Geriatric Competencies, Patient Safety, and Fall Risk: Implementation Challenges

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Professor and Director,
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Alternate Title

How to determine when you are not ready to submit a grant application
Best Practices in Geriatric Health Care

The Evidence

Inter-Professional Team Work

Patient-Centered Outcomes

Knowledge Translation and Implementation
Objectives

• To provide information about Geriatric Competencies for the healthcare work force, specifically regarding patient safety

• To review the evidence regarding patient safety and specifically fall risk

• To describe a pilot study on the content and usefulness of existing internet resources

• To suggest barriers and opportunities for knowledge translation efforts in geriatrics
Funding Opportunity

- Department of Health and Human Services
- T2 Translational Research: Research leading to new health care practices, community programs, and policies affecting older persons (R21)
- FOA Purpose: …T2 Translational Research on Aging is defined as research to gather information needed to develop or evaluate methods of translating results from clinical studies into everyday clinical practice and health decision making…implementation research
Partnership for Health in Aging

• Position Statement on Interdisciplinary Team Training – factors necessary
  – Background attitudes and experience with team care and training
  – Different degrees of faculty support and student participation
  – Level of training of students and their expectations
  – Importance of training context
  – Importance of institutional and financial support for IDT training
Partnership for Health in Aging

Multidisciplinary Competencies in the Care of Older Adults at the Completion of the Entry-level Health Professional Degree

Dentistry
Medicine
Nursing
Nutrition
Occupational Therapy
Pharmacy
Physical Therapy
Physician Assistants
Psychology
Social Work
Participants

Todd P. Semla, MS, PharmD, Chair, American Geriatrics Society
John O. Barr, PT, PhD, American Physical Therapy Association
Judith L. Beizer, PharmD, American Society of Consultant Pharmacists
Sue Berger, PhD, OTR/L, American Occupational Therapy Association
Ronni Chernoff, PhD, RD, American Dietetic Association
JoAnn Damron-Rodriguez, LCSW, PhD, Social Work Leadership Institute
Charlotte Eliopoulos, RN, MPH, PhD, American Association for Long Term Care Nursing
Carol S. Goodwin, American Geriatrics Society
Catherine L. Grus, PhD, American Psychological Association
Kathy Kemle, MS, PA-C, American Academy of Physician Assistants
Ethel L. Mitty, EdD, RN, The Hartford Institute for Geriatric Nursing
Kenneth Shay, DDS, MS, American Dental Association
Gregg A. Warshaw, MD, American Geriatrics Society
Endorsements

Alliance for Aging Research
American Academy of Nursing – Expert Panel on Aging
American Academy of Physician Assistants
American Assisted Living Nurses Association
American Association of Colleges of Pharmacy
American Association for Geriatric Psychiatry
American Association for Long Term Care Nursing
American Association of Nurse Assessment Coordinators
American College of Clinical Pharmacy
American Dental Association

American Dietetic Association
American Geriatrics Society
American Occupational Therapy Association
American Pharmacists Association
American Physical Therapy Association
American Society on Aging
American Society of Consultant Pharmacists
Association of Directors of Geriatric Academic Programs
Association for Gerontology in Higher Education
Council on Social Work Education
Fall Risk

Addressed within several domains:

• Health and Safety
• Evaluation and Assessment
• Care Planning and Coordination
• Interdisciplinary and Team Care
Health Promotion and Safety Competencies

Advocate to older adults and their caregivers interventions and behaviors that promote physical and mental health, nutrition, function, safety, social interactions, independence, and quality of life.

Identify and inform older adults and their caregivers about evidence-based approaches to screening, immunizations, health promotion, and disease prevention.

Assess specific risks and barriers to older adult safety, including falls, elder mistreatment, and other risks in community, home, and care environments.

Recognize the principles and practices of safe, appropriate, and effective medication use in older adults.

Apply knowledge of the indications and contraindications for, risks of, and alternatives to the use of physical and pharmacological restraints with older adults.
Goal: Competencies to be achieved in the health professions educational settings

Challenge:

Are practicing health care professionals equally competent in all areas?
We know that impaired cognition plays a significant role in accidental falls.

