Evidence-Based Home Assessment Tools and Resources for PTs and PTAs

Speaker(s): Diana Kornetti, PT, MA
Roger Sondrup, PT

Session Type: Educational Sessions
Session Level: Intermediate Level

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Evidence-Based Home Assessment Tools & Resources for the Physical Therapist and PT Assistant

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Course Objectives

Upon completion of this session, attendees will be able to:

1. Outline the importance of a standardized home assessment of the beneficiary under the Medicare Part A Home Health benefit.
2. Identify key components of a thorough home assessment of the Medicare beneficiary.
3. Analyze home assessment resources currently available to the home health clinician.
4. Incorporate key elements of a comprehensive home assessment tool into clinical practice in the home health setting.

Why Fall Risk Prevention?

1. Out of 3 adults 65+ falls each year
2. In 2013, 2.5 million nonfatal falls were treated in emergency rooms; 734,000 were hospitalized
3. The number of American seniors who die from a fall-related injuries has nearly doubled since 2000
4. Adults 75+ who fall are 4 to 5 times more likely than those 65-74 to be admitted to LTC for a year or longer
5. Unsustainable Health Care Costs
Nancy Gell, Assistant Professor, University of Vermont in Burlington stated:

“An important takeaway from this study is the concerted need for fall-prevention efforts. [This] may include an individual fall-risk assessment, home environment assessment, and participation in fall-prevention exercise, such as balance and strengthening exercise.”

Published May 6 in the CDC’s NCHS Data Brief. Nancy Gell is an assistant professor in the department of rehabilitation and movement science at the University of Vermont in Burlington

Literature Review-Fall Prevention & Environmental Home Assessments

Studies that included Multi-Factorial Approach to Fall Prevention generally report good/significant improvement in:

- Reducing The Number of Falls
- Fall Frequency
- Fall/Injury Severity
- Reducing Admissions to Emergent Care
- Patient Confidence and Alleviating Fear of Falling

Literature Review-Fall Prevention & Environmental Home Assessments

Multi-Factorial defined as:

- Medication Review/Mgmt.
- Vision Screening
- Regular Exercise/Activity
- PT/OT Interventions (Strength, Balance, Gait, Footwear, ADL/IADL trg., etc.)
- Education
- Environmental Home Assessment, Home Modifications and Correction of Environmental Hazards


Research Limitations*

- Studies not blinded, had high dropout rates and/or had small sample sizes
- Self reported ADL/IADL function not clearly defined
- Interventions not clearly described & definitions of home modifications and equipment varies among studies
- Studies conducted in several countries and different health care systems may have impact of design & implementation of the interventions.
- Difficulty in determining the contribution of individual components of multifactorial interventions and it is not clear whether home modifications were completed appropriately on the basis of recommendations provided.

Issues Facing Home Health Agencies Today

- Increased emphasis on **quality** and **outcomes**, especially as related to falls, hospital readmission rates and emergent care
- Referral source and ACO demands for quality outcomes
- Five Star Rating System
- Pay for Performance
- Increased need to set your agency apart from the competition.
- Medicare requirements: Homebound, R&N, ADR’s, etc.

Finding the Right Home Assessment Tool

- Standardized, Evidenced Based Assessment
- Thorough, yet quick and easy to use for the clinician
- Actionable data with patient specific recommendations
- Enhances patient/family satisfaction
- Facilitates communication and education
- Improves compliance with recommendations
- Meaningful results
The Home Assessment and OASIS-C1

OASIS and the Home Assessment

<table>
<thead>
<tr>
<th>Item Intent</th>
<th>Data Sources / Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M1800’s: ADLs and IADLs (M1800-M1910)</strong></td>
<td><strong>Observation/</strong> demonstration is the preferred method</td>
</tr>
<tr>
<td>Identifies the patient’s ability to tend to personal hygiene needs, excluding bathing, shampooing hair, and toileting hygiene. The intent of the item is to identify the patient’s ABILITY, not necessarily actual performance. “Willingness” and “adherence” are not the focus of these items. These items address the patient’s ability to safely perform grooming, given the current physical and mental/emotional/cognitive status, activities permitted, and environment. The patient must be viewed from a holistic perspective in assessing ability to perform ADLs. Ability can be temporarily or permanently limited by:</td>
<td>• Observation/** demonstration is the preferred method</td>
</tr>
<tr>
<td>- physical impairments (for example, limited range of motion, impaired balance)</td>
<td>• Patient/CG interview</td>
</tr>
<tr>
<td>- emotional/cognitive/behavioral impairments (for example, memory deficits, impaired judgment, fear)</td>
<td>• Physical assessment</td>
</tr>
<tr>
<td>- sensory impairments, (for example, impaired vision or pain)</td>
<td>• Environmental assessment</td>
</tr>
<tr>
<td>- environmental barriers (for example, accessing grooming aids, mirror and sink).</td>
<td><strong>Do we really address this? What does our documentation look like?</strong></td>
</tr>
</tbody>
</table>
M1800’s

- M1800 – Grooming
- M1810 & M1820 – Dressing
- M1830 – Bathing
- M1840 – Toilet Transfer
- M1845 – Toileting Hygiene
- M1850 – Transferring
- M1860 – Ambulation

M1880 – Meal Preparation

FOOD
DOES
NOT FLY!!
M2020 – Oral Med Management

Safe & Consistent Administration

Knowledge:
- What?
- When?

