The Silver Tsunami: Meeting the Growing Rehab Challenges of Older Adults

Combined Sections Meeting 2018
New Orleans, LA, February 21 – 24, 2018

Speakers
• Carol Jo Tichenor, PT, MA, FAPTA (Creighton University)
  • Assistant Clinical Professor, Past Director OMPT Fellowship
• Becky Olson-Kellogg, PT, DPT (University of Minnesota)
  • Board Certified Geriatric Clinical Specialist, Certified Exercise Expert for Aging Adults
  • Assistant Professor, Associate Director, Director Geriatric Residency
• Greg Hartley, PT, DPT (University of Miami)
  • Board Certified Geriatric Clinical Specialist, Certified Exercise Expert for Aging Adults
  • Assistant Professor, Past Director Geriatric Residency, Past Chair of ABPTRFE
• Kathy Brewer, PT, DPT, MEd (Mayo Clinic)
  • Board Certified Geriatric Clinical Specialist, Certified Exercise Expert for Aging Adults
  • Director Geriatric Residency

Panel Presenters
• Matthew Briggs, PT, DPT, PhD, AT (The Ohio State University)
  • Board Certified Sports Clinical Specialist
• Kathleen Shirley, PT, DPT (Texas Woman's University)
  • Board Certified Orthopaedic and Geriatric Clinical Specialist
  • Assistant Clinical Professor of Physical Therapy
• Raine Osborne, PT, DPT, FAOMPT (Brooks Rehabilitation Clinical Research Center)
  • Board Certified Orthopaedic Clinical Specialist
  • Past Residency Coordinator, Adjunct Faculty University of North Florida

Panel Presenters
• Jackie Osborne, PT, DPT (University of North Florida, Brooks Institute of Higher Learning)
  • Board Certified Geriatric Clinical Specialist, Certified Exercise Expert for Aging Adults, Director Geriatric Residency
• Rob Robinson, PT, DPT (University of North Florida, Brooks Rehab)
  • Board Certified Geriatric Clinical Specialist, Certified Exercise Expert for Aging Adults, Geriatric Residency Graduate, Assistant DCE

Disclosures
• All speakers have previously been, or are currently, active in residency/fellowship education.
• No relevant financial relationship exists with any speaker.

Session Learning Objectives
• Discuss common gaps and pitfalls in management of the older adult population across PT settings, the value of collaborating across specialty areas, and the importance of managing older adults’ holistically to abet an impending global health crisis.
• Describe ageism present among physical therapists and strategies to reduce it.
• Discuss the opportunities for entry-level DPT and residency/fellowship programs to positively influence readiness and perception of graduates working with older adults regardless of their chosen area of specialization.
• Describe and discuss the global crisis in shortage of skilled geriatric healthcare specialists.
A Global Healthcare Crisis?

Greg Hartley, PT, DPT
Board Certified Geriatric Clinical Specialist
Certified Exercise Expert for Aging Adults

Demographics of Aging – U.S. (>65 yo)

<table>
<thead>
<tr>
<th>Date</th>
<th>% of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>4</td>
</tr>
<tr>
<td>1980</td>
<td>11.3</td>
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<tr>
<td>2030</td>
<td>20</td>
</tr>
<tr>
<td>2050</td>
<td>25</td>
</tr>
</tbody>
</table>

Aging of the Aged

In 2030:
We will have as many >75 yo as there were >65 yo in 1980.


Aging Boomers...

By 2030...
• 1st boomers turn 84
• Hip replacements to grow 174% (572,000 vs 332,000 in 2014)
• Knee replacements expected to jump 673% (3.48 million vs 719,000 in 2014)


Aging Boomers...

By 2050, it is anticipated that Americans aged 65 or older will number nearly 89 million people, or more than double the number of older adults in the United States in 2010.
• The leading edge of the baby boomers reached age 65 in 2011, launching an unparalleled phenomenon in the United States. Since January 1, 2011, and each and every day for the next 20 years, roughly 10,000 Americans will celebrate their 65th birthdays.
• In 2030, when the last baby boomer turns 65, the demographic landscape of our nation will have changed significantly. One of every five Americans—about 72 million people—will be an older adult.
  [Pew Research Center]

Aging Boomers...

