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Contact Melanie Sponholz, GeriNotes Editor melanie.sponholz@foxrehab.org
PRESIDENT’S PERSPECTIVE:
PROMOTING OUR PARTNERS PROGRAM

John O. Barr, PT, PhD

For a number of years, the Section on Geriatrics has been working on ways to more actively engage individuals and groups who have interests in common with us, but who are outside of the realm of our professional organization. In February at the Combined Sections Meeting (CSM), the Section’s Board of Directors gave final approval on our Partners Program. Modeled closely after the program developed by the Neurology Section, it is aimed to engage international physical therapy professionals, other professionals in the United States who are not eligible for APTA membership, individuals in industry, and members of the public interested in the advancement of evidence-based physical therapy to improve care and quality of life for aging adults. Five other sections (Cardiovascular & Pulmonary, Home Health, Oncology, Orthopaedics, and Pediatrics) and the APTA (ie, Faculty Partners) currently offer partner programs.

Our program had its debut at the business meeting of the International Association of Physical Therapists working with Older People (IPTOP), during the World Confederation for Physical Therapy Congress in Amsterdam on June 21st, and on our Web site at www.geriatricspt.org/partners/ on July 1st. During the IPTOP meeting there seemed to be good interest in the program, with many application forms being taken. At its highest level of benefit (Gold Level; $50 per year), our partners will receive: an annual subscription to the Journal of Geriatric Physical Therapy, including online access; member discounts on section publications, continuing education courses, and preconference courses at the CSM; membership in our 3 Special Interest Groups (Balance and Falls; Bone Health; and Health Promotion and Wellness); access to the Geriatrics Clinical Specialists Resource List; and access to the Geriatric PT list-serve. It should be noted, however, that our bimonthly newsmagazine GeriNotes is not included among these benefits.

It should also be noted that this program is not intended to short-cut the traditional mechanisms for APTA and SOG membership. Rather, we are hoping to provide international colleagues and others with access to select SOG resources in an affordable manner, thereby improving our potential for collaboration, while producing income for our organization. The Neurology Section, for example, currently has 18 active Partner members, only 4 of whom are not at their highest benefit level.

I strongly encourage you to promote our Partners Program to your colleagues who are not otherwise eligible for APTA/SOG memberships. These could be individuals within your work environment or acquaintances in the international physical therapy community. As you recognize through your own membership, we do have many wonderful resources to share.

Dr. Barr is a Professor in the Physical Therapy Department at St. Ambrose University, Davenport, IA. He also serves on the Editorial Board for the Journal of Geriatric Physical Therapy.

SOG PARTNERS WITH THE INTERNATIONAL COUNCIL ON ACTIVE AGING

David M. Morris, PT, PhD

In the fall of 2010, the APTA Section on Geriatrics (SOG) entered into a promotional partner program contract with the International Council on Active Aging (ICAA). Based in Vancouver, BC, the ICAA was established in 2001 and states as its mission to “connect a community of like-minded professionals who share the goals of changing society’s perception of aging and improving the quality of life for aging Baby Boomers and older adults within the 7 dimensions of wellness (emotional, vocational, physical, spiritual, intellectual, social, and environmental).”

The ICAA offers a wide range of activities/resources including an annual active aging conference, multiple publications, facility locator, consumer information, and access to industry suppliers. The SOG also sponsors an annual active aging week-September 25-October 1, 2011. ICAA membership includes discount to the annual conference and subscriptions to ICAA Functional U (6 issues/year), The Journal of Active Aging (6 issues/year), and the ICAA Research Review (45 issues/year). Members also have access to a toolkit including the ICAA logo, press releases, posters, and PowerPoint presentations on active aging issues.

The SOG and ICAA partnership agreement will foster collaboration between the two groups and work to inform each organization’s members about resources offered by and issues important to both groups. The SOG point of contact for the ICAA is the SOG Health Promotion and Wellness (HPW) Special Interest Group (SIG) and questions can be directed to the HPW SIG Chair, David Morris at morrisd@uab.edu.

SOG members are encouraged to visit the ICAA Web site at www.icaa.cc to learn more about this organization.
This quote from Winston Churchill sums up the reason that I love my job. I count myself lucky to earn a living in a profession that gives as much as it gets. I’m always fascinated by the various paths that lead people to find a vocation. I use that word deliberately here, because I do think what we do as physical therapists in the field of geriatrics is a calling. It’s a very specific group of us who enter this field.

I know that my family inspired my interest in working with older adults. I am the oldest child of two children, and I had the luxury and privilege of knowing four of my great-grandparents and all of my grandparents well. In fact, three of my grandparents, all in their 90s now, are still a part of my life. I still remember a project I did in sixth grade, for which I interviewed my parents and grandparents about dating in their generation. I have many memories of picking berries in the Maryland garden of two of my great-grandparents, while hearing stories of their work in a shoe factory when they were young. Another set of great-grandparents immigrated from England, and hosted tea parties whenever we visited.

I think my experiences with the declining health of my family members also shaped my philosophies as a health care provider. One of my great-grandmothers had Alzheimer’s in her later years. This was my first encounter with the disease, and I clearly recall her speaking to me, in my teens, as my mother, because in her world my mother was 17 again. My mother’s parents were my first window into the world of assisted living and skilled nursing facilities. I watched them move from their home, to an assisted living, and eventually into the skilled wing of their continuing care community, as my grandmother’s Parkinson’s disease and my grandfather’s stroke took their toll. I learned how invaluable compassionate caregivers are. The most beautiful, state-of-the-art facility is worth nothing without caring hands and hearts. Unfortunately, I also learned how biased our society and our health care system can be against older adults. Far too often pain and dysfunction are dismissed as normal aging, and chronic disease and cognitive decline are used against the elderly in the reimbursement system.

A large part of my motivation for returning to school to become a physical therapist was the desire to deliver the care that older adults deserve. I hope all of us who work with this population have the ability to view our patients as we would our own grandparents and to imagine ourselves in their shoes in the future. I think what makes a great geriatric PT is that inner vision of our older client as their 16-year-old self, on the way to the roller rink with friends, or their 40-year-old self, working hard to take care of their family. Too often, the older self is somehow seen as independent of the rich life lived, and undeserving of life satisfaction and optimal function. Again, we are so lucky to make a living giving renewed vigor, function, and even optimism, to this great population.

Whether it is by lobbying in Washington or educating caregivers and clients, we have many opportunities to be advocates for older adults. It isn’t enough anymore to be clinically excellent, we need to be activists to ensure that we continue to have the privilege of making a living treating this population. We also need to be researchers, providing evidence that what we do is effective and perpetually improving what we have to offer. I know that many reading this article are going above and beyond every day in their work with and for the geriatric popula-
DEMystifying Polypharmacy Through Technology

Melanie DeSumma, MSPT; Marissa Furka, MSPT, DPT

With electronic health records popping up everywhere, the use of computers in health care delivery is becoming the norm. Technology has transformed the way many of us do business, get our information, and collect data. As seen at the APTA's Techtopolaza at the Combined Sections Meeting in New Orleans, technology is greatly expanding in all clinical settings, including geriatrics. Access to the Internet is available in nearly every corner of the country, making information readily and easily accessible to health care professionals as well as consumers. Moreover, applications (also known as “apps”) found on smart phones and tablet devices enable you, the clinician, to instantly get evidence-based research with the push of a button or measure the kyphotic curvature of an elderly woman with the tilt of the smart phone. As many organizations and health care providers make the switch to computer systems for documentation, our geriatric clientele is getting an increased exposure to technology. Many of our patients may already be online, using Facebook and “skyping” relatives around the globe. Incorporating technology into examination and intervention sessions is becoming standard and can even enhance your relationship with your clients. So can we use it to enhance our understanding of pharmacology and apply it to our geriatric clients? It might not be as hard as you think.

Polypharmacy is a concern for many clinicians who work with a geriatric client base. It may seem daunting to keep up with the latest innovations in medication development. Perhaps even more daunting is the extensive list of side effects and interactions many medications may cause. Now, through the click of a mouse or phone button, medication lists can easily be examined and evaluated for indication, contraindication, side effects, and interactions. Never before has it been so easy to keep up on the innumerable medications our patients are prescribed. This is becoming increasingly more important especially as physical therapists are used as nonphysician, primary care providers. Increasing our awareness of harmful drug interactions and increasing our knowledge of commonly prescribed drugs, improves our patient care by decreasing medication-related ER visits and even lengths of hospitalization. Secondly, a comprehensive analysis of medications helps the physical therapist become more aware of the chronic conditions affecting their geriatric client. Physical therapists, especially in the home, have an important role to play in making sure the patient and/or caregivers are competent in the management of medications, and Web sites that check drug interactions can be an essential resource for this. Box 1 identifies our role in interdisciplinary medication management.

Identification of credible information is a key component to incorporating technology into the clinical setting. Scanning a source for author, date of publication, and content is the first step in ensuring a credible source. Moreover, using a news source or journalistic site can increase reliable information. Choosing information from a “.org” versus a “.com” can also play a substantial role in decreasing bias when making a clinically based decision and tapping into pharmacologic properties. Using information with a reference list that includes trustworthy sources can also ensure a credible source. In any case, the sources discussed here represent a small number of websites available on pharmacology.

INTERNET PHARMACOLOGY SITES

Researching pharmacologic properties of medications is possible by accessing credible Web sites, using the guidelines described above. You can easily “google” the drug name and numerous Web sites will ultimately pop up. One Web site listing may take you to the drug manufacturer’s Web site. This can provide you with essential information and news releases regarding the drug. The limitation with this approach is you might spend a lot of time clicking through various sites. A more efficient approach might be to use specific sites for pharmacological updates. Web sites such as the WebMD drug database articulate indications, side effects, precautions, interactions, and missed or overdose information. There is also an “app” by WebMD called Medscape, but more on that later. PubMed Health is yet another Web site that provides extensive information on medications and also has a column titled “Evaluating Your Options” that gives the health care consumer information on similar drugs used for similar diagnoses. Epocrates.com is another site that has an online component that will give all information on a specific drug type. This also has applications for iPhone/iPad, Android, BlackBerry, Windows mobile, and Palm. The basic software is free and will give you general drug reference information.

The Medicines and Healthy Aging organization has a site called Medsandaging.org that offers tools such as: find a pharmacist, personal medication list form, an explanation of the Medicare D donut hole, and tips for medication safety. The Web site also offers a questionnaire that identifies medication risk and is hugely helpful, especially in the home care setting. It takes about 3 minutes to fill it out with your client, and then it will give you a result of the areas of risk. Research has shown that age, the number of different medicines taken, and certain medicines may increase the risk for problems that result from these medicines.

Another tool, easily accessible via the Internet is the Beers List, which consists of medications that can cause potentially devastating side effects in the geriatric population. Table 1 lists these medications considered hazardous for older adults. This can also be found in PDF form at this Website: https://www.dcri.org/trial-participation/the-beers-list.

PHARMACOLOGY AND APPS

Applications are downloadable, portable programs that are easily accessible via the Market, on the Android operating system; BlackBerry App World, for BlackBerry phones; Marketplace, for Windows phone users; and the App
Table 1. Beers Criteria of Potentially Dangerous Drugs for Older Adults

| A | alprazolam (Xanax) | amiodarone (Cordarone) | amitriptyline (Elavil) | amphetamine | anorectic agents |
| B | barbiturates | belladonna alkaloids (Donnatal) | bisacodyl (Dulcolax) |  |
| C | carisoprodol (Soma) | cascara sagrada | chlorzoxazone (Paraflex) |  |
| D | desiccated thyroid | dexchlorpheniramine (Polaramine) | dicyclomine (Bentyl) |  |
| E | ergot mesylates (Hydergine) | estrogens | ethacrynic acid (Edecrin) |  |
| F | ferrous sulfate (iron) | fluoxetine (Prozac) | flurazepam (Dalmane) |  |
| G | guanadrel (Hylorel) | guanethidine (Ismelin) |  |
| H | halazepam (Paxipam) | hydroxyzine (Vistaril, Atarax) | hyoscyamine (Levins, Levines) |  |
| I | indomethacin (Indocin, Indocin SR) | isosuxprine (Vasodialan) |  |
| K | ketorolac (Toradol) |  |
| L | lorazepam (Ativan) |  |
| M | meperidine (Demerol) | meprobamate (Milturn, Epanut) | mesoridazine (Sertindil) |  |
| N | naproxen (Naprosyn, Avapro, Aleve) | Neoloid | nitrofurantoin (Microdantin) |  |
| O | orphenadrine (Norflex) | oxaprozin (Daypro) | oxazepam (Serax) |  |
| P | pentazocine (Talwin) | perphenazine-amitriptyline (Triavil) | piroxicam (Feldene) |  |
| Q | quazepam (Doral) |  |
| R | reserpine (Serpalan, Serpasil) |  |
| T | temazepam (Restoril) | thioridazine (Mellaril) | ticlopidine (Tilid) |  |
| U | trimethobenzamide (Tigan) | trimethobenzamide (Tigan) | trimethobenzamide (Tigan) |  |

Table 2. Applications for Smart Phones

<table>
<thead>
<tr>
<th>Application</th>
<th>Information</th>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epocrates</td>
<td>Drug information, free updates, pill identification</td>
<td>iPhone, Android, BlackBerry, Windows Mobile, Palm</td>
</tr>
<tr>
<td>iPharmacy</td>
<td>Drug information, free updates, include full package insert</td>
<td>iPhone, Android, BlackBerry, Windows Mobile, Palm</td>
</tr>
<tr>
<td>Medscape Mobile</td>
<td>Drug information, pill identification, interaction checker, free updates</td>
<td>iPhone, Android, BlackBerry, Windows Mobile, Palm</td>
</tr>
</tbody>
</table>

It is important to select the best method for retrieving pharmacologic information based on what tools are available and what resources you prefer. Each Web site has different standards of reporting. On some Web sites, information is presented in tabbed form, while others display all information on one single page. What’s more, different modes of retrieval are possible with the different equipment. iPhone, Blackberry, and Android operating systems use different application interfaces and may have different application names but similar uses. Even further, applications on smart phones are not feasible on computer devices, and Internet access on some smart phones may make information formatting easier or more complicated, depending on the Web...
site. Overall, an app is the easiest way to access medication information while doing a house call or at a patient’s bedside, where computer access isn’t convenient.

Perhaps more importantly, many of our geriatric patients and clients have access to technology in the form of computers, smart phones and tablets. It is important that they have the accurate resources available to get the information they need. Not only is it crucial that you have access to medication information but also that the geriatric health care consumer knows where to get credible information regarding medications. Technology may be very confusing for some of our geriatric clients. By providing information on how to obtain credible medical information, we can help health care consumers become their own advocates in their care. Here’s an example on how to put this technology in to practice.

