The role of physical therapy in home care endures ever-increasing scrutiny from regulatory bodies and auditors. With the inception of prospective payment system (PPS) therapy clarifications on April 1, 2011, PTs must include objective measures that provide quantification of impairments on evaluation and offer a baseline from which to determine progress on subsequent reassessments. However, simply adopting a variety of standardized instruments will not ensure that useful data has been collected, putting the scores documented at risk of being invalid and unreliable. Achieving clinical competency as a home care PT will ensure you and your agency's therapists administer standardized instruments in a valid and reliable fashion. This session will provide attendees with an opportunity to become clinically competent in a variety of therapy measures appropriate for use with the Medicare home care population, as well as the tools and resources for establishing a competency program for their home care agencies. Tools included in a hands-on lab will be based on those included in the Home Health Toolbox, developed by the Home Health Section's Practice Committee Task Force.

Upon completion of this course, you'll be able to:

- Demonstrate competency in a variety of standardized instruments appropriate for use with the community-dwelling older adult and frail geriatric populations.
- Implement a competency program for peer agency therapists in tests and measures.
- Demonstrate knowledge of how and when to most appropriately utilize Section-approved standardized instruments with their geriatric patients.

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Clinical Competency for the Home Health Therapist

Tests & Measures to Meet PPS-2011 Requirements

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Objectives

• Upon completion of this course:
  – The participant will achieve competency using a variety of objective instruments appropriate for use with the community-dwelling elderly population.
  – The participant will be able to implement a competency program for clinicians regarding tests & measures.
  – The participant will have an increased understanding and knowledge of how and when to objective, standardized instruments with their home care patients.
  – The participant will be able to define and develop a continued competence program.
Introduction

• April 26, 2010, WSJ article, “Home Care Yields Medicare Bounty” accelerates ever increasing scrutiny in healthcare, particularly in Home Health.
• April 1, 2011, Therapy clarifications go into effect for 2011 PPS Final Rule.
  – Mandatory therapy reassessments at specified time points. (13vst., 19vst., minimally every 30 days)
  – Mandatory use of objective testing for quantification of impairments on evaluation; provide a baseline from which to determine progress on subsequent reassessments.

Key Points

• Simply adopting a variety of standardized instruments will not ensure that useful data has been collected, putting the scores documented at risk of being invalid and unreliable.
... Key Points (cont’d)

• Achieving clinical competency as a home care therapist will ensure that you and your peers use *appropriate objective test instruments* selected by the patient’s individual impairments, these tests are *administered in a valid and reliable way*, and *data obtained is accurate, reliable, relevant and usable* as part of establishing the POC.
• By promoting continuing competence principles, improved compliance and performance will be achieved that will be lasting.

Pre-Test

• What are the cut off scores for “risk” on the Tinetti-POMA Balance and Gait components?
• Name 2 objective tests available to assess for aerobic capacity/endurance impairments.
• True/False? Balance and balance confidence are measured using the same objective test(s).
• True/False? Orientation checklists are part of the competency checklist.
• True/False? Competence is defined by establishing minimal acceptable standards.
• True/False? The TUG test was developed in 2001.
WHAT IS A COMPETENCY PROGRAM?

Competency Program

• Purpose:
  1. To define the minimum (baseline) skill set and knowledge base required to practice physical therapy safely and effectively in the home setting.
  2. To establish Standards of Competence – (def): A desired, achievable and documented level of performance against which actual performance and outcomes can be compared and are essential for the practice of physical therapy.
  3. To establish and implement evaluative methods to ensure that the defined baseline and standards (policies and procedures) are being met by practicing clinicians and agency personnel.
Continuing Competence

• Purpose
  1. Promote ongoing possession and application of contemporary knowledge, skills, and abilities commensurate with an individual’s (physical therapist or physical therapist assistant) role within the context of public health, welfare, and safety and defined by a scope of practice and practice setting.
  2. Related to concepts of *Lifelong Learning* and *Professional Development*.

Why should I spend time and resources on a Clinical Competency Program and foster Continuing Competence?

• To prepare for new CMS reimbursement models based on outcomes for payment (Pay 4 Performance; Value-Based Purchasing).
• To cultivate an environment of professional development intrinsic to the therapist that allow for **best practice to be the standard of care provided**:
  – Administer objective, valid and reliable tests correctly.
  – Provide interventions that go beyond evidence-based practice with best practice to ensure the best outcomes.
  – Not only meet the regulations for payment but, set the course of home health care rather than react.
What is the difference between competency programs and continuing competence?

• A **Competency Program** consists of meeting standards as defined by the agency, regulators.

• **Continuing Competence** is a concept that is *internally driven* by the clinician that involves lifelong learning and ongoing professional development.
  – A competency program may be one component of a continuing competence program

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In the beginning...

• 2011 PPS Final Rule mandates:
  – 13/19/30 reassessments by “qualified” therapists and not assistants.
  – Must assess the patient using a method which allows for objective measurement of function and successive comparison of measurements.
  – The measurement results must be documented in the clinical record.
  – Determine effectiveness of therapy, or lack thereof.
  – Determine if the goals of the POC have been achieved or if the plan of care may require updating.
Are the PPS 2011 Mandates Reasonable?

• **YES**, with regards to the requirements of performing reassessments and with the necessary content of the reassessments.

• Should assessment and reassessment to determine the effectiveness of PT interventions been done all along?
  
  – Most therapists have been. But, not with available, validated, reliable, objective measures.
  
  – Many of the tests we use now have been available starting in the mid 1980’s.

  • Tinetti POMA 1986  Berg Balance 1989
  • One Leg Stance 1985  30 sec Sit to Stand Test 1999
  • TUG 1991

Where we started (April 1st):

• Agencies/Clinicians attempt to meet challenge of scheduling qualified therapists to perform reassessments at proper time points.

• Agencies/Clinicians attempt to meet challenge of tracking visits for multiple discipline therapy cases.
  
  – *Increased collaboration is a must.

• Agencies/Clinicians develop communication tools/tracking forms and software patches in attempts to meet new regulations.

• Training and implementation of new regulations is under way.
Where we started (April 1st):

- Agencies and clinicians interpret “what” is necessary for a reassessment visit.
  - Full evaluation at time points vs focused functional reassessment.
  - What objective measures are required?
  - How many measures are required?

What happened?

- Agencies/Clinicians implement PPS 2011 Final Rule regulations. And questions arise!
- Agencies and clinicians sought out guidance for the objective measure requirements.
- Objective measures slowly appear in the clinical record.
- Functional reassessments begin to be documented, but often times are not done on time, missed altogether (especially in the multiple service cases), and provided documentation is lacking necessary elements.
- More questions than answers! Agencies and clinicians look for answers!
Clinician’s voices have been heard

• CSM 2011. The Home Health Section Executive Board takes action.
• Practice Committee & Tool Box taskforce were formed (prior to implementation of PPS 2011) in order to meet the challenges to home care and Physical Therapy in particular.
• Purpose is to use a peer review process to evaluate current PT practice specifically to home care.

