerJ. 2015 Dec 17;3:e1500.

*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.