

GERI NOTES

Academy of Geriatric Physical Therapy

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IN HONOR/MEMORIAM FUND

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

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

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

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

PRESIDENT'S MESSAGE: MORE HONORS AND AWARDS

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



At the NEXT Conference, just held in June in Washington, DC, the American Physical Therapy Association (APTA) announced its Honors and Awards

Program recipients, and it is my pleasure to inform you that the following Academy of Geriatric Physical Therapy members were selected by the APTA's Board of Directors to receive the following awards:

- **Maura Daly Iversen, PT, DPT, SD, MPH**—Catherine Worthingham Fellow of APTA FNAP, FAPTA
- **Timothy L. Kauffman, PT, MS, PhD, FGSA, FAPTA**—Catherine Worthingham Fellow of APTA
- **Laurie Baldwin Kontney, PT, DPT, MS, CEEAA**—Lucy Blair Service Award

These individuals have provided leadership to the Association and the Academy, and I want to personally thank them for all they do for our organizations. If you know these individuals, please take the time to thank them for their service.

- **Brittney Sellers, SPT**, was awarded the Minority Scholarship Award and **Courtney Laine Watts, SPTA**, was awarded the Mary McMillan Scholarship Award.

Additionally, The PTA Recognition of Advanced Proficiency Program, which recognizes physical therapist assistants (PTAs) who have achieved advanced proficiency through education, experience, leadership, and as part of

the PT/PTA team in a specified area of work, was awarded in geriatrics to six individuals. They are **Sean Bagbey**, PTA, MHA, ATC; **Lynn Peter-Contesse**, PTA; **Alexander Schaub**, PTA, BS; **Kelli Trobaugh**, PTA; **Sharon Tebbe**, PTA; and **Samuel Waayers**, PTA. This brand signifies that the recipient has gone above and beyond entry-level education in his or her selected area of work and sets the recipient apart from other providers.

Along with the awards, many Academy members took part in a PT Day on Capitol Hill, meeting with our senators and representatives. Please join me in congratulating **Dominique Forte** of the University of Alabama-Birmingham and **Luke Snelling** of George Fox University in Newberg, Oregon, our winners of the 2015 Student Advocacy Award. Their interest and experience in advocacy efforts are commendable and we are proud to recognize them. Dominique Forte and Luke Snelling were sponsored by the Academy to attend APTA's Capitol Hill Day. They started out the day with a "PT Rally on Washington" and were matched up with delegates from each state who had experience lobbying on Capitol Hill, so that they could be effective in their visits. Delegations of PTs, PTAs, and physical therapy students then met with members of the 114th Congress and their staff to discuss the issues affecting the physical therapy profession, including the Medicare therapy cap and student loan forgiveness. This was the second time I have attended this event and I urge all members to

participate, either locally or nationally, to help our profession and the clients that we serve.

The NEXT Conference was in National Harbor and was another outstanding event that enabled PTs from around the country to meet and share stories and resources. Thursday's programming offered 4 lectures on the older adult. On Friday, the play, *Tangles*, was presented. *Tangles* explores the challenges associated with communication between families and medical professionals as they work to navigate the health care system. The play, which was written specifically for medical audiences, portrays the impact of a neurocognitive disorder (dementia) on a family and health care team. A rich discussion followed the presentation.

The \$25,000 donation we made this year to the Academy of Geriatric Physical Therapy's research fund is about to be put to use. The Foundation anticipates offering a \$40,000 research grant funded through the Academy's Geriatric Research Fund this summer. We also offered a \$1,000 research grant this spring for Parkinson disease research, which was made possible by a bequest of a former patient of Tim Kauffman, PT, PhD. The patient's family donated \$500 and the Academy matched that donation to create a one-time research award. At the time of publication, this has not been awarded.

Have a wonderful summer everyone. Stay active and do what you do best—taking care of the older generation. I'll be taking another hike on the Appalachian Trail.



EDITOR'S MESSAGE: STRIVING FOR RELEVANCE IN A CHANGING WORLD

Meri Goehring, PT, PhD, GCS



As *GeriNotes* Editor, I have the wonderful opportunity to review many submissions. Most of these submissions are well-

written and provide our readers with timely and useful information. Some need editing, and I am happy to work with authors to edit these works. A few, however, are not appropriate for *GeriNotes*. These are returned to the sender with a thank you for the submission. I always try to recommend other venues for publication to the authors.

I would like to take this opportunity to ask our readers and potential writers to carefully consider a topic before submitting their work for review. *GeriNotes* is not a peer-reviewed publication. Articles in non peer-reviewed publications are often written by experts in their field, but are not considered research. Typically, they are short articles with an emphasis on industry trends, new products, techniques, and organizational news. Articles are primarily

designed to share information and news with others in the Academy of Geriatric Physical Therapy. The Editor chooses what copy goes into each issue. When there are questions regarding content, the Editor may consult with the *GeriNotes* Editorial Board and/or the Director of Publications for the Academy of Geriatric Physical Therapy.

Student work is often submitted to *GeriNotes*. Sometimes these submissions are quite long and have many tables and figures. Often, they include abstracts, as if they were being submitted to a peer-reviewed journal. *GeriNotes* does not print abstracts, so be aware that these must be removed prior to submission. Additionally, it appears that some of the student articles are final projects for academic programs. Although I am willing to consider these, they may need editing. Articles over 5000 words are more difficult to publish, as they need to be balanced with other copy. These longer articles may wait for months or years to actually go to print. At this point, *GeriNotes* is not putting a strict word limit on any articles; however, one may be imposed in the future. Any such change in the author instructions will be clearly announced in *GeriNotes*.

GeriNotes strives to be a publication that provides clinicians with useful information that can be incorporated into practice. It also provides members with news and information regarding the Academy of Geriatric Physical Therapy. It provides photos of events and people active in the Academy, as well as award winners. Although some research articles may be included, it is not a considered a research-oriented journal, but a news magazine for the Academy.

Of course, the issue of print versus electronic copy is challenging in today's world. The Board of Directors of the Academy of Geriatric Physical Therapy may recommend changes from print to electronic copy or a mix of print and electronic in the future. If changes are made, they will be published in *GeriNotes* well in advance of any such change. Be aware that the current issue of *GeriNotes* is always available electronically in PDF form to members on our website.

For now, please enjoy the current issue of *GeriNotes*. There is a mix of student and clinician content in this issue, as well as news from the Academy. And, as always, please consider writing for *GeriNotes* if you have ideas to share.

WANTED: ARTICLES FOR GERINOTES

TOPICS: Anything related to older adults

STUDENTS AT ANY LEVEL: Send me papers you wrote for class

CLINICIANS: Send me an article or an idea

EDUCATORS: Send me student papers

Everyone loves to publish and it is easy! Contact Meri Goehring, GeriNotes Editor, at goehrinm@gvsu.edu

PRACTICE COMMITTEE UPDATE

Chair, Greg Hartley, PT, DPT, GCS, CEEAA

The Practice Committee of the Academy of Geriatric Physical Therapy (AGPT) continues to work on many AGPT-driven goals including the creation of evidence-based documents, like clinical practice guidelines. We are pleased to inform the membership that the Academy has successfully published the first Clinical Guidance Statement in the history of *Physical Therapy (PTJ)*, the journal of the APTA. The document, titled: “*Management of Falls in Community-Dwelling Older Adults: Clinical Guidance Statement From the Academy of Geriatric Physical Therapy of the American Physical Therapy Association*” has already been published ahead of print and is available in the June issue of *PTJ*. The full citation is:

Avin KG, Hanke TA, Kirk-Sanchez N, et al. Management of falls in community-dwelling older adults: clinical guidance statement from the Academy of Geriatric Physical Therapy of the American Physical Therapy Association. *Phys Ther.* 2015;95:xxx-xxx.

Additionally, members of the Practice Committee Clinical Practice Guideline Editorial Panel are deep in the work of creating 3 additional clinical practice guidelines (CPGs). The first of those will be specific to *physical therapy management (including intervention)* of patients who fall. The second is a joint venture with the Orthopaedic Section and will be on physical therapy management of patients with hip fracture. The Academy’s third CPG, currently under development, will be on physical therapy management of patients with osteoporosis.

The Practice Committee is involved in much more than the creation of CPGs. The following initiatives and updates come from the APTA Practice De-

partment. Academy of Geriatric Physical Therapy and members of the Practice Committee work closely with APTA on many of these initiatives. If you have any questions, please visit the links listed under each heading.

1. GUIDE TO PHYSICAL THERAPIST PRACTICE, 3.0

The Guide to Physical Therapist Practice, 3.0 was released in August 2014. It can be accessed via <http://guidetoptpractice.apta.org/> OR www.apta.org/guide.

Guide 3.0 is free to all members; annual subscriptions are available for nonmembers and institutions.

Guide 3.0 is available as an online subscription with interactive internal and external links, including ones to PTNow (www.ptnow.org). You can use the web-based *Guide 3.0* on a tablet, smart phone, or computer. *Guide 3.0* also has an optional feature allowing you to download it as an ePub on all of these devices; however, APTA cannot ensure compatibility of the ePub, and is not able at this time to provide tech support for issues related to it.

An explanation of all major changes can be found on the first page under Table of Contents.

2. PREVENTION POLICIES REVIEW

In February 2014, the APTA Board of Directors passed a position: Physical Therapists’ Role in Prevention, Wellness, Fitness, and Disease Management that came from the work of the Prevention Task Force. It included a proviso:

This position has been adopted by the APTA BOD with the understanding that this position and all other positions on this topic be incorporated into the policy review project with a comprehensive policy forwarded to the 2015 HOD.

The Public Policy and Advocacy Committee (PPAC) developed a process for the policy review project on another topic. A subgroup of PPAC was appointed to work with Clinical Practice Staff to accomplish the review and consolidation for Prevention. The process is on track to be forwarded to the 2015 House.

3. ICD-10

On October 1, 2015, the ICD-9 code sets used to report diagnoses and inpatient procedures will be replaced by ICD-10 code sets. The transition will affect all entities and providers covered by the Health Insurance Portability Accountability Act (HIPAA).

Key Practice Impacts of ICD-10:

- Identification of where diagnosis codes are used today: Paperwork, electronic systems, and other processes, such as submitting reimbursement claims, identifying patient eligibility, getting prior authorization from a payer, reporting quality data, and more, will need to be updated to reflect new ICD-10 diagnosis codes.

- Documentation: The ICD-10 code set provides greater specificity for patient diagnosis, so it will be critical to assess current documentation and how it will support coding for ICD-10.

- Vendor Updates: If practices are using electronic systems for billing, they will need to have their systems updated by vendors.
- Staff Training: All staff that work with the current ICD-9 system must be trained on the ICD-10, such as clinicians, front desk staff, and coding/billing staff.
- For more information, please visit APTA's website, <http://www.apta.org/ICD10/>

4. PHYSICAL THERAPY CLASSIFICATION AND PAYMENT SYSTEM

- APTA's goal is to reform payment for outpatient physical therapy services to improve quality of care, recognize, and promote the clinical judgment of the physical therapist, and provide policymakers and payers with an accurate payment system that ensures the integrity of medically necessary services.
- APTA developed a classification and payment system that is based on the clinical judgment of the physical therapist. Pilot testing has been completed.
- Factors in payment will include the severity/complexity of the patient's presentation with the added dimension of the required intensity/complexity of the therapist's clinical decision making and skill/expertise of techniques.
- A final Code Change Proposal was prepared for submission to AMA CPT Editorial Panel in February 2015 for a tiered evaluation structure. The intervention codes will be deferred for further modification and testing.
- For more information, please visit APTA's website: <http://www.apta.org/PTCPS/>, or contact Carmen Elliott at carmenelliott@apta.org.