HHS Practice Committee

• Provide evidence-based practice patterns, practice guidelines, documentation guidelines, white papers, and develop resources including a Tool Box of validated and reliable objective tests to promote best practice in the home setting.
• Be an advocate for the patients and clinicians.
HHS Tool Box Taskforce

- Toolbox task force was charged to perform multiple literature review as per sub groups based on impairment categories.
  - Searching the literature for objective test measures (measures in practice and those newly identified and appropriate to home care).
- Objective tests were reviewed for validity, reliability, norms, sensitivity, and specificity.
- Tests chosen for inclusion in the toolbox recommendations were selected based on the statistical design and strength of the studies.

What do the clinical records look like?

- Objective measures are being utilized and documented.
- Frequency of use is increasing as training progresses. **BUT**, the results are simply being listed and not utilized to their fullest potential.
- Goal setting based on the objective tests is **lacking**.
- Interventions based on the objective test results is **lacking**.
Where do we go from here?

- Insanity – doing the same thing over and over and expecting a different outcome.

- We need to change our thinking and behavior.

- By promoting clinical competency, continuing competence, life long learning and professional development, compliance will increase with long lasting and more permanent results.

Where do we find the answers to change?


- Citizens Advocacy Center. (CAC) — 2004 - Road Map to Continuing Competency Assurance
Federation of State Boards of Physical Therapy (FSBPT)

- Mission is to protect the public by providing service and leadership that promote safe and competent physical therapy practice.
- The literature around the topic of continuing competence does not support continuing education as the sole determinant of ongoing competence.
- There are many ways to maintain and acquire skills that are as effective, if not more effective than attending a continuing education course alone.

American Geriatrics Society

- Meeting of 21 organizations representing healthcare professionals who care for older adults to discuss how these organizations could work together to:
  - Advance recommendations from the 2008 Institute of Medicine Report, Retooling for an Aging America: Building the Health Care Workforce, and advocate for ways to meet the healthcare needs of the nation’s rapidly growing older population.
  - Developed Core Competencies for the care of older adults that were endorsed by all health professional disciplines.
Citizens Advocacy Center (CAC)

- Since 1987, CAC has been serving the public interest by enhancing the effectiveness and accountability of health professional oversight bodies.
- 2004 Developed Road Map for Continuing Competency
- **CAC** is a resource for the health professional boards themselves. Example boards:
  - American Board of Medical Specialties
  - Federation of State Medical Boards
  - Federation of State Boards of Physical Therapy
  - Joint Commission
  - American Board of Nursing Specialties

Competence

- **Definition:** *the application of knowledge, skills and behaviors required to function effectively, safely, ethically and legally within the context of the individual’s role and environment.*

Courtesy: FSBPT
Measuring Competence

- Objective tests
- Observation (experts, peers, consumers)
  - Field visits
  - Performance Appraisals
  - Practical demonstration, live and multimedia
- Practice audits (including chart auditing)
- Patient outcomes (through charts, surveys, questionnaires)
- SELF ASSESSMENT OF NEEDS, COMPETENCIES, AND MEANS OF ENHANCING COMPETENCIES AND REMEDIATING DEFICITS

Adapted from Brown and Yarrow

Continuing Competence

- The lifelong process of maintaining and documenting competence through ongoing self-assessment, development and implementation of a personal learning plan, and subsequent reassessment.

Courtesy: FSBPT
What should clinicians and administrators do together?

- Decide on standards that clinicians, agency agree to that promote best practice
  - Stakeholders needs must be included.
- Conform to regulatory standards that have been established and implemented.
  - The Joint Commission
  - Department of Health
  - CMS
  - Third party insurances

What should clinicians do now?

- Choose objective tests based on the patient’s history, systems review, diagnoses, and functional impairments.
- Document the results of the chosen objective tests.
- Give meaning to the results.
  - Make professional opinions based on the results.
  - For example, what does a Tinetti POMA score of 12/28 mean for falls risk?
- Use test results to form goals.
- Use results of objective tests to assist in creating plan of care.
What should administrators do now?

• Develop Competency Program related to objective test selection, administration, interpretation and documentation.
• Integrate principles of “continuing competence” into every day practice.
• Promote and encourage lifelong learning concept into culture of agency, where ever possible.

Continuing Competence

• Guiding Principles:
  — should be self-directed by the PT or PTA.
  — Evaluation/Assessment of current competence is critical for the PT or PTA. The results of an evaluation or assessment should be used by the PT or PTA to then select appropriate development activities.
  — PTs and PTAs should have a wide variety of activities available to demonstrate their competence; there is not one “right” way to demonstrate competence.

Courtesy FSBPT
A Roadmap for Success

HOW TO IMPLEMENT A COMPETENCY PROGRAM AT YOUR AGENCY

Set Excellence/Quality as a top priority

- Pick a Leader by identifying someone committed to excellence and passionate about providing quality care.
- Provide leader with resources and training to required to become competent with the objective testing measures.
- This person becomes the trainer for the staff and establishes competency program.
- Accountability is the key to successful implementation of the program.
How to get started...

- Identify impairment categories.
  - Balance/Gait/Falls Risk, ROM, Muscle Strength, Aerobic Capacity/Endurance, Cognition, etc.
- Identify Objective Testing Measures within category
  - Tool Box Recommendations available
- Education/training
  - Tool selection/Administration
  - Documentation/Interpretation of results
  - Establishing POC [Goals and interventions] based on results.


...How to get started (con’t)

- Practice via practical format, video observation, perform tests at field visits with “competent” trainer.
- Establish competency using:
  - Proficiency Testing
    - Knowledge-Based Testing (similar to annual mandatory's)
      - Pencil and Paper testing using multiple choice, true/false format, etc.
  - Competence Checklists
    - similar to those used at the beginning of employment (orientation checklist); at the end of probationary period (initial competence assessment); and at the time of annual performance review (annual competence assessment).

Adapted from Philips AM. Assessing Competence. APTA 2004.
... How to get started (cont’d)

• Self-Assessment
  – Provides opportunity for individuals to reflect on their abilities to perform at an expected level.
  – Measures what individuals feel they are learning and provides opportunities to explore specific provider perspectives about performance and competence
  – Used as a tool to focus an individuals awareness regarding educational and developmental needs and to promote BEHAVIOR MODIFICATION.


How is effective practice demonstrated?

• How can a therapist demonstrate his or her effective practice in the context of continuing competence?
  – Demonstrate knowledge and skill in areas of core competencies
  – Use self-assessment process to determine learning needs
  – Creates a portfolio that demonstrates clinical-decision making
  – Case studies, oral, practical exams
  – Peer observation
  – Evaluations that assess clinical-decision making
  – Education on contemporary decision-making and ability to apply the current decision-making techniques

Adapted from APTA
Continuing Competence Principles

• **Quality is the Purpose** – “A basic underpinning of any effort to assure patient safety and improve the quality of health care practice are systems that assure continued clinician competence and which are routine in every professional’s practice life. Continuing competency assessment and assurance are not designed for finding “bad apples” among practitioners.”