Function:
- Where?
- How?

M1200 - Vision

Identifies the patient’s ability to see and visually manage (function) safely within his/her environment, wearing corrective lenses if these are usually worn.
### M2102 – Types and Sources of Assistance

**M2102**

#### Types and Sources of Assistance:
Determine the ability and willingness of non-agency caregivers (such as family members, friends, or privately paid caregivers) to provide assistance for the following activities, if assistance is needed. Excludes all care by your agency staff. (Check only one box in each row.)

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>No assistance needed – patient is independent or does not have needs in this area</th>
<th>Non-agency caregiver(s) currently provide assistance</th>
<th>Non-agency caregiver(s) need training/supportive services to provide assistance</th>
<th>Non-agency caregiver(s) are not likely to provide assistance (it is unclear if they will provide assistance)</th>
<th>Assistance needed, but no non-agency caregiver(s) available</th>
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<tr>
<td>a. ADL assistance (for example: transfer/ambulation, dressing, toileting, eating/feeding)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. ISCIL assistance (for example: meals, housekeeping, laundry, telephone, shopping, finances)</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>c. Medication administration (for example: oral, inhaled or injectable)</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>d. Medical procedures/treatments (for example: changing wound dressing, home exercise program)</td>
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<td>☐</td>
<td>☐</td>
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### M2102 Continues

**(M2102)**

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<td>e. Management of Equipment (for example: oxygen, enteral, parenteral nutrition, ventilator therapy equipment or supplies)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f. Supervision and safety (for example: due to cognitive impairment)</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g. Advocacy of patient or patient's participation in appropriate medical care (for example: transportation to or from appointments)</td>
<td>☐</td>
<td>☐</td>
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Activities that may be necessary due to cognitive, functional, or other health deficits. May range from calls to remind the patient to take meds, in-person visits to ensure that the home environment is safely maintained, the need for the physical presence of another person in the home to ensure that the patient doesn’t wander, fall, or for other safety reasons.
How Do We Assess?

Are we comparing one patient home to another?

How Do We Assess?

Are we REALLY looking at the risk areas present in any home?
How Do We Assess?

Are we using a standardized approach?

Options for Home Health
Comprehensive Home Assessment

- What’s the purpose of home assessments?
- What key features and environmental attributes need to be assessed to reduce the risk of falls?
- What tools and resources are out there?
- What are pros and cons of different systems?
- How does a computerized system for fall risk mitigation work?

Purpose of Home Assessments

- FALL RISK MITIGATION
- ALZHEIMER’S CAREGIVER SUPPORT
- RECOVERY AND RECUPERATION
- AGING IN PLACE SUPPORT
- VISUAL IMPAIRMENT
Key Features of Rooms

- **Bathroom:**
  - Toilet
  - Tub
  - Shower
  - Flooring
  - Lighting

- **Stairs:**
  - Treads & Risers
  - Light Switch
  - Color Contrast
  - Hand Rails
  - Lighting

What environmental attributes should be assessed for fall risk mitigation?

- Inadequate task lighting in the kitchen or bathroom
- Poor ambient lighting in the living room
- Lack of visual clarity in hallways
- Trip hazards in the entry or stairs
- Slippery floors in kitchens and bathrooms (especially when wet)
What environmental attributes should be assessed for fall risk mitigation?

- Inappropriate furnishing in living areas
- Poorly specified equipment or adaptive devices in the home
- Anthropometric factors (e.g., a person’s height, upper or lower reach range and use of assistive devices)

What tools and resources are out there?

- iPad Assessment & Web-based Reporting
- Conventional Tools
- Evidence-Based Evaluation Problems, Needs & Strategies
- Pen & Pencil Checklists with Observations
What are pros and cons of different systems?

<table>
<thead>
<tr>
<th>iPad Assessment &amp; Web-based Reporting</th>
<th>Conventional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer-based assessment &amp; reporting process</td>
<td>Pen &amp; paper-based assessment process with limited reporting capabilities</td>
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What are pros and cons of different systems?

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<th>iPad Assessment &amp; Web-based Reporting</th>
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<tbody>
<tr>
<td>Automated decision support &amp; reporting system that is efficient</td>
<td>Limited decision support system that is labor intensive and inefficient</td>
</tr>
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</table>
### What are pros and cons of different systems?