CASE STUDY

A 92-year-old female comes in for her initial evaluation at your physical therapy practice. She was recently hospitalized for a fall, with resultant pain in her lumbar spine, and from her right hip to her knee. She reports that she is having difficulty walking, and she has a fear of falling. She notes she gets out of breath with her daily activities. As requested, she brings all of her medications to physical therapy evaluation. The bag contains the following: Xanax 1mg, Aspirin 500mg (takes once per day), Vitamin B complex, Lipitor 10mg qd, Metoprolol 50mg bid, Prilosec 20mg qd, Imipramine 25 mg qhs, Fish oil, Dalmane 15mg qhs, Zantac, and Digoxin 0.25 mg qd. Somehow, you get onto the topic of the cost of medications and she tells you that she sometimes cuts the Metoprolol, Imipramine, and Lipitor in half to save money.

Using the available resources listed in this article, what areas are you most concerned with?

*Zantac and Prilosec both increase the effect of digoxin by increasing gastric pH. Digoxin meets the Beer’s Criteria of Potentially Dangerous Drugs for Older Adults.

*Xanax also meets the Beer’s Criteria of Potentially Dangerous Drugs for Older Adults. It also increases the levels of digoxin.

*Dalmane and Xanax, when taken together, may cause CNS and respiratory depression. Prilosec and Imipramine affect liver metabolism.

These drugs would directly affect therapist outcome and put patient at increase risk for falls and heart arrhythmias.

How would you address the possible concerns/adverse reactions?

Make sure that the patient has had a pharmacist or a doctor look at her list of medications for any red flags. Consumer awareness is a huge step in diminishing polypharmacy, and making your patient and her family aware of the Beers List may empower them to have a critical conversation with her physician. Also, have the patient list any current symptoms that might be secondary to the medications. As a health care professional, you should be contacting the physician to let them know of any symptoms you have noted as this is crucial in making sure a pharmacological risk assessment has been made.

How would you address her pill cutting?

Suggest she talk to her doctor about pill cutting. Some pills may be split but it should be under the medical supervision of her physician. If she is worried about the “donut hole,” or the point at which the individual pays larger sums of money for medications due to a coverage gap, you can help her to access the donut hole calculator and tips on how to avoid the coverage gap on Medsandaging.org.

Medications should not be a mystery but rather an opportunity to further understand a medical diagnosis. We as health care professionals in geriatric care must make it a priority to no longer ignore the medication list but use it as part of our assessment of the patients’ current status. The best part is we are not alone and have reliable resources literally at our fingertips.

REFERENCES


Melanie DeSumma is Director of PT Clinical Services for Fox Rehabilitation, with over 10 years experience in geriatric homecare. She was recently appointed as the Balance and Falls SIG Vice Chair and hopes to be a part of the grassroots efforts to prevent falls. She graduated from Thomas Jefferson University in 1999. She has extensive background in teaching and training and has a passion for geriatrics, functional outcome measures, and professional development. She can be reached at Melanie.desumma@foxrehab.org.

Marissa S. Furka is Coordinator of Physical Therapy Clinical Services at Fox Rehabilitation. She graduated from the Richard Stockton College of NJ. Practicing since 2007 in geriatrics, she strives to proactively promote successful aging across the lifespan and exceed her patient’s expectations. She can be reached at marissa.furka@foxrehab.org.
INTRODUCTION
Cancer is a condition that has become a widespread chronic disease due to advances in early detection and advancements in chemotherapy, radiation treatment, surgical options, and other novel adjuvant treatments. Therapists will encounter patients in all stages of cancer disease. In fact, therapists will have an increasingly important role in screening and early detection of cancer as direct access advances across the United States. The purpose of this article is to explore the varying roles a physical therapist may have with patients throughout the cancer continuum from screening to restorative care.

The lifetime risk of developing cancer is slightly less than 1 in 2 for men and a little more than 1 in 3 for women.1 Cancer is a condition that is encountered in all practice settings and all clinical areas; either as a primary diagnosis or in the patient's history. It is important for therapists to have a framework for assessment and treatment of cancer regardless of the practice setting in which they work. For example, a therapist working in an outpatient orthopedic setting may receive a referral to treat a 62-year-old woman with a knee replacement. Upon taking a history, the patient reveals having had a history of breast cancer 10 years ago and having polyps removed during a colonoscopy one year ago. Focusing solely on the interventions for the knee replacement may lead to a less than optimal outcome. With direct access, it is incumbent on physical therapists to be cognizant to perform a thorough history and systems review, and screen their patients for potential medical conditions and physical impairments that need to be addressed by other health care providers.2

BACKGROUND
According to the American Cancer Society (ACS), cancer is the 2nd most common cause of death in the United States, second only to heart disease. About 1.5 million new cancer cases are expected to be diagnosed in 2011. Approximately 571,950 Americans are expected to die of cancer in 2011, which is more than 1,500 people a day. Cancer is the leading cause of morbidity due to late effects and complications of the disease and its various treatment interventions, ie, chemotherapy toxicities, late effects of radiation therapy, and adverse effects of surgical intervention.3 An important statistic for any cancer patient to be aware of is the 5-year survival rate; currently 68%. If a cancer survivor reaches the 5-year survival mark without cancer recurrence, they have the same chance of dying from that same cancer as the rest of the population. Approximately 10% to 20% will have a cancer recurrence or a new cancer.

Before discussing patient management, therapists must have a working definition of cancer, the forms of cancer (benign vs. malignant), how cancer is staged, cancer sites (lung, colon, etc.), and the signs/symptoms involved. Understanding the characteristics of neoplasm will allow clinicians to provide best practice in assessment and treatment for patients with neoplasm. Cancer is a condition that is defined by uncontrolled growth and spread of abnormal cells. Cancer is caused by both external factors (tobacco, infectious organisms, chemicals, and radiation) and internal factors (inherited mutations, hormones, immune conditions, and mutations that occur from metabolism) that may work alone or together, in concert or sequentially, to initiate or promote carcinogenesis.4 Proliferation of these abnormal cells, if not controlled, can result in death.

The ACS has asked a poignant question, “Can cancer be prevented?” All cancers caused by cigarette smoking and heavy use of alcohol could be prevented completely. Scientific evidence suggests that about one-third of the 571,950 cancer deaths expected to occur in 2011 will be related to obesity, physical inactivity, and poor nutrition, and thus could be prevented. Regular screening examinations by a health care professional can result in the detection and removal of precancerous growths, as well as the diagnosis of cancers at an early stage, when they are most treatable.5 Therapists are uniquely qualified to provide safe and effective exercise programs for improving fitness and reducing obesity.

A tumor (neoplasm) is defined as an abnormal growth of new tissue that is nonfunctional and competes for vital blood supply and nutrients.3 Tumors that are classified as benign are localized, slow growing, encapsulated, and not invasive to other tissues. Benign tumors are generally innocuous and not life-threatening.6 Tumors that are considered malignant are invasive to other tissues, tend to be fast growing, may be encapsulated or not, and spread to the lymph vessels and/or blood vessels.3 Malignant tumors (also called cancer) are considered life threatening and metastasize.4

Cancer Staging and Grading
There are different ways that cancer is staged or graded. Traditionally cancer was staged on a scale of 4 stages using roman numerals as stage I to stage IV.3 See Table 1 for details. In 1988, a consensus of criteria was defined by the American Joint Committee on Cancer (AJCC). The AJCC system, called the TNM classification system, grades cancer based on T (primary tumor size), N (regional lymph node involvement), and M (metastasis).3,5 See Table 2 for details. “Each cancer type has its own classification system, so that the letters and numbers do not always mean the same thing for every kind of cancer. Once the T, N, and M are determined, they are combined, and an overall “Stage” of I-IV is assigned. Sometimes these stages are subdivided as well, using letters such as IIIA and IIIB.5” All cancers are staged only once at initial diagnosis.3,5 Stage I cancers are the least advanced and generally have a better prognosis as do the higher stages.3,5 According to ACS, the 3 leading cancer types for men are prostate (29%), followed by lung & bronchus (14%), then colon & rectum (9%). For women, breast cancer is first (30%), followed by

THE ROLE OF PHYSICAL THERAPISTS IN CANCER CARE
Ken Miller, PT, DPT; Elizabeth Budd, PT, DPT
The earliest sign of breast cancer is thickening of the breast, swelling, distortion, tenderness, skin irritation, redness, scaliness, or nipple abnormalities, such as retraction, ulceration, or spontaneous discharge. More typically, breast pain is from a benign condition and is not an early sign of breast cancer.¹

Prostate cancer usually has no symptoms early in the disease, however, with more advanced disease, men experience interrupted and/or weak urine flow, inability to urinate, start or stop the urinating, frequent urination especially at night, blood in the urine, or pain/burning sensation with urination. Advanced prostate cancer commonly spreads to the bones causing pain in the ribs, spine, and hips or elsewhere in the skeletal system.¹

Lung cancer is the second most common cancer type for both men and women accounting for 27% of all cancer deaths alone. The signs and symptoms for lung and bronchus cancer may include persistent cough, sputum streaked with blood, chest pain, recurrent pneumonia or bronchitis, and voice changes.¹

The third most common cancer type in both men and women is colon and rectal cancer and fortunately the mortality rate for colon cancer has decreased over the past 20 years. Unfortunately, early stage colorectal cancer does not usually have symptoms, for this reason alone, screening is usually necessary to detect this cancer in its early stages. Advanced disease may cause rectal bleeding, blood in the stool, changes to bowel habits, and cramping pain in the lower abdomen.¹

The signs and symptoms described above are also seen with other medical conditions and may be dismissed by patients, therapists and physicians alike. For example, the signs and symptoms of prostate cancer also mimic benign prostatic hyperplasia. And the symptoms of lung cancer may be seen with other lung disorders or with smoking. It is important for therapists to be aware of the signs and symptoms of cancer including the onset, duration, frequency, and intensity of symptoms, so that appropriate interventions are rendered, including referrals to other health professionals.

Consider this example. A patient is referred to outpatient physical therapy with complaints of low back pain. Upon taking a history and physical examination, it is revealed that the patient's pain is constant and not affected by activity level or posture. The patient reports having unexplained weight loss of 20 pounds in the past two and a half months. Further questioning reveals that the patient has difficulty with urination, rapid, unexplained weight loss, urination difficulties, frequency and burning pain, should raise a red flag. The best practice would be to call the patient's primary physician with the findings and hold off on physical therapy treatment until the patient has been worked up for the etiology of the symptoms. As for what to say to the patient, it would not be wise to tell the patient what is suspected. Instead, tell the patient, "Before your back pain can be effectively and appropriately treated, you need to follow up with your doctor to do more tests to find out why you have the weight loss, difficulty with urination, and burning pain. This is why

<table>
<thead>
<tr>
<th>Stage of Cancer</th>
<th>Description of Cancer Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Cancer is limited to the organ in which it develops.</td>
</tr>
<tr>
<td>II</td>
<td>The tumor is spread beyond the primary site but remains in the same anatomic region. Some local invasion of the organ or the immediate adjacent areas.</td>
</tr>
<tr>
<td>III</td>
<td>The tumor has spread to the region surrounding the primary organ. There is a high probability of microscopic metastatic disease.</td>
</tr>
<tr>
<td>IV</td>
<td>Metastatic disease is present beyond the local site. Cancer cells are present throughout the entire organism and there is little chance for cure.</td>
</tr>
</tbody>
</table>


Table 2. TNM Classification System

<table>
<thead>
<tr>
<th>T category = extent of primary tumor</th>
<th>TX</th>
<th>T0</th>
<th>Tis</th>
<th>T1-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX</td>
<td>Primary tumor cannot be evaluated</td>
<td>No evidence of primary tumor</td>
<td>Carcinoma in situ (early cancer that has not spread to neighboring tissue)</td>
<td>Size and/or extent of the primary tumor</td>
</tr>
<tr>
<td>T0</td>
<td>No local tumor</td>
<td>No evidence of primary tumor</td>
<td>Tumor cannot be evaluated</td>
<td>Tumor cannot be evaluated</td>
</tr>
<tr>
<td>Tis</td>
<td>Tumor cannot be evaluated</td>
<td>Tumor cannot be evaluated</td>
<td>Tumor cannot be evaluated</td>
<td>Tumor cannot be evaluated</td>
</tr>
<tr>
<td>T1-4</td>
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<table>
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<th>N category = extent of lymph node involvement</th>
<th>NX</th>
<th>N0</th>
<th>N1-3</th>
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<tr>
<td>NX</td>
<td>Regional lymph nodes cannot be evaluated</td>
<td>No regional lymph node involvement</td>
<td>Involvement of regional lymph nodes (number and/or extent of spread)</td>
</tr>
<tr>
<td>N0</td>
<td>No regional lymph node involvement</td>
<td>No regional lymph node involvement</td>
<td>No regional lymph node involvement</td>
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<tr>
<td>N1-3</td>
<td>Involvement of regional lymph nodes (number and/or extent of spread)</td>
<td>Involvement of regional lymph nodes (number and/or extent of spread)</td>
<td>Involvement of regional lymph nodes (number and/or extent of spread)</td>
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<table>
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<th>M1</th>
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</thead>
<tbody>
<tr>
<td>M0</td>
<td>No distant metastasis (cancer has not spread to other parts of the body)</td>
<td>Distant metastasis (cancer has spread to distant parts of the body)</td>
</tr>
<tr>
<td>M1</td>
<td>Distant metastasis (cancer has spread to distant parts of the body)</td>
<td>Distant metastasis (cancer has spread to distant parts of the body)</td>
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</table>

Adapted from www.cancerstaging.org (American Joint Commission on Cancer)

lungs & bronchus (14%), then colon & rectum (9%). It is interesting to note that the 2nd and 3rd cancer types are not only the same type, but also the same incidence rate. As for estimated deaths based on cancer type, the leading cancer type is the same for both men (26%) and women (26%), and that is lung & bronchus, followed by prostate for men (11%) and breast for women (15%), third is colon & rectum for both men (8%) and women (9%).

Signs and Symptoms

Cancer is a condition in which earlier detection usually means a better prognosis. This next section focuses on the signs and symptoms of varying cancer types. These signs and symptoms are useful for patients and health care professionals to aid in early detection of cancer.