From CAC Roadmap

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Continuing Competence Principles

• **An Evidence-Based Approach is Essential** – “Research should be initiated that focuses on examining the link between periodic continuing competency assessment and assurance and changes in behavior that lead to improved clinical outcomes.”

From CAC Roadmap
Continuing Competence Principles

- **Build Upon What Works** – “It is both prudent and more efficient to build upon and learn from competency assessment and remediation programs that are already up and running.”

From CAC Roadmap

A Review

**THE HH SECTION’S TOOLBOX OF STANDARDIZED INSTRUMENTS**
Toolbox Instruments: Development Process

• Currently utilized in home care
• Guide to PT Practice’s to organize impairment categories
• Peer-Review Selection Process
  – Feasibility in the home setting (equipment, time, space)
  – Literature search/review by task force (“expert”)
• Ranked available research articles according to:
  – Strength of the study
    • Sample size, study design, currency of research article
  – Applicability to the home care setting

Impairment Categories/Toolbox Instruments

• Aerobic Capacity/Endurance
  – 2-Minute Step Test (2MST)
  – Borg Rating of Perceived Exertion (Borg RPE)
• Balance/Balance Confidence
  – Berg Balance Test (BBT)
  – Tinetti-POMA
  – Modified Falls Efficacy Scale (mFES)
  – Activities-Specific Balance Confidence (ABC)
• Arousal/Attention/Cognition
  – Montreal Cognitive Assessment (MOCA)
  – St. Louis University Mental Status Exam (SLUMS)
  – Trail Making Test (TMT) A, B
  – Geriatric Depression Scale (GDS)
  – Cornell Scale for Depression in Dementia (CSDD)
Impairment Categories/Toolbox Instruments

- **Gait/ Locomotion**
  - Functional Gait Assessment (FGA)
  - Dynamic Gait Index (DGI)
  - Gait Velocity (GV)

- **Strength**
  - Manual Muscle Test (MMT)
  - 30-Second Chair Stand Test (30CST)

- **Mobility/ADL/IADL**
  - Timed Up & Go (TUG)
  - Barthel Index

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**INSTRUMENT NAME: 2MST**

- **Specific population(s):**
  - Community-dwelling older adults

- **Age/gender norms:**
  - 5-yr increments from 60-94 years of age
  - Male/female norms

- **Descriptive categories/cut-off scores:**
  - Average range of steps
  - Below & above average designations

- **Psychometric Properties:**
  - Reliability = .90
  - Criterion Validity = .73 - .74 with 1-mi. walk, treadmill
    - Moderate correlations

- **Protocol for standardized administration**
  - Equipment: stop watch; tally counter; tape measure or 30inch string; masking tape
  - Time: approx. 5 minutes
2-Minute Step Test – Score Table

<table>
<thead>
<tr>
<th>Age</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-64</td>
<td>87-115</td>
<td>75-107</td>
</tr>
<tr>
<td>65-69</td>
<td>86-116</td>
<td>73-107</td>
</tr>
<tr>
<td>70-74</td>
<td>80-110</td>
<td>68-101</td>
</tr>
<tr>
<td>75-79</td>
<td>73-109</td>
<td>68-100</td>
</tr>
<tr>
<td>80-84</td>
<td>71-103</td>
<td>60-91</td>
</tr>
<tr>
<td>85-89</td>
<td>59-91</td>
<td>55-85</td>
</tr>
<tr>
<td>90-94</td>
<td>52-86</td>
<td>44-72</td>
</tr>
</tbody>
</table>

INSTRUMENT NAME: Borg RPE

- Specific population(s):
  - None defined
- Age/gender norms: N/A
- Descriptive categories/cut-off scores:
  - Perception of exertion depends mainly on the strain and fatigue in muscles and on feeling of breathlessness or aches in the chest
  - 6-20 scale (original)
    - 11-14 = mid-range
  - 1-10 scale (modified)
    - 3-6 = mid-range
- Psychometric Properties:
  - Reliability = (ICC) .91
  - Clinically significant difference/minimally detectable change: 1 unit
- Protocol for standardized administration
  - Equipment: rating scale form
  - Time: < 5 minutes
Borg Rating of Perceived Exertion Scales

<table>
<thead>
<tr>
<th>Rating</th>
<th>Borg</th>
<th>Modified Borg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perceived effort</td>
<td>Perceived Effort</td>
</tr>
<tr>
<td>0</td>
<td>No exertion at all</td>
<td>Nothing at all</td>
</tr>
<tr>
<td>1</td>
<td>Very weak</td>
<td>0.5 Very, very weak (just noticeable)</td>
</tr>
<tr>
<td>2</td>
<td>Weak</td>
<td>1 Very weak</td>
</tr>
<tr>
<td>3</td>
<td>Light</td>
<td>2 Weak</td>
</tr>
<tr>
<td>4</td>
<td>Somewhat hard</td>
<td>3 Moderate</td>
</tr>
<tr>
<td>5</td>
<td>Moderate</td>
<td>4 Somewhat strong</td>
</tr>
<tr>
<td>6</td>
<td>Somewhat hard (heavy)</td>
<td>5 Strong (heavy)</td>
</tr>
<tr>
<td>7</td>
<td>Hard (heavy)</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>Very Hard</td>
<td>7 Very strong</td>
</tr>
<tr>
<td>9</td>
<td>Extremely hard</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>Maximal exertion</td>
<td>9 Very, very strong (almost maximal)</td>
</tr>
</tbody>
</table>

INSTRUMENT NAME: MOCA

- Specific population(s):
  - Community-dwelling older adults
  - Parkinson’s Disease
  - TIA/CVA
- Age/gender norms: N/A
- Descriptive categories/cut-off scores:
  - Normal = ≥ 26/30
  - Mild Cognitive Impairment (MCI) = < 26/30
    - Range: 19-25 (avg: 22)
  - Alzheimer’s Disease = < 26/30
    - Range: 11-21 (avg: 16)
- Psychometric Properties:
  - Sensitivity:
    - MCI = 90%
    - AD = 100%
  - Specificity: 87%
- Protocol for standardized administration
  - Equipment: instructional guide; score form; pencil/pen; stopwatch
  - Time: 15-30 minutes
INSTRUMENT NAME: SLUMS

- Specific population(s):
  - Community-dwelling older adults
- Age/gender norms: N/A
- Descriptive categories/cut-off scores:
  - Normal:
    - ≥ HS Education: ≥ 27/30
    - < HS Education: ≥ 25/30
  - Mild Neurocognitive Disorder (MNCD):
    - ≥ HS Education: 21-26/30
    - < HS Education: 20-24/30
  - Dementia:
    - ≥ HS Education: 1-20/30
    - < HS Education: 1-19/30
- Psychometric Properties:
  - Sensitivity and Specificity
    - category dependent
  - 95% Confidence Intervals
    - category dependent
- Protocol for standardized administration
  - Equipment: instructional guide; form; pencil/pen
  - Time: 7 minutes

INSTRUMENT NAME: TMT (A, B)