5. PHYSICAL THERAPY OUTCOME REGISTRY

- The Physical Therapy Outcome Registry is an organized system to

collect data across the continuum of care to evaluate patient function and other clinically relevant measures for the population of patients receiving physical therapy services. The registry will serve to inform reimbursement, improve practice, support quality improvement initiatives, and promote research.

- Registry participants will be able to use data to: benchmark performance at individual PT and practice levels, enhance patient care, justify services to payers, and fulfill regulatory requirements.
- APTA is currently conducting pilot testing of the Registry, with a limited number of slots remaining for participation. Pilot participants will be fully funded through 2015. For information on how to participate in the pilot, please email registry@apta.org.
- For more information, please visit APTA's website: <http://www.apta.org/registry>.

6. SCOPE OF PRACTICE

- Under the guidance of the APTA Board of Directors, a Scope of Practice Task Force was developed to determine the definitions of 3 components of scope of practice—professional, jurisdictional, and personal. The task force recommendation included that APTA define the physical therapist's professional scope of practice as a global statement rather than as a list of activities. The work of the original task force is complete and provided important work as a foundation. A new task force has been developed with the purpose to develop and propose a broad definition of the physical therapist's professional scope of practice for the Board of Directors to ultimately forward to the House of Delegates in 2016. Charter for the current Task Force can be found at: <http://www.apta.org/Volunteer-Groups/TaskForce/ScopeofPractice/>.

- The scope of practice for physical therapists is dynamic, evolving with evidence, education, and societal needs, and has 3 components:

- Professional Scope of Physical Therapist Practice: The professional scope of practice of physical therapy is defined as practice that is grounded in the profession's unique body of knowledge, supported by educational preparation, based on a body of evidence, and linked to existing or emerging practice frameworks.
- Jurisdictional Scope of Physical Therapist Practice: The jurisdictional (ie, legal) scope of practice is established by a state's practice act governing the specific physical therapist's license and the rules adopted pursuant to that act.
- Personal Scope of Physical Therapist Practice: The personal scope of practice consists of activities undertaken by an individual physical therapist that are situated within a physical therapist's unique body of knowledge where the individual is educated, trained, and competent to perform that activity.

- For more information, please visit APTA's website: <http://www.apta.org/ScopeOfPractice/>.



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

TASK-SPECIFIC RESISTANCE TRAINING BEDSIDE FOR AN 80-YEAR-OLD DECONDITIONED FEMALE: A CASE REPORT

Maura Ryan, DPT; Russel Carter, EdD, PT; Robin Washington, PT, PhD, CRC; Rebecca Wojcik, PT, EdD, GCS

INTRODUCTION

Often times individuals require hospitalization to treat an illness or injury, but hospitalization itself can have detrimental effects to people, specifically older adults.¹ Hospitalization can lead to complications unrelated to the problem that caused the admission, including deconditioning.¹ Deconditioning is a complex process of physiological change that can affect multiple systems within the body and often results in functional decline, specifically in muscle strength, aerobic capacity, and diminished pulmonary ventilation.^{1,2}

Functional decline is a loss of independence in self-care activities that includes basic activities of daily living (ADLs), such as transferring in and out of bed and walking.^{2,3} Deconditioning is recognized as a distinct rehabilitation condition by the American Board of Physical Medicine and Rehabilitation.⁴ Research has shown that of 60 functionally independent individuals 75 years or older admitted to the hospital from their home for acute illness, 75% were no longer independent on discharge.¹ Even with interventions targeted to increase functional independence during acute admission, many older adults will continue to experience deconditioning during their hospital admission, impacting discharge planning, and preventing direct return to the home environment.² Subacute rehabilitation settings can be used as an alternative or bridge in these cases. Reconditioning can be a long process, depending on the duration of inactivity, and overwhelming to patients and caregivers.⁵ A treatment plan tailored to the needs of each individual must be established. The most significant deficits for patients with hospital-associated deconditioning include decreased lower extremity muscle strength and endurance,

as well as a decrease in basic mobility and ambulatory endurance.⁴ Additionally, difficulty in transferring, the ability to rise in and out of a bed and chair, is a common problem in older adults.⁶

Physical therapy is an essential aspect of rehabilitation for patients with these impairments. In situations where the patient is unable to leave the room, bedside therapy is the other option. A study that focused on bedside physical therapy to prevent deconditioning proved that bringing physical therapy to the bedside of patients that cannot leave their room has led to improved physical conditioning and fewer falls.⁷

Deconditioning is a complex process of physiological change that can affect multiple systems within the body and often results in functional decline, specifically in muscle strength, aerobic capacity, and diminished pulmonary ventilation.

There is also evidence that supports task-specific resistance training as beneficial for increasing the overall ability to complete transfer tasks in activity of daily living-impaired adults.⁸ Participants were aged 65 years and older, who reported requiring assistance (from a person, equipment, or device) in performing at least one of the following activities: transferring, walking, bathing, and toileting.⁸ In response to bed- and chair-rise task-specific resistance training interventions over 12 weeks, the ability of the older adults to perform a set of bed- and chair-rise tasks increased.⁸

Ambulatory endurance training, with or without gait aids, is an imperative component of the PT program for

deconditioned patients.³ This includes walking progressively longer distances and tracking progress with each therapy session.⁴ Clinical practice guidelines identify a substantial therapeutic role for physical activity in coronary heart disease^{9,10} and hypertension.⁹ For example, lower risks of cardiovascular disease have been observed with just 45 to 75 minutes of walking per week.⁹

Hospitalizations also increase the probability of acquiring a health care-associated pathogen, specifically *Clostridium Difficile* (*C. Difficile*). The incidence and severity of *C. difficile* infection (CDI) has increased in many parts of North America in the past few years.¹¹ Moreover, patients in the hospital with CDI are more likely to be discharged to a long-term care facility.¹¹ The greatest risk factors for CDI are hospitalization, exposure to antimicrobial agents, and advanced age.¹¹ A national point-prevalence survey for CDI conducted in 648 hospitals in the United States (12.5% of all acute-care facilities) in 2008 found a prevalence of 13.1 per 1,000 inpatients. The majority (69%) of the affected patients were aged 60 and older.¹¹ Further research revealed a 43% spike in *C. difficile*-associated disease, including severe diarrhea, among patients at hospital discharge between 2000 and 2001.¹² Data came from the Centers for Disease Control and Prevention annual National Hospital Discharge Survey, which included records from more than 300,000 patients at short-stay hospitals annually. The study suggested the increased exposure to anti-microbial drugs and health care facilities, as well as decreased defenses among the elderly, may contribute to the problem.¹² The incidence of CDI as well as the populations at risk have increased significantly in the last decade.¹³ The use of private

rooms and implementation of contact precautions have been successful in limiting transmission of *C. difficile*.¹¹

Groin hernia repair is a common surgical procedure and postoperative recovery is uncomplicated in most patients.¹⁴ Some patients, however, continue to complain of chronic groin pain or discomfort for months or even years after hernia repair.¹⁴ Additionally, atrial fibrillation is the most common arrhythmia encountered in clinical practice and is associated with significant morbidity and mortality.¹⁵

The literature on deconditioning focuses on older adults, yet doesn't incorporate the incidence of back-to-back hospitalizations that are accompanied by CDI, necessitating rehabilitation to be completed in the patient's room. Therefore, the purpose of this case report was to describe the use of task-specific resistance training bedside on 80-year-old deconditioned female.

CASE DESCRIPTION

Subject

The patient for this case report was an 80-year-old retired African-American female seen in a skilled nursing facility. The patient was referred from an acute care hospital for physical therapy evaluation and treatment. The patient was recently hospitalized due to defibrillator firing, atrial fibrillation with rapid ventricular rate, and abdominal pain with *C. Difficile*. Three weeks prior, the patient had been hospitalized due to a right inguinal hernia with repair and endoscopic retrograde cholangiopancreatography with stent and accordion drain to the gallbladder. Related past medical history included tissue mitral valve replacement, automatic implantable cardioverter defibrillator, chronic coagulation, hypertension, mitral valve disorder, and coronary artery disease. Medications the patient was on included Amiodarone, Metoprolol Tartrate, Lactobacillus Rhamnosus, Furosemide, and Enoxaparin Sodium.

The patient presented at the time of the initial physical therapy examination with complaints of weakness and pain in her abdomen with movement, spanning the past 4 weeks. The physical therapist's examination and intervention focused on functional testing and training, lower extremity strengthening, and balance training to return home safely with her family.

Table 1. Patient Goals and Outcome Measures

Goals	Outcome Measure
Gait: ambulate 25 feet with least restrictive device in order to walk to the bathroom	Measure distance ambulated daily, FIM
Sit to stand transfer with Min Ax1 with least restrictive device	FIM (motor)
Bed Mobility: supine to sit with Min A x1	FIM (motor)
Bed to chair transfer with Min A x1 with least restrictive device	FIM (motor)
Strength: increase BLE to 4-/5	Manual Muscle Testing.

Abbreviations: FIM, Functional Independence Measure; Min A, Minimal Assistance; BLE, bilateral lower extremity.

Prior to admission, the patient lived alone in a first floor apartment with no exterior or interior steps. She was independent with all functional mobility, using a single point cane to ambulate. She explained she had not been able to get out of bed independently since her hospitalization for the hernia repair, which was one month prior to her admission to the skilled nursing facility (SNF). The patient's goals are outlined in Table 1. The goals included being able to return home with her daughter as her primary caregiver and to increase independence in bed mobility, transfers, and ambulation. She stated her personal goal was to be able to walk to the bathroom.

The patient expressed a willingness to participate in the physical therapy plan of care as outlined in this case report.

EXAMINATION

Systems Review

The initial encounter began with the patient lying in a hospital bed. Cognition was found to be intact, with the patient alert and oriented to person, place, and time, and able to follow simple commands. She required 2 liters supplemental oxygen via nasal cannula with her O₂-saturation rate at 94% at rest. The patient was unable to complete basic functional activities (eg, bed mobility, transfers, and ambulation) with complaints of lightheadedness upon sitting at the edge of the bed, demonstrating decreased strength in bilateral lower extremities (BLE). She was unable to go from supine to sit in bed without maximum assistance of two people and was unable to sit unsupported at the edge

of the bed without minimum assistance of one person. The surgical incision closure site from the hernia repair was intact. Given the fact that she had been medically cleared following the defibrillator firing and atrial fibrillation, physiological signs and symptoms for cardiac concern were monitored, but were not an issue throughout care. Oxygen saturation rate fluctuated from 85% to 95% with activity and was treated with rest and nasal breathing techniques. Slight edema, 1+, with no lasting impression, was present in BLE below the knees.

CLINICAL IMPRESSION

The findings from initial examination revealed extreme muscle weakness with concurrent pain with movement, increased dependence for all functional mobility, decreased activity tolerance, and need for supplemental oxygen. With blood pressure and heart rate within normal limits throughout evaluation, cardiac concerns were not a focus of therapy. The focus of treatment would be on restoring functional mobility and strength, rebuilding independence with ADLs, and prevention of deterioration.