The earliest sign of breast cancer is usually an abnormality detected on a mammogram, before it can be felt by the woman or health care professional. Tumors that are larger may become evident from a benign condition and is not an early sign of breast cancer.¹

Prostate cancer usually has no symptoms early in the disease, however, with more advanced disease, men experience interrupted and/or weak urine flow, inability to urinate, start or stop the urinating, frequent urination especially at night, blood in the urine, or pain/burning sensation with urination. Advanced prostate cancer commonly spreads to the bones causing pain in the ribs, spine, and hips or elsewhere in the skeletal system.¹

Lung cancer is the second most common cancer type for both men and women accounting for 27% of all cancer deaths alone. The signs and symptoms for lung and bronchus cancer may include persistent cough, sputum streaked with blood, chest pain, recurrent pneumonia or bronchitis, and voice changes.¹

The third most common cancer type in both men and women is colon and rectal cancer and unfortunately the mortality rate for colon cancer has decreased over the past 20 years. Unfortunately, early stage colorectal cancer does not usually have symptoms, for this reason alone, screening is usually necessary to detect this cancer in its early stages. Advanced disease may cause rectal bleeding, blood in the stool, changes to bowel habits, and cramping pain in the lower abdomen.¹
you need to see your primary physician. I will call your doctor about your symptoms. And you should make an appointment to see him/her. Sometimes the best practice involves not treating the patient, but sending them back to their physician. See Table 3 for general signs and symptoms of cancer.

Medical Screening Tools

In depth discussion of medical testing procedures used to diagnose the different types of cancer is beyond the scope of this article. The following is a synopsis of medical testing for cancer screening and early detection of cancer for the 3 most common forms of cancer in both men and women. Self-breast examination, clinical breast examination, mammography, biopsy, and MRI are used for the detection of breast cancer. Prostate cancer is detected by use of the Prostate Specific Antigen (PSA) blood test and digital rectal exam. Colorectal cancer is detected by use of fecal occult blood test, sigmoidoscopy, double contrast barium enema, colonoscopy and virtual colonoscopy. Lastly, screening tools for early detection of lung and bronchus cancers have limited effectiveness. Chest x-ray, analysis of cells in sputum, and fiberoptic examination of the bronchial passages have been shown to have limited effectiveness for reducing lung cancer deaths. Clinical trials using low-dose spiral computed tomography (CT) scans have produced promising results according to the ACS.

Medical Interventions

The medical interventions available to treat cancers are always expanding, with new chemotherapy drugs being developed and drug cocktails being mixed. Advances in radiation therapy, as well as new surgical interventions, have provided the oncologist many more options to treat their patients. The next section of this paper will go over the treatment options in general terms, and how these treatments may affect the patient’s physical and functional status. The various treatment interventions of chemo, radiation, surgery, and other adjuvant treatment options available to the patient are based on several factors, including but not limited to cancer type/location, grade/stage, overall health, blood cell counts, and co-morbidities. The specific treatment intervention is based on what the overall goal is, curative vs. palliative.

The treatment for breast cancer usually involves surgical removal of the tumor and may be a lumpectomy or mastectomy with or without axillary node dissection. Patients have a greater risk of developing lymphedema as more nodes are removed. Physical therapy intervention should include education for lymphedema identification and prevention and management of edema. Also, ROM exercises for shoulder flexion, extension, internal and external rotation, pectoralis stretch, elbow flexion, and scapular retractions should be prescribed. Scar mobility after healing and postural re-education should be prescribed as well.

Treatment for breast cancer may also include chemotheraphy (before or after surgery), radiation therapy, and hormone therapy. The treatment options for prostate cancer vary from surgery (open, laparoscopic, or robotic-assisted), external beam radiation, or radioactive seedimplants for early stage disease. Hormonal therapy is also an option that has been shown to slow the growth of the cancer. Chemotherapy is used for more advanced stage disease. Prostate cancer sequelae include incontinence and impotence. Physical therapist intervention for prostate cancer would include educating the patient with behavioral modification in establishing a voiding schedule, assisting the patient with preoperative biofeedback (results in a quicker return to continence postsurgery), and Kegel exercises.

Lung cancer treatment in the early stages may include surgical resection, radiation, chemo, and targeted therapies such as Avastin and Tarceva. If diagnosed in the early stages, surgery is the first choice, followed by chemotherapy. But, by the time this type of cancer is usually found, spread has usually occurred, so surgery is usually performed with chemo and radiation. Physical therapy interventions for lung cancer include: postural re-education, breathing exercises, productive cough training, gentle rib cage mobility, muscle re-education (specifically-scapular retraction), and ROM to trunk and extremities.

Surgery is the most common treatment for colon and rectal cancer. Che-
Chemotherapy and Radiation Therapy Side Effects

Aside from being aware of medical and therapy interventions shown above for primary cancer sites, therapists need to be aware of more global effects of the chemotherapy and radiation treatments may have. Chemotherapy medications are known to have cardiotoxic effects causing a risk of heart failure, effusion, myocardial infarction, or arrhythmia. These symptoms are likely to resolve upon cessation of the chemo medication. However, late effects of chemotherapy can last up to 20 years. Chemotherapeutic agents have been shown to be neurotoxic both centrally, causing “chemo brain,” and peripherally, causing peripheral neuropathy. Chemo brain is also known as chemo fog and is characterized by cognitive impairment shown as weakened cognitive ability; memory, concentration, attention, and executive function are affected. Physical therapy intervention should include both assessment of central function as well as sensory function peripherally.

Radiation therapy produces skin impairments due to fibrosis of vasculature and lymphatics and adhesions to collagen. Chronic effects of radiation include progressive immobility and adhesion of the tissues. Therapists should consider soft tissue work and myofascial release after the subacute stage of healing, also manual stretching, manual lymph drainage, and ROM exercises should be performed. Heat should never be used in the radiation field. Patients that have received left chest wall radiation therapy are also at a higher risk for coronary artery disease and myocardial infarction. Radiation pneumonitis is another condition resulting from radiation to the chest cavity.

Blood Values

Physical therapist’s need to be familiar with lab values when treating patients that have cancer, especially those patients that are being treated with chemotherapy, since chemotherapy medications have effects on counts. Therapists need to look at the RBCs, WBCs, and hematocrit. The patient’s ability to perform physical activity will be affected by low hemoglobin levels. Also, exercise is contraindicated for patients with very low platelet count (thrombocytopenia) due to the risk of bleeding. It is important to know these counts before providing physical therapy intervention as the patient may not be able to participate. Please see Figure 1 for specific lab values to guide physical therapy interventions.

**Figure 1. Lab values to guide physical therapy intervention.**
function associated with aging. Adding a cancer diagnosis and treatments to the equation further complicates the balancing act that has to be performed by seniors to remain healthy and functionally independent.

Cancer-related Fatigue

On initial assessment, a review of systems may identify a number of problems that can be addressed by physical therapy interventions, including pain, edema, limited ROM, muscle weakness, decreased ability to perform ADLs, and transfer and gait limitations. In addition, a problem that is common to the majority of cancer patients, but not always considered on assessment, is Cancer Related Fatigue (CRF). A study by Lawrence et al reported that “an estimated 80% - 100% of people with cancer experience fatigue.”

Since CRF is probably one of the least familiar and most prevalent problems for therapists to manage, it will be the focus of discussion. Cancer-related fatigue has been defined as “a persistent, subjective sense of tiredness related to cancer or cancer treatment that interferes with usual functioning.”

Studies looking at CRF began in the early to mid 1990s when it was identified as a major problem for cancer patients. Use of erythropoietin (drugs such as Procrit) to treat anemia and associated fatigue resulting from chemotherapy, radiation therapy, blood loss, and disease process began. However, not all cancer patients with fatigue are anemic. Other potential causes of CRF are side effects of chemotherapeutic agents, tumor stage, psychosocial factors, sleep deprivation, and deconditioning resulting from inactivity.

While CRF has been identified and studied, it is still not considered by many health care providers when developing treatment plans for cancer patients. Lack of understanding about the serious impact it can have on patients and lack of awareness regarding tools to measure CRF and strategies to help control it may be to blame. A number of tools have, in fact, been developed to measure CRF, among them the “Brief Fatigue Inventory” and the “Oncology Nursing Society Fatigue Scale.” The Brief Fatigue Inventory asks the patient to respond to a series of questions related to current fatigue level, fatigue over the past 24-hour period, and how fatigue is interfering with things like normal daily activities, mood, and relationships. All responses are scored from 0 to 10 and then averaged. A score of 1-3 reflects “mild” fatigue, 4-6 “moderate” fatigue and 7-10 “severe” fatigue. The ONS Fatigue Scale is a 0 to 10 scale, similar to the pain scale that many therapists are familiar with, with 0 representing no fatigue, 1-3 “mild” fatigue, 4-6 “moderate” fatigue, 7-9 “extreme” fatigue, and 10 the “worst” fatigue. Addressing fatigue and attempting to quantify it validates the problem for the patient and allows the therapist to gauge progress and tolerance to activity.

Once defined, there are a variety of nonpharmacological approaches that fall under the realm of physical therapy practice and can be implemented to treat CRF. Included in that group are exercise, energy conservation strategies, progressive relaxation techniques, massage, and other less traditional therapies. Of these, the most studied and most effective in reducing the symptoms of cancer related fatigue, is exercise. A paper published in the Clinical Journal of Oncology Nursing categorized all of the suggested interventions for CRF, both pharmacologic and nonpharmacologic, into the following groups; “recommended for practice,” “likely to be effective,” “benefits balanced with harms,” “effectiveness not established,” “effectiveness unlikely,” and “not recommended for practice.”

Exercise was the only intervention in the “recommended for practice group.” All other interventions, including use of erythropoietin (which has the potential for serious side effects), fell into categories below exercise. Providing exercise to cancer patients in all therapy practice settings and throughout all stages of cancer treatment can have a positive impact on quality of life. The reduction of fatigue and improvement in mood associated with exercise enables patients to continue with activities that have meaning for them and give purpose to daily living.

CONCLUSION

The purpose of this article is to serve as a springboard for clinicians to increase their working knowledge of cancer, its risk factors, screening, assessment, and treatment. Cancer related fatigue and chemo brain are distinct conditions for therapists to consider when developing treatment plans. Therapists in the world of autonomous practice and direct access need to have an understanding of cancer in order to refer patients to other health care providers when necessary. In order to provide best practice, therapists need to understand cancer and its effects on those we serve.

REFERENCES


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The National Prevention Health Promotions and Public Health Council developed a visionary plan entitled, The National Prevention Strategy: America’s Plan for Better Health and Wellness. A primary tenant of this plan is to “move the nation away from a health care system focused on sickness and disease to one focused on wellness and prevention.” In a press release dated July 21, 2011, APTA President, R. Scott Ward, PT, PhD, commends the efforts of this group and goes on to state that “Improving the nation’s health through a national strategy on prevention and health promotion will take an integrated, multidisciplinary, and community-based approach.” So how do we as physical therapists promote the integrated, multidisciplinary effort to make this strategic plan a reality in a geriatric population in order to support aging in place? The answer to this question may begin with Medicare’s funding of an Annual Wellness Visit (AWV), including Personalized Prevention Plan Services (PPPS), which began January 1, 2011.3

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, provided Medicare beneficiaries with a one time, introductory initial preventive physical examination, commonly referred to as the “Welcome to Medicare” visit. The intent of this program was to facilitate the partnership between the patient and health care providers by funding the provider to comprehensively evaluate a patient’s health, and to foster early identification of risk factors associated with disease in order to mitigate, to the greatest extent possible, adverse health outcomes. It also provided a window of opportunity to promote healthy lifestyle choices that would support positive impacts on health.4 Achieving long-term behavioral change obviously takes more than one lifetime visit. Section 4103 of the Affordable Care Act of 2010 was a significant step forward in promoting health and wellness in that it provides coverage for regular and ongoing assessment of a Medicare beneficiary’s health status. The goal of the AWV is “Health promotion and disease detection and fostering the coordination of the screening and preventive services that may already be covered and paid for under Medicare Part B.”5

The content of the AWV must include:

- Medical/family history
- List of current providers/suppliers
- Blood pressure, height, weight, and other routine measurements
- Detection of any cognitive impairment
- Review potential (risk factors) for depression, functional ability, and level of safety
- Establishment of a:
  - written screening schedule (such as a checklist) for next 5-10 years and
  - list of risk factors and conditions where interventions are recommended
- Personalized health advice and referrals for health education and preventive counseling

The Center for Medicare & Medicaid Services (CMS) stipulates that the AWV must be completed by a “health professional,” such as a licensed physical therapist or a team of medical professionals working under the direct supervision of a physician.6 The AWV are coded as G0438 for the first AWV, and G0439 for subsequent visits. Specific information on how to seek reimbursement is beyond the scope of this article, and it is recommended that physical therapists desiring more information should access The Guide to Medicare Preventive Services, Chapter 4, for specific documentation and billing instructions. This Guide can be viewed at the following Web site: http://www.cms.gov/MLNProducts/downloads/mps_guide_web-061305.pdf

The physical therapist can also use the AWV as a networking tool to partner with primary care providers and develop a positive working relationship. One of the primary components of the AWV is a review of the patient’s functional abilities and level of safety. The therapist can suggest or complete evidence-based assessment tools that will clearly establish baseline function and lay the foundation for objective future comparisons of functional status and safety. There are a plethora of assessments that may be used, and CMS does not stipulate which tools to use. When evaluating which tools to select, it may be helpful to consider the following questions:

1. Does the tool have respectable psychometric properties?
2. Is the tool easy to administer and interpret results?
3. Is there equipment or other costs related to the administration of the test?
4. Are the results related to a functional outcome?
5. Are there normative values related to the population assessed?
6. Are there any copyright or permissions that must be granted in order to use the tool?

Let’s take a quick look at some assessment tools that may be an option. We know that lower extremity muscle strength is vital to preventing the onset of disability, frailty, and dependency as we age.6 How do we rapidly assess functional lower extremity strength? We could do a manual muscle test of the major lower extremity muscle groups; however, this may be time consuming and may not give us a direct link to function. Evidence indicates that chair-stand provides fairly reliable and valid indications of lower body strength and function.7 The 30-second Chair-Stand Test could be administered quickly and has age and gender norms for community dwelling elderly.8-10 The risk zone for this test would be a score of less than 8 sit to
stands in a 30-second period for both men and women. Now add this to the Timed Up and Go Test, which has demonstrated sensitivity and specificity for identifying elderly individuals at risk for falls, and a picture emerges of a patient’s functional status and level of risk.11-13

Similarly, grip strength and gait velocity may be chosen for measurement. Grip strength has normative data by gender, age, and hand dominance, and it has also been linked to functional outcomes in the aging process.14-17 Gait velocity quickly becoming the “Sixth Vital Sign.”18 Research indicates that gait speed can be a single predictor of adverse events in healthy seniors and normative values have been established by age and gender.19-22 In a matter of 15 to 30 minutes, baseline data can be gathered that can be compared year after year. These rapid assessment tools can also provide insight into where appropriate treatment intervention may be aimed or where prevention and wellness programs should be targeted.