- Specific population(s):
  - Community-dwelling adults (age range 18-89 years)
- Age/gender norms:
  - Age (11 categories) and education (2 categories) variances
- Descriptive categories/cut-off scores:
  - Increasing age + decreasing education resulted in ↓ scores
  - Not equivalent on Trail A and B
  - Higher scores = greater impairment
    - Trail A: avg = 29 secs. abnormal = > 78 secs.
    - Trail B: avg = 75 secs. abnormal = >273 secs.
- Psychometric Properties:
  - Not described in research literature reviewed
  - Commonly used in research published in peer-review journals
- Protocol for standardized administration
  - Equipment: Instructional guide; score form; pencil/pen
  - Time: Trail A ~ 90 seconds Trail B ~ 3 minutes
**INSTRUMENT NAME: GDS-15**

- **Specific population(s):**
  - Elderly persons with/without mild-moderate dementia and/or physical illness
- **Age/gender norms:** N/A
- **Descriptive categories/cut-off scores:**
  - 1-4 Score = No cause for concern
  - 5-9 Score = Strong probability of depression
  - 10+ Score = Indicative of depression

**Psychometric Properties:**
- Sensitivity (at 4/5 cut-off): 92.7%
- Specificity (at 4/5 cut-off): 65.2%

**Protocol for standardized administration**
- Equipment: scoring guide; form; pencil/pen
- Time: 5 minutes

**INSTRUMENT NAME: CSDD**

- **Specific population(s):**
  - Elderly persons with suspected depression; with/without dementia
- **Age/gender norms:** N/A
- **Descriptive categories/cut-off scores:**
  - Final ratings represent the rater’s clinical impression rather than informant responses.
  - Scale Range of Scores from 0-2 (19 items)
  - Scores > 10 = probable major depression
  - Scores > 18 = definite major depression

**Psychometric Properties:**
- Correlative status with GDS
- Convergent Validity: High
- Sensitivity: 93% (at ≥ 6)
- Specificity: 97% (at ≥ 6)

**Protocol for standardized administration**
- Equipment: scoring guide; score form; pencil/pen
- Time: 20 minutes
**INSTRUMENT NAME: BBT**

- **Specific population(s):**
  - Community-dwelling older adults (≥ 65 yrs and older)
  - Parkinsonism
- **Age/gender norms:** N/A
- **Psychometric Properties:**
  - Reliability = (ICC) > .90
  - Sensitivity: 91%
  - Specificity: 82%
  - Clinically significant difference/minimally detectable change: 6, 8 pts
- **Descriptive categories/cut-off scores:**
  - < 45/56 = impaired balance; (+) falls risk
  - ≥ 45/56 = impaired balance; (-) falls risk
    - Sensitivity: t’s with cut-off score >48/56
    - **JGPT exception**
- **Protocol for standardized administration**
  - Equipment: score sheet, stopwatch, shoe, ruler, stepstool
  - Time: 20 minutes

**INSTRUMENT NAME: Tinetti-POMA**

- **Specific population(s):**
  - Community-dwelling older adults
- **Age/gender norms:** N/A
- **Psychometric Properties:**
  - Reliability = (ICC) 0.93
  - Sensitivity:
    - Gait (8/12 cut-off) = 21%
    - Balance (12/16 cut-off) = 24%
  - Specificity:
    - Gait (8/12 cut-off) = 95%
    - Balance (12/16 cut-off) = 91%
  - Clinically significant difference/minimally detectable change: **undetermined**
- **Descriptive categories/cut-off scores:**
  - 25-28 = low falls risk
  - 19-24 = medium falls risk
  - < 19 = high falls risk
- **Protocol for standardized administration**
  - Equipment: hard, armless chair; stopwatch, 15ft walkway
  - Time: 20 minutes
**INSTRUMENT NAME: mFES**

- **Specific population(s):**
  - Older adults (age ranges 66-89 yrs of age)
  - With/without cognitive impairments
- **Age/gender norms: N/A**
- **Psychometric Properties:**
  - Reliability = (test-retest) 0.71
  - Correlation with ABC = 0.84
- **Protocol for standardized administration**
  - Equipment: score/instruction form; pencil/pen
  - Time: 10 minutes
- **Descriptive categories/cut-off scores:**
  - > 80% = balance confidence WFL; no probable fear of falling
  - < 80%: impaired balance confidence; (+) fear of falling

**INSTRUMENT NAME: ABC**

- **Specific population(s):**
  - Older adults (ranging from 65-95 yrs of age)
  - ≥ 1 yr post-stroke
  - Parkinsonism; PD
- **Age/gender norms: N/A**
- **Psychometric Properties:**
  - Reliability = (ICC) 0.92
  - Correlation with FES = 0.84
- **Protocol for standardized administration**
  - Equipment: instruction sheet; score sheet; pencil/pen
  - Time: 10 minutes
- **Descriptive categories/cut-off scores:**
  - > 80% = balance confidence WFL; no probable fear of falling
  - < 80%: impaired balance confidence; (+) fear of falling
INSTRUMENT NAME: FGA

- **Specific population(s):**
  - Adults/older adults (ranging from 45-90 yrs of age)
  - Parkinson’s Disease
  - Post-stroke
  - Vestibulopathy
- **Psychometric Properties:**
  - Reliability = (ICC) 0.93; (test-retest) 0.91
    - Sensitivity: 72%
    - Specificity: 78%
  - Vestibulopathy = (ICC) 0.86; (test-retest) 0.74
- **Age/gender norms:** N/A
- **Descriptive categories/cut-off scores:**
  - < 22/30 predictive of falls
- **Protocol for standardized administration**
  - Equipment: scoresheet; stopwatch; shoe box; steps; pencil/pen
  - Time: 5 minutes
  - Space: approximately 20 feet

INSTRUMENT NAME: DGI

- **Specific population(s):**
  - Adults/older adults (ranging from 21-77 yrs of age)
  - Parkinson’s Disease; MS
  - ≥ 3 mos post-stroke
  - Vestibulopathy
- **Psychometric Properties:**
  - Reliability = (ICC) 0.96
  - Correlation with TUG = 0.80
  - Validity (construct/concurrent) = 0.68 – 0.83
  - MDC/CSD: 2.9 pts
- **Age/gender norms:** N/A
- **Descriptive categories/cut-off scores:**
  - < 19/24 = (+) falls risk in community-dwelling older adult
  - < 12/24 = (+) falls risk in MS
- **Protocol for standardized administration**
  - Equipment: score sheet; 2 obstacles (same size); stairs; 20ft path; pencil/pen
  - Time: 6-30 minutes
INSTRUMENT NAME: Gait Velocity

- Specific population(s):
  - Older adults (ranging from 50-98 yrs of age)
  - Post-stroke; OA; CHF; post-fracture
- Age/gender norms: N/A
- Descriptive categories/cut-off scores:
  - Various distances; can be measured in ft/sec or m/sec.
  - **see next slides**
- Psychometric Properties:
  - Reliability = (ICC) 0.96-0.97
  - Correlation between 8ft and 20ft = 0.933
  - Clinically significant/meaningful change:
    - Meaningful: 0.05m/second
    - Substantial: 0.10m/second
- Protocol for standardized administration
  - Equipment: stopwatch; measuring tape ( > 10ft)
  - Time: 10 minutes
  - Space: approximately 20ft

---

Gait Velocity

<table>
<thead>
<tr>
<th>Gait Velocity Distance</th>
<th>Score Categories/Cut-off</th>
<th>Feet/Meter Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Feet</td>
<td>&lt;1.97ft/sec = predictive of hospitalization risk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt; 1.86ft/sec = (+) falls risk</td>
<td></td>
</tr>
<tr>
<td>4 Meter</td>
<td>0.0-0.4m/sec = household amb.</td>
<td>13 feet 1.48 inches</td>
</tr>
<tr>
<td></td>
<td>0.4-0.6m/sec = limited community amb</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt; 0.57m/sec = (+) falls risk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.6 - 1.0m/sec = ltd – safe community amb</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 1.0m/sec = functional community amb</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 1.2m/sec = safe to cross streets</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: There are additional distances that can be utilized for testing – establish internal consistency in your agency.