TESTS AND MEASURES

Manual Muscle Testing

The patient's muscle strength was extremely impaired (Table 2). Research reports that manual muscle testing (MMT) is the most commonly used method for documenting impairments in muscle strength and is a valid measurement.¹⁶ A literature review analyzed more than 100 studies on the reliability and validity of MMT and reported that there is evidence of good reliability and

Table 2. Manual Muscle Testing Results at Hospital Admission and Discharge

Manual Muscle Testing	Admission	Discharge (4 weeks later)
B Hip flexor	1/5	3+/5
B Hip abductor	1/5	3+/5
B Knee flexor	1/5	3+/5
B Knee extensor	1/5	3+/5
B Ankle dorsiflexor	3+/5	3+/5
B Ankle plantar flexor	3+/5	3+/5

Abbreviations: B, bilateral.

validity in the use of MMT for patients with interrater reliability of .82 to .97 and test-retest reliability of .96 to .98.¹⁷ Additionally, MMT has content validity because the test construction is based on known physiologic, anatomic, and kinesiology principles.¹⁷

Gait

The physical therapist performed gait analysis due to the impairments found during examination, including decreased BLE strength, and due to the patient's goal to walk to the bathroom. Gait evaluation is based primarily on clinical observation and is the accepted manner of judging how well a patient is walking.¹⁸ The patient had gait deviations in forward head and trunk, decreased step length, cadence, and most importantly, gait distance tolerance was severely limited. For the purpose of this study, gait evaluation and analysis was measured by distance in feet. Using distance walked, the therapist was able to gather objective, quantitative measurements of the patient's gait.¹⁸

Functional Independence Measure

The motor portion of the functional independence measure (FIM) was used to assess the patient's function and to provide a baseline measure for tracking progress and outcomes. The FIM 18-item rating scale assesses self-care, bowel and bladder management, mobility, communication, cognition, and psychosocial adjustment.¹⁹ Each item is rated on a scale from 1 (total assistance) to 7 (complete independence).¹⁹ The FIM is a 7-point rating scale created as part of the Uniform DATA System for Medical Rehabilitation.²⁰ It was designed to assess the ability to carry out ADLs. The FIM has been shown to have high interrater reliability, with interclass correlation coefficient of .97 for the total

FIM (functional outcome differences) and .96 for the motor domain (inter-rater reliability of the 7-level FIM).²¹ A separate study compared the reliability, validity, and responsiveness of the motor subscale of the FIM in inpatients with stroke receiving rehabilitation. It was reported that the FIM had high concurrent validity with intraclass correlation coefficient of $\geq .83$, high internal consistency with coefficient of $\geq .84$ and a high responsiveness ≥ 1.2 .²² The FIM data reported here is according to the total FIM, but standard practice for physical therapists at the skilled nursing facility was analyzing bed mobility, transfer, locomotion, and stairs and the others were assessed by other disciplines. These measures, though not established valid as the total motor portion of the FIM, provided an objective baseline measurement relevant to function and patient goals. Bed mobility required maximum assistance of two people, corresponding to a FIM score of 1. See Table 3 for the FIM scores for bed mobility, transfers, and locomotion. Stair climbing remained a 0 throughout treatment, as it was not a goal and the patient had

no exterior or interior stairs in her home. Transfers and locomotion with walking were assessed during the plan of care due to the patient's weakness and complaints of lightheadedness during examination. When attempting to initiate rolling from supine to a sidelying position, she was unable to perform hip and knee flexion in preparation to scoot toward the edge of the bed (EOB) with complaints of pain in her abdomen and bilateral lower extremities. She required maximum assistance of two people to perform supine to sit, corresponding to a FIM score of 1. She was incapable of maintaining sitting balance without minimal assistance from the physical therapist. The physical therapist could not assess standing balance at the initial examination secondary to safety concerns, due to insufficient trunk control, weakness in the lower extremities, and the patient's complaints of lightheadedness.

Diagnosis

The patient presented with impairments in balance, strength, and pain as well as limitations in locomotion, transfers, and bed mobility. The results from the MMT and an inability to complete basic functional mobility tasks confirm the patient's diagnosis. These impairments correspond to the physical therapy diagnosis of generalized weakness/debility.

Prognosis

Typical recovery for an older adult with hospital-associated deconditioning depends on many factors including the level of deconditioning, the patient's motivation, and the patient's co-morbidities.

Table 3. Functional Independence Measure Results from Admission to Discharge

Functional Independence Measure	Admission	Progress	Progress	Discharge
Bed mobility	1	1	3	3
Sit-to-stand transfer	0	1	3	4
Bed-to-chair transfer	0	1	3	3
Locomotion via walking with rolling walker	0	1	1	1

0= Did not test, 1= Total Assistance- the patients expends less than 25% of the effort or the need of more than 1 person was required, 2= Maximal assistance- the patient expends between 25% to 49% of the effort, 3=Moderate Assistance-the patient requires more help than touching or expends between 50% and 74% of the effort. 4=minimal assistance- the patient requires no more help than touching and performs 75% or more of the task. In the case of locomotion, if the patient walks less than 50 feet, they are automatically scored a 1.¹⁹

The patient's prognosis was fair to good due to her high motivation to achieve her goals, high prior level of function, good cognition, and desire to return home. There were a number of other factors evaluated in determining a prognosis for this patient. The main negative prognostic factor was the patient's extended period of inactivity, due to the amount of time spent in bed post hernia repair 3 weeks prior to the defibrillator firing incident. The consequences of prolonged immobility on older adults (≥ 65 years old), compared to younger subjects, are that older adults are more sensitive to bed rest inactivity.⁴ In a study that compared the effects of bed rest on lean tissue in older versus younger adults, the older adults lost 1 kg of lower extremity lean tissue in 10 days, whereas younger subjects in a 14-day bed rest study lost only 650 g.⁴ In addition, her age, 80, puts her at greater risk for age-related loss of muscle mass, or sarcopenia.²³ Because physiologic and functional capacity often decline with age, the patient was at a greater risk for deconditioning. Research also shows that patients following an inguinal hernia repair should be back to work, including undertaking light lifting, within one to two weeks. The extended time the patient spent inactive post hernia repair may have further impaired her condition. Additionally, the diagnosis of *C. Difficile* further increased the patient's weakness and deconditioning.¹²

Plan of Care/Goals

The patient presented with impairments in strength, activity tolerance, and balance leading to deficits in gait, transfers, and bed mobility. Over the course of 4 weeks of physical therapy, the plan for this patient was to be seen 5 days a week for 75 minutes a day to address impairments and the physical therapy goals.

Considering the patient's stated goals and level of functional mobility at the time of examination, goals were formulated to address her impairments. Goals in the area of strength, measured by MMT, were to increase overall BLE strength to 4-/5 in order to facilitate improved functional mobility at home. Goals in bed mobility, transfers, and locomotion as measured by motor components of the FIM, were to decrease in level of assistance from maximum assist of 2 people (1/7) to minimum assistance (Min A) (4/7) for all functional mobility

tasks to achieve greater independence functioning at home.

INTERVENTIONS

The patient received physical therapy treatments 5 days a week, 45 minutes a day for 4 weeks in the subacute rehabilitation setting of a SNF. The interventions specifically addressed the impairments, as noted in the examination, which included muscle weakness in BLE, functional mobility, and activity tolerance with gait. Interventions were divided into two phases (Table 4). The first phase consisted of sessions 1 through 9, the first two weeks, and focused on bed mobility, transfers, and active range of motion of the lower extremities. Bed mobility focused on lateral scooting left and right in bed, in supine, and in sitting, rolling to the edge of bed, and scooting in sitting. Transfers focused on sit-to-stand and bed-to-chair transfers via stand pivot using a rolling walker. Active range of motion exercises of the hip, knee, and ankle joints were completed while sitting in a chair. The second phase consisted of sessions 10 to 19, weeks two and 4, and focused on increasing aerobic capacity and gait distance, as well as strengthening the lower extremities.

Bed Mobility/Transfer Training

The patient was unable to perform a transfer and was unable to complete bed mobility without assistance from the physical therapist upon initial examination. Transferring function may decline as a result of acute illness and hospitalization, or analogously, improve as a result of rehabilitation.⁶ To address the patient's impairments, a series of bed mobility and transfer tasks were implemented. The tasks were chosen to target

functional limitations and to increase strength through functional activities. The patient was instructed from the supine position to perform bed mobility tasks of bridging, lateral scooting in supine, rolling to sidelying, sidelying to sit, lateral scooting in sitting, and to perform transfers from sit-to-stand and bed-to-chair transfers with a rolling walker.

Strength

Due to the very low levels assessed during MMT, a strengthening program was implemented. The strengthening program consisted of various functional activities, resistive band exercises, and open chain kinetic and closed chain kinetic exercises that targeted the BLEs. Strength training is an effective intervention to improve muscle strength, power output, and muscle mass in healthy and frail elderly populations.²³ Additionally, a study reported that following a leg resistance training program, one frail, older adult was able to rise from a chair without armrest use and others felt that rising from a chair was easier.⁸

Aerobic Activity

Due to the patient's decreased activity tolerance to minor mobility tasks, aerobic activity was implemented via the Omnicycle. The Omnicycle is a special therapeutic exercise system that is powered through rotations from bilateral upper and lower extremities. The patient would complete 15 minutes using her arms, followed by 15 minutes using her legs to increase her aerobic capacity.

Gait Training

Given the patient's goal to walk and her inability to stand or walk indepen-

Table 4. Two Phases of Interventions

	Week 1	Week 2	Week 3	Week 4
Dynamic activities in sitting	X	X	X	X
Open/closed chain kinetic exercises	X	X	X	X
Transfer training	X	X	X	X
Bed mobility activities	X	X	X	X
Elastic band resistive exercises	X	X	X	X
Gait training		X	X	X
Omnicycle		X	X	X
Dynamic balance activities in standing		X	X	X

dently on examination, gait training was a primary focus for her plan of care during the second phase. The patient was unable to complete any gait activities prior to session 10. Gait training was initiated using a rolling walking with moderate assistance of one person. See Figure 1 for progression of gait throughout the plan of care. For the purpose of this report, S stands for session. In a 2003 article, Manson et al²⁴ demonstrated the importance of physical exercise for the prevention of cardiovascular disease in women who reported walking to be as efficient as vigorous exercise in preventing cardiovascular events. The patient completed pre-gait activities prior to her taking her first steps. Pre-gait activities included weight shifting side-to-side and front and back, and standing unsupported with a rolling walker.

OUTCOMES

The patient's impairments improved, yet she did not fully meet all of her goals. Goals in the area of strength, measured by MMT, improved to 3+/5 in all muscle groups tested (see Table 2), 1 muscle grade below the goal. Goals in bed mobility, transfers, and locomotion as measured by motor components of the FIM were partially met. The patient was able to ambulate with a rolling walker 11 feet with contact guard assist (CGA) of 1 person, transfer from the bed to a chair using the stand pivot technique with Mod A of 1 person, and get in and out of bed with Mod A of 1 person (see Table 3).

DISCUSSION AND CONCLUSION

The goal of this case report was to describe the use of task-specific resistance training bedside on a deconditioned 80-year-old female. Following a treatment plan that focused on exercises and activities to increase independence with functional mobility and strengthening, the patient showed improvement in both areas evidenced by MMT and tracking functional mobility in bed mobility, transfers, and gait using the FIM guidelines. Previous research has shown that older adults can respond positively to exercise training.^{25,26} In one study by Coleman et al,²⁵ researchers evaluated the changes in strength, mobility, balance, endurance, frailty, and quality of life following a 6-week multidisciplinary inpatient rehabilitation program. Therapy consisted of a variety of interventions aimed at improving balance, functional exercise capacity, lower limb strength, mobility, and transfers. Outcome measures demonstrated significant improvements in balance, basic functional mobility of sit-to-stand, walking, and changing directions with walking, and functional exercise capacity.²⁵ However, the patient was unable to fully meet her goals of achieving independence with gait, bed-to-chair transfer, and bed mobility.