Brief cognitive assessments (screening tools) are readily available for use.

Which of these suitable tools should not be used as a clinical tool without further investigation?

- Mini-Mental State Examination (MMSE)
- General Practitioner Assessment of Cognition (GPCOG)
- Mini-Cog
- Memory Impairment Screen (MIS)
Interdisciplinary Education in Geriatric Competencies

Impetus: Translational Research Grant

- Review of Published Evidence in Fall Risk Management for Healthcare Providers in Acute Care, Long-Term Care, Home Health, and the Community
- Studying implementation science material
- Review of selected online educational information in geriatrics, specifically patient safety issues
- Planning meeting with selected rehabilitation leaders in community: Geriatric Task Force
The Evidence

- **Acute and Long-term Care**
  - AHRQ Guideline Summary NGC-9096: Prevention of falls (acute care)
    Health care protocol
  - AHRQ Guideline Summary NGC-8494: Falls and fall risk in the long-term care setting
  - Tools: STRATIFY, MORSE Fall Scale, Medication Fall Risk Score, MDS

- **Home Health**
  - Peel et al. (2008) A survey of Fall Prevention Knowledge and Practice Patterns in Home Health PTs.
  - Tool: OASIS

- **Community (and Institutions)**
  - STEADI (CDC): Integrating Fall Prevention into Practice
  - Gait, strength and balance, postural hypotension, medication, vision, urinary incontinence, home safety, cognitive impairment, fear of falling, footwear, poor sensation, poor nutrition
Knowledge Translation and Implementation Science

- Better understanding of theories and framework used to implement evidence into practice
- Select possible theory-informed behavior change interventions: Common determinants of provider behavior
- Outcomes: Implementation, Service, Client
- Readiness for implementation - either in health care or community domains
Translating Research into Practice

Basic Knowledge
Clinical Studies
Clinical Knowledge (Guidelines)

First Translation Block

Second Translation Block

High Quality Care and Outcomes

Third Translation Block

Low Quality Care and Outcomes

Diffusion
No Diffusion

Quality Improvement Interventions
Implementation Research

Rubenstein and Pugh, 2006
Knowledge Translation and Implementation Science

- Better understanding of theories and framework used to implement evidence into practice
- Select possible theory-informed behavior change interventions: Common determinants of provider behavior
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Provider Behavior Determinants

- Organization & Practice
- Environment
- Provider
- Patient & Encounter

Provider Behavior

Health Outcomes

Rubenstein et al, 2000
Knowledge Translation and Implementation Science

- Better understanding of theories and framework used to implement evidence into practice
- Select possible theory-informed behavior change interventions: Common determinants of provider behavior
- Outcomes: Implementation, Service, Client
- Readiness for implementation - either in health care or community domains
Available Internet Resources

- North Carolina Area Health Education Center Program (http://www.aheconnect.com)
- CDC STEADI (http://www.cdc.gov/homeandrecreationalfallsafety)
- Hartford Institute for Geriatric Nursing (http://hartfordign.org/)
- California Fall Prevention Consortium (http://www.stopfalls.org)
- Connecticut Collaboration for Fall Prevention (http://www.fallprevention.org/index.htm)
- National Council on Aging: State Policy Toolkit for Advancing Falls Prevention (http://www.ncoa.org)
Geriatric PT Task Force

• Rehab Director, Clinical Development Specialist at Large TMC Hospital
• Two Geriatric Specialists: Harris Health System (one rehab director, one residency director)
• Regional Therapy Director of home health agency
• Owner and President of staffing company for home health and skilled nursing facilities
• TWU faculty and staff
Pilot Research: Assessment of Current Knowledge and Review of Geriatric Competency Online Resources for Fall Risk Reduction