NOTE: The shortest distance found reliable/valid in the research literature is 8 feet. Distances greater than 20 feet become difficult to establish in the home setting.
INSTRUMENT NAME: TUG

- **Specific population(s):**
  - Community-dwelling older adults
  - Vestibulopathy
  - Parkinson’s Disease
  - Post-hip fracture
  - Alzheimer’s Disease
- **Age/gender norms:** N/A
- **Descriptive categories/cut-off scores:**
  - Mobility impairment categories (ref next slide)
  - > 14 seconds = (+) falls risk
- **Psychometric Properties:**
  - Reliability = 0.98 – 0.99
  - Sensitivity: 0.80
  - Specificity: 0.934
  - Correlates mod-high with:
    - Berg, gait velocity, Barthel
- **Protocol for standardized administration**
  - Equipment: stopwatch; tape measure; standard-height chair with arms
  - Time: 2-5 minutes
Timed Up & Go

<table>
<thead>
<tr>
<th>Time to Complete Test</th>
<th>Mobility Impairment Category</th>
<th>Falls Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 10 seconds</td>
<td>Independent</td>
<td>NO</td>
</tr>
<tr>
<td>10-20 seconds</td>
<td>Mostly Independent</td>
<td>YES, if &gt; 14 seconds</td>
</tr>
<tr>
<td>20-30 seconds</td>
<td>Moderately Impaired</td>
<td>YES</td>
</tr>
<tr>
<td>&gt; 30 seconds</td>
<td>Severely Impaired; probable ADL dysfunction</td>
<td>YES</td>
</tr>
</tbody>
</table>

Agency should adopt internal consistency in completion of this standardized instrument.

Variations in # of Trials: 1 trial; average of 2-3 trials
Variations in measurement: 10ft distance measured from either front leg of test chair or front of individual's foot when seated in chair
Variations in turn strategy: pivot turn or walk around a designated marker at 10ft mark

INSTRUMENT NAME: Barthel

- Specific population(s):
  - Older Adults (ranging from 16-75 yrs of age)
  - Post-stroke, TBI and/or dementia

- Age/gender norms: N/A

- Descriptive categories/cut-off scores:

- Psychometric Properties:
  - Reliability = .80-0.89 (good)
  - Validity (concurrent) = suggested by close association with clinical data
  - Sensitivity to change is limited due to floor/ceiling effects

- Protocol for standardized administration
  - Equipment: None
  - Time: 10-15 minutes
INSTRUMENT NAME: MMT

• Specific population(s): N/A
• Age/gender norms: N/A
  – Gender differences do exist
• Descriptive categories/cut-off scores:
  – **see slide for muscle test score definitions
  – Important to test, when able, in proper test positions
    • Gravity resisted
    • Gravity eliminated
• Psychometric Properties:
  – Reliability = (ICC) 0.86 – 0.97
  • Tester consistency best
  • Study looked at hip and shoulder muscle testing
  • *½ MMT grade variation is not significant when same tester completes test-retest
  • *1MMT grade variation is not significant between 2 testers
• Protocol for standardized administration
  – Equipment: NONE
  – Time: Variable, depending on number of muscles being tested

**Arm Curl Test: Assesses upper-body strength**

**Equipment:** Stopwatch, folding chair without arms, 5-lb dumbbell for women, 8-lb dumbbell for men.
**Scoring:** The score is the total number of arm curls completed in 30 seconds. If the arm is more than halfway up at the end of 30 seconds, it counts as a curl.
### Manual Muscle Testing – Score Table

#### Gravity Eliminated Grades
- 2+/5 = < ½ ROM gravity resisted position or minimal resistance/full ROM gravity eliminated position
- 2/5 = full ROM gravity eliminated position; no resistance
- 2-/5 = > ½ ROM gravity eliminated position
- 1+/5 = < ½ ROM gravity eliminated position or palpable AND visible contraction
- 1/5 = palpable contraction/no ROM completed
- 0/5 = no palpable contraction/no ROM completed

#### Gravity Resisted Grades
- 3-/5 = > ½ ROM gravity resisted position
- 3/5 = full ROM gravity resisted position; no resistance
- 3+/5 = full ROM gravity resisted + minimal resistance
- 4-/5 = full ROM gravity resisted + min-mod resistance
- 4/5 = full ROM gravity resisted + mod resistance
- 4+/5 = full ROM gravity resisted + mod-max resistance
- 5/5 = full ROM gravity resisted + max resistance

### INSTRUMENT NAME: 30CST

- **Specific population(s):**
  - Community-dwelling older adults
- **Age/gender norms:**
  - 5-yr increments from 60-94 years of age
  - Male/female norms
- **Descriptive categories/cut-off scores:**
  - Average range of completed stands
  - Below & above average designations
- **Psychometric Properties:**
  - Reliability = (ICC) 0.90; (test-retest) 0.96
  - Correlates to leg press performance for LE strength (0.78 men; 0.71 women)
- **Protocol for standardized administration**
  - Equipment: test chair; stopwatch; tally counter
  - Time: < 5 minutes
### 30-Second Chair Stand Test – Score Table

<table>
<thead>
<tr>
<th>Age</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-64</td>
<td>14-19</td>
<td>12-17</td>
</tr>
<tr>
<td>65-69</td>
<td>12-18</td>
<td>11-16</td>
</tr>
<tr>
<td>70-74</td>
<td>12-17</td>
<td>10-15</td>
</tr>
<tr>
<td>75-79</td>
<td>11-17</td>
<td>10-15</td>
</tr>
<tr>
<td>80-84</td>
<td>10-15</td>
<td>9-14</td>
</tr>
<tr>
<td>85-89</td>
<td>8-14</td>
<td>8-13</td>
</tr>
<tr>
<td>90-94</td>
<td>7-12</td>
<td>4-11</td>
</tr>
</tbody>
</table>

### Hands-On Lab Section: Directions

- 2-hour time frame for attendees to:
  - Become acquainted with instruments not currently utilized/familiar with
  - Practice instruments of choice to enhance competency
  - Prioritize stations attended (from least familiar to most familiar with instruments)

- Stations set up per Impairment Categories
  - Equipment present to complete instruments
  - Facilitator present at each station (Toolbox Task Force member)
    - Provide direction, guidance, instruction
    - Answer questions, etc.
Return at 3:15 PM

TAKE A 15-MINUTE BREAK!