Currently, there is minimal literature on the effectiveness of bedside rehabilitation in patients seen in a skilled nursing facility. In addition, minimal literature reports the effectiveness of bedside rehabilitation in deconditioned patients or the effectiveness of specific reconditioning interventions in reha-

bilitation.² There is currently insufficient evidence to support the use of geriatric rehabilitation programs to reduce functional decline in older adults who are deconditioned.² Moreover, there is a limited number of randomized controlled trials to assess and determine the most effective and efficient interventions to minimize and treat deconditioning.^{2,27} This could be due to the fact that the term "deconditioning" is not recognized by the International Classification of Diseases, nor is it included in the National Library of Medicine Medical Subject Heading.² These exclusions may impact the ability to fund treatment programs and conduct research to determine the effectiveness of interventions to treat deconditioning.²

Alexander et al⁷ utilized a randomized controlled trial to determine the effect of task-specific resistance training program to improve the ability of disabled older adults (age 65 and older) to rise from a bed to a chair. Their findings indicated positive outcomes reporting increased overall ability to perform a series of bed- and chair-rise tasks. Consistent with the current case report, the patient increased her overall ability of transferring into and out of a chair or bed. Research regarding the effectiveness of gait training was plentiful. Researchers in a 2013 study investigated the effects of a walking program on aerobic endurance and function in a sample of sedentary elderly people.²⁸ The interventions consisted of walking training including balance exercises and lower limb strength activities.²⁸ The study concluded that a walking training program can be used to improve physical functioning among sedentary elderly people.²⁸ There is minimal research on the effectiveness of gait training when confined to a room. The patient demonstrated increased strength and improved activity tolerance, allowing for increased gait distance, ambulating with her rolling walker 4 feet at the 10th session to 11 feet, 5 times at discharge, with decreased assistance from the PT, Mod A at session 10 to CGA at discharge. The patient did, however, experience setbacks. On session 15, the patient was unable to complete any gait due to overactive bowel movements. On session 18, the patient decreased the number of bouts and the distance walking for each bout. This may be due to the intensity of the previous days' exercises.

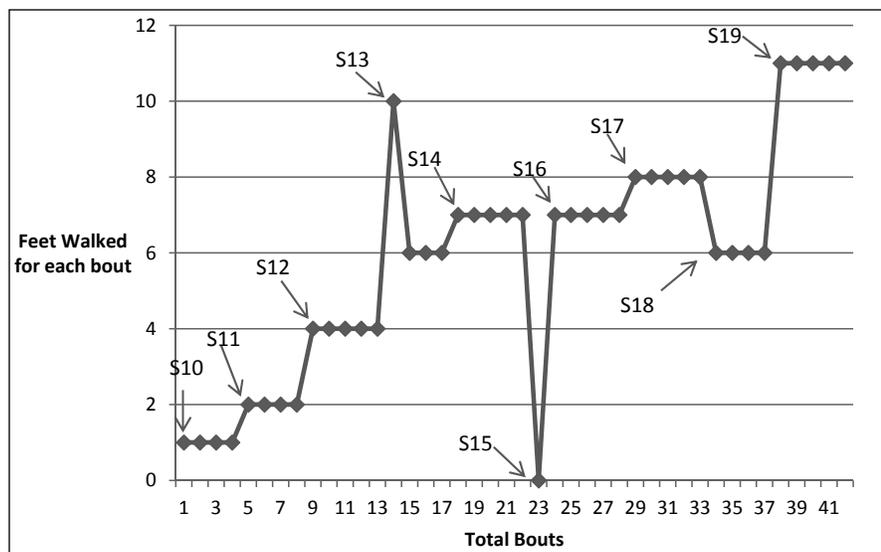


Figure 1. Progression of gait throughout the plan of care.

The patient improved her strength and aerobic capacity as demonstrated by increased muscle grades and required less rest breaks during exercise with the Omnicycle respectively. An article by Izquierdo et al²¹ investigated the effects strength, endurance, and concurrent training had on the elderly. It was suggested after an analysis of a 16-week program of the strength training group, the endurance group, and the concurrent group that a minimum weekly frequency of concurrent training may promote an optimal stimulus to strength gains in previously untrained elderly subjects.²¹ Additionally, a review article of the same topic concluded that the combination of strength and endurance training (ie, concurrent training) performed at moderate volume and moderate to high intensity in elderly populations is the most effective way to improve both neuromuscular and cardiorespiratory functions.²¹

Limitations

The data in this report is from a single subject who was confined to her room to complete interventions. Replication of this study should compare treatment with a control subject who receives the same treatment in a gym setting. The treatments used were appropriate for our particular patient and should not be generalized to all hospital-associated deconditioned patients. There is a broad spectrum of symptoms in older adults who become deconditioned following an acute hospital admission and they should be treated appropriately based on examination findings. Severity of their condition can make a significant difference in rehab potential. In a patient with mild deconditioning, impairments may resolve more rapidly when compared to a patient with more severe and involved deconditioning, such as in this case report. Additionally, the restriction of performing all interventions in the patient's room may negatively affect a patient who is more ambulatory because it would limit the distance they are able to walk.

When the patient was initially examined, she was unable to perform basic mobility tasks. Possible weakness of the functional data accrued involves the reliability of recording a portion of the motor component of the FIM. Another weakness of the data involves recording gait distance during gait training. Step length, stride length, and cadence were not assessed.

The physical therapy interventions designed for this patient to address strength, activity tolerance, and functional mobility were effective to a degree. Although the patient was not able to achieve her goal to independently walk with her rolling walker, she was able to accomplish increased gait distance with decreased assistance from the physical therapist, demonstrating the potential to continue to improve with the home exercise program and with assistance from her daughter.

In conclusion, this is an important time regarding healthcare resources for older people status post-acute hospital admission, as the geriatric population is steadily growing.²⁵ There is a need for evidence-based practice in the form of randomized controlled trials to determine the most effective types of therapy interventions that would be beneficial to refine intervention options for patients with this condition.

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THE EFFECTIVENESS OF MANUAL THERAPY TECHNIQUES IN THE TREATMENT OF PATIENTS WITH HIP OSTEOARTHRITIS

Bonni Kinne, PT, MSPT, MA; Kelly Johnson, DPT; Rachel Patterson, DPT; Aaron Poirier, DPT

Arthritis is the term used for a number of different rheumatic diseases that cause joint pain and inflammation.¹ Currently, over 50 million Americans have been diagnosed with some form of this condition. Most types of arthritis are more common in females than they are in males, and increased age is a contributing factor for all types of arthritis. In addition, arthritis is more likely to develop in individuals who are overweight, who have previously experienced a joint injury or infection, or who have participated in activities that required the repetitive use of a particular joint.

Therefore, some types of arthritis may be at least partially preventable by losing weight, guarding against joint injury and infection, and modifying repetitive-use activities. Arthritis is diagnosed through laboratory tests and radiographic imaging, and it is treated through a combination of pharmacological interventions, non-pharmacological interventions (such as physical therapy), and, in the most severe cases, surgery.

The most common type of arthritis is osteoarthritis (OA), also referred to as degenerative joint disease.² Osteoarthritis is characterized by cartilage deterioration and subsequent bony changes in the affected joint. There are two forms of OA. The idiopathic, or primary, form arises from an unknown cause; and the secondary form is caused by injury, infection, or other recognized medical reasons. Osteoarthritis is responsible for over 50% of all arthritis-related inpatient medical visits and almost 20% of all arthritis-related outpatient medical visits. In addition, individuals with OA spend approximately \$6,000 per year on arthritis-related health care costs. The 3 joints most often affected by OA are the hands, knees, and hips.

Individuals with hip OA typically complain of anterior groin pain, especially when the hip is internally or externally rotated while the knee is in complete extension.³ Objectively, hip OA is characterized by at least two of

these specific criteria: (1) a low erythrocyte sedimentation rate as diagnosed by laboratory tests, (2) the presence of osteophytes as diagnosed by radiographic imaging, and (3) a narrowing of the joint space as diagnosed by radiographic imaging.⁴ After hip OA has been diagnosed, the primary treatment objectives include decreasing the individual's pain, improving the individual's function, and slowing down the progression of the cartilage deterioration and subsequent bony changes.⁵ A recent Cochrane review reported that exercise therapy is able to decrease pain and improve function in many individuals with hip OA.⁶ The Orthopaedic Section of the American Physical Therapy Association also recommends that manual therapy be included in the treatment protocol.⁷

Manual therapy techniques may be defined as "skilled hand movements intended to improve tissue extensibility; increase range of motion; induce relaxation; mobilize or manipulate soft tissues and joints; modulate pain; and reduce soft tissue swelling, inflammation, or restriction."^{8(p680)} Joint mobilizations and joint manipulations are the only interventions included in the two most popular manual therapy approaches developed by physicians (Cyriax and Mennell), as well as in the two most popular manual therapy approaches developed by physical therapists (Kaltenborn and Maitland).⁹ Mobilizations are "low-velocity passive movements within or at the limit of joint range of motion (ROM),"^{10(p853)} whereas manipulations are "high-velocity thrusts to a joint so that the joint is briefly forced beyond the restricted ROM."^{10(p853)} The benefits of manual therapy are thought to occur because of its positive influence upon both the anatomic structure and the physiologic function of the body part impacted by the particular medical condition.¹¹

Although manual therapy positively influences both anatomic structure and physiologic function, there is very little evidence related to the effects of manual

therapy on hip OA. Two recently published systematic reviews examined the effects of physical therapy on OA in general. However, the first systematic review¹² only included one study that referred to hip OA and the second systematic review¹³ only included two studies that referred to manual therapy. Therefore, the authors completed a systematic review with the purpose of evaluating the effectiveness of manual therapy techniques on the functional status and/or the pain level of patients with hip OA. The following is a summary of the primary findings of this systematic review.

METHODS

A search of the CINAHL Plus with Full Text, ProQuest Medical Library, and SPORTDiscus with Full Text databases was performed. The search terms used for these databases were "hip osteoarthritis" AND "manual therapy" AND "randomized." The inclusion criteria for this systematic review consisted of (1) patients with hip OA, (2) an intervention group that received manual therapy as a component of the treatment plan, (3) a comparison group that did not receive manual therapy as a component of the treatment plan, (4) function and/or pain as the outcome measure, and (5) randomized controlled trials. The exclusion criteria consisted of (1) patients with a diagnosis other than hip osteoarthritis, (2) an intervention group that did not receive manual therapy, (3) a comparison group that received manual therapy, (4) outcome measures other than those outlined in the inclusion criteria, and (5) studies other than randomized controlled trials. The approach used to evaluate evidence level was the Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence¹⁴ and the approach used to evaluate methodological rigor was the PEDro scale.¹⁵

RESULTS

A total of 2,047 articles were identified through a database search. Three additional records were identified through other sources. After removing

the duplicates and screening the records, 4 studies¹⁶⁻¹⁹ were ultimately included in the qualitative synthesis. According to the Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence,¹⁴ all of the included studies¹⁶⁻¹⁹ were classified as level 2 evidence because each study was considered a randomized controlled trial. According to the PEDro scale,¹⁵ 3 of the included studies^{16-17,19} had a methodological rigor score of 7 out of 10 and the other study¹⁸ had a methodological rigor score of 6 out of 10.

In the Hoeksma et al¹⁶ study, 56 participants were randomly assigned to a manual therapy (MT) group, and 53 participants were randomly assigned to an exercise therapy (ET) group. Both groups were treated two times per week for 5 weeks, for a total of 9 sessions. The MT group received 25 minutes of manual therapy per session and the ET group received 25 minutes of exercise therapy per session (as well as a home exercise program). The functional outcome measures used in this study were (1) the Hip Disability and Osteoarthritis Outcome Score (HOOS),²⁰ (2) the 80-Meter Walk Test,¹⁶ and (3) the Short Form-36 (SF-36).²¹ The pain outcome measure was the Visual Analog Scale (VAS).²² Using these outcome measures, the groups were analyzed at discharge, 3 months after discharge, and 6 months after discharge.