By being proactive and approaching primary care providers, we as physical therapists can be the “fire starters” of grass roots efforts Dr. Ward spoke of when he referred to the evolution from a sickness and disease-based model to one focused on wellness and prevention, through an integrated, multidisciplinary, and community-based approach. We have the ability to select and administer evidence-based evaluation tools to objectively quantify an individual’s level of functional abilities and safety. We can position ourselves well with primary care providers, who are currently at the center of health care reform, in order to demonstrate our value to the team of health professionals supporting our patients and their desire to remain in their homes as long as possible.

For further information about AWV, please see the following Web sites:


REFERENCES

Physical therapy is gaining efficacy in the role of primary care. In community, private practice, and facility based clinics, our clients frequently return for recurring episodes of care over time, recognizing individual therapists as “their PT.” Although these referrals may be at variable intervals and for different reasons, therapists have the opportunity to develop a comprehensive impression of the client’s medical and functional history over time. Specific to the older adult population, consistent measures included in the initial assessment for each admission will provide comparable data to previous functional testing, which could identify significant markers of declining status, quality of life, or general health.

Gruenewald et al1 describe the concept of allostatic load, a cumulative index of wear and tear across multiple physiological systems involved in the body’s effort to adapt to internal and external stressors over time. As multisystem dysregulation accumulates, predictable functional changes begin to appear and can serve as warning signs of vulnerability, development of frailty, and adverse health outcomes.1

Older adults with low functional reserve and poor resistance to stressors are at risk for falls, morbidity, physical disability, hospitalization, and death. Characteristics of age associated declines across multiple physiologic systems may include weakness, fatigue, slowness, poor balance, slowed motor performance, low physical activity, weight loss, sarcopenia, and cognitive impairment.1 These conditions, although multifactorial, can be determined and tracked to objectively measure change and subsequent risk for frailty.

Fried et al3 define frailty in older adults as a phenotype, a clinical syndrome in which 3 or more of the following criteria were present: unintentional weight loss (10 lbs in past year), self-reported exhaustion, weakness (grip strength), slow walking speed, and low physical activity. This frailty phenotype was independently predictive (over 3 years) of incident falls, worsening mobility or ADL disability, hospitalization, and death.

It is intuitive that comorbidities and severity of chronic disease would also influence the frailty formula. In a study reviewing data from the Cardiovascular Health Study, participants (5,317 men and women 65 years and older, neither institutionalized nor end stage disease) were given baseline evaluations with follow-up at 4 and 7 years, including surveillance for outcomes such as incident disease, hospitalization, falls, disability, and mortality. In this population, frailty was associated with being African American, having lower education and income, poorer health, and having higher rates of comorbid chronic diseases and disability.2

**Efficacy of Functional Assessment for Predicting Frailty**

Brach et al3 describe a comparison of performance-based and self report measures in identifying early signs of decline of physical function in 170 community dwelling women > 65 years of age. Walking speed (WS) and the Physical Performance Test (PPT) identified deficits in physical function not indicated by the Functional Status Questionnaire (FSQ). Particularly in cases where mild deficits are present, the individual is still able to complete the task in spite of increased time and decreased frequency of performance. Consequently, if the self-report measure is the only assessment given, there may be a progressive but unrecognized decline in function until a more obvious clinical event occurs.3 Performance based measures are more likely to identify early deficits or “preclinical disability” than self reported measures.4 Therefore, if we are to effectively recognize significant changes in our clients that are predictive of decline in function and risk for frailty, we must invest the time to perform a few significant performance assessments.

The MOBILIZE Boston study1 compared two published frailty indexes: The Cardiovascular Health Study (CHS)6 and the Study of Osteoporotic Fractures (SOF).7 Kiely, Cupples and Lipsitz6 validated findings of the CHS and SOF studies in a more diverse elderly community dwelling population, which includes men and African American women. Furthermore, the MOBILIZE study demonstrates both CHS and SOF to be good at distinguishing relevant geriatric conditions, functional and cognitive impairment, while also predicting adverse outcomes (recurrent falls) and use of acute services (emergency department visits and unscheduled hospitalizations) according to level of frailty.5

Brach suggests that modification of lifestyle through health promotions, education, and establishing regular physical activity can minimize functional deficits that if unchecked, can lead to more moderate to severe deficits requiring extensive rehab programs.9 The ability to identify early decline in physical function is important for implementation of intervention to slow or even stop the decline, potentially reducing or delaying disability. In the early stages of change, intervention to improve physical function may be less costly, less intensive, and more effective.

The American Geriatrics Society/British Geriatrics Society published the revised Clinical Practice Guideline for Prevention of Falls in Older Persons in 2010, prepared by a panel with substantial knowledge, experience, and publications in fall prevention and care of older patients from across the health care spectrum. The risk of falling and sustaining an injury as the result of a fall increases with age. Falls sustained by older community residents are associated with morbidity and mortality and are linked to poorer overall functioning and early...
admission to long-term care facilities. Early identification of fall risk and appropriate interventions to reduce risk can potentially reduce serious fall-related injuries, emergency department visits, hospitalizations, nursing home placements, and functional decline. The 2010 Guidelines, recommend a multifactorial fall risk assessment for all older adults who present with a fall or who have gait and balance problems. The Guidelines present a detailed algorithm to be used in the clinical setting for assessment and intervention to reduce falls in community-residing older persons. The Guidelines definitively state: “All older adults who are under the care of a health professional should be asked at least once a year about falls, frequency of falling, and difficulties in gait or balance.” Any positive answer to the screening questions puts the person screened in a high-risk group that warrants further evaluation.

Applications to Practice
Standard screening and assessment for change in condition, when used as routine measures in each episode of care, can identify critical markers for risk of functional decline in returning clients within a clinical practice. Applying the phenotype described by Fried and others, the following measures are recommended:

Interview Questions:
1. Weight Loss: Have you had an unintentional weight loss of 10 lbs or more in the last year? (Yes No). A “yes” answer is a risk qualifier.
2. Exhaustion: The following 2 statements are read: “I felt everything I did was an effort. I could not get going.” How often in the last week have you felt this way? 0 = Rarely or none of the time 1 = Some or a little of the time (1-2 days) 2 = A moderate amount of the time (2-4 days) 3 = Most of the time Answers 2 or 3 are categorized as frail by the exhaustion criterion, using the CES-D Depression scale.
3. Fall history: Have you had 2 or more falls in the last 12 months (Yes No)

Walking Speed
Fried et al used a 15’ walk test with the following cut off scores for indication of frailty with calculations from English to metric included.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Height</th>
<th>Speed</th>
<th>Ft/sec</th>
<th>m/sec</th>
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<tbody>
<tr>
<td>Male</td>
<td>≤173 cm (68.1 in)</td>
<td>≥7 sec.</td>
<td>2.14 ft/sec</td>
<td>.65 m/sec</td>
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<tr>
<td>Female</td>
<td>≤159 cm (62.6 in)</td>
<td>≥7 sec.</td>
<td>2.14 ft/sec</td>
<td>.65 m/sec</td>
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There is considerable evidence for walking speed as a general indicator of underlying physiological process and predictor of future events. Fritz and Lusardi describe walking speed of ≥1.2 – 1.4 m/sec as the normal velocity for community dwelling adults. Speeds less than .4 m/sec are characterized as household ambulation; .4 - .8 m/sec is indicative of a limited community ambulator; .8 – 1.2 m/sec is considered adequate for community ambulation. However, clients with speeds less than 1.0 m/sec should be assessed for intervention to reduce fall risk. Self selected walking speed correlates with functional ability and balance confidence, with the potential to predict future health status, falls, functional decline, hospitalization, and mortality. A description of testing protocol is presented in “Walking Speed: the 6th Vital Sign.” The cutoff scores used by Fried et al above, would place clients in the limited community ambulation category.

Strength
Fried et al measured grip strength to identify weakness as a criterion for frailty if the subject performance is in the lowest 20% for age and gender norms. The Concord Health and Ageing in Men Project (CHAMP) study by Hairi et al concluded muscle strength to be the single best measure associated with functional limitation and physical disability in IADLs. Decline in strength demonstrates clear and consistent relationships with disability, institutionalization, and death. Hand grip and quadriceps strength were measured as determinants of sarcopenia, and have stronger association than muscle mass or quality. The authors concluded muscle strength to be the most useful indicator of age related changes in muscle for use in clinical practice.

In the CHAMP study, functional limitation was objectively measured with the 5 time chair stand task and walking speed. Chair stands were also used in the SOF study described by Kiely, Capples and Lipsitz. The chair stand task is described as a predictor of disability by Gurralnik.

Low Physical Activity
Self report physical activity instruments typically ask respondents about the types of activity they engage in, as well as intensity, frequency, and duration. Measurement for older adults is more difficult due to variation of activity, typically lighter MET level intensity, and perhaps some difficulty with accurate recall. Therefore, several surveys have been specifically developed for administration to older adults.

CHAMPS: Community Health Activities Model Programs for Seniors
PASE: Physical Activity Scale for the Elderly
SQUASH: Short Questionnaire to Assess Health Enhancing Activity
YPAS: Yale Physical Activity Survey
LTPA: Minnesota Leisure Time Physical Activity questionnaire

The PASE may be the most descriptive for a population using descriptors for typical activity in retired but active community dwelling older adults. This is the tool used by Kiely, Capples and Lipsitz. The YPAS was used by Gruenewald et al, while a short version of the Minnesota Leisure Time Questionnaire was used in the Fried study. A comparison of metrics and methodology for CHAMPS, PASE, and the YPAS can be reviewed in an article by Harada. Some of these tools require a subscription fee.

Ravaglia et al defined low activity as lack of adherence to the current exercise recommendation for older people as defined in recommendations by the Centers for Disease Control and the American College of Sports Medicine in 1995 (< 4 hr/week of moderate intensity activity). These guidelines have since been revised to 150 min of moderate ac-

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tivity, plus two days of muscle strengthening activity per week. There are some variations of these guidelines for more vigorous exercise. This can become a simple question in an intake form such as: "I participate in moderate physical activity at least 30 minutes on at least 5 days per week" (YES/NO), with a "no" answer representing the criterion for risk of frailty. Be prepared to define moderate activity according to the current CDC/ACSM guidelines.

### Assessment Tools Used in Research Presented

<table>
<thead>
<tr>
<th>Author</th>
<th>Assessment tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brach et al³</td>
<td>Functional Status: Physical Performance Test&lt;br&gt;Self report: Functional Status Questionnaire&lt;br&gt;Walking Speed: 4 meter&lt;br&gt;Physical Activity: Pedometer x 7 days</td>
</tr>
<tr>
<td>Haire et al⁴</td>
<td>Strength: hand grip (dynamometer)&lt;br&gt;Quadriceps (spring gauge)&lt;br&gt;Functional status: 5 times chair stand (Guralnik)&lt;br&gt;Walking speed: 6 meter&lt;br&gt;Self Report: questionnaire</td>
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<tr>
<td>Gruenewald et al³</td>
<td>Weight loss&lt;br&gt;Exhaustion: CES-D question (Radloff)&lt;br&gt;Strength: hand grip (dynamometer)&lt;br&gt;Walking Speed: 10 foot&lt;br&gt;Physical Activity: YALE (Dipeitro)&lt;br&gt;Additional physiological markers per labs – cardiovascular, endocrine, metabolic, and immune systems</td>
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<td>Fried et al⁷</td>
<td>Weight loss&lt;br&gt;Exhaustion: CES-D question (Radloff)&lt;br&gt;Strength: hand grip (dynamometer)&lt;br&gt;Walking Speed: 15 foot&lt;br&gt;Physical Activity: Minnesota Leisure Time Activity Questionnaire (Taylor)</td>
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<tr>
<td>Kidy et al⁵</td>
<td>Weight loss&lt;br&gt;Exhaustion: CES-D question (Radloff)&lt;br&gt;Strength: 5 times chair stand (Guralnik)&lt;br&gt;Walking Speed: 4 meter&lt;br&gt;Physical Activity: PASE (Washburn)</td>
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### Potential Impact

There is evidence to support early intervention for these changes in functional status to prevent or delay disability, preserving quality of life and safety.

Participation in a wellness program by residents in assisted living has been shown to maintain functional status and lower rates of falling. Hatch and Lusardi present data from annual functional screening using the Mini Mental State Examination score (cognitive status), the Berg Balance Test (postural control and fall risk), and the 6 Minute Walk test (cardiovascular endurance and mobility). Numbers of falls were tracked over this time as well. Thirty six residents with a mean age of 85.5 years met criterion for inclusion in the study. Participants were classified as exercisers (attending exercise ≥2 per week for at least 9 of 12 consecutive months) and nonregular exercisers (participated less than 2 times per week or had an interruption in their exercise routine of more than 3 months). While there were no differences in measures at enrollment between groups, at one year the exercisers demonstrated preservation of functional status according to these measures and a lower rate of falling compared to the nonexercisers. The conclusion of this study supports regular exercise as having a long term effect of minimizing the rate of functional decline typical of aging in this population.

The US Department of Health and Human Services Agency for Healthcare Research and Quality (AHRQ) sponsored the development of the Chronic Disease Self Management Program (CDSMP) through the Stanford University Patient Education Research Center. Through this program, patients are taught to improve symptom management, adhere to medication regimens and maintain functional ability. Regardless of the specific diagnosis or condition, participants are taught strategies to improve diet, manage sleep and fatigue, use relaxation techniques, increase safe exercise and physical activity, and improve communication with health providers. After only 6 months of participating in the program, participants demonstrated increased exercise, better coping strategies and symptom management, more energy and less fatigue, fewer physician visits and hospitalizations. At 2 years, participants had no further increase in disability, reduced health distress, fewer visits to physicians and emergency rooms and increased self-efficacy. The results of this research clearly indicate that health education and lifestyle changes contribute to reducing the negative consequences of chronic disease and aging while reducing costs of accessing health care services. This program provides examples of interventions or programs that could be provided to older adults demonstrating functional decline and markers for frailty in the assessment procedures described above.

A longitudinal study by Kaplan et al included over 2,400 Canadians age 65-85 at baseline. Repeated, continuous, and multidimensional health status and health related quality of life measures were used over 10 years. The analysis focused on the absence of functional limitations and the maintenance of positive health in this population to identify “thrivers” and describe the characteristics common among them. While there is abundant evidence that education, income, and other socioeconomic factors are determinants of health, those who practice health behaviors which impact modifiable risk factors are common to those who thrive. The authors concluded that health behaviors such as not smoking, moderate alcohol intake, and maintenance of physical activity across the lifespan, have significant impact on successful aging. Protective behaviors established much earlier in life may sustain exceptionally good health through old age. The opportunity to instruct and encourage practice of positive health behaviors has potential benefits to optimize aging.

### SUMMARY

As clinicians we have opportunity to improve the quality of life and maintenance of function in our older adult clients by providing specific instruction in fitness and health behaviors designed
to better manage chronic conditions or residual effects of recent illness or injury. The first step is to identify areas of decline and risk for adverse outcomes by developing systems to measure, document, and track markers for frailty. The research presented in this article supports investing time and resources to screen our current clients at every available interval in the health care continuum in order to intervene with primary or secondary prevention, education, and awareness to promote optimal aging.