Testing for Proficiency Using Standardized Instruments

• Video Component
  – You will be provided a copy of the instrument score sheet.
  – You have full access to all course materials to complete the test.
  – While observing the completion of the instrument, score the individual being tested in the video.
  – Instrument test sheets will be collected for grading . . . so, make sure you put your name on each page!
  – Proficiency in the video component of testing is established at 90% (successful passing grade).
  – Time allotted: 40 minutes
Testing for Proficiency Using Standardized Instruments

• Written Component
  – You will be provided a copy of the written test, along with any completed score sheets required to answer the test questions.
  – You have full access to all course materials to complete the written test.
  – The written test will be collected for grading . . . . so, make sure you put your name on each page!
  – Proficiency in the written component of testing is established at 80% (successful passing grade).
  – Time allotted: 35 minutes

Score Results and Certification of Proficiency

• Video and written score sheets will be graded during the conference.
• You will be able to pick up your Proficiency Certificate (must pass both sections of the Proficiency Exam!) prior to the start of the Section Business meeting
  – Friday, February 10, 2012 (6:30-9:30PM)
• This certification is separate, and in addition to, your PreConference attendance certificate (picked up at the end of this 1-day session)
Resources (objective measures)

- Tool Box Taskforce document
- Home Health Section Website
- Neurology Section Tool box
- Geriatric Section
  - CEEAA Certified Exercise Expert for Aging Adults
Resources (professional development)

- Home Health Section Website
- Other APTA section websites
- CSM and Annual Conference
- Pursue Clinical Specialist Designation
- APTA Learning Center
- Continuing Education Courses
- Journal Club
- Mentorship Programs
- Residencies and Fellowships

References

- https://www.fsbpt.org/ForCandidatesAndLicens ees/ContinuingCompetence/Model/index.asp?p rint=yes
- APTA. PROFESSIONAL DEVELOPMENT, LIFELONG LEARNING, AND CONTINUED COMPETENCE IN PHYSICAL THERAPY HOD P05-07-14-14 [Position]
References

• APTA. CONTINUED COMPETENCE BOD P05-03-03-05 [Position]
• 2004 CAC. MAINTAINING AND IMPROVING HEALTH PROFESSIONAL COMPETENCE: The Citizen advocacy Center Road Map to Continuing Competency Assurance.

Thank You!

Questions?

Contact information:
dkornetti@homewithintegrity.com
kenmpt@aol.com
Clinical Competency for the Home Health Therapist: Tests and Measures to Meet PPS-2011 Requirements

HANDOUT APPENDIX

Documents appear in the Appendix in the following order:

1. 2-Minute Step Test (Procedure and Normative Data)
2. Borg RPE Scales
3. Berg Balance Test
4. Tinetti POMA
5. mFES (modified Falls Efficacy Scale)
6. ABC (Activities-Specific Balance Confidence Scale)
7. MOCA Test (Montreal Cognitive Assessment)
8. MOCA Scoring Instructions
9. SLUMS (St. Louis University Mental Status Examination)
10. TMT A, B (Trail Making Test A and B)
11. GDS Short Form (Geriatric Depression Scale-15 item with references)
12. Cornell Score Sheet (CSDD)
13. The Cornell Scale for Depression in Dementia (CSDD instruction guide)
14. FGA (Functional Gait Assessment)
15. DGI (Dynamic Gait Index)
16. Gait Velocity (GV) Procedure and Normative Data
   Gait Velocity (GV) Direction Sheet
17. TUG (Timed Up & Go) Variations Procedure
18. Barthel Index ADLs
19. Arm Curl Test with Normative Data
20. 30 Second Chair Stand Test (CST) Procedure and Normative Data
21. TOOL: Agency Checklist for Developing Objective Test Competency document
22. Self Assessment Competency Tool
23. Home Health Agency Competency Assessment Tool
# Two Minute Step Test Protocol

<table>
<thead>
<tr>
<th>Equipment needed:</th>
<th>Start Position:</th>
<th>Procedure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop watch</td>
<td>Subject should be in a standing position near wall, doorway, next to a high back chair or countertop</td>
<td>Demonstration of stepping (not running) in place to the subject</td>
</tr>
<tr>
<td>Tally Counter</td>
<td>Arms at side</td>
<td>Subject will perform 1 to 3 repetitions and is checked for proper form</td>
</tr>
<tr>
<td>Piece of string or cord about 30 in. (76.2 cm) long</td>
<td>Back Straight</td>
<td>Subject is encouraged to complete as many steps as possible with in 2 minutes</td>
</tr>
<tr>
<td>Masking Tape</td>
<td>Feet flat on floor</td>
<td>On the signal, “go” the subject steps in place raising legs alternately to the correct height starting with the right leg</td>
</tr>
<tr>
<td></td>
<td>Proper knee height is a point midway between the patella and iliac crest</td>
<td>As soon as proper knee height can no longer be maintained, the participant is asked to stop- or to stop and rest until proper form can be regained. Stepping may be resumed if the 2 min time period has not elapsed</td>
</tr>
<tr>
<td></td>
<td>Place a piece of masking tape at the minimum knee-stepping height</td>
<td>Subject is told when 1 minute and 30 seconds are remaining respectively</td>
</tr>
<tr>
<td></td>
<td>Examiner uses a tally counter to help count steps</td>
<td>Perform 2 minute trial</td>
</tr>
</tbody>
</table>

## Scoring:
The score is the total number of correct height steps taken by the right leg within 2 minutes. If a subject needs to stop or slow down during the 2 minute trial, the clock continues to run.

---


<table>
<thead>
<tr>
<th>Normal Range of Scores for Two Minute Step Test*</th>
<th>60-64</th>
<th>65-69</th>
<th>70-74</th>
<th>75-79</th>
<th>80-84</th>
<th>85-89</th>
<th>90-94</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Min. step</td>
<td>87-115</td>
<td>86-116</td>
<td>80-110</td>
<td>73-109</td>
<td>71-103</td>
<td>59-91</td>
<td>52-86</td>
</tr>
<tr>
<td>(no. of steps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Min. step</td>
<td>75-107</td>
<td>73-107</td>
<td>68-101</td>
<td>68-100</td>
<td>60-91</td>
<td>55-85</td>
<td>44-72</td>
</tr>
<tr>
<td>(no. of steps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Normal defined as the middle 50% of the population.