Current public health response - more of the same will not be enough

Chronic Diseases: The Leading Causes of Death and Disability in the United States
http://www.cdc.gov/chronicdisease/overview/

• Obesity is a serious health concern. During 2009–2010, more than one-third of adults, or about 78 million people, were obese [defined as body mass index (BMI) ≥30 kg/m²]. Nearly one of five youths aged 2–19 years was obese (BMI ≥95th percentile).

• Arthritis is the most common cause of disability. Of the 53 million adults with a doctor diagnosis of arthritis, more than 22 million say arthritis causes them to have trouble with their usual activities.

• Diabetes is the leading cause of kidney failure, lower limb amputations other than those caused by injury, and new cases of blindness among adults.
WHO:

- Physical inactivity has been identified as the fourth leading risk factor for death worldwide (6% of deaths globally).
- Moreover, physical inactivity is estimated to be the main cause for approximately 21–25% of breast and colon cancers, 27% of diabetes and approximately 30% of ischemic heart disease burden.

ADULTS AND PHYSICAL ACTIVITY

- Studied nearly 1.8 million (18+) to see if exercise vital signs (EVS) included in electronic medical record provide an estimate of physical activity (PA) levels (face and discriminate validity of tool)
- Categorized EVS into:
  - Completely inactive (0 min of exercise/wk)
  - Insufficiently active (more than 0, less than 150 min/wk)
  - Sufficiently active (150 min or more/wk)
- Found:
  - 36.3% completely inactive; 33.3% insufficiently active; 30.4% sufficiently active
  - Being physically inactive more common if older, obese, of a racial/ethnic minority, and higher disease burden

(WHO: Physical inactivity has been identified as the fourth leading risk factor for death worldwide (6% of deaths globally). Moreover, physical inactivity is estimated to be the main cause for approximately 21–25% of breast and colon cancers, 27% of diabetes and approximately 30% of ischemic heart disease burden.)

Exercise: the 5th Vital Sign

(BMJ 2011: Developing healthcare systems to support exercise: exercise as the fifth vital sign)

http://www.cdc.gov/diabetes/data
JAMA, Berra, et al, 2015

**Table. Strategies for Integrating Physical Activity Counseling into Clinical Practice**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Task Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make physical activity a vital topic of each visit.</td>
<td>Health care professional or care staff</td>
</tr>
<tr>
<td>Ask if the patient exercises regularly or engages in physical activity.</td>
<td>Health care professional or care staff</td>
</tr>
<tr>
<td>If yes, ask what type of activity, duration, frequency, and intensity.</td>
<td>Increase efficiency</td>
</tr>
<tr>
<td>Ask if the patient is willing to start</td>
<td>Resource connection / referral</td>
</tr>
<tr>
<td>Assess level of physical activity with reduced risk of heart disease, risk</td>
<td>Health care professional or care staff</td>
</tr>
<tr>
<td>of other cancers. Write a prescription for signed daily</td>
<td>Improved effectiveness / outcomes</td>
</tr>
<tr>
<td>physical activity, work up at least 30 minutes of other moderate intensity</td>
<td></td>
</tr>
<tr>
<td>activities, or encourage moderate intensity</td>
<td></td>
</tr>
<tr>
<td>Encourage use of a pedometer and advise record keeping of activity.</td>
<td></td>
</tr>
<tr>
<td>Keep a record of walking, exercise, and other activity measures.</td>
<td></td>
</tr>
</tbody>
</table>

**Expert Practice in Geriatrics**

Becky Olson-Kellopp, PT, DPT
Board Certified Geriatric Clinical Specialist
Certified Exercise Expert in Aging Adults

**Medical Complexity of Older Adults**

**Geriatric Specialist**

**Specialist vs. Generalist**

- Specialized body of knowledge
- Holistic view of patient
- Increased efficiency
- Resource connection / referral
- Improved effectiveness / outcomes

**Changes in PT Education & Advancement**

- Evolution of entry-level education
- Opportunities for advanced knowledge & skills in specialized areas of practice
  - Board Certified Clinical Specialists
  - Residency & Fellowship education
Clinical Specialists