REFERENCES


DOES EXERCISE IMPROVE PHYSICAL FUNCTION IN OLDER PEOPLE WITH DEMENTIA?

Diane Pierce Koenig, PT, MBA, GCS, CEEAA

INTRODUCTION

Dementia is an acquired syndrome characterized by a decline in cognitive and physical function, the risk of which increases with age. Because life expectancy is increasing as a result of medical advances and the availability of better health care services, the number of people with dementia in the general population is rising. Prevalence of dementia in the United States has been reported at 13.9% among individuals aged 71 years and older, with 69.9% of those individuals diagnosed with Alzheimer’s Disease (AD), the most common type of dementia.1 Worldwide, people with AD are estimated to number 30 million, and this number is expected to quadruple over the next 40 years.2 Memory loss and a decline in self-care abilities lead to costly institutional or home care and a lower quality of life for both the person with dementia and for family caregivers. Studies evaluating pharmacological solutions have produced disappointing results and concerns of medication interactions and side effects.

Benefits of exercise for healthy people have been well documented. Studies addressing exercise for older adults show benefits, including protection against development of dementia.3 However, relatively few high quality studies have examined the benefits of exercise for those already diagnosed with dementia. A randomized trial conducted by Rolland et al4 involved 134 nursing home residents with dementia in a group exercise program conducted over the course of a year. Twice weekly one-hour sessions consisted of walking, strength, balance, and flexibility training. Significant improvements in walking speed and a slower decline in performance of activities of daily living were found when compared with the control group. In a Cochrane Library systematic review of physical activity programs for people with dementia, Forbes et al5 found only 2 studies that could be used in their analysis. They concluded that there was insufficient evidence to support the benefit of physical activity programs for people with dementia.

Through a critical review of the literature, the purpose of this paper is to determine whether people with dementia can improve physical performance with a short-term exercise program.

METHODS

Literature searches were conducted using the PubMed and Cochrane Library databases. PubMed search words of “exercise and dementia” yielded 700 articles. Adding the limits of peer reviewed, age 65 and older, English language, past 5 years, and randomized trials resulted in 26 studies. The search words of “exercise and dementia” generated 4 reviews in the Cochrane Library. Additional studies were identified by cross-referencing the articles found.

The 5 articles reviewed were chosen because of their randomized, controlled designs with an exercise intervention and results that were at least partially described in terms of physical function measures. Studies with subjects younger than 65 and with subjects who had only mild cognitive impairment were excluded. All were published in the last 5 years. Although not intentionally sought, each of the selected studies was conducted in a different country.

CRITICAL REVIEWS

Kemoun et al6 conducted a randomized, controlled trial including 31 subjects with dementia living in the same nursing home in France. The primary purpose of this study was to determine the cognitive effects of exercise and the secondary purpose was to demonstrate the effects on gait efficiency. Inclusion criteria were a diagnosis of AD by a neurologist, according to the criteria of the Diagnostic and Statistical Manual of Mental Disorders, 4th ed.; a Mini Mental State Examination (MMSE) score lower than 23; and the ability to walk 10 m without technical assistance. The authors recruited 38 people over the age of 75. Four withdrew from the intervention group. Because they had strokes, 3 from the control group missed the posttest evaluation.

The subjects were randomized using a permutation table. The 16 subjects in the intervention group (IG) participated in an exercise program for 3 one-hour sessions weekly over 15 weeks. The first session of each week focused on walking and balance; the second on stamina at 60% to 70% of cardiac reserve; and the third on a combination of walking, balance, and stamina activities that was designed to be enjoyable and maintain motivation over the course of the program. Participation in the activity program averaged 40.6 of the 45 sessions. The 15 participants in the control group (CG) did not have an exercise program and participated in the routine activities at the nursing home.

The cognitive function outcome was assessed with the Rapid Evaluation of Cognitive Function (RECF) test that consists of 12 subtests of different cognitive domains. Gait parameters of walking speed, stride length, and double limb support time were assessed with the Bessou Locometer and SATEL software.

Repeated measures analysis of variance (ANOVA) tests were used to assess each participant before and after the intervention. Significant interactions were found for walking speed and stride length that were diminished in the CG and improved in the IG. Double limb support time also showed improvement in the IG over the CG. Correlation tests were used to identify the changes in cognitive scores with the changes in walking variables. The investigators observed a significant correlation between changes in the RECF score and walking speed, stride length, and double stance time.

Although the authors concluded that the improvements could reasonably be attributed to the additional physical ex-
exercise, the increased amount of personal attention or variation in nursing home routine may have contributed. The researchers proposed that the small sample size, unknown medications, unknown comorbidities, and the incomplete standardization of the amount of activity could have confounded the results. The frequency, intensity, and variety of exercises in the design of this program make it practical to implement clinically.

Santana-Sosa et al conducted a randomized, controlled, single-blind design study involving 16 subjects with AD living in a nursing home in Spain. The purpose of the study was to determine the effects of a 12-week physical training program on overall functional capacity and ability to perform activities of daily living (ADL). Inclusion criteria were to have AD diagnosed by a geriatrician; an MMSE score between 18 and 23; to have lived in the nursing home for at least 4 months; and to be without other neurologic, vision, or cardiorespiratory disorders.

Before group assignment, the subjects were divided into 2 blocks to remove the potential confounding factor of gender on physical capacity. The intervention and control groups had 8 subjects each. Led by an exercise physiologist, the intervention group received 36 programmed sessions in classes of 4 subjects each. Each session was 75 minutes long, and sessions were conducted 3 times weekly over 12 weeks. At the beginning and ending of each class, the subjects participated in 15 minutes of warm up and cool down time involving gentle stretching and walking. The core program included joint mobility, resistance using elastic bands, and coordination activities such as catching and bouncing decreasing sizes of balls. The order of the exercise blocks did not vary and music from the subjects’ youth years accompanied all classes. Adherence to the training was very good, averaging 98.9%. Control group members received usual nursing care and did not engage in any kind of programmed physical activity.

<table>
<thead>
<tr>
<th>Title</th>
<th>Exercise training programme on cognitive function and walking efficiency in elderly persons with dementia</th>
<th>Exercise training is beneficial for Alzheimer's patients</th>
<th>Dual-task performance can be improved in patients with dementia</th>
<th>A controlled clinical trial on the effects of motor intervention on balance and cognition in institutionalized elderly patients with dementia</th>
<th>Evaluation of a home-based exercise program in the treatment of Alzheimer's disease: the maximizing independence in dementia (MIND) study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methodology &amp; Length of Intervention</td>
<td>RCT 15 weeks</td>
<td>RCT 12 weeks</td>
<td>RCT 12 weeks</td>
<td>RCT 6 months</td>
<td>RCT 12 weeks</td>
</tr>
<tr>
<td>Number of Subjects: Initially/Final</td>
<td>38/31</td>
<td>16/16</td>
<td>61/49</td>
<td>54/41</td>
<td>27/27</td>
</tr>
<tr>
<td>Age Mean(SD)</td>
<td>IG 76(4) 82(5.8) 81.7(5.1)</td>
<td>CG 73(4) 79(4) 80.4(7.1) 82.3(7) 79.8(2.3) 79.4(2)</td>
<td>IG 80.4(7.1) 82.3(7)</td>
<td>CG 70.1(8.1) 74.2(2.3) 76.5(3.9)</td>
<td>IG 76.5(3.9) 74(8.1)</td>
</tr>
<tr>
<td>Inclusions</td>
<td>diagnosed AD, walk 10 m without assist</td>
<td>diagnosed AD; live in nursing home for at least four months; no other neurologic, vision, or cardiorespiratory disorders</td>
<td>diagnosed dementia; age greater than 65; no severe neurologic, cardiovascular, metabolic or psychiatric disorders; live within 15 km of study center</td>
<td>diagnosed primary dementia, medically fit to participate, no other diagnoses associated with cognitive impairment, no antidepressant medications, no drug-related impairment of cognition or balance, no medication change during study</td>
<td>diagnosed probable dementia, dwelling in the community and not in assisted living situation, stable medical health, ambulatory, has a caregiver at least 10 hr per week</td>
</tr>
<tr>
<td>Setting</td>
<td>nursing home</td>
<td>nursing home</td>
<td>ambulatory clinic</td>
<td>psychiatric institution</td>
<td>home</td>
</tr>
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<td>Country</td>
<td>France</td>
<td>Spain</td>
<td>Germany</td>
<td>Brazil</td>
<td>United States</td>
</tr>
<tr>
<td>Physical Function Measures Performed</td>
<td>walking speed, stride length, double limb support time</td>
<td>Senior Fitness Test, Katz ADL scale, Barthel ADL index, Tinetti scale</td>
<td>gait speed, spatial and temporal gait parameters under dual-task conditions</td>
<td>Berg Balance Scale, Timed Get Up and Go test</td>
<td>Yale Physical Activity Survey, timed 8-foot walk, Jebsen Total Time, 5 chair sit-to-stand</td>
</tr>
<tr>
<td>Blinded tester?</td>
<td>not reported</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Physical Function Measures with statistically significant positive results</td>
<td>walking speed, stride length, double limb support time</td>
<td>all tests: strength, flexibility, speed, agility, balance, endurance, gait, both ADL scores</td>
<td>gait speed and other gait parameters under Serial 3 conditions (but not under Serial 2 conditions)</td>
<td>Berg Balance Scale</td>
<td>Jebsen Total Time</td>
</tr>
</tbody>
</table>

RCT=Randomized Controlled Trial SD=Standard deviation IG=Intervention Group CG=Control Group
An exercise physiologist, different from the exercise leader, performed the outcome measures in the nursing home. All 16 subjects completed the assessments. The evaluator administered the Senior Fitness Test which is actually a battery of tests designed to evaluate functional capacity. The Fitness Test includes tests of strength, flexibility, speed, agility, balance, and aerobic endurance. Before baseline testing of the Fitness Test items, these cognitively impaired subjects underwent 5 familiarization sessions to eliminate learning effects. The Katz ADL scale and the Barthel ADL index were used to assess ADL ability. The Katz scale consists of 6 items with possible scores ranging from 0 to 6. The Barthel index, with possible scores ranging from 0 to 100, is a quantitative test including 10 items. The researchers chose the Tinetti scale to further evaluate gait and balance.

To assess the exercise training effects, statistical analysis applied a 2-factor ANOVA with repeated measures on the Senior Fitness Test items, the Tinetti scale score, and the Barthel ADL index. Post hoc testing was performed using the Tukey test. The Mann-Whitney U test was applied to the nonparametric Katz ADL scale score. At baseline, no significant difference was found between the IG and the CG on any of the individual or group tests. At 12 weeks, all postintervention values were significantly improved in the training group and were unchanged in the control group.

The authors pointed out the optimistic findings of their study that reported significant improvements in strength, flexibility, speed, agility, balance, aerobic endurance, gait, and 2 measures of ADL skills. In this AD sample, the relatively short 12-week exercise program improved scores on all tests suggesting a lowering of fall risk and reduced caregiver burden. The researchers proposed such a program should be implemented as soon as a person enters a nursing home, given the early benefits and evidence that ADL abilities can improve irrespective of the development of mental capabilities. The exceptionally high adherence, lack of adverse physical effects, and the inexpensive materials used in the onsite program indicated the feasibility of implementation. Although the authors emphasized the low cost of this program, the cost of the exercise leader 3 times weekly with the necessarily small groups of 4 people with AD could be a large expense. To lower the cost, an exercise physiologist might train an exercise leader in the special training needs of managing older adults with dementia, recognizing medical complications, and identifying when to adjust the level of exercise for each individual.

Schwenk et al conducted a double-blind, randomized, placebo-controlled 12-week ambulatory clinic study. The purpose of the study was to determine whether specific attention-related training would improve gait parameters under challenging dual-task conditions in subjects with mild to moderate dementia. The subjects were recruited and assessed for eligibility upon their discharges from a German geriatric hospital, resulting in 61 subjects, 26 of whom were randomized into an exercise intervention and 35 into the control group. Attrition after randomization resulted in a final exercise group of 20 and a control group of 29. Inclusion criteria for dementia were multi-factorial. After qualifying with an MMSE score of between 17 and 26, subjects were further assessed by the Consortium to Establish a Registry for AD test battery. The dementia diagnosis was based on the criteria of the National Institute of Neurologic and Communicative Disorders and Stroke-AD and Related Disorders Association (NINCDS/ADRDA). Additional inclusion criteria were age greater than 65 and lack of severe neurologic, cardiovascular, metabolic, or psychiatric disorders. The subjects were required to live within 15 km of the study center.

The IG received specific dual-task training with the addition of progressive resistive and functional balance training. A “qualified trainer” led groups of 4 to 6 persons, twice weekly for 12 weeks. The sessions were 2 hours long. The subjects performed resistive exercises for one hour, followed by balance and dual-task training for an additional hour. The activities were individualized with specific decision points for safely advancing to more complex activities. The CG subjects participated twice weekly in one hour of supervised exercises of simple structure with verbal cues and reassurance of progress.

Outcome assessments were performed at baseline and at the end of the 12-week program. The researchers analyzed gait parameters electronically through the use of the GAITRite system. The primary outcome measure was the dual-task cost (DTC) for maximal gait speed under complex Serial 3 backward calculation (S3) conditions in each group. Serial 3 conditions required the subjects to count backward by threes from random starting points while performing other activities. Secondary outcome measures were the S3 DTC for spatial and temporal gait parameters, as well as the same gait parameters with Serial 2 forward calculations (S2), a less demanding cognitive task than the S3. A reduction in the DTC represents better performance.

Baseline demographics and clinical characteristics measured were age, gender, MMSE score, education, medications, comorbidities, the Geriatric Depression Scale score, history of falls in the past year, the Barthel ADL Index score, the Performance Oriented Mobility Assessment score, and maximal gait speed. The researchers found no differences between groups at baseline by comparing the groups with the appropriate t tests, Mann-Whitney U tests, and X² tests.

The primary statistical analysis was on the between group changes of the DTC by 2-way ANOVA for repeated measures. The most striking statistically significant result of this study was that the initially severe DTC of gait speed during complex S3 conditions was reduced by half after the specialized attention-based exercise program. The DTC for the less demanding S2 conditions did not change. The authors stated that the DTC is thought to be related to clinically relevant gait changes and falls in people with dementia.