In the Abbott et al¹⁷ study, 13 participants were randomly assigned to a manual therapy/exercise therapy (MT + ET) group, 16 participants were randomly assigned to a manual therapy (MT) group, 14 participants were randomly assigned to an exercise therapy (ET) group, and 18 participants were randomly assigned to a control group. The control group only received routine medical care. The other 3 groups were treated 7 times during the first 9 weeks, then two more times during week 16. The MT group received 50 minutes of manual therapy per session (as well as a home exercise program), the ET group received 50 minutes of exercise therapy per session (as well as a home exercise program), and the MT + ET group received a combination of the manual therapy and exercise therapy protocols. The functional/pain outcome measure used in this study was the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC).²³ Using this outcome measure, the groups were analyzed at a one-year follow-up.

In the French et al¹⁸ study, 43 participants were randomly assigned to a

manual therapy/exercise therapy (MT + ET) group, 45 participants were randomly assigned to an exercise therapy (ET) group, and 43 participants were randomly assigned to a control group. The control group only received routine medical care. The other two groups were scheduled to be treated 6 to 8 times over a period of 8 weeks. The MT + ET group received 30 minutes of exercise therapy and up to 15 minutes of manual therapy per session. The ET group received 30 minutes of exercise therapy per session (as well as a home exercise program). The functional outcome measures used in this study were (1) the WOMAC,²³ (2) the SF-36,²¹ (3) the 50-Foot Walk Test,¹⁸ and (4) the Sit-to-Stand Test.²⁴ The pain outcome measure was the Numeric Rating Scale (NRS).²² Using these outcome measures, the groups were analyzed one week after discharge.

Arthritis is more likely to develop in individuals who are overweight, who have previously experienced a joint injury or infection, or who have participated in activities that required the repetitive use of a particular joint.

In the Poulsen et al¹⁹ study, 43 participants were randomly assigned to a manual therapy/patient education (MT + PE) group, 39 participants were randomly assigned to a patient education (PE) group, and 36 participants were randomly assigned to a control group. The control group only received a home stretching program. The MT protocol consisted of two sessions per week for 6 weeks, and the PE protocol consisted of 5 sessions over a period of 6 weeks. The PE group received 30 to 90 minutes of patient education per session (as well as a home stretching program). In addition to participating in the same protocol as the PE group, the MT + PE group received 15 to 25 minutes of manual therapy. The functional outcome measure used in this study was the HOOS.²⁰ The pain outcome measures were the NRS²² and the HOOS.²⁰ Using these outcome measures, the groups were analyzed at discharge and at a 12-month follow-up.

DISCUSSION

Three of the 4 studies^{16,18-19} examined the short-term effects of manual therapy. Except for the SF-36, Hoeksma et al¹⁶ found a significant difference in

outcomes when comparing a manual therapy group to an exercise therapy group, with the manual therapy group demonstrating a greater improvement in function and a greater decrease in pain. Poulsen et al¹⁹ found a significant difference in outcomes when comparing a manual therapy/patient education group to a patient education group and when comparing a manual therapy/patient education group to a control group, with the manual therapy/patient education group demonstrating a greater improvement in function and a greater decrease in pain. However, French et al¹⁸ did not find a significant difference in functional or pain outcomes when comparing a manual therapy/exercise therapy group to an exercise therapy group.

The frequency and duration of the manual therapy application may partially explain the significant difference in outcomes found in the Hoeksma et al¹⁶ and the Poulsen et al¹⁹ studies as well as the lack of significant differences found in the French et al¹⁸ study. Hoeksma et al¹⁶ provided 9 sessions of manual therapy over a period of 5 weeks (approximately two sessions per week) and each session lasted 25 minutes. Therefore, the total manual therapy intervention was 225 minutes. Poulsen et al¹⁹ provided 12 sessions of manual therapy over a period of 6 weeks (two sessions per week) and each session lasted 15 to 25 minutes. Therefore, the total manual therapy intervention was 180 to 300 minutes. French et al¹⁸ on the other hand, only provided 4 to 8 sessions of manual therapy over a period of 8 weeks (one session every one to two weeks), and each session lasted no more than 15 minutes. Therefore, the total manual therapy intervention was no more than 120 minutes.

In addition to frequency and duration, the intensity of the manual therapy application may partially explain the significant difference in outcomes found in the Hoeksma et al¹⁶ and the Poulsen et al¹⁹ studies as well as the lack of significant differences found in the French et al¹⁸ study. Hoeksma et al¹⁶ and Poulsen et al¹⁹ both required the use of high-velocity low-amplitude manipulations. In the manual therapy protocol for French et al,¹⁸ the therapists may have used some grade IV mobilizations. However, depending upon each patient's presentation, they were not required to do so.

Three of the 4 studies^{16-17,19} examined the long-term effects of manual therapy. Except for the SF-36, Hoeksma et al¹⁶ found a significant difference in

outcomes when comparing a manual therapy group to an exercise therapy group 3 months after discharge with the manual therapy group demonstrating a greater improvement in function and a greater decrease in pain. However, these significant differences only remained in terms of one functional outcome measure (the HHS) and one pain outcome measure (the VAS – pain walking) 6 months after discharge. Although the exercise therapy group was instructed in a home exercise program, the manual therapy group was not. The use of a home exercise program may have allowed the exercise therapy group to “catch up” to the manual therapy group over time. Therefore, the prescription of a home exercise program may be a vital component in the long-term management of hip OA.

In the Abbott et al¹⁷ study, the manual therapy group was the only group to demonstrate a significant improvement in function and a significant decrease in pain at the one-year follow-up. It is interesting to note that the manual therapy/exercise therapy group did not demonstrate a significant long-term improvement in function or a significant long-term decrease in pain. In fact, there was an antagonistic relationship between the manual therapy and the exercise therapy such that the combination of the two interventions did not result in better outcomes when compared to the application of manual therapy or exercise therapy by itself. Abbott et al¹⁷ provided an explanation for this finding by stating, “it is probable that those in the combined therapy group spent less time on each intervention than did those who received only one intervention, and hence decreased the effectiveness of both modalities.”^(p530) An interesting aspect of this study is that all of the groups were instructed in a home exercise program. Because the manual therapy group was the only group to demonstrate significant improvements at the one-year follow-up, it is possible that the combination of manual therapy and a home exercise program was the reason for these long-term positive outcomes. The benefits of manual therapy are further reinforced by the fact that the other 3 groups did not demonstrate significant improvements at the one-year follow-up despite also being instructed in a home exercise program.

When the data was analyzed per protocol, Poulsen et al¹⁹ found a significant difference in outcomes when

comparing a manual therapy/patient education group to a control group at a 12-month follow-up with the manual therapy/patient education group demonstrating a greater improvement in function and a greater decrease in pain. However, there were no significant differences in function or pain between the two groups when the data was analyzed as randomized. Although each group was instructed in a home stretching program, the participants did not receive a comprehensive home exercise program. Therefore, stretching alone may not be sufficient to maintain the positive outcomes obtained from the manual therapy application.

CONCLUSIONS

This systematic review found that manual therapy is generally effective in the treatment of patients with hip OA. In the short-term, positive outcomes appeared to be related to a greater frequency, duration, and intensity of the manual therapy application. In the long-term, positive outcomes appeared to be related to the prescription of a home exercise program in addition to the application of manual therapy techniques.

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VOTE



2015 AGPT Election

IMPORTANT INFORMATION:

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Those elected will take office at CSM in February of 2016. As per AGPT Bylaws, only PTs and PTAs vote in Academy elections.

PRESENTING ANN LOWREY, PTA: ADVANCED PROFICIENCY IN GERIATRICS

Michele Stanley, PT



Ann Lowrey, PTA

Physical therapist assistants are vital members of the rehabilitation team, especially in the realm of geriatrics. *GeriNotes* will be highlighting some of our Academy PTA members with exceptionally interesting achievements and careers.

Watching a brother-in-law undergo rehab after a brain injury and stroke triggered Ann's interest in physical therapy. "The first time I saw his therapists stand him and take some steps, I knew that was what I wanted to do," she says. So she quit her job, applied to school at the University of Pittsburgh, and graduated in 2000. "One of the best choices I have made and I thank him often." Her brother-in-law passed away in 2001.

Ann started work at a small hospital in the transitional care center and outpatient care and then moved to another local hospital to work in acute rehab and transitional care for 5 years. Since then, she has worked at West Park Rehab, a private outpatient clinic where she works with clients with various musculoskeletal and neurologic problems and elders, along with prime athletes. She also does

per diem at a local skilled nursing facility.

What prompted her special interest in geriatrics? Ann started out thinking that she would like pediatrics—until she treated a few children and “knew” that wasn't a fit. Working in transitional and acute care, she treated a lot of elders, stimulating her to read more about elderly people, balance, falls, and the difficulty in getting back home. “I learn from my patients every day: who they are, where they've been...they are an inspiration to me...to grow as a clinician and to be humble in what I do. I sometimes think some of them were placed on a path leading to me, so that I could learn as much from them while they regained functional independence from me.”

While she continues to learn, she also teaches. Since becoming a credentialed clinical instructor in 2009, she has had a number of students in all of her work settings. Her advice to students? Learn to listen without the intent to respond and treat a person who has a particular diagnosis, not a diagnosis with a body attached.

An APTA member since her student days, Ann volunteers for the Academy because she has “always felt welcome and encouraged to participate.” She is the PTA Advocate for the Academy, Secretary of the Balance and Falls SIG, and Co-chair of the Subcommittee to promote the advanced proficiency career pathways programs for PTAs. She represents Pennsylvania in the national PTA Caucus and is the communications committee chairperson. Active in the Pennsylvania chapter, she is past chair of the PTA SIG, past PTA representative on the Ethics Committee, and past committee member with professional development and strategic planning. In the wider community, Ann has volunteered for her county Area Agency on Aging for the past 3 years, organizes a PT Month

event at the local shopping mall, and has displays to increase falls awareness at her workplace featuring information from the National Institutes of Health, Centers for Disease Control, and National Council on Aging.

This busy lady has been married for 24 years and has two sons in their early 20s. She enjoys gardening, especially vegetables, flowers, and herbs. Ann explains that she was raised on a dairy farm with a huge garden and “you can take the girl off the farm but you can't take the farming out of the girl!” She is also an avid reader with at least half a dozen books going at a time! On her bucket list is more camping and fishing with her spouse.

Fitting for a geri-practitioner, Ann's favorite health tip is, “Keeping your brain active is as important as keeping the body moving.”

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TRIFOLD REFLECTION: GERIATRIC EDUCATION

Steven Karstetter, DPT

Instructors: Chris Childers, PT, MS, GCS, and Jennie L. DiGrado, OTR/L, OTD, C/NDT

Older adults are the fastest growing population in the United States, and it is estimated that 20% of the population will be age 65 or older by 2030.^{1,2} Health literacy is low among the older populations in the United States, which presents a problem for the largest growing demographic.¹ Proper management and preventative education on diseases such as type II diabetes, will not only maintain the quality of life for these people, but can also help reduce health care costs. Education can help lead to

less hospital visits, drugs, surgeries, and professional care. However, placing an elderly person through an educational program can be difficult due to decreasing cognition, visual acuity, memory, and energy.¹⁻³

The use of a trifold, or pamphlet, is a very common method in educating someone on a particular topic. Most pamphlets regarding elderly health have a variety of topics ranging from osteoarthritis, type II diabetes, and cancer to exercise and sexual health.² The point

is that there are many topics that can improve the quality of life for the elderly through proper management and education. Pamphlets provide a short, concise set of guidelines to any particular topic and offer plenty of additional resources. Having a variety of pamphlets available at a clinic, sporting event, or office enables information to be made easily available to the public. Oftentimes people will not want to ask about a particular problem they may be having. If there is a pamphlet about it nearby, there

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will at least be an opportunity to receive proper information and additional resources for their concerns.