• Purpose: To evaluate existing online educational material on best practices for fall-risk reduction as appropriate for PTs and OTs
• Research Design: Survey and qualitative (focus groups)
• Subjects: Six therapy practitioners (OT and PT) with at least two years of clinical geriatric experience, from acute care, home health and skilled nursing venues
• Material Review
  – 12 content areas were divided into 3 groups of 4 areas each
  – Each participant was assigned to one group, with assignment based on setting and therapist designation
Group 1

DEMENTIA, DELIRIUM, AND DEPRESSION

The Mini-Cog:
http://consultgerirn.org/resources/media/?vid_id=4361918
#player_container

The CAM:
http://consultgerirn.org/resources/media/?vid_id=4361983
#player_container

Geriatric Depression Scale:
http://consultgerirn.org/resources/media/?vid_id=4200933
#player_container

VISION
http://www.aheconnect.com/newahec/cdetail.asp?courseid=uncg8
http://www.stopfalls.org/resources/downloadables/vision_lowvision.pdf

NEUROMUSCULAR FUNCTION: STRENGTH, GAIT AND BALANCE
http://www.aheconnect.com/newahec/cdetail.asp?courseid=uncg8

http://www.cdc.gov/homeandrecreationalsafety/Falls/steady/videos.html#4Stage


FOOT PROBLEMS AND FOOT WEAR
http://www.aheconnect.com/newahec/cdetail.asp?courseid=uncg8
Group 2

**MEDICATION USE**


http://consultgerirn.org/resources/media/?vid_id=4852321#player_container
http://www.stopfalls.org/resources/downloadables/medication_color.pdf

**ELDER ABUSE**


**GERONTOLOGICAL ASSESSMENT/SCREENING (SENSORY DEFICITS)**

http://consultgerirn.org/topics/atypical_presentation/want_to_know_more

**RESTRAINTS**

http://consultgerirn.org/resources/media/?vid_id=4475795#player_container
http://consultgerirn.org/topics/physical_restraints/want_to_know_more
Group 3

NUTRITION AND AGING
http://www.aheconnect.com/newahec/cdeta
il.asp?courseid=uncg13
http://consultgerirn.org/resources/media/?v
id_id=4475674#player_container
http://consultgerirn.org/resources/media/?v
id_id=4902587#player_container
http://consultgerirn.org/uploads/File/trythis
/try_this_9.pdf

ENVIRONMENTAL HAZARDS
http://www.aheconnect.com/newahec/cdeta
il.asp?courseid=uncg8
http://www.cdc.gov/HomeandRecreational
Safety/pubs/English/booklet_Eng_desktop-
a.pdf
http://www.stopfalls.org/grantees_info/file
s/HomeModification.PDF

URINARY INCONTINENCE
http://www.aheconnect.com/newahec/cdetai
l.asp?courseid=uncg19
http://consultgerirn.org/resources/media/?vid_i
d=4902587#player_container
http://consultgerirn.org/uploads/File/trythis/try_
this_11_1.pdf

ORTHOSTATIC HYPOTENSION
http://www.cdc.gov/homeandrecreationalsafty/
pdf/steadi/postural_hypotension_trifold.pdf
http://www.cdc.gov/homeandrecreationalsafty/
pdf/steadi/measuring_orthostatic_bp.pdf
Assessment Methods

• Survey on Content Areas
  – Relevance, breadth, clarity, conciseness
  – General comments and ranking
Survey on Usefulness of Online Content Related to Geriatric Fall Risk

ID number: ____________________

Learning Module: ________________________________________

Content Relevance
1) The content in this module is relevant to the fields of occupational and physical therapy.
2) I learned information that I can use in my practice.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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Content Breadth
1) The content covers most of the information you expected to find.
2) The content was offered at an appropriate difficulty level.

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<th>Strongly Agree</th>
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<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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Content Clarity
1) The content was arranged in a clear, logical, and orderly manner.
2) The content explains the knowledge and concepts appropriate for the PT and OT professions.