The small sample size and the difference in the number of investigator contacts with the 2 groups might have affected the results. The authors offered that it is possible that the positive reduction of the DTC effect under D3 conditions was because of a general exercise benefit. However, that explanation is unlikely, because cognitive testing revealed that the only significant change among the cognitive domains was in the attention-related dual-task performances. Future research needs to assess whether improvements in specifically trained activities can transfer to everyday untrained tasks requiring du-
A blinded tester performed outcome assessments at baseline and at 6 months. Balance was measured by the Berg Balance Scale and the Timed Get Up and Go Test. Cognition was analyzed with the MMSE and the Brief Cognitive Screening Battery (BCSB). The BCSB consists of tests for different types of recall and also includes the Semantic Verbal Fluency Test (SVFT) and the Clock Drawing Test (CDT).

Sociodemographic characteristics of gender, age, education, period of institutionalization, the MMSE score, and the Katz ADL scale score were analyzed with one-way ANOVA. Scheffe post hoc testing was performed finding baseline differences in age and education between IG1 and the CG and in age between IG2 and the CG. For the balance and cognitive measures, a 2-way multiple analysis of variance (MANOVA) was used to identify the main and interaction effects with respect to IG1 versus the CG and IG2 versus the CG. For cases with baseline differences, covariate factors were used. For both group comparisons, MANOVA analysis showed a main effect of time indicating cognitive decline in both groups after 6 months. For IG1 versus the CG, testing with ANOVA showed statistically significant main effects with respect to the SVFT and the CDT, effects that did not appear in IG2 versus the CG. Statistically significant improvement in the Berg Balance Scale was present in both groups.

The authors reported their positive balance outcome measures with caution for readers who might be tempted to generalize this result to a reduction in falls. They pointed out that intrinsic fall risk factors are closely related to sensorimotor alterations in the aging process where extrinsic factors such as uneven terrain demand complex cognitive functions that are affected in people with dementia. The SVFT and CDT improvements in IG1 might be explained by the widening of social networks from the greater intensity of that intervention or possibly the activation of executive functions with motor activities. However, the authors stated that this was a "probably fortuitous" result.

This study's consistent finding of statistically significant improvement in Berg Balance Scale scores for each of the exercise intervention groups over the control group is encouraging. The second group which involved only a physiotherapist for 3 hours weekly would be more feasible to implement than the first group, which required 3 professionals for 10 hours weekly.

Steinberg et al. conducted a randomized, controlled study to assess the effects of an exercise intervention on functional performance in home-dwelling people with AD in Baltimore, Maryland. Secondary goals were to assess exercise effects on cognition, neuropsychiatric symptoms, quality of life, caregiver burden, plus the safety and feasibility of the intervention. The researchers recruited subjects from the Johns Hopkins Comprehensive Alzheimer Program in the Department of Psychiatry. The sample of 27 subjects was randomized by stratified sampling to achieve relatively equal groups of gender as well as age above and below 75. Fourteen subjects were in the exercise intervention group and 13 were in the home safety control group. Inclusion criteria were probable AD based on NINCDS/ADRDA criteria and an MMSE score greater than 9. The researchers also required the subjects to be dwelling in the community and not in assisted living situations, have stable medical health, be ambulatory, and have a caregiver at least 10 hours per week.

Both the exercise intervention and the safety group received 3 visits, each of which was approximately 2 hours long. Both groups kept diaries of their assigned weekly activities. An exercise physiologist developed the exercise program that consisted of aerobic fitness, strength training, and balance with flexibility training. The exercises were briefly described, but without details that would allow the study to be reproduced. The caregivers kept diaries that gave ‘one point for partially performing a task and two for completing’ though what constituted task completion was not clear. The CG received a home safety program that consisted of 3 visits to identify hazards, make recommendations, and evaluate implementation. In addition, the CG caregivers were to record 3 general physical activities performed regularly. Fifty-nine percent of the exercise group and 57% of the control group turned in their diaries. From the exercise group diaries received, the IG achieved the instructed level of exercises from 72% to 79% of...
the time. The CG diaries revealed frequent participation in the subjects’ chosen activities.

One blinded rater performed all testing at baseline and repeated the tests at 6 and 12 weeks later. It was not reported whether all 27 subjects were available for the 3 testing sessions. The authors assessed physical function with 4 tests. The Yale Physical Activity Survey, timed 8-foot walk, Jebson Total Time (JTT), and the 5 chair sit-to-stand test measured physical activity in older adults, walking speed, hand function, and lower body function, respectively. To assess the secondary goals, the rater administered 5 additional tests: a cognitive battery of tests, the Alzheimer’s Disease Quality Related Life scale, the Neuropsychiatric Inventory (NPI), the Cornell Scale for Depression in Dementia (CSDD), and the Screen for Caregiver Burden.

The tests were analyzed using intent-to-treat linear random effects models. The interaction of group and time was chosen to represent the treatment effect for each outcome measure. Differences in baseline demographics were found significant only for the MMSE score. The authors discussed the statistical results in terms such as “mild increase,” “trend toward,” and “suggestive of” certain differences between the 2 groups. The only statistically significant changes reached after the results were controlled for MMSE scores were a higher CSDD depression score and improvement in the JTT. The higher depression score in the exercisers was not confirmed by the depression subset of the NPI that was also administered in this study. The JTT measures hand function predictive of ADL performance. The authors stated that although this study was unable to demonstrate a clear benefit from exercise that it confirmed prior studies that a caregiver-supervised, home-based exercise intervention could be performed with acceptable compliance. However, the relatively low rate of diaries collected indicates missing data and the likelihood that the interventions were not consistently applied. In addition, the investigators reported that a strength of this study was that an exercise intervention developed by an exercise physiologist was simple enough for delivery by a caregiver in the home setting where most AD people reside. Although this may be true, the authors did not offer objective evidence other than the percentage of collected diaries.

An effective exercise intervention for people with AD that could be carried out by caregivers in the home would be welcome. However, this study did not offer a strong case for either positive or negative results from the intervention, partially because it was not clear that implementation of the intervention itself was consistent.

DISCUSSION

The primary purpose of this paper is to determine the physical effects of exercise for people with dementia through a review of recent randomized, controlled studies. The reviews provided support for the benefits of exercise in this population. Steinberg et al10 had the weakest evidence. Notably, it was the only study reviewed that used a home-based program dependent upon caregivers and it consisted of only 3 subject contacts.

Sample sizes were small in these studies, ranging from 16 to 49. Analysis of variance was the primary statistical analysis in 4 of the 5 studies. Standard deviations and p-values were reported in all; none reported confidence intervals. Blinded assessors were specified in 4 of the 5 studies. Age means for all 5 studies were greater than 70 years. Settings differed in that 3 were in institutions, one in the community, and one at home. Adherence to the exercise plan, reported in 4 of the 5 studies, was usually high (>90%) with the exception of the home-based program. The high rates of participation are likely due to the onsite nature of those residential populations; sometimes the researchers even escorted the subjects to the exercise area.

With the exception of the 6-month duration in the Christofoletti study,9 the programs were implemented for 12 to 15 weeks which was long enough to show statistically significant improvements in at least some of each researcher’s chosen physical outcome measures. The type, duration, and intensity of exercises varied across studies. Most studies had aerobic, balance, gait, and strength components. One study that demonstrated significant improvement combined exercise with a cognitive load.8 The S3 conditions are clinically feasible to implement and have a practical application to everyday tasks that may include fall prevention. In terms of frequency and intensity, Christofoletti et al8 had one IG that was 5 times weekly. Steinberg et al10 did not specify a set exercise session intensity. Otherwise, the studies had exercise classes ranging from 30 minutes to 2 hours, which took place 2 or 3 times weekly. Although the studies standardized their own specific exercise parameters, each study described individualized aspects and was not regimented with a strict protocol. By integrating customized elements with individual and very small groups, the investigators designed programs tailored to people with dementia in a way that the exercises would most likely be carried out clinically. Other than the personnel required to lead some of the programs, the costs were kept low. When used, materials were simple.

The exercise interventions demonstrated improvements in physical function that suggest the results may transfer to reduced falls and lowered dependence on caregivers, which are areas to explore in future studies. Though still scarce, randomized controlled studies are beginning to explore exercise benefits for people with dementia in terms of depression, urinary continence, behavior, caregiver burden, medication reduction, agitation control, and societal economic costs. Researchers worldwide are looking for effective means to manage the symptoms of dementia. The 5 small studies reviewed in this paper were conducted in France, Spain, Germany, Brazil, and the United States. Two large randomized, controlled trials are underway. Citing recent evidence of increased mortality, stroke, and cognitive decline associated with medications used for the behavioral symptoms of dementia, Cerga-Pashoja et al11 are conducting a study in the United Kingdom and plan to recruit 146 people with dementia and their caregivers. The intervention will be a structured walking program and will last 12 weeks. In Finland, Pitkala et al12 report they are recruiting 210 people with dementia who live with their spousal caregivers. Their study will have a twice weekly home-based group, a twice weekly rehabilitation center group, and a control group. The costs for physical function, cognitive function, and health services will be assessed at 1 and 2 years.
CONCLUSION

Given the neurodegenerative characteristics of dementia that have been referred to as slow death, society and caregivers may fail to consider the potential for progress in function afforded by exercise. This narrative review has focused on exercise intervention studies which used physical function measures to assess gait, balance, ADL, strength, and aerobic activity tolerance. Physical therapists can expect positive outcomes by using the results of these studies to implement exercise programs and encourage activity in people with dementia. While the most effective intensity and type of exercises have yet to be determined, these studies offer optimism for exercise as an avenue to attenuate decline and improve quality of life for both people with dementia and those who care for them.

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REFERENCES


Diane Koenig currently enjoys practicing home care physical therapy in Anne Arundel County, Maryland. Previously she worked as a clinician and manager in the acute care, outpatient, and rehabilitation settings. The author can be contacted at dianekpt@verizon.net.
"America’s Got Talent." We all know the popular TV show where people who think they have talent go on stage to showcase their skills to a panel of judges and a national audience. They are excited, and often nervous, but they all have one thing in common: a love for what they do and a willingness to share it with others.

As your new Chair of Public Relations for the Section on Geriatrics, I know that all Physical Therapists and Physical Therapy Assistants have talent, and I believe we should share it with others. No stage, you say? Oh yes there is! Your potential stage is everywhere: next door at your neighbors, down the street at the local YMCA or community center, local businesses and other professional associations you interact with, your local newspapers or magazines, local television/network stations, or even your state capitol. There are many stages on which to showcase our skills, and many of us are already spreading the word. As we proudly witnessed in June, more than 500 physical therapists, physical therapist assistants, and students of physical therapy, gathered at our nation’s capital to advocate for the industry and heighten awareness of physical therapy issues to members of Congress. But each one of us can make a difference by spreading the word about our skills and sharing our knowledge of geriatrics and the issues surrounding our specialty.

The Section on Geriatrics’ mission is to further our members’ ability to advocate and provide best practice physical therapy for optimal aging. Your physical therapy talents represent our Section’s values of compassion, caring, commitment, and excellence for the patients you serve. Both the APTA and the Section on Geriatrics offer you a plethora of tools and ideas on how to promote your skills and knowledge to consumers.

Our committee is dedicated to assisting you with two of your Professional Standards: Education (IV) and Community Responsibility (V). Getting free press and media attention for those working with older adults, and on issues that affect the aging population, is our focus, and we are excited to assist you with marketing efforts through products and courses. For example, the SOG has recently worked with the Washington Chapter of APTA on purchasing calendars for 2012 that are focused on “better balance” for the aging population. This calendar will allow Section members to reach out into the community. You will be able to personalize the calendars with your name, facility, or organization for additional marketing support. The SOG has also been invited to attend this year’s International Council on Active Aging Adult (ICAA) Conference being held December 1st in Orlando, Florida. Like the SOG, ICAA has been an advocate for the active-aging population. At this conference you will be able to expand your knowledge through seminars and forums sharing ideas, as well as solutions with other professionals across many areas. The SOG also provides international PT professionals, American professionals, industry partners, and other members of the public not eligible for APTA membership, the ability to join as Partners of the Section. All Partners gain access to an active network of physical therapy practitioners, educators, and researchers dedicated to the advancement of evidence-based practice, in order to improve care and quality of life of aging adults. Again, look to our Web site for more information and how you can use this as you work on outreach activities. More information is available at www.geriatricpt.org.

In this magazine, I will continue to share ideas and tools for moving forward with public relations and showcase the great talents many of our professionals continue to display. Hopefully, it will be an inspiration and motivation for ongoing participation and outreach into our communities.

Of course, any and all contact you make plays a huge role in getting physical therapy recognized. The APTA and the Section on Geriatrics can help you reach the media, market your practice, and improve your ability to share “Move Forward” brand with consumers and other professional associations. Practice & Patient Care on the APTA Web site guides you to Public Relations & Marketing, which will give you a whole host of wonderful ideas for outreach. Time is tight for all of us, but reading outside of our professional journals can be a great way to find venues for articles related to the aging adult and opportunities for media/consumer contact. Guidance on effective letter writing to editors and article submission is offered to our members, including the provision of past articles for reference. It’s good to start by writing for town newsletters and local newspapers, before moving up to publications with larger circulations. With the dramatic rise in our aging population, the demand for articles addressing our aging population is high. Information on how to reach the media through press releases and media alerts is also available for your reference. In the Internet world we live in, public relations strategies can also include blogging or writing for a Web site. There are many free on-line magazines, Web sites and newsletters that are geared to the aging population. Sign-up for these Web sources to receive information and newsletters that offer you more chances to connect.

Members also have access to an excellent tool for event planning. The event you plan might be small, like a balance screening at a mall, or large, like a booth at a professional organization tradeshow or government association event. The tools that are available for your use will make you feel comfort-
able in knowing that all steps have been taken to ensure success.

The APTA “Marketing 101 Tutorial” gives you guidance on how to develop relationships with other health care professionals, such as primary care physicians, nurse practitioners, psychologists, dietitians, and others. These contacts are essential to the growth and health of your practice, and will allow you to show off your branding and share your talents through the development of an effective marketing strategy.

Social media and networking is such a regular part of our everyday lives that sometimes we don’t think of it as work. These venues are a great way to interact with other component Section members, professionals, and consumers across several platforms. “A blog a day,” I say. Just think, with almost 5,500 members in our Section, we could be heard 22,000 times/year with a minimal commitment of a quarterly blog from each member, or be heard as loud as 286,000 times/year if we shouted once a week! We have seen such a transformation and expansion of many methods of media that we must take advantage of its power to spread the word of what we do for our aging population. Take a look at what the Section on Geriatrics and APTA are doing to help raise your social media profile. When used in the right way, they can be very effective in your quest for sharing your talents. The SOG will be volunteering as a Regular Contributor to the “Be Active Your Way” blog by the U.S. Department of Health and Human Services. APTA has already been a contributor, and SOG is proud to participate as a way to share our skills.