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<tr>
<th>iPad Assessment &amp; Web-based Reporting</th>
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<tr>
<td>Highly scalable systems requiring minimal training</td>
<td>Non-scalable systems that may require extensive training</td>
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<td>Objective, scientifically valid assessments of environmental risks using state-of-the-art measurement tools (e.g., digital light meter, digital reflectance meter, and digital slip meter)</td>
<td>Subjective, often non-validated (i.e., unreliable) observations of environmental risk factors</td>
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<tr>
<td>Decision support system with multiple solutions for environmental solutions</td>
<td>Decision support with limited (or unspecified) options for environmental solutions</td>
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<td>Built-in cost estimates of different options for environmental modifications to help end-users evaluate likely cost-effectiveness</td>
<td>Little or no attention to cost-estimates or potential cost-effectiveness of environmental modifications</td>
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<tr>
<td>Dynamic &amp; open systems that can be updated in real time as new technological solutions become available</td>
<td>Static &amp; closed systems that cannot be updated in real time, often lacking in specific recommendations for new technological solutions</td>
</tr>
</tbody>
</table>

Defining Risk

Behavior (Falls) = f (Environment) + f (Person) + f (Interaction of Person x Environment)
Computer System for Fall Risk Mitigation

[Diagram showing a computer interface with options for vision and physical assessment.

- Low vision: difficulty with low lighting: Yes/No
- Low vision: difficulty with glare: Yes/No
- Impaired depth perception: Yes/No
- Impaired field of vision: Right or Left
- Computed blindness: Yes/No
- Impaired strength grip: Left

Sync and Close]

[Diagram showing a computer interface with options for balance and functional mobility.

- Impaired dynamic balance: Yes/No
- Impaired static balance: Yes/No
- Impaired standing balance: Yes/No
- Vertigo/balance: Yes
- Unstable walking: Yes/No
- Decreased logrolling/shuffling gait: Yes/No

Sync and Close]
Computer System for Fall Risk Mitigation

LivingLife SOLUTIONS

Preventing falls in the home of
Mary Ayers
420 Willow Rd. - Wausau, WI 54403

ABOUT THIS REPORT
An assessment was completed of your home on Friday, September 11, 2015, by Teresa Swoe.

Based on your personal needs, the information gathered during our assessment, and from listening to you and your family, we can now provide you with recommendations and options to enable you to live safer at home.

This report proposes the environmental risks and hazards you can address in your home to reduce your risk of falling. It also lists the aids and devices best for improving your quality of life.

Following these recommendations can enhance your safety and independence at home.
Computer System for Fall Risk Mitigation

### Risk: Unsecure toilet seat can lead to falls when sitting on or transferring on/off toilet

- Toilet can be addressed with the following recommendations:
  1. Replace and secure nuts/bolts attaching toilet seat to toilet base

#### Replace and secure nuts/bolts attaching toilet seat to toilet base

- Toilet seats that are not securely attached to the toilet bowl can move or shift when using the toilet, putting you at risk.
Computer System for Fall Risk Mitigation

1. Replace light bulbs in this room
   - Recommendation
   - Moving about rooms that do not have enough light can make it difficult to see obstacles and lead to trips or falls. It is important to replace all light bulbs to create more light.
   - Recommended Vendor: Ecolite Dimmable General Purpose Light Bulb. Model number: 20W/120V. Can be found at http://www.20w120v.com

2. Resurface the wall (paint, wallpaper, tile, or stone) with material that has LTV > 50%
   - Recommendation
   - The color of wall paint can help enhance the amount of light to a room making it safer and easier to see when moving around the room.
   - Recommended Vendor: Can be found at http://www.silicon.com

Risk: Tub/shower flooring that is slippery or unclean can increase risk of falling
- Add slip resistant strip to floor of tub/shower

Computer System for Fall Risk Mitigation

1. Add slip resistant strip to floor of tub/shower
   - Recommendation
   - Tub/shower surfaces are slippery when dry or wet. Non-slip reflective flooring strips improve traction and prevent slipping when wet.
   - Recommended Vendor: 3M Mira-Banded Strip. Manufacturer number: 551260. Can be found at http://www.3m.com

2. Place slip resistant tub mat to floor of tub/shower
   - Recommendation
   - Tub flooring is slippery when dry or wet. Placing a slip-resistant tub mat on tub floor will improve traction and prevent slipping when wet.
   - Recommended Vendor: Foam floor mats (cushioned) with tub mat. Manufacturer number: 90000. Can be found at http://www.foamfloormat.com

3. Add slip resistant coating to surface of tub/shower
   - Recommendation
   - Tub/shower flooring is slippery when dry or wet. Slip-resistant surfaces can be installed without fear of damage and prevent slipping while taking. Read product instructions before applying.
   - Recommended Vendor: 3M Mira-Banded Strip. Manufacturer number: 551260. Can be found at http://www.3m.com
Computer System for Fall Risk Mitigation

List of Currently Available Home Assessment & Fall Risk Prevention Tools

See Handout Provided at the Conference
Questions?