- Research the literature
- Consider the broader perspectives
- Think about multiple domains
- Share their expertise
- Perform in a more nuanced manner

Residency Specialties

- Respond to societal needs
- Respond to workforce distribution
- “Should the profession be concerned about developing more geriatric residencies given the aging population in the United States?” - Furze et al, 2016

Residency Graduates → Specialists

- Demonstrated improved non-patient care skills also
  - Advanced leadership skills
  - Professional development
  - Other professional skills
  - Higher earned income
  - Jones et al, 2008

Development of a Specialist

- Facilitate patient to actively engage in treatment process to improve his/her condition
- Clinical reasoning skills of a specialist understands patient’s “life context”
  - An essential component of therapist’s clinical reasoning process in developing as a specialist
  - Furze et al, 2016

Development of a Specialist

- Diverse set of skills of increased **breadth & depth**:
  - Advanced knowledge
  - Advanced hands-on skills
  - Advanced clinical reasoning
  - Advanced teaching & learning strategies
  - Advanced non-patient skills

Defining Geriatrics

- **Primary Care for older adults or a Specialty Discipline?**
- “A ‘metadiscipline’ that transcends & informs all other disciplines”
  - Will never be able to train enough geriatricians to provide direct care to all older adults
  - Need to ensure that all clinicians are competent in geriatric principles & practices
  - Tinetti, 2016
Healthcare Payment Reform

The Triple Aim

- Requires specialists:
  - Understand the changes
  - Able to navigate the changes successfully
- The right care → at the right time → to the right person → by the right person
- Value + Efficacy + Efficiency

Geriatric Principle Based Approach

- Geriatric specialists → skilled at managing complex patients
  - Can inform mainstream healthcare
- “We are THE experts in complexity & all that comes with it...uncertainty, tradeoffs, interdisciplinary teams, multiple coexisting conditions, patient goal-driven care” Tinetti, 2016

Geriatric Principle Based Approach

- Teaching/mentoring/consulting is what we do as specialists
- Integrate geriatric specialists into orthopedic PT practice & residency education
  - Assist you in understanding:
    - Normal & pathological aging
    - Comprehensive POC
    - Referral to other services / resources

Committee on Future Health Care Workforce for Older Americans

- Fundamental reform in care delivery to older adults
  - Those with complex medical issues need care that is streamlined & coherent
  - Education & training for entire workforce
  - Improve everyone’s “geriatric competence”
  - Interdisciplinary models imperative
  
Institute of Medicine, 2008

Geriatric Principle Based Approach

- Geriatric specialists → train the workforce in geriatric principles / competencies
  - Geriatric content in orthopedic residencies
  - Inservice training in clinics
- Persons treated by geriatric nurse specialists:
  - Less likely to be restrained
  - Have fewer readmissions to hospital
  - Less likely to be inappropriately transferred from nursing home to hospital

Institute of Medicine, 2008
Committee Recommendations

• To improve the ability of the US health care workforce to care for older Americans:
  1. Enhance competence of all individuals in the delivery of geriatric care
  2. Increase recruitment & retention of geriatric specialists & caregivers
  3. Redesign models of care & broaden provider & patient roles to achieve greater flexibility

Institute of Medicine, 2008

In Summary…

Our Recommendation: Include a GCS on all orthopedic clinical staff teams

• Teach / mentor / consult on older adult patients
• Increase your “geriatric competence”
• Teach in orthopedic residencies
• Improve patient experience
• Improve patient outcomes

Ageism and a Call to Action!

Kathy Brewer, PT, DPT
Board Certified Geriatric Clinical Specialist
Certified Exercise Expert for Aging Adults

How do YOU Define Older Adults?

By Chronological age:

— Gerontologists traditionally focus on persons aged 60 + years
— The federal government uses age 65 as a marker for full Social Security and Medicare benefits.
— Researchers identify subgroups of “older adults” as:
  — “younger old” (ages 65-75)
  — “older-old” (ages 75-85)
  — “oldest old” (85+)

Aging – a lifespan experience

● Developmental - NOT chronological
● Increasing vulnerability to environmental changes
● Increasing probability of death
● Multifactorial process...
● No universally accepted theory
● Confusion between normal and pathological aging
Successful Aging: absence of disease and disability; high cognitive and physical functioning; active engagement with life.