What tends to be overlooked within pamphlets is the design that goes behind them.^{1,3} As mentioned previously, aging is associated with many cognitive and physical declines that may increase the difficulty in education to the older population.¹⁻³ Information presented in each pamphlet needs to be a small amount of detail that is meaningful and valuable to the older person's function of everyday life and accommodates for potential low literacy in health related topics.¹⁻³ Linda Ruholl promotes the strategy of clumping, which breaks down complex instructions into simpler, smaller steps.³ This method is used to help promote short-term memory in older adults so that information is better retained.³ In regards to any instructions or details of a certain disease on the pamphlet, Dr. Carolyn Speros recommends that information be specific in regards to time, order, duration, and frequency.¹ The physical appearance will also play a significant role in the effectiveness of the pamphlet. Many older adults have visual deficits that can make reading a pamphlet quite difficult.^{2,3} It is important to make sure that the font is large enough to read, (recommended size is 16 font) and that there is adequate contrast between the writing and the background.³

The information presented on the pamphlet is important, but an opportunity to review the pamphlet with an older adult will provide the most benefit. As clinicians, we can help ease concerns, answer questions, and refer to appropriate medical professionals. Dr. Speros describes that placing expectations on an elderly person to be able to perform new skills or retain new information can bring about, "incapacitating anxiety, frustration, and unwillingness to perform for fear of failure and shame."¹ Trying to multitask all the new incoming information can be a bit overwhelming, and having a medical professional present can help simplify the information on the pamphlet.^{1,3} Additionally, a conversation allows for a teach-back technique in which the patient is able to paraphrase the concepts back to check for retention and understanding.¹

Medical pamphlets provide an opportunity in which clear, concise information can be easily spread to the elderly population. Research on the internet can often be from misleading sources or extremely heavy in content that may confuse an elderly person. Proper education can lead to better disease management and a better quality of life for the elderly with diseases. Pamphlets are a great resource for clinicians to use in the education of patients and the community to maintain a high standard of health.

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she teaches the gerontology program and part of the neurology triad.



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Chris Childers is currently serving as a board member for the Geriatric Specialty Council for the American Board of Physical Therapy Specialists. She is full time faculty at the University of St. Augustine, San Marcos, CA campus, where

REFLECTIONS ON SELECTED FILMS ABOUT AGING

Athena Merica, SPT; Jeremy Ibali, SPT; Casey Beebe, SPT
Instructors: Chris Childers, PT, MS, GCS, and Jennie L. DiGrado, OTRL, OTD, C/NDT

In the third term of their Doctor of Physical Therapy or Masters of Occupational Therapy program, students at the University of St. Augustine, San Diego campus, participate in their Health Sciences Gerontology class. As an optional assignment, students are encouraged to watch a movie that reflects some aspect of aging, terminal disease, death or dying, or chronic illness. The students are asked to watch the movie from the perspective of a future health care practitioner and write a reflection of their observations. Below are some of the most poignant and interesting submissions of the fall 2014 class.

Reflection by Athena Merica, SPT: *Calendar Girls*



“The flowers of Yorkshire are like the women of Yorkshire. Every stage of their growth has its own beauty, but the last phase is always the most glorious. Then very quickly they all go to seed.” This quote was taken from the movie and serves as strong themes throughout. The first time I watched *Calendar Girls* was years ago on a girls’ weekend with family. I was surrounded by my aunts, my sisters, my cousins, my mom, and my grandma. At the time, I took it for nothing more than a hysterical movie about a bunch of ladies refusing to accept their age as an excuse not to feel sexy. “Appropriate movie choice for a family full of women,” I thought. It wasn’t until getting this assignment and watching this movie again years later, that I found there was much more to this film than I had originally thought, and that quote above started to make a lot more sense.

This movie, based on a true story, follows two best friends, Annie and Chris, who in the midst of grieving the

loss of Annie’s husband to cancer come up with a plan to raise money to buy a couch for the local hospital’s waiting room. This is a very general synopsis, but the movie encompasses an array of issues surrounding aging and sexuality, bereavement, and the caregiver and societal pressures that go along with wanting to raise money for cancer in a very unconventional way.

Cancer, leukemia in this case, affects so many people. The concern throughout its progression is largely with patient. But so often, the concerns of the caregiver or loved ones watching their family member suffer go unobserved. A seemingly small thing, like an old couch in the waiting room of a hospital, becomes home for friends and family supporting patients that are undergoing treatment. After the passing of John, Annie’s husband, Chris decides to make it her mission to get this couch replaced in honor of John and to support Annie. While this couch is only a small piece of the overall themes in this film, it serves as a representation of the needs of the caregiver and how a small gesture can offer so much more comfort to a person indirectly suffering from a disease.

Both women belong to a chapter of the Women’s Institute (WI), a long-standing British community-based organization focused on empowering women in education and improving their roles in society. Where this movie transitions from just one of grieving and the celebration of life, is in the subject of the WI’s yearly calendar. Chris, inspired by the words of her former friend John, gets the idea to have members of their chapter pose for this year’s calendar—in the nude. The WI refuses to support this until Chris and Annie take it to the Board members with a strong argument.

There are other factors that play into what is considered appropriate for a person’s age. In this movie, the genera-

tion they are from, the small community they live in, and their personal values all play an intricate role in deciding what is and isn’t “acceptable.” What this movie does so well, is that it says to disregard tradition and emphasizes the need to do what feels right. Honoring a life in a special way and celebrating women in their most natural and beautiful form. There is so much judgment and negativity surrounding sexuality with age. Women can be made to feel less beautiful because some commercial emphasizes the importance of a wrinkle-free face. While some men may perpetuate this stigma about age and sexiness, women are the worst to each other. They constantly compare themselves to an unattainable figure or deprecate another’s achievement in health by claiming that someone wouldn’t need to work so hard to attain beauty if they had not let themselves go in the first place. I, in no way, mean to say that taking off your clothes is something all women should do in order to feel sexy. But this story does a great job of celebrating beauty at any age.

Reflection by Jeremy Ibali, SPT: *Big Fish*



Big Fish is about a son attempting to know his father before the father’s death. As a great storyteller, Edward always told his son, William, about his life involving a witch, giant, and unbelievable adventures. As an adult, William believes his father’s life story to be far-fetched tales and doubts the truth about his father’s life, which strains their relationship to the point they do not communicate for 3 years. Then when Edward’s health starts failing, William attempts to find the truth about his father’s life before his death. While watch-

ing, I thought of my recently passed uncle and how I grieved his death.

Getting to know the whole truth about a person before he or she dies is frustrating, especially if that person is a family member. I can relate to William because my Uncle Albert always told me wild stories about my Dad and him being troublemakers and getting involved with the law while growing up. At first, I thought these were stories to scare my cousins and me from being bad kids and to stay in school, but when I watched *Big Fish*, I began doubting the truth in those stories, much like William in the movie. I felt torn between knowing the truth behind my uncle's stories and passing them on as anecdotal just to teach me a lesson. When William in the movie finally believed his father's stories after seeing the witch, giant, and other characters from his father's story during the funeral, William was at ease to know that his father was honest with him.

Unlike William, I never got the validity of my uncle's story before he died, which irritates me because of how important he was in my life. When "secrets die" with a person, grievance by family can be difficult because they feel they never fully knew that person. While it may seem selfish for the person to hide the truth, I can understand to a degree that secrets are kept or the truth is blemished to protect the ones you love. Or that knowing the truth about someone's life can change your perspective about them. If the crimes my uncle, Dad, and their friends supposedly committed were entirely true, I would see them in a more negative light and find it hard to trust them. While I grieved Uncle Albert's death, from watching this movie I have my doubts about the person I knew him to be versus who he was based on his stories. This really got me to think how dying affects family members and their perspective on their loved one.

Reflection by Casey Beebe, SPT:

Up



The movie starts off with the old man's fond memories of his wife. After a brief reflection, the man's wife passes away and the old man is heartbroken. After her passing, he has a

very strict daily schedule, he cleans, he eats breakfast, and he waits for the mail. He's annoyed by the construction going on around his house all the time, he's shut off to the outside world. He says he'll give up his house when "he's dead." He's essentially the stereotypical rigid, grumpy old man who doesn't want to be bothered. He uses a cane, has glasses, and a hearing aid. He seems to be getting around fine and doesn't want to change his ways. He comes across a young man who wants to "assist the elderly" for his wilderness badge. After meeting the boy, the old man is sent to court as a "public menace" and is ordered to a retirement home against his will. He doesn't want to leave his old house and memories, it's all he has left. As a last resort, he creates a giant kite with balloons and it lifts his house up into the sky. He plans on sailing to "Paradise Falls" as he and his wife had always wanted to visit, but never got to. His house sails away and the old man falls asleep. He finds himself with the little boy on his front porch, while they sailed all the way to Paradise Falls in South America.

The old man and the little boy face many obstacles together, continuously challenging the old man's patience. The pair are chased through the jungle, taken captive, and forced to hide their new friends from the bad guy. Once they finally are safe, the old man goes inside the house and reminisces about his past adventures with his wife. She leaves him a note that says he needs to have new adventures without her. The old man gets inspired by the message and empties out the house of all his old stuff. He sails high above the land and the pair get into trouble again. In the end, the old man has to give up his house and lets it sail up into the clouds. The old man accepts the loss of his house and takes on a new role as a surrogate grandfather to the little boy.

This movie is a wonderful representation of the geriatric community and how caregivers can come in many shapes and sizes. The portrait of the old man is similar to many people in his age range, mid-80s, who become more shut-in when their spouses pass away. They get withdrawn from the outside world and often times don't want to interact with people. They create a schedule for themselves and constantly look back at old memories, living in the past. If they

do not have caregivers or family nearby, the thought of living in a retirement community can be daunting. If faced with challenges, they sometimes struggle to think outside of the box. They may be too set in their ways to overcome difficulties. This movie also did a great job of showing how sometimes younger companions can be the best caregivers for an aging population.

As a future physical therapist, I know to pay special attention to the needs of the aging population. As each generation gets older, they have certain characteristics that are unique to them. For example, many in our current geriatric population have gone through the Great Depression and tend to be very thrifty. They don't like to give belongings away or let memories be forgotten. They tend to dwell on the past. The Baby Boomer generation, the upcoming aging generation, will have their own unique characteristics. It is imperative to understand the patient's motives and what is important to them in order to give them the most quality care.

Athena Merica, Jeremy Ibali, and Casey Beebe are all physical therapy students at University of St. Augustine.

THE FINAL GOODBYE

Patrice Antony, PT, GCS, CAPS

Losing a loved one—no matter how expected or unexpected—still comes as a shock. We are never truly prepared for the finality and the multitude of emotions and decisions that come with the passing. Sometimes the family has some time to mentally prepare for the loss with access to professional help from hospital, facility, or hospice staff. Other family members may be in the unfortunate position of finding a loved one that has passed suddenly in their home environment. No matter what, we are never truly prepared for the chaos that follows a death.

If you find yourself in the position of discovering the body of a loved one who died suddenly in the home environment, there are several steps to take:

1. Call 911 to report the death.
2. Render CPR if appropriate or if it seems to have just happened.
3. Stay with the body until the police arrive. They will have questions about the circumstances surrounding the death and may have to treat the environment as a crime scene. Often, a medical examiner will need to examine the body. Once the details have been secured, the body will be released to the funeral home.
4. Start contacting immediate family/relatives. Some family members may want to have some time with the deceased before the body is moved.
5. Plan what to say and how you will share the sad news. Remember that this will be a shock to everyone hearing it for the first time.
6. Try to locate the will and funeral wishes of the decedent.
7. The funeral home will need someone to sign paperwork to confirm the identity and release the body to be taken out of the house.
8. Consider removing any jewelry or personal effects from the body

before it is moved. All too often, valuables disappear as the body is being transferred.