So far, we have discussed ideas for how to get onto the stage. However, you also need to decide which of your many talents you wish to showcase. This should be the easy part for any Physical Therapist or Physical Therapy Assistant: but for many, this decision is not. If you have never done public relations, the Section on Geriatrics and the Special Interest Groups have developed many informative tools that will give you ideas and help you decide what topics that are right for you and can be found on the SOG Web site under the Special Interest Section.

Balance and Falls SIG offers our members educational tools for the older adult with balance problems and a risk of falls. A PowerPoint presentation with coordinating brochures can be distributed. Abstracts on research can also be found for therapist education and reference.

Bone Health SIG has instructional videos on kypholordosis. The video educates therapists on effective evidence-based evaluation and treatment of spinal posture needs. A “Standing Tall” video that focuses on patient compliance with exercise for the older adult reinforces good postural alignment, proper body mechanics and strengthening. Many links to other professional sites related to bone health are listed.

Health Promotion and Wellness SIG also offers a PowerPoint presentation that can be used by Section members to educate consumers on the importance of physical activity. Five states have developed Geriatric Special Interest groups within their state associations. Those that have shown dedication to the needs of the aging adults in this manner are Massachusetts, New Jersey, Oklahoma, Pennsylvania, and West Virginia. The Geriatrics Special Interest Group of the Massachusetts Chapter, in conjunction with APTA, held a successful consumer event “Staying On Your Feet: How to Keep Your Balance and Prevent Falls” at APTA’s Annual Conference in 2010. With the generosity of the Massachusetts Geriatrics Special Interest Group and the MA Chapter, all of the information about organizing such an event is accessible to our members. The SOG encourages other states to undertake a SIG project. The benefits to the consumers in your state, and the advocacy it brings to moving the profession forward, are a wonderful way to showcase your caring and commitment to excellence for aging adults.

I encourage you to look at these tools and topics and think about how you can use them to spread the word about what we do for our elderly population. Consider how you can bring Physical Therapy to other foundations and associations that share the same mission. Contacts with such organizations may be possible at a local level. Sharing a booth at a trade show or health fair is always a great way to develop a relationship. The SOG supports efforts in other states to undertake a Geriatric SIG project or committee.

For instance, setting up a booth at your state’s annual conference is a great way to spark interest of those other therapists and therapy assistants and students interested in Geriatrics. The SOG Membership Committee can assist you with guidance, handouts, and brochures.

Unlike individuals who want to appear on “America’s Got Talent,” therapists don’t have to wait in long lines and audition to get on stage. You can create your own opportunity to shine. However, some annual events help focus attention on what we are trying to do. For instance, October is National Physical Therapy Month. Planning for events and media attention during this month should begin now to give you enough time to plan for a successful event. APTA has provided you with a thorough online Public Relations kit. An event planning guide, brochures, PowerPoint presentations, and consumer handouts are only a few of the things offered to members. This year’s theme is “Sports and injury prevention across the lifespan.” The SOG’s prevention of injuries through a reduction in falls and a focus on health promotion and wellness in our aging population, is a great fit for this theme. However, don’t limit yourself to October. There are many other nationally recognized events that you can take advantage of. September offers Health and Aging Month, Rehab Week, Falls Prevention Awareness events, and more.

There is not just one winner in our “Physical Therapy’s Got Talent” show. Our members, the consumers we serve, professionals we interact with, regulators, legislators, and payors all benefit from our roles in education and community responsibility. Through your work the power of “moving forward” will help the Section on Geriatrics meet the needs of our aging population.

Start small and then move up as your comfort rises. Work together, and consider offering outreach to the novice therapist, if you have more experience with public relations or event planning. Share your success stories! In addition, if you would like to know more about what our committee is all about, please contact me at kcordeau@astherapy.com. You have passion, knowledge, talent, use it to spread the word about what we can and must do for best practice physical therapy for optimal aging.
Karleen Cordeau is the Public Relations Chair for the Section on Geriatrics. She is Director of Development for AllStar Therapy, LLC located in Avon, CT. Karleen has extensive skills in business development and program development including an ABPTRFE Credentialed Geriatric Residency Program. As co-owner of The Center of Evidence, Karleen works with companies to encourage evidence-based interventions, optimizing health care delivery and efficiency with the use of products. She is adjunct professor at the University of Hartford teaching health care management and is a practice committee member of the Connecticut Physical Therapy Association representing the geriatric population.

**IT’S TIME TO START THINKING ABOUT SECTION ON GERIATRICS AWARDS!**

**Student Research Award**
Recognize outstanding research-related activity completed by entry-level physical therapy students.

**Clinical Educator Award**
Recognize physical therapists or physical therapist assistants for outstanding work as a clinical educator in geriatrics health care setting.

**Fellowship for Geriatric Research**
Recognize physical therapists pursuing research in geriatrics which may be conducted as part of a formal academic program or a mentor ship.

**Excellence in Geriatric Research Award**
Honour research published in peer-reviewed journals based on clarity of writing, applicability of content to clinical geriatric physical therapy, and potential impact on both physical therapy and other disciplines.

**Adopt-A-Doc Award**
Recognize outstanding doctoral students committed to geriatric physical therapy, provide support to doctoral students interested in pursuing faculty positions in physical therapy education, and facilitate the completion of the doctoral degree.

**Clinical Excellence In Geriatrics Award**
Recognize a physical therapist for outstanding clinical practice in geriatric health care settings.

**Distinguished Educator Award**
Recognize a Section on Geriatrics member for excellence in teaching.

**Outstanding Physical Therapist Assistant Award**
Recognize a physical therapist assistant who has significantly impacted physical therapy care in geriatric practice settings.

**Lynn Phillippi Advocacy for Older Adults Award**
Recognize projects or programs in clinical practice, educational, or administrative settings which provide strong models of effective advocacy for older adults by challenging and changing ageism.

**Volunteers in Action Community Service Award**
Recognize the exceptional contribution of a physical therapist or physical therapist assistant in community service for older adults.

**Joan Mills Award**
Presented to a Section on Geriatrics member who has given outstanding service to the Section.

For additional information on the criteria and selection process for section awards, please visit the Section on Geriatrics website at www.geriatricspt.org and click on “About Us” and “Section Awards” or contact the office by email at karen.oshman@geriatricspt.org or by phone at 866/586-8247.

Nominations are due November 1, 2011 and all awards will be presented the Section Membership Meeting at CSM in February of 2012.
SECTION ON GERIATRICS 2011

CANDIDATE STATEMENTS

Slate for 2011 SOG Officers

President
William Staples, PT, DHS, DPT, GCS, CEEAA

Vice President (Elect 1)
Jill Heitzman, PT, DPT, GCS, CWS, CEEAA, FACCWS

Alice Bell, PT, GCS

Director (Elect 1)
Rubye Kendrick, PT, MS, GCS, CEEAA
Lucy Jones, PT, DPT, GCS, MHA, CEEAA
Myl’a ’Myles’ Quiben, PT, PhD, DPT, GCS, NCS

Nominating (Elect 1)
Ken Miller, PT, GCS

PRESIDENT
William “Bill” Staples, PT, DHS, DPT, GCS, CEEAA

1. What experiences have prepared you to lead the Section on Geriatrics?

I believe that I have the experience and knowledge of the workings of the Section to guide the Section for the next 3 years. I served on the Board of Directors of the Section from 2001 through 2010, 3 years as a Director and as Treasurer for 6 years. I have served on the Editorial Board of GeriNotes since 1998. Additionally, I was on the ExPAAC planning committee. Prior to serving on the Board, I worked on several Section committees including the Finance, Government Affairs, and Awards committees. I have also served on the Geriatric Specialty Council and the ABPTS Board for 3 years each. I am currently an instructor for the CEEAA educational programming, a reviewer for APTA clinical residency programs, and serve on the Item Bank Review Committee for FSBPT.

2. What is your vision of the future of geriatric physical therapy and what should be the role of the Section on Geriatrics in advancing that vision?

The section has made a lot of progress over the last decade with major initiatives including the Task Force on Exercise that lead to the CEEAA continuing exercise program, the Retooling for Aging America Task Force that is working on developing Geriatric Competencies that will be included in all educational curriculums, the ExPAAC program last summer, and the Journal of Geriatric Physical Therapy which is now published 4 times per year by Lippincott Williams & Wilkins and has allowed for a more prestigious arena to present related research. The Section is in strong financial shape. But now is the time to rest on our laurels. We can get better, and we must.

We need to continue our push to attract new members. Membership is vital to advance our mission of promoting geriatric physical therapy to all the shareholders including members, the clientele that we serve, and third-party payers. Increasing membership provides the Section financial stability and the ability for the provision of additional services and programming. We must attract the new generation of physical therapists into the fold. Recent graduates can bring new ideas, perspectives, and enthusiasm to the Section.

The Section needs to continue to strive for autonomous practice which goes hand-in-hand with Vision 20/20. We need to continue the push to have Medicare direct access. Not only would this be a milestone for the profession, it would allow better access to the older population which we have chosen to serve. This can be accomplished if we continue to knock on those doors. We need to have our expertise and professionalism continually presented to the medical community, payers and to the general public. The Section must stay on top of legislative issues involving geriatric care and reimbursement. We are making progress in this area and we need to continue to push. But membership has to be part of the equation. Members must continue to practice evidence-based interventions to maximize outcomes which can only be achieved through good communication, collaboration, and continuing education. Members must serve as the best advocate for their profession, just as they do for the patients they serve. With the Section coordinating those efforts between members, we can become a force to be reckoned with. Our combined efforts can be directed to advocating for and receiving fair and adequate reimbursement for what we do now plus additional services such as the Welcome to Medicare program, fall screens, and/or wellness checks.

We must repeal the illogical Part B cap forever, instead of having it hang over our heads every year. With the numbers of older adults increasing, and the silver tsunami approaching, combined with the lack of other qualified geriatric health care practitioners, there are niches that we can fill to meet the needs of older adults. As physical therapists, we look at the entire individual and all their needs from a biopsychosocial view. We need to further expand our roles into prevention and wellness care, not only in the exercise expert role but in other health issues which we have chosen to serve. With the Section coordinating those efforts between members, we can become a force to be reckoned with.

Our Section is blessed with a great number of caring and talented individuals. It would be an honor and privilege to serve the membership as President of the Section on Geriatrics.

VICE PRESIDENT
Jill Heitzman, PT, DPT, GCS, CWS, CEEAA, FACCWS

I am currently assistant professor at Alabama State University and a practicing clinician at East Alabama Medical Center/Rehabworks. While I have been active in the SOG for 20+ years, I have also personally experienced some of the challenges facing aging adults, as we recently moved my mother into an Alzheimer Unit. This brought home...
the personal impact of providing and financing quality physical therapy care and other aging services.

My previous roles in the SOG include Program Chair, GeriNotes Editorial Board, Director, committee member for the Review of Description of Specialty Practice for Geriatrics, and CEEAA faculty. These roles have given me the experience to work within the Section and within the larger APTA organization. As Program Chair since 2003, I have worked with other Sections, learning about the similarities/differences that make up our profession. I was chair of the APTA Program Chairs Committee from 2007-2009, which holds a dual role as a member of the APTA Committee on Chapters and Sections. Through this role, I learned to negotiate with other sections and state chapters. I was also instrumental in developing a survey regarding the relationships between Sections and State Chapters. This helped me, as a Director of the Section, to begin working to enhance our state advocate roles. One of my roles as a Director from 2003-2009, was overseeing the membership and awards committees. We undertook reorganization of state advocates, worked to attract student members through developing the student forum and student PT/PTA membership awards, and refocused membership recruitment not only of those in traditional geriatric practices such as SNFs and ALFs, but also of clinicians practicing in private practice and outpatient orthopedic clinics who also treat aging adults with various comorbidities. To increase membership and recognition to PTAs working with the aging population, I worked with the Pediatric Section to initiate the addition of geriatrics and pediatrics to the APTA PTA Advanced Proficiency.

As the aging baby boomers are reaching retirement, there are many challenges to the physical therapy profession for which the Section on Geriatrics needs to be the lead. This aging generation is demanding to remain active members of society. They are no longer satisfied with being able to walk in their home, but want to continue their traveling and leisure pursuits. Physical therapists need to be able to challenge this generation, helping them remain active. The Section has started working on this through the CEEAA courses and ExPAAC, but more is needed. The CEEAA faculty, of which I am part, continues to expand the offerings and update the courses with the latest research, and from suggestions from past attendees. ExPAAC was highly attended, and attendees were motivated to enhance their practices. We need to continue pursuing future ExPAAC events, bringing physical therapists together with other professionals who work with the aging adults to enhance our role and ensure we are included in the various issues affecting this population. Along with the aging of the general population, the professionals within the physical therapy profession are also aging, including many who work with older adults. As presented at CSM 2011, we need to recognize the aging worker within the PT profession and within society, while mentoring younger workers to enhance their knowledge of aging issues. The SOG needs to develop more geriatric residencies and other avenues to mentor new graduates and younger therapists into the field of geriatric physical therapy. The SOG has started offering grants for residency development and working to develop curriculum that could be shared amongst these developing residencies. We need to continue working with the APTA Committee on Residencies and Fellowships to explore more ways to enable programs to develop both residencies and fellowships.

Finally, as health care is changing under new government reforms, the Section on Geriatrics needs to remain active within the government affairs to ensure that physical therapy is reimbursed for the skills provided. There also needs to be work within administrative bodies of clinics and facilities regarding the time required for quality care for this generation. The aging adults demand to receive the care for which they are paying, and if it is not provided by a physical therapist, they will look elsewhere. Exercise physiologists, personal trainers, massage therapists and athletic trainers are all pushing to be recognized to work with the aging population, not only in prevention and wellness but postinjury. We, as a Section, need to be the leaders to continue educating the general population and politicians about the role of physical therapists as the exercise experts for the aging adult.

If elected VP of the Section, I will continue to work to listen to clinicians, increase opportunities for members to be involved in the Section and other activities related to the aging adult, and advocate for the geriatric physical therapist and their clientele. I hope you will join me in continuing to advance the practice of geriatric physical therapy. With your involvement and support, we can advance geriatric practice and be recognized as leaders in improving the health of the aging population.

Alice Bell, PT, GCS

It is with sincere gratitude that I submit to you my candidate statement for the position of Vice President for the Section on Geriatrics. I am currently the Vice President of Clinical Services for Genesis Rehab Services. I have been with GRS for 23 years and have had the opportunity to work with wonderful therapists in all of the rehabilitation disciplines. I have also had the opportunity to grow as a clinician, an educator, and a leader in a truly wonderful organization. Prior to joining Genesis in 1988, I had worked in acute care, acute rehab, home health, and outpatient settings. Throughout my career I have been grateful for the opportunity to work with older adults and, for the past 23 years, my focus has been in the skilled nursing, assisted living, and independent living settings. I received my Bachelors degree from Northeastern University in 1982. I became a Board Certified Specialist in Geriatrics in 1994 and was recertified in 2003. I am currently a tDPT candidate at the University of Montana, and look forward to finishing the program in December of this year.