### Borg vs Modified Borg

<table>
<thead>
<tr>
<th>Rating</th>
<th>Perception of effort</th>
<th>Rating</th>
<th>Perception of Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>No exertion at all</td>
<td>0</td>
<td>Nothing at all</td>
</tr>
<tr>
<td>7</td>
<td>Extremely light</td>
<td>0.5</td>
<td>Very, very weak (just noticeable)</td>
</tr>
<tr>
<td>8</td>
<td>Very light</td>
<td>1</td>
<td>Very weak</td>
</tr>
<tr>
<td>9</td>
<td>Light</td>
<td>2</td>
<td>Weak</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>3</td>
<td>Moderate</td>
</tr>
<tr>
<td>11</td>
<td>Somewhat hard</td>
<td>4</td>
<td>Somewhat strong</td>
</tr>
<tr>
<td>12</td>
<td>Hard (heavy)</td>
<td>5</td>
<td>Strong (heavy)</td>
</tr>
<tr>
<td>13</td>
<td>Very Hard</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Extremely hard</td>
<td>7</td>
<td>Very strong</td>
</tr>
<tr>
<td>15</td>
<td>Maximal exertion</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>10</td>
<td>Very, very strong (almost maximal)</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>Grading</td>
<td>Notes</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>1. Sitting to standing:</td>
<td>Stand up. Do not use hands for support.</td>
<td>Mark the lowest category that applies. (4=best, 0=worst)</td>
<td>(4) able to stand up without hands, (3) able to stand with minimal use of hands, (2) able to sit safely with supervision, (1) unable to sit with supervision but able to sit without help, (0) unable to sit without help.</td>
</tr>
<tr>
<td>2. Standing Unsupported:</td>
<td>Stand for 2 minutes without holding on.</td>
<td>(4) able to stand safely for 2 minutes, (3) able to stand 30 seconds with supervision, (2) able to stand independently for 30 seconds, (1) able to stand independently but needs supervision, (0) unable to stand independently.</td>
<td></td>
</tr>
<tr>
<td>3. Sitting unsupported, feet on floor</td>
<td>Sit with arms folded for 2 minutes.</td>
<td>(4) able to sit safely and for 3 minutes, (3) able to sit 2 minutes under supervision, (2) able to sit 30 seconds supported, (1) able to sit independently but needs supervision, (0) unable to sit independently.</td>
<td></td>
</tr>
<tr>
<td>4. Standing to Sitting:</td>
<td>Please sit down.</td>
<td>(4) able to sit independently and comfortably, (3) able to sit independently but with supervision, (2) able to sit down with minimal supervision, (1) needs supervision to sit, (0) unable to sit down.</td>
<td></td>
</tr>
<tr>
<td>5. Transfers:</td>
<td>Please move from chair to bed and back again.</td>
<td>(4) able to transfer safely with minimal use of hands, (3) able to transfer with definite need of hands, (2) able to transfer with verbal cueing and supervision, (1) needs verbal cueing to transfer, (0) unable to transfer without help.</td>
<td></td>
</tr>
<tr>
<td>6. Standing unsupported with eyes closed.</td>
<td>Close your eyes and stand still for 10 seconds.</td>
<td>(4) able to stand 10 seconds safely, (3) able to stand 10 seconds with supervision, (2) able to stand 3 seconds, (1) unable to keep eyes closed, (0) unable to stand.</td>
<td></td>
</tr>
<tr>
<td>7. Standings unsupported with feet together:</td>
<td>Place your feet together and stand without holding.</td>
<td>(4) able to place feet together independently and stand independently, (3) able to place feet together independently but for 1 minute with supervision, (2) able to place feet together independently but unable to hold for 30 seconds, (1) needs help to maintain position but able to stand 15 seconds, (0) unable to stand.</td>
<td></td>
</tr>
<tr>
<td>8. Reaching forward with outstretched arm</td>
<td>Lift arm to 90 degrees. Stretch out your fingers and reach forward as far as you can.</td>
<td>(4) can reach forward confidently &gt; 10 inches, (3) can reach forward &gt; 5 inches safely, (2) can reach forward &gt; 2 inches safely, (1) reaches forward but needs supervision, (0) needs assistance to prevent falling.</td>
<td></td>
</tr>
<tr>
<td>9. Pick up object from floor</td>
<td>Pick up the shoe/slipper that is placed in front of your feet.</td>
<td>(4) able to pick up slipper safely and easily, (3) able to pick up slipper but requires supervision, (2) unable to pick up but reaches 1-2 inches from slipper, (1) unable to pick up object, (0) unable to attempt/requires assistance to prevent falling.</td>
<td></td>
</tr>
<tr>
<td>10. Turn to look behind/over left and right shoulders:</td>
<td>Turn to look behind you over/toward left shoulder. Repeat to the right.</td>
<td>(4) able to turn 360° safely in &lt; 4 seconds each direction, (3) able to turn 360° safely one side only in &lt; 4 seconds, (2) able to turn 360° safely but slowly, (1) unable to turn independently, (0) unable to turn independently.</td>
<td></td>
</tr>
<tr>
<td>11. Turn 360 degrees</td>
<td>Turn completely around in a full circle. Pause. Turn a full circle in the other direction.</td>
<td>(4) able to turn 360° safely in &lt; 4 seconds each direction, (3) able to turn 360° safely one side only in &lt; 4 seconds, (2) able to turn 360° safely but slowly, (1) unable to turn independently, (0) unable to turn independently.</td>
<td></td>
</tr>
<tr>
<td>12. Alternating steps on stool:</td>
<td>Place each foot alternately on the stool. Continue until each foot has touched the stool four times.</td>
<td>(4) able to stand independently and complete 8 steps in less than 20 seconds, (3) able to stand independently and complete 8 steps but greater than 20 seconds, (2) able to complete 4 steps independently without assistance, (1) able to complete 2 steps independently, requires minimal assistance, (0) needs assistance to prevent falling/unable to try.</td>
<td></td>
</tr>
<tr>
<td>13. Standing unsupported, one foot in front (Tandem stance)</td>
<td>Close your eyes and stand still for 10 seconds.</td>
<td>(4) able to place foot tandem independently and hold for 30 seconds, (3) able to place foot ahead of the other independently and hold 30 seconds, (2) able to take small step independently and hold 30 seconds, (1) needs assistance to step, can hold for 15 seconds, (0) loses balance while stepping or standing.</td>
<td></td>
</tr>
<tr>
<td>14. Stand on one leg</td>
<td>Stand on one leg as long as you can without holding.</td>
<td>(4) able to lift leg independently and hold &gt; 10 seconds, (3) able to lift leg independently 5-10 seconds, (2) able to lift leg independently and hold &gt; 3 seconds but remains standing independently, (1) tries to lift leg, unable to hold 3 seconds but remains standing independently, (0) unable to try or requires assistance to prevent falling.</td>
<td></td>
</tr>
</tbody>
</table>

**Total Score:**

Shumway-Cook A, Baldwin M, Polissar NL, Gruber W. Predicting the probability for falls in community-dwelling older adults. Phys Ther. 1997;77:812-819
Tinetti Performance Oriented Mobility Assessment (POMA)*

**Description:**
The Tinetti assessment tool is an easily administered task-oriented test that measures an older adult’s gait and balance abilities.