Optimal Aging: Capacity to function across many domains – physical, functional, cognitive, emotional, social, spiritual – to one’s satisfaction and in spite of one’s medical conditions.

Typical Aging: one or more medical conditions that become prevalent in later life.

The Faces of Aging…

Lifespan vs. Healthspan

Health of your life

Limited by:
• Longevity
• Disease
• Disability
• Frailty

Compress of Morbidity

Lifespan

Compression of Morbidity

Lifespan

LeBrasseur NK, 2012

Cellular Senescence

• Aging is the primary risk factor for chronic disease
• Cells become dysfunctional after a defined number of divisions
• Healthy divisions are compromised by injury and disease
• Maintenance of healthy cell life does not expand length of life but rather length of healthspan
• Single greatest influence on maintenance of healthy cellular function is physical activity

LeBrasseur, 2012

Aging Adult Syndromes of Concern to Physical Therapists

• Sarcopenia
• Falls
• Depression
• Frailty
• Cognitive impairment
• Incontinence
• Malnutrition
• Physical inactivity/Sedentary Death Syndrome

“The chief complaint may not represent the specific pathological condition underlying the change in health status.”

Poor functional outcomes?

- Patient compliance vs. insufficient dosage
  - lack challenge in exercise prescription
  - education for safe physical activity
  - removing barriers for sustainability of gains

Consider this…

Don’t prescribe under-dosed strength training programs for older adults. Instead, match the frequency, intensity and duration of exercise to the individual’s abilities and goals.

Improvement in older adults is associated with improved health, quality of life and functional capacity and with a reduction in falls. Older adults who are functionally impaired and have low muscle mass are at high risk for falling, and work hard to maintain gains in muscle strength.


Professional obligation

Limited resources (i.e. Medicare cap, insurance limits) + Excessively conservative intervention = Underdosing and suboptimal outcomes; leaving vulnerable older adults at risk for falls and other secondary conditions related to weakness and deconditioning.

Whetten, 2011

Physical therapists are essential providers to address the numerous chronic and degenerative conditions common among aging adults.

OPPORTUNITY

Embracing our scope of practice

Public Health  
Curative Medicine

Embracing our scope of practice

Primary Care

... embrace the professional and personal opportunities presented by the aging population.

Lewis specifically cited the greater use of functional assessments and the promotion of exercise. She said, “Exercise and functional assessment are just 2 examples of where we need to shake ourselves out of our complacency. We must continually expand our professional toolboxes, and we must be confident, loud, and supportive of our unique therapeutic skills.”

News From NEXT: McMillan Lecturer Calls for Renewed Focus on Geriatrics

Carole B. Lewis, PT, DPT, PhD, FAAPTA, issued a call to action during the 47th Mary McMillan Lecture June 9 at NEXT 2016. In her address titled “Our Future Selves: Unprecedented Opportunities,”
Essential Competencies in the Care of Older Adults at the Completion of a Physical Therapist Post Professional Program of Study

- **Domains**
  - Health promotions and safety
  - Evaluation and assessment
  - Care planning and coordination across the care spectrum
  - Interdisciplinary and Team care
  - Caregiver support
  - Healthcare systems and benefits

Focus on the aging adults in your clinical practice

- **Look beyond** the reason for referral
  - Screen for falls and risk factors for other conditions (DM, Osteoporosis, etc.)... make appropriate referrals
  - Identify characteristics of frailty, depression, abuse/neglect, geriatric syndromes... make appropriate referrals
  - Plan for sustainable outcomes and increase in safe physical activity/participation through education and exercise prescription

Perceived and Real Limitations to Activity and Participation

- Independence vs. assistance
- Difficulty/effort
- Risk of injury/pain
- Fear/anxiety
- Timeliness
- Safety
- Low expectations/self efficacy
- Value to the patient

Optimal Outcomes

Decreased cost and burden to the healthcare system by helping patients/clients to
1) achieve and restore optimal functional capacity
2) minimize impairments, functional limitations and disabilities related to congenital and acquired conditions
3) maintain health (thereby preventing further deterioration or future illness) and
4) create appropriate environmental adaptation to enhance independent function