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<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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Content Conciseness
1) The multimedia materials in the module were of the right amount and content.
2) The content delivery method did not hold my interest.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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General Comments and Rank:
Assessment Methods

• Survey on Content Areas
  – Relevance, breadth, clarity, conciseness
  – General comments and ranking

• Two Focus Groups
  – 1 hour in length
  – Item-driven responses
  – Recorded and transcribed
Results: Participation

- 5 therapists evaluated web-based content
- 4 therapists attended a focus group meeting
- 1 therapist provided written responses to questions asked in focus groups
- 1 therapist did not complete tasks or provide feedback
Overall Survey Results

- Content very specific to nursing
- AHE videos are too long, do not hold interest
- Hartford material, particularly written material, is better
- Most useful content: STEADI (screens), Medication use, Restraints, Elder Abuse, Orthostatic Hypotension screen
STEADI Screens

The 4-Stage Balance Test

Purpose: To assess static balance
Equipment: A stop watch

Directions: There are four progressively more challenging positions. Patients should not use an assistive device (cane or walker) and keep their eyes open.

1. Describe and demonstrate each position. Stand next to the patient, hold his/her arm and help them assume the correct foot position.
2. When the patient is steady, let go, but remain ready to catch the patient if he/she should lose their balance.
3. If the patient can hold a position for 10 seconds without moving his/her feet or needing support, go on to the next position. If not, stop the test.

Instructions to the patient: I’m going to show you four positions.
Try to stand in each position for 10 seconds. You can hold your arms out or move your body to help keep your balance but don’t move your feet. Hold this position until I tell you to stop.

For each stage, say “Ready,” begin and end timing.
After 10 seconds, say “Stop.”

1. Stand with your feet side by side.
2. Place the instep of one foot on it.
3. Place one foot in front of the other, heel touching toe.
4. Stand on one foot.

The Timed Up and Go (TUG) Test

Purpose: To assess mobility
Equipment: A stop watch

Directions: Patients wear their regular footwear and can use a walking aid if needed. Begin by having the patient sit back in a standard arm chair and identify a line 3 meters or 10 feet away on the floor.

Instructions to the patient:
When I say “Go,” I want you to:
1. Stand up from the chair
2. Walk to the line on the floor at your normal pace
3. Turn
4. Walk back to the chair at your normal pace
5. Sit down again

On the word “Go,” begin timing.
Stop timing after patient has sat back down and record.
Time: _______ seconds

An older adult who takes >12 seconds to complete the TUG is at high risk for falling.

Observe the patient’s gait, balance, and coordination. Circle all that apply: Slower steps, shorter stride, faster pace, loss of balance, shorter stride, shuffling, less balance, little or no arm swing, staggering, problem with balance, Ever falling, massage therapy, Longtime user.

Notes:

The 30-Second Chair Stand Test

Purpose: To test leg strength and endurance
Equipment:
1. A chair with a straight back without arm rests (seat 17” high)
2. A stop watch

Instructions to the patient:
1. Sit in the middle of the chair.
2. Place your hands on the opposite shoulder cushions or on your knees.
3. Keep your feet flat on the floor.
4. Keep your back straight and your arms against your chest.
5. On “Go,” rise to a full standing position and then sit back down again.
6. Repeat this for 30 seconds.

On “Go,” begin timing.
If the patient needs to use both arms to stand, stop the test.
Record “0” for the number and score.
Count the number of times the patient comes to a full standing position in 30 seconds.
If the patient is ever halfway to a standing position when 30 seconds have elapsed, count it as a stand.
Record the number of times the patient stands in 30 seconds.
Number ________ Score ________ See next page.
A below average score indicates a high risk for falls.

Chair Stand—Below Average Scores

<table>
<thead>
<tr>
<th>Age</th>
<th>Men</th>
<th>Women</th>
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<tbody>
<tr>
<td>69-84</td>
<td>&lt; 14</td>
<td>&lt; 12</td>
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<tr>
<td>85-89</td>
<td>&lt; 12</td>
<td>&lt; 11</td>
</tr>
<tr>
<td>70-74</td>
<td>&lt; 12</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>75-79</td>
<td>&lt; 11</td>
<td>&lt; 10</td>
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<tr>
<td>80-84</td>
<td>&lt; 10</td>
<td>&lt; 9</td>
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<tr>
<td>85-89</td>
<td>&lt; 8</td>
<td>&lt; 8</td>
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<tr>
<td>90+</td>
<td>&lt; 7</td>
<td>&lt; 4</td>
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</tbody>
</table>
Measuring Orthostatic Blood Pressure

1. Have the patient lie down for 5 minutes.
2. Measure blood pressure and pulse rate.
3. Have the patient stand.
4. Repeat blood pressure and pulse rate measurements after standing 1 and 3 minutes.