9. Secure the home/remove valuables if possible. Make sure that the house is locked securely. Set alarms if possible. Know that the neighbors are going to know what is going on, and this can set the home up for robbery.
10. Make arrangements for any pets in the home.

Choosing a funeral home is difficult to do at the time of need. The family is usually in a state of shock and grief. Hopefully, the decedent has put something in the will or has had some sort of conversation to give some direction. If not, then it may be easiest to work with a funeral home that has helped with other pre-deceased family members in the past. If pre-planning is possible, shop around. Get general price lists from 3 different funeral homes and interview the funeral directors. It is truly overwhelming to even describe the amount of detail and decision making that is required when planning a funeral or cremation—especially if the family members have avoided any conversation on this topic.

For some reason, people are almost superstitious when it comes to talking about their own mortality. I am amazed at how many children of aging parents have never broached the topic of death with their parents, and feel extremely uncomfortable in even bringing it up. Talking about death does not have to be morbid or emotional. It is truly a gift for a parent or aging loved one to share their final wishes with their families when they are living. It is also really practical. Funeral costs now range from \$1,500 (for a basic cremation) to over \$15,000 for a traditional burial service. Thinking and planning ahead can save literally thousands of dollars. If the aged loved one is not comfortable talking to their

children about their final wishes, it may be very helpful for them to complete a questionnaire and keep it in their safety deposit box or file it with their will. These types of tools are readily available on the internet or at any funeral home and can be really invaluable for the children planning the event at the time of death.

Most questionnaires will have a list of “nuts and bolts” items that are going to be required in order to complete a death certificate. Even close families are often caught off guard by some of the questions. These questions include:

1. full name of the deceased,
2. full names of the deceased’s parents—including mother’s maiden name,
3. deceased’s date and place of birth (including city, state, county, province, etc.),
4. deceased’s social security number,
5. deceased’s usual occupation,
6. details of military service (branch of service, years of active duty, discharge date, highest rank achieved.),
7. highest educational level completed,
8. place of disposition, and
9. official cause of death.

The next level of detail will involve the type of funeral the deceased wants. This is where the decision-making can move you to insanity—especially when you are deep in grief trying to do this. The types of details to consider are:

1. Cremation or burial? Embalming?
2. Memorial Service? Viewing?
 - a. Where will it be (church vs memorial chapel)?
 - b. Who will officiate? Who will give eulogy?
 - c. How big will the attendance be? Seating arrangements?
 - d. Memorial leaflets (color, design, typeset, verse, etc)?

- e. Flowers?
- f. Special rituals?
- g. Memory board? (display of deceased in happy times....)?
- h. Open vs closed casket? Display of urn?
- i. Timing of things (viewing right before service or night before)?

Most families are unaware that the deceased is often NOT embalmed at the local funeral home as it was in the past. Frequently, the body is sent to a central “processing area” where the body is prepared (cremated or embalmed) for burial. Once the processing is completed, the body is sent to the funeral home chosen for the services requested.

Details that may be requested by the processing people and/ or funeral home are:

1. What clothing will the deceased be wearing?
2. How should the hair look? Is there a particular hair dresser preferred (a picture is really helpful)?
3. Dentures in or out?
4. Glasses on or off?
5. Jewelry to be worn?
6. Items to be buried with the deceased (favored bibles, trinkets, etc)?
7. What portion of the deceased will be viewed (usually top half, but some are full casket)?
8. What type of casket (wood, metal, laminates, etc)? Temporary container for cremation?
9. What color inside lining of the casket?
10. How should the hands be folded? Will the deceased be holding something (flower, Bible)?

Yet more decisions abound around the funeral/internment:

1. Picking out the plot, mausoleum, or above ground vault
2. Choosing a marker
3. How to go about shipping the body to a distant place for burial
4. The vault (keeps the ground from sinking at the burial site)
5. Graveside service? Military honors?
6. Family present at lowering of casket?
7. Opening/closing of the grave
8. Limousine and hearse use
9. Pall bearers
10. Disposition of ashes/urn from cremation

11. What to do with the deceased’s cherished pet that is left behind
12. How many death certificates will be needed? Long vs short forms?

It is truly overwhelming to even describe the amount of detail and decision making that is required when planning a funeral or cremation—especially if the family members have avoided any conversation on this topic.

Fortunately, for all of us, there is a professional to guide us through the maze—the funeral director. This professional is able to grief counsel, while keeping families moving through the process. They also act as ushers, pall bearers, bouncers, ministers, and greeters. They can troubleshoot issues that arise so that no one is the wiser and the production moves on. A good funeral director can also help people save some money by suggesting ways to cut costs without losing dignity in the funeral service itself. The funeral director’s services don’t come cheap, but this is an area that can be negotiated to some extent as well.

There are several areas where the family can save significant amounts of money when paying for a funeral:

1. Buy a cheaper casket. Visually, the laminate casket looks pretty close to solid wood, but is about \$1,500 less in price. Caskets don’t have to be ordered via the funeral home. There are outside casket vendors available that offer substantial discounts and direct delivery to the funeral home.
2. Caskets can also be rented. If the deceased wants a viewing, but plans for cremation, the viewing can be set up in a rented casket, and the cremation can be done with a cheap container.
3. Price out florists. One stop shopping is tempting, but you can save significant dollars by ordering flowers through a florist vs the funeral home.
4. Order the cheaper leaflets. People really don’t care if the paper is parchment.
5. Skip the thank you notes. You can purchase these anywhere.
6. Bring in CD music to play vs paying for live music /organist.

7. PRE-PAY for the funeral. Advance planning enables you to price out options and set a plan in place without a time crunch. Going to various funeral homes and getting their price lists can be a real eye-opener. Just like buying a new car, the various add-on charges can run the gambit—and are fully negotiable. Who wants to negotiate when you are burying your mother? Doing this sort of thing when you aren’t emotionally unstable and under the gun can really save money. You don’t have to get everything under one roof—and you have plenty of time to make decisions without pressure. You can get estimates by fax—which will eliminate sales calls, but still give you an idea of the cost.

Writing a good obituary is very important. There is no correct way to do this. Some suggestions on doing this:

1. Make it creative.
2. Enlist others to help you.
3. Read other obituaries and model after them.

The obituary should include:

1. An announcement that includes: name of decedent, date and location of death, and cause of death if appropriate.
2. Biographical information: things that the decedent accomplished, including education, special interests. Basically, what would the person want to be remembered for?
3. Survivors: family tree style is best.
4. Schedule of ceremonies: time, date, and location of viewings and services.
5. Memorials: instructions on charitable contributions, flowers, leaving comments on an obituary website.
6. Arrangements: funeral home information, contact number for further information.

Be sure to enlist the help of others when you are making arrangements. Have close family/friends of the deceased assist with phone calling and thank you note writing. People usually feel better when they are actually given something constructive to do and are more than happy to do it. This can help

when grief overwhelms you and organizational skills go to pot.

Delivering a eulogy can be a daunting task. Some thoughts on this:

1. It doesn't have to be formal or well delivered. No one expects you to be an entertainer.
2. It does need to be respectful both to the decedent and to those in the audience.
3. Make it personal. Include anecdotes that illustrate some of the best qualities or finest moments of the deceased.
4. Pick 3 or 4 standout qualities and tell stories. What will you miss the most about this person and why?
5. It is ok to tell some of the negative qualities of the person as long as it is respectful. Nobody is a saint and sometimes these human characteristics can add levity and humor to a somber occasion.
6. It's ok to cry or take a moment to compose yourself.
7. It's ok to invite members of the audience to share stories, but don't let it get carried away or go on too long.

Emptying/cleaning out a home after a death and disposing of personal possessions can be very painful. Families have a tendency to want to do this quickly after a death, thinking that getting rid of the reminders will ease the pain. It doesn't work! Lock things up for a while and do this task when it becomes therapeutic and a way to honor the deceased. Otherwise, you will probably dispose of something of great sentimental value in the rush to complete the task.

In the week after the death, there are a number of tasks that need to be handled:

1. Contact Social Security Administration to notify them of the death. There is a one time, lump sum funeral benefit for the surviving spouse = \$255, as long as the spouse was residing in the same household as the decedent at the time of death. Also, the surviving spouse may be eligible for additional benefits based on the decedent's income earnings. If the decedent receives social security income after death, Social Security will want those funds returned.
2. Contact the Veterans Administration to notify of the death. There

may be military funeral benefits available to the surviving spouse. If the decedent was receiving any benefits through the VA, these may be terminated if the surviving spouse is not eligible.

3. Notify employer and co-workers.
4. Notify pension sources. Find out if there are surviving spouse benefits.
5. Notify clubs/organizations.
6. Notify church.
7. Start processing life insurance policies. It is not critical to do this immediately, but the companies should be notified of the death so that they stop collecting premiums.
8. Notify banks/financial institutions.
9. Notify public assistance benefits department if the decedent was a beneficiary of these benefits.
10. Notify nursing facilities (if person died in hospital). Don't assume that they know about the death. Arrange to pick up items that may be left there.
11. Notify creditors.
12. Notify the department of motor vehicles if there is a car registered to the decedent.
13. Contact a probate attorney to start organizing the estate.
14. Notify the executor of the will/estate.
15. Stop auto debit payments for health insurance, life insurance, disability insurance, etc.
16. Clean out the refrigerator in the home. Dispose of the garbage.
17. Make arrangements to collect mail coming to the home.
18. Stop the paper.
19. Make arrangements for paying pool service, lawn service, and housekeeper if these people are going to keep providing services.
20. Notify neighbors as appropriate.

Recognize that grief affects different people differently. SEEK HELP if the grief is overwhelming. Counseling can do wonders and there are medications that can "get you over the hump." Remember that crying is a normal part of the grieving process. Many refer to it as the "rinse cycle of grief." Most hospice and church organizations have grief support groups that can be helpful.

Know that you are not alone although you may feel that way. Ask for help and you will be surprised at how

many people will step up to the plate. The funeral process does give closure to the final goodbye.



Patrice Antony is a Florida International University graduate who has been practicing physical therapy in the Central Florida area since 1981. Patrice

became a Geriatric Clinical Specialist in 1992 and received the Clinical Excellence in Geriatric Practice from the Geriatric Section of the APTA in 1996. She taught as an adjunct instructor in the University of Central Florida physical therapy program for four years and has done extensive lecturing around the country on various topics relating to care of the elderly. She is owner and President of Elder Advocates Inc., a care management company founded in 1998 that is designed to meet the needs of the frail elderly and the medically complex client.

ONE STEP AT A TIME

Emilee Anderson, DPT student

One step at a time, with my clinical instructor guarding, John made it to the top of the steps. Since the time of his stroke, John had progressed from being completely blind and wheelchair-bound, to having partial vision and negotiating stairs with relative ease. His memory was still suffering however, evidenced by the sweet questions he repeated again and again.

“I am so proud of you, John.” His wife, cheered from the bottom of the stairwell where we stood next to one another. John turned and flashed her his familiar grin and a thumbs-up.

“When do I go home with you, Mary?” He shouted down to his wife.

“Tomorrow, dear.” She replied to his question, the same as she had each time before.

With tears welling in her eyes, Mary turned to me and in a hushed, broken way, said, “I just... don’t know if I can do this, Emilee. Everything has changed.” I couldn’t help but allow tears

to form in my own eyes as well as we shared that moment together holding hands. She was so strong—present each and every day John was there, soaking up every ounce of information she could on how to help him best.