CALL TO ACTION (Carole Lewis)

- “Embrace the unprecedented professional and personal opportunities presented by our aging population.”
- “… ageism is prejudice against not just our current patients but against our future selves. Age acceptance recognizes that one can be active, involved, curious, and a full participant in life until the very end.”
Summary

- appreciate the scope of geriatric physical therapy needed to serve the diverse and extensive clinical and healthcare needs of this population
- delineate areas of social responsibility and advocacy to establish your practice in leadership within the profession and community to benefit the needs of geriatric patients/clients
- reflect on opportunities for education of peers and students to improve quality of care delivery to geriatric patients/clients in your local practice and/or institution

Panel Discussion

Carol Jo Tichenor, PT, MA, FAPTA
Moderator

Case Study 1

Kathy Brewer, PT, DPT
Board Certified Geriatric Clinical Specialist
Certified Exercise Expert for Aging Adults

Reason for Referral

- Referral from PM&R for LBP s/p L1 VCF – orthopedic approach to pain, spine health, mobility. Compensatory vs. restorative approach
- What else needs to be addressed to restore Martha to optimal QOL and function?
  Activity/participation (ICF):
  - Fear of being alone
  - Depression/isolation
  - Physical activity to support general wellbeing
  - Are Martha’s frailty risks modifiable???

Case Study: Martha 82 yo F ...Curtailing frailty

Interventions: (10 weeks/7 visits)

- Safe movement, posture correction, core stabilization strengthening
- Posterior chain strengthening – focus thoracic and axial extension
- Home safety/fall prevention, personal medical alert system
- LE strengthening and walking program

Case Study: Martha 82 yo F ...Curtailing frailty

FUNCTIONAL MEASURES:

- % LASF
- pain 7/10
- 0 sit <> stand
- lower thoracic kyphosis/loss of normal lumbar lordosis/forward head (tragus to wall of 14 cm)
- timed loaded standing 30 sec w/no weight (functional upper thoracic strength measure)
- 48 lb. weight loss. (1/3 of her body weight) in 6 months

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Outcomes:

<table>
<thead>
<tr>
<th>Measure</th>
<th>Initial</th>
<th>Final</th>
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<tbody>
<tr>
<td>LASEF</td>
<td>50%</td>
<td>0%</td>
</tr>
<tr>
<td>30 sec chair stand</td>
<td>0</td>
<td>12 (ab&gt;9-14)</td>
</tr>
<tr>
<td>Tragus to wall</td>
<td>14 cm</td>
<td>11.5 cm</td>
</tr>
<tr>
<td>Timed loaded standing</td>
<td>30 sec (0 weight)</td>
<td>2 min (1lb weights)</td>
</tr>
<tr>
<td>Lowback pain</td>
<td>7/10</td>
<td>&lt; 1/10</td>
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</tbody>
</table>

- Participation: travel, office work, water aerobics 3x/wk, line dancing 1x/wk, daily walking 2.5 miles

Geriatric Specialists in OP Orthopedic/Sports Centers

- Case: 87 yo female with referring diagnosis of HA and neck pain – 4th referral to PT in 2 years. Reports ongoing decline with PT.
  - Key findings
    - Chronic HA, severe cervical rotation limitations, neck pain
    - Multiple comorbidities – Obesity, HTN, Cardiac hx, Anxiety, deconditioning, multiple fall hx
    - Functional limitations - recliner for 23/24 hours of the day
    - BPPV

Interventions/Outcomes

- Treatment/Outcomes - Seen 16 visits over 4 months
  - Biopsychosocial model
  - Education patient and family – findings and expectations
  - Treatment of BPPV - This was key
  - Manual therapy, progressive ex( mobility and functional strength) including balance activity
  - Address fear avoidance through graded activity

Monitoring over time to enhance sustainability – 8 years later

Case 2 Key points

- Excellent sustainable outcomes are possible!
- Need Geriatric Champions in OP Ortho
- Biopsychosocial model focus
- It takes a TEAM
Resources and References


5. Tinetti M. Mainstream or extinction: can defining who we are save geriatrics? JAGS. 2016;64:1400-1404. DOI: https://doi.org/10.1111/jgs.2015.13.34.81.