**Equipment needed:**
- Hard armless chair
- Stopwatch or wristwatch
- 15 ft walkway

**Completion:**

**Time:** 10-15 minutes

**Scoring:**
A three-point ordinal scale, ranging from 0-2. “0” indicates the highest level of impairment and “2” the individual's independence.
- Total Balance Score = 16
- Total Gait Score = 12
- Total Test Score = 28

**Interpretation:**
- 25-28 = low fall risk
- 19-24 = medium fall risk
- < 19 = high fall risk

Tinetti Performance Oriented Mobility Assessment (POMA)

- Balance Tests -

Initial instructions: Subject is seated in hard, armless chair. The following maneuvers are tested.

1. **Sitting Balance**
   - Leans or slides in chair
     - Unsteady, unsafe = 0
     - Steady, safe = 1

2. **Arises**
   - Unable without help = 0
   - Able, uses arms to help = 1
   - Able without using arms = 2

3. **Attempts to Arise**
   - Unable without help = 0
   - Able, requires > 1 attempt = 1
   - Able to rise, 1 attempt = 2

4. **Immediate Standing Balance** (first 5 seconds)
   - Unsteady (swaggers, moves feet, trunk sway) = 0
   - Steady but uses walker or other support = 1
   - Steady without walker or other support = 2

5. **Standing Balance**
   - Unsteady = 0
   - Steady but wide stance (medial heels > 4 inches apart) and uses cane or other support = 1
   - Narrow stance without support = 2

6. **Nudged** (subject at maximum position with feet as close together as possible, examiner pushes lightly on subject’s sternum with palm of hand 3 times)
   - Begins to fall = 0
   - Staggers, grabs, catches self = 1
   - Steady = 2

7. **Eyes Closed** (at maximum position of item 6)
   - Unsteady = 0
   - Steady = 1

8. **Turning 360 Degrees**
   - Discontinuous steps = 0
   - Continuous steps = 1
   - Unsteady (grabs, staggers) = 0
   - Steady = 1

9. **Sitting Down**
   - Unsafe (misjudged distance, falls into chair) = 0
   - Uses arms or not a smooth motion = 1
   - Safe, smooth motion = 2

**BALANCE SCORE:** _____/16
**Tinetti Performance Oriented Mobility Assessment (POMA)**

- **Gait Tests** -

Initial Instructions: Subject stands with examiner, walks down hallway or across room, first at “usual” pace, then back at “rapid, but safe” pace (using usual walking aids)

10. **Initiation of Gait** (immediately after told to “go”)
   Any hesitancy or multiple attempts to start = 0
   No hesitancy = 1  

11. **Step Length and Height**
   Right swing foot
   - Does not pass left stance foot with step = 0
   - Passes left stance foot = 1  

   Right foot does not clear floor completely
   - With step = 0
   - Right foot completely clears floor = 1  

   Left swing foot
   - Does not pass right stance foot with step = 0
   - Passes right stance foot = 1  

   Left foot does not clear floor completely
   - With step = 0
   - Left foot completely clears floor = 1  

12. **Step Symmetry**
   Right and left step length not equal (estimate) = 0
   Right and left step length appear equal = 1  

13. **Step Continuity**
   Stopping or discontinuity between steps = 0
   Steps appear continuous = 1  

14. **Path** (estimated in relation to floor tiles, 12-inch diameter; observe excursion of 1 foot over about 10 ft. of the course)
   Marked deviation = 0
   Mild/moderate deviation or uses walking aid = 1
   Straight without walking aid = 2  

15. **Trunk**
   Marked sway or uses walking aid = 0
   No sway but flexion of knees or back or
   Spreads arms out while walking = 1
   No sway, no flexion, no use of arms, and no
   Use of walking aid = 2  

16. **Walking Stance**
   Heels apart = 0
   Heels almost touching while walking = 1  

   **GAIT SCORE** =  

**BALANCE SCORE** =  

**TOTAL SCORE (Gait + Balance)** =  

{< 19 high fall risk, 19-24 medium fall risk, 25-28 low fall risk}

---

Originally prepared and assembled by Delmarva Foundation for Medical Care, this tool is provided by Lumetra, California’s Medicare Quality Improvement Organization. To obtain more copies, visit www.lumetra.com or call (415) 677-2000. 8SOW-CA-1B-07-59
The Modified Falls Efficacy Scale
Adapted from Tinetti et al, 1990; Hill et al, 1996

On a scale of 0 to 10, how confident are you that you can do each of these activities without falling, with 0 meaning "not confident/not sure at all", 5 being "fairly confident/fairly sure", and 10 being "completely confident/completely sure"?

NOTE:
- If you have stopped doing the activity at least partly because of being afraid of falling, score a 0;
- If you have stopped an activity purely because of a physical problem, leave that item blank (these items are not included in the calculation of the average MFES score);
- If you do not currently do the activity for other reasons, please rate that item based on how you perceive you would rate if you had to do the activity today.

<table>
<thead>
<tr>
<th></th>
<th>Not confident at all</th>
<th>Fairly confident</th>
<th>Completely confident</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1. Get dressed and undressed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Prepare a simple meal</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>3. Take a bath or a shower</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4. Get in/out of a chair</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5. Get in/out of bed</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6. Answer the door or telephone</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>7. Walk around the inside of your house</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>8. Reach into cabinets or closet</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>9. Light housekeeping</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>10. Simple shopping</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>11. Using public transport</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>12. Crossing roads</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>13. Light gardening or hanging out the washing*</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>14. Using front or rear steps at home</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

* rate most commonly performed of these activities

Average score/item rated = ........../........

= ........


In 2005 the Department of Human Services funded the National Ageing Research Institute to review and recommend a set of falls prevention resources for general use. The materials used as the basis for this generic resource were developed by the National Ageing Research Institute and the North West Hospital Falls Clinic, Parkville (adapted from Tinetti et al., 1990). This and other falls prevention resources are available from the department's Aged Care website at: http://www.health.vic.gov.au/agedcare.
The Activities-specific Balance Confidence (ABC) Scale*

Administration:
The ABC can be self-administered or administered via personal or telephone interview. Larger typeset should be used for self-administration, while an enlarged version of the rating scale on an index card will facilitate in-person interviews. Regardless of method of administration, each respondent should be queried concerning their understanding of instructions, and probed regarding difficulty answering specific items.

Instructions to Participants:
For each of the following, please indicate your level of confidence in doing the activity without losing your balance or becoming unsteady from choosing one of the percentage points on the scale form 0% to 100%. If you do not currently do the activity in question, try and imagine how confident you would be if you had to do the activity. If you normally use a walking aid to do the activity or hold onto someone, rate your confidence as it you were using these supports. If you have any questions about answering any of these items, please ask the administrator.

Instructions for Scoring:
The ABC is an 11-point scale and ratings should consist of whole numbers (0-100) for each item. Total the ratings (possible range = 0 – 1600) and divide by 16 to get each subject’s ABC score. If a subject qualifies his/her response to items #2, #9, #11, #14 or #15 (different ratings for “up” vs. “down” or “onto” vs. “off”), solicit separate ratings and use the lowest confidence of the two (as this will limit the entire activity, for instance the likelihood of using the stairs.)

- 80% = high level of physical functioning
- 50-80% = moderate