It was clear their relationship had indeed changed. John had told me pieces of stories he remembered during our time together—stories of flowers and dates, and the children they had together. It was apparent he took his role as a husband and provider seriously. He cared so deeply for Mary, and had done so since the day they were married 36 years earlier. One of the first things John could routinely recall from day-to-day was that I was getting married this summer. We spent lots of time revisiting the details of my fiancé, wedding day, and our future plans. He always had wise words to share—often the same as the day before.

“He’s a lucky man,” John would tell me at the end of each of our sessions.

And I would always reply, “And I’m a lucky lady.”

John and his wife touched my life in a way that surpassed my role as a future physical therapist. Through their actions, they showed me the meaning of “for better and for worse” and what unconditional love and marriage is truly all about.



Emilee Anderson is a 2nd year student in the Doctor of Physical Therapy Program at Grand Valley State University in Grand Rapids, Michigan. She also works as an Athletic Trainer with Spectrum Health Orthopedics and Sports Medicine and the Grand Rapids Ballet Company.



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POSTOPERATIVE LIFTING RESTRICTIONS: THE WEIGHT OF COMMON HOUSEHOLD ITEMS

Megan Chatellier, DPT; Jonas LaPier

INTRODUCTION

Lifting restrictions are commonly prescribed to older patients following a wide variety of surgical procedures including median sternotomy, traditional open abdominal procedures, female pelvic floor repairs, arterial catheterization, lumbar discectomy, and cataract extraction.¹⁻⁵ The premise of patients following lifting precautions is the assumption that avoiding lifting excess weight will prevent large increases in intra-thoracic, intra-abdominal, and intra-vascular pressure and thereby reducing the risk of excessive incisional stress and tension.² Theoretically, the decreased tension allows for more optimal surgical outcomes with fewer subsequent complications such as sternal dehiscence for sternotomies, incisional hernias for abdominal surgeries, and pelvic organ prolapse in pelvic floor reconstruction.³ In clinical practice, lifting restrictions most commonly employ a 10 to 20 pound weight limit, but are not consistent across facilities or between surgeons.^{3,6-9}

Specifically with cardiac surgeries involving a median sternotomy, limiting the amount of weight lifted is believed to minimize tension across the sternum, to reduce generation of intra-thoracic forces, and to control elevation in systolic blood pressure.^{3,11,12} To prevent these negative effects on sternal stability, sternal precautions are commonly prescribed to patients following median sternotomy and typically restrict upper extremity force production by placing weight limits on lifting, pushing, and/or pulling.^{3,12} Sternal instability is highly associated with the development of mediastinitis and sternal approximation is important for prevention of it.¹² Mediastinitis involves purulent deep sternal wound infection, requiring extensive debridement and drainage. Although complications are relatively rare (<5%) following mediastinitis, they are associated with high mortality rates.^{3,12-17} Sur-

vey data from physiotherapists indicate that commonly prescribed SP include restrictions on lifting objects greater than 10 pounds.⁶⁻⁸ A survey of cardiothoracic surgeons indicated that 95% provide education on sternal precautions, which most commonly included lifting no more than 10 pounds, both bilaterally or unilaterally.⁹

Postoperative weight lifting restrictions are also advocated to minimize increases in pressure (intra-thoracic, intra-abdominal, and intra-vascular) for a variety of other surgical procedures including pelvic surgeries, spine surgeries, and cataract extractions. Concerning common pelvic surgeries (abdominal hysterectomy, vaginal hysterectomy, pelvic floor reconstruction), one survey indicated that 88% to 99% of surgeons recommend the restriction of lifting to less than 20 pounds for anywhere from 5 weeks to “forever.”¹ The rationale for this requirement has been cited as prevention of increased oxidative stress on abdominal muscles and prevention of delayed healing of colonic anastomoses from additional abdominal pressure.^{2,18,19} Surgeons frequently recommend lifting restrictions after spinal surgeries for a wide range of time (3 to 12 weeks).¹ The proposed rationale for employing lifting restrictions in this patient population is to avoid injuring a compromised spine with generation of high muscular forces.²⁰ Cataract extraction procedures often include postoperative lifting restrictions to less than 20 pounds to purportedly optimize surgical outcomes.²¹

Despite the frequent use of lifting restrictions with many common surgeries, patient adherence is universally a challenge across patient settings.²² Often health care professionals instruct patients to not lift anything heavier than a gallon of milk; however, the weight of other household items in regards to lifting precautions is not discussed. Pa-

tients frequently have difficulty estimating the weight of objects.²² To improve adherence to lifting restrictions after medical procedures, patients must know the weight of typical household items to match the commonly prescribed 10 pound weight limit. The purpose of this study was to objectively examine the weight of items commonly encountered during activities of daily living, instrumental activities of daily living, and recreational pursuits.

METHODS

We selected 36 household items that appeared to weigh approximately 5 to 30 pounds. Table 1 outlines the items included in this study. Items that had a label clearly indicating weight (ie, 10 pounds of flour) were not included in this study. Items were weighed using a U.S. Produce Scale (AS COR, Model SW-1 5016, East Rutherford, NJ). The scale was always placed on a flat, level surface and items were positioned on the center of the scale to ensure consistent measurements. Items that were larger than the scale plate surface area were placed on a level board with the weight of the board tarred from measurements. The items were repeatedly weighed 3 times and measurement reliability was 100%.

RESULTS

Table 1 includes the common name of the items, full description of the items, and weight of the items in pounds and kilograms. Items weighing greater than 10 pounds are in bold font. Many of the items (n = 34) included in this study weighed greater than 10 pounds. Some items weighed even more than 20 pounds, including a kitchen stand mixer and a case of water bottles to name a couple. Often, items packaged as they come from a store, such as a case of soda, weighed greater than 10 pounds.

Based on the measurement results, Figure 1 was developed to present the study data as a patient-friendly

Table 1. Weight of Commonly Used Household Items

Common Name	Full Name	Weight (lb)
Dinner Plates, 6 stoneware	6 stoneware plates, 12 inch diameter	12.68
Axe	Ames axe	5.60
Blender – empty	Ninja blender, empty	7.60
Cereal Bowls, 6 stoneware	6 stoneware bowls, 3.5 inch height, 6 inch diameter	6.30
Blender – Full	Ninja blender, 9 cups of water	12.20
Canned food - 15 oz	Can of food, 14-16 oz net weight	0.98 – 1.60
Car battery	Maxx car battery, 12 volt	42.72
Casserole dish – empty	Corelle 2 ½ quart casserole dish with glass lid, empty	4.90
Casserole dish – full	Corelle 2 ½ quart casserole dish with glass lid, full	8.44
Cast iron dish – empty	Kirkland Signature 3 quart casserole dish with lid, empty	14.20
Circular saw	Ryobi cordless circular saw with battery	6.92
Coffee pot – full	Black & Decker 12 cup glass coffee pot	5.30
Counter stool, wood	Counter stool, 18x23x24 inches	9.50
Drill, cordless	Ryobi cordless drill with battery	5.06
Engine oil, 1 gallon	Rotella T engine oil, 1 gallon	7.76
Folding chair, wooden	Folding chair, wooden with upholstered seat, 36x14 inches	12.12
Folding chair, metal	Folding chair, metal and plastic, 33 x 17 inches	7.58
Garden hose – 100ft	Apex 100 ft garden hose	16.24
Golf club set, women’s	TiTech 12 piece women’s golf club set	14.72
Kitchen stand mixer	Kitchen Aid classic stand mixer	22.50
Laptop computer	HP Laptop G62 Notebook	5.58
Laundry basket, 4 dry towels	Plastic laundry basket, 4 bath size towels – dry	6.52
Laundry basket, 4 wet towels	Plastic laundry basket, 4 bath size towels – damp	9.14
Milk, gallon	1 gallon of milk	8.78
Propane tank – empty	Propane tank, 40 lb – empty	16.90
Propane tank – full	Propane tank, 40 lb – full	36.68
Soda – 12 pack	Sam’s Cola 12 pack	10.50
Soda – 2L bottle	Great Value Mountain Rush – 2 liter bottle	4.59
Stock pot	Tramontion Tri-Ply base 22 qt stock pot, empty	8.74
Television – 32” flat screen	Vizio 32” LED television	29.98
Trailer hitch	Reese Tri ball trailer hitch	10.28
Vacuum – cordless	Dyson DC35 Max with attachments – cordless	4.92
Vacuum – upright	Bissel Power Force Helix upright vacuum – corded	12.42
Water, bottled – case	Nestle Pure Life 500ml bottled water, 1 case (24 bottles)	27.36

handout. Items were categorized as less than 10 pounds if they weighed < 8.0 pounds, approximately 10 pounds if they weighed 8.0 to 12.0 pounds, and greater than 10 pounds if they weighed > 12.0 pounds. Layout, font size, reading level, and use of graphics in the patient handout are appropriate for use with older adults as assessed with the Suitable Assessment of Materials.²³

DISCUSSION

Across a wide spectrum of surgeries, it is common practice for surgeons to include lifting restriction to reduce theorized risks associated with increased intra-abdominal, intra-thoracic, and intra-vascular pressure.²⁰ Often “a gallon of milk” is used as a benchmark of what weighs approximately 10 pounds and patients are told that nothing heavier

than this should be lifted. Typically, no other reference list or examples of common household items that weigh more than 10 pounds are provided to patients. So although a patient may intend to follow his or her prescribed weight-lifting restrictions, lack of objective information may interfere with activity precaution compliance.²² The results of this investigation can be used to provide an

Weight Before You Lift

Examples of Household Items



Items Weighing Less Than 10 pounds

- Full coffee pot
- Empty blender
- Folding metal chair
- Laptop computer
- Up to 6 stoneware cereal bowls
- Empty stoneware casserole dish
- 2 liter bottle of soda (or other liquid)
- Cordless vacuum, circular saw, or drill
- Laundry basket with no more than 4 dry towels or equivalent



Items Weighing Approximately 10 pounds

- Full blender
- Empty stockpot
- Wooden counter stool
- Trailer hitch (ball type)
- Full stoneware casserole dish
- Gallon of milk (or other liquid)
- Regular upright vacuum that plugs in
- 12 pack of canned soda / beverages
- Laundry basket with 4 wet towels or equivalent



Items Weighing Greater Than 10 pounds

- Car battery
- Set of golf clubs
- Kitchen stand mixer
- Case of water (24 bottles)
- 6 or more stoneware plates
- Propane tank – empty or full
- Empty cast iron casserole dish
- Garden hose 100 feet or more
- 8 + cans of food (fruit, vegetables, soup...)



Figure 1. Patient-friendly handout.

objective list of household item weights and a patient-appropriate educational handout.

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Thanks!

Many thanks to the many dedicated AGPT members who volunteered at the **Academy of Geriatric Physical Therapy booth at APTA NEXT 2015 in National Harbor June 3-5.**

For each hour volunteered at the booth, volunteer names were placed in a drawing for *one free year of section membership.*
This year, the winner is Nannette Farley.

Please be sure to sign up again to volunteer at booth at CSM 2016 in Anaheim, CA Feb. 17-19th, for another chance to win free membership. Watch for the volunteer call later this year.

Thanks again to all of our volunteers
We couldn't do it without you all!

Tamara Gravano, PT, DPT, GCS, CEEAA
Membership Committee Chair
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Thanks to our booth volunteers and to the Student Assembly for collaborating with the Academy of Geriatric Physical Therapy at NEXT 2015. We look forward to seeing you all next year at NEXT 2016 in Nashville!!!

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The purpose of this SIG is to provide a forum through which individuals having a common interest in older adults with dementia and other cognitive-based conditions can learn from each other.

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