A drop in bp of ≥20 mm Hg or in diastolic bp of ≥10 mm Hg or experiencing lightheadedness or dizziness is considered abnormal.

<table>
<thead>
<tr>
<th>Position</th>
<th>Time</th>
<th>BP</th>
<th>HR</th>
<th>Associated Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lying Down</td>
<td>5 Mins</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standing</td>
<td>1 Min</td>
<td></td>
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</tr>
<tr>
<td>Standing</td>
<td>8 Min</td>
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For relevant articles, go to: www.cdc.gov/injury/STEADI

http://www.cdc.gov/homeandrecreationalsafety/Falls/steadi/videos.html
Focus Group Questions

• Now that all of you have reviewed online training content that covers different competencies regarding safety and fall risk reduction for geriatric clients, please talk about the competency areas you were assigned and how well existing online information addressed those competencies.
• Did you learn something new?
• Are there areas in which you would have liked more information?
• Did the material hold your attention?
• Was the material too long, not detailed enough, too detailed, not presented clearly?
• You viewed video presentations as well as slides and written content. Please share your impressions about each method of delivering the material
• What method of material presentation do you prefer for online learning, video, audio, slides, written material?
• Can you rank order the competency areas you reviewed in terms of both need and quality of content?
• Which areas would you consider essential as continuing education for the clinicians in your field?
• Do you have any other comments you would like to share with the group?
Open-Ended Discussion

• How frequently do you use knowledge such as this in your daily practice?
• You are all experienced therapists. Would this information be useful to others in your environment?
• Do you communicate findings to other health care practitioners?
Results

• Potential themes (with disclaimer)
  – About media: good review, geared more toward nurses, need more about intervention for PTs and OTs to be useful
  – About fall risk: inter-professional communication is essential but there is inconsistency in how this occurs and how it is interpreted
Themes

• Media
  – Videos were made by/for nurses, too basic for PTs and OTs, might be ok for patient, consumer, PTA/technician education
  – Videos are good review but no new info
  – Would need more intervention info to be useful
  – Bullets are better, with links for more detailed info if desired
  – Short is better: approx. 20 minutes maximum

• Fall Risk
  – Communication re: fall risk is essential, but doesn’t always occur
  – Scores on outcome measures are not understood by many outside of PT and OT (even assistants); they may do them but they do not report numbers to other providers
  – PT residents and DPTs have raised the level of care
General Comments

• PT/OT providers value more info on pharmacology/medications, dementia (geared toward intervention), visual impairments, restraints

• Everyone had different ideas about the media used: videos, podcasts, PDFs, quizzes, apps—would need to look into this more
Where are we now?

- Experienced PT/OTs already know most of the content within this competency
- Care extenders, the personnel spending the most time with patients in some environments, do not know this content
- Knowledge about fall risk contributors is fine, but what about interventions?
- With productivity requirements, unless reporting on medical record is required by institution, personnel may not take the time to do so.
- Inter-professional communication issues will limit implementation of best practice
Limitations

• Small sample
  – Restricted to PT and OT
  – Experienced clinicians
  – Focus was on materials available rather than process of knowledge translation
Conclusions

• It is apparent that lack of knowledge alone is not the cause for lack of implementation.

• Rehab professionals are focused on their areas of expertise and feel that other competencies will be handled by different personnel.

• Integrated, patient-centered geriatric care is unlikely to change unless it is encouraged by changes in the "systems."
Bottom Line: We need more implementation interventions, not just knowledge interventions, in order to impact everyday geriatric clinical practice!
Thank you!
Questions?