I believe I have had many experiences which have prepared me for the role of Vice President of the Section on Geriatrics. Professionally, I have held many leadership positions within my organization, developed innovative initiatives and programs, mentored many individuals, and been a strong advocate for the profession of physical therapy and the patients whom we serve. My advocacy efforts have included engaging in letter writing campaigns related
It is critically important that we:

• contribute to the research related to Geriatrics as to further our members’ ability to advocate and provide best practice physical therapy for optimal aging. I would like to help advance strategies that are currently in place for:

2. What current or future Section activities would you like to advance as a member of the Board of Directors?

The mission of the Section on Geriatrics is to further our members’ ability to advocate and provide best practice physical therapy for optimal aging. I would like to help advance strategies that are currently in place for:

a) Promotion of physical therapists as practitioners of choice and for increasing advocacy and promotion of Geriatrics as a specialty area.

It is predicted that the growth rate of the 65+ age group will be dramatic during the years 2010 to 2030 as the Baby Boomer generation grows. I suspect that this group will stay active for a long time and want to remain able to function independently in their homes, travel, continue their roles in the workplace, and participate in their favorite sport. But the challenges that older adults face will only increase in light of the current state of the economy and health care reform. Clinicians working with this population must be able to provide the most effective interventions possible when treating individuals after an adverse event and when developing wellness and disease management programs. There are many professions and disciplines infringing on our area of expertise—physical activity and exercise. We must continue to provide the resources, tools, and information needed for clinicians to expand their skills and knowledge base and encourage clinicians to avail themselves of this information so that they can be better prepared to care for this group. Currently, there are approximately 1100 PTs who are board-certified geriatric clinical specialists. The section’s goal is 2000 specialists by 2020 and systems are being developed to help achieve this goal. Additionally, the process for achieving advanced proficiency in geriatrics for the PTA is underway.
The section must remain diligent in moving the plan forward so that the mission can be fulfilled.

b) Recruiting and retaining members. We must “live” in the recruitment and retaining mode. My premise is that unless a clinician’s sole environment of practice is pediatrics, they should be a member of the Section on Geriatrics. Although we have resources available that document the benefits of belonging, we must continue to develop/identify marketing strategies to help us close the sale. Knowledge of members’ concerns, interests, and needs is important for retention; therefore, successful communication is vital. The membership committee is reviewing comments/suggestions received from the members’ meeting at CSM 2011 regarding recruitment and retention and will provide feedback. We must continue to be proactive with recruiting and retention efforts, seeking creative methods and collaborative opportunities with other committees. We must identify and address retention barriers, even though some barriers are not within our control. We must also continue to promote and embrace diversity within our organization.

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

The greatest challenge facing the geriatric practitioner is surviving in the midst of health care reform and the growing population of those 65+. We are experiencing the effects of initial changes to Medicare now, and the party isn’t over. The script could possibly look like this: increased need/demand for services + shortage of geriatric physical therapy clinicians + decrease in reimbursement for services = pressure to do more for less, higher stress level, clinician vulnerability to short cuts vs. evidence-based practice. The SOG can help by continuing to advocate for appropriate health policy and reimbursement related to the aging adult, ensuring that we are represented “at the table” with other entities who impact decision making related to wellness and physical function for the aging adult; achieving the goal of having 2000 board certified clinical specialists in geriatrics by 2020 to address the shortage issue; and continuing the involvement in retooling for an aging America.

Lucy H. Jones, PT, DPT, GCS, MHA, CEEAA

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

Having worked in a variety of geriatric settings from inpatient to outpatient, and home health to skilled nursing facilities, I come to the Section on Geriatrics Board of Directors with intricate knowledge of geriatric physical therapy practice. With attaining the Geriatric Certified Specialist, and owning a private consulting contracting PT practice, I experienced the delivery of evidence-based geriatric patient care with the reimbursement challenges present in today’s market. Being a credentialed Clinical Instructor, and providing opportunities for PT students to achieve the best practice for our older adults. In reviewing documentation for a skilled nursing facility and consulting for a hospital for appropriate rehabilitation staffing, I have seen geriatric practice and provision of services from several vantage points.

In the past several years, with the completion of the transitional DPT and the CEEAA course, I feel my practice has come full circle to be true to my original mission as a geriatric PT. Providing optimal evidence-based physical therapy keeping our older adults as functional and strong as they can be is my practice.

2. What current or future Section activities would you like to advance as a member of the Board of Directors?

Leadership development has been a part of my thinking and emphasis whether at my place of employment, volunteer activities, or with the Section on Geriatrics. With my role on the SOG Nominating Committee, a great opportunity presented itself to encourage others to participate in the process. As the SOG Web site Committee Chairperson, initiating a Facebook presence has expanded the opportunity for all to comment, and be updated on SOG highlights. Ian Inquimboy has been adding new postings, reflections, and SOG activities to inform others of the ways to become involved in the Section. I am excited to see fresh faces and increased interest and involvement in the Section on many levels. This is our Section, and the fact that you have read this far is an indication of your desire to move the influence of SOG and geriatric practice forward.

With leadership development comes a perceived awareness that our geriatric practice is fluid, moving forward, and learning is ongoing and continual. The expansion of the webinar delivery of teaching topics is a great opportunity for the section to become involved. With the stretched continuing education dollar for PTs, this can be a practical way to expand the audience for geriatric practice topics. In addition, with the explosion of applications for phone and notebook, apps relating to geriatric practice are becoming more prevalent.

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

Enhancing geriatric practice throughout the continuum of care is a constant challenge facing the PT profession. The ExPAAC conference last summer was phenomenal in bringing national and international geriatric research practitioners to disseminate valuable trends and global research emphasis. In the Tuscany region of Italy, a group of hospitals have a discharge plan to send, or assign, individuals to outpatient exercise groups following hospitalizations. This process decreased readmission for those who participated and improved the regions’ overall health. How can we translate this to our culture?

The Section on Geriatrics has been enhanced with the Description of Specialty Practice in Geriatrics spearheaded by Greg Hartley and his committee in defining and delineating the specific responsibilities we undertake. The objective for all of us comes in fleshing out the wonderful opportunities SOG and its valued leadership has provided for us. During the second weekend of the CEEAA, a colleague was discussing how the SOG offerings, and the previous CEEAA course content, had...
drastically changed his home health practice and improved his patient outcomes. Another clinician stated that as a private practitioner, she would begin data collection on some of the tests and measures to enable her staff to engage in retrospective studies within the year. Webinars can also expand individual’s knowledge and minimize time away from the clinic. Raising the bar for PT for our older adults is continually on the horizon for all of us involved with the Section on Geriatrics. The SOG Strategic Plan is reviewed and revised to reflect the expanding professional responsibilities we face. Consistently seeking ways to implement our geriatric practice to enhance our patient outcomes and quality of life is always before us. What a privilege to encourage one another to participate in this endeavor.

Myla (“Myles”) Quiben, PT, PhD, DPT, GCS, NCS

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

I bring a depth and range of clinical, administrative, and academic experiences to the Board. Having been involved in varied committees throughout my clinical and academic career, I work well with other individuals, contribute favorably to the team, and work well under pressure. My colleagues will attest to my work ethics, commitment to excellence, and dedication to completing projects in a timely manner. I have the enthusiasm to contribute my time and efforts to the growth and further development of the Section.

I have a passion for geriatric care and for optimizing the quality of life and function of our elderly patients and clients. This passion is complemented with a strong commitment to the Geriatric Section and its goals. I have been fortunate to have the opportunity to share my aptitude and skills at varied levels and continue learning from talented individuals; moving from item writer for the specialist exam with the Geriatrics Specialization Academy of Content Experts (SACE) to serving on the Geriatric Specialist Council as the item review coordinator, to my current role as Chair of the Council. I am also a Credentialed Clinical Instructor Trainer for APTA. At the state level, I served a term as Delegate for the Arkansas Chapter; currently I am active in the Texas Chapter. I am an Advanced Item Writer for the National Physical Therapy Exam, the Federation of State Boards of Physical Therapy, and member of the Exam Development Committee for Physical Therapists. Throughout these experiences, I continued to hone my knowledge of geriatric issues, sharpen leadership skills, and increasingly appreciate our role of geriatric care at the societal level.

2. What current or future Section activities would you like to advance as a member of the Board of Directors?

Promotion of the geriatric physical therapist practitioner: I would very much like to see a more robust effort to promote geriatric physical therapy to the public, within the Association, and to third party payers. We need to put our stamp as the experts in the care, management, and health promotion of older adults. I believe we need to be more visible and recognized in our contributions to healthy aging.

Membership: Increase and retention of members has always been an interest area for the sections. I will be a strong proponent of exploring methods to enhance membership numbers. We can look into grass roots initiatives, increasing the presence of the SOG at state levels to promote the Section and geriatric issues.

Geriatric education in professional programs: I believe there is much variability in the inclusion, content, and promotion of geriatrics in the PT curricula across programs. In conversations with colleagues from different states encompassing clinical practice and academia, there appears to be a disconnect with the reality regarding the need for strong geriatric practitioners and a strong geriatric course or focus. We often hear of programs and graduates being “strong” in orthopedics or neurologic PT, but rarely would you hear a strong geriatric program or focus. Are we truly responding to the societal need for geriatric practitioners and are we preparing future therapists for effective geriatric care? I would like to explore this issue further and would like to see the SOG be the impetus in initiating conversations across clinical and academic programs.

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

I believe one of the greatest challenges facing the geriatric practitioner is the lack of recognition for the identity of the PT as a geriatric practitioner of choice. We have not established ourselves as the possible points of entry of older adults into the health care system, nor the fact that not only are we well qualified to treat/manage geriatric conditions, but that we play a key role in the health and wellness promotion for aging adults. Other health care professionals, third party entities, and the public are often not aware or underestimate the role of physical therapy in healthy and successful aging.

I believe the SOG is in a distinct position to promote PTs as the geriatric practitioners, ie, that we have the knowledge and skills to effectively treat and manage a wide range of conditions and at the same time play a pivotal role in prevention through health and wellness promotion activities. In the era of increasing fiscal responsibility, we can market our role as primary care providers for elders as a cost-effective measure in the prevention of many conditions and multisystem decline associated with aging while ensuring that our aging clients achieve the highest quality of life.

The promotion of physical therapists as geriatric practitioners cannot be the principal focus without acknowledging the need for vigorous education at entry-level programs to provide the level of care needed for older adults. Inclusion of geriatrics in the curriculum can and will impact clinical preparation, practice interest, and quality of care.

I look forward to continue serving the profession, Section, and Association. I would be honored to have the opportunity to serve as a member of the Board of Directors while learning and working with esteemed colleagues from diverse backgrounds.
I have been a physical therapist since graduating from Touro College’s physical therapy program in 1995 with a B.S./M.A. in physical therapy. I have worked in various therapy settings including: inpatient acute rehab, hospital outpatient rehab, private therapist-owned outpatient rehab, and home care. I have worked with geriatric patients in all of these settings. For the past 11 years, I have been treating patients for home care and, more recently, I have been the clinical educator responsible for providing continuing education and training to the professional staff.

In 2007, I graduated from Touro College’s transitional DPT program and this experience has facilitated opportunities for my professional growth into clinical education and clinical research. I have presented my doctoral research as a poster at CSM in Nashville in 2008 and have had my research published in the *Journal of Geriatric Physical Therapy* (*JGPT*). I am a peer reviewer for *JGPT*, as well as being on the Editorial Board of *GeriNotes*. I am active in my Section by serving on the Practice Committee and serve as co-chair for the PTNow Portal Project. I also serve in the Home Health Section on their Newsletter Committee and Practice Committee. I am a recipient of the Home Health Section’s Excellence in Home Care Award, and feel honored to serve both Sections. I also serve in academia as an adjunct faculty member at Touro College. I presented an educational session at this past year’s CSM in New Orleans. I have recently received grant funding to research heart failure treatment in the home environment, and have begun the data collection phase. I have been a Section member for the past 4 years and an APTA member for the past 11 years.

1. How would you identify and mentor new leaders within the Section?

   I have been identifying and mentoring future leaders for the past two years in my role as Editorial Board member (Section on Geriatrics newsletter, *GeriNotes*) and Newsletter Committee member (Home Health Section newsletter, *Quarterly Report*). I have encouraged and mentored colleagues to write articles and have co-authored several articles for both *GeriNotes* and the *Quarterly Report*. The collaborative process of putting together resources and creating an article requires patience, diligence, flexibility, and teamwork. The process of mentoring requires these qualities to be exemplified. I feel that my role as mentor is to guide the process. An illustration of my philosophy is this, “If I give a person a fish, they eat for a day, but if I teach them how to fish, they eat for life.” As for identifying a person for leadership, I believe that a person who is caring, demonstrates professionalism, and has a passion for quality care makes a good leader. Passion is key to self-motivation and getting quality work, and to getting this work completed. I believe that I am good at recognizing passionate professionalism in my colleagues, and feel that I am responsible for giving back to our profession.

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

   I feel uniquely qualified for this position because I also serve in this capacity in my church as a current member of and past chair of the Nominating Committee. This role required me to evaluate people’s talents, interests, and gifts and then match them up with open positions that needed to be filled in the church. Each person has a unique skill set with individualized likes and dislikes. If a person is able to do something s/he loves and enjoys, then that person does not view it as work, but rather as a calling. This is important to get the best out of people doing all of the various duties required to run a church, or to run a Section, for that matter. However, recognizing that people need to grow, sometimes putting people in a new role to challenge them is key to keeping them motivated; this is a balance that the Nominating Committee for any organization needs to keep in mind. Lastly, because each one of us has a unique personality and on occasion, personality conflicts occur, a Nominating Committee seeks to place people in such a way as to minimize conflicts from the onset.

I would be happy to serve on the Section on Geriatrics in this capacity as a member of the Nominating Committee. I feel well qualified to perform the duties this position requires due to my experience in this area, as well as my continued participation in both the Section on Geriatrics and Home Health Section.
For age is opportunity, no less than youth itself,

though in another dress, and as the evening twilight fades away, the sky is filled with stars, invisible by day

- Henry Wadsworth Longfellow
Section on Geriatrics, APTA

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Residency and Fellowship Mentoring: Advancing the Resident and Developing the Faculty
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Presenters: Catherine Goodman, PT, MBA,
CBP, Carol M. Davis, DPT, EdD, FAPTA, Mary
Lou Galantnio, PT, PhD, MSCE, Jennifer M.
Bottomley, PT, MS, PhD and Brent Anderson,
PT, PhD, OCS

Writing Case Reports: Tips & Guidelines when Getting Started
Wednesday, Feb. 8, 2012, 8 am – 5:30 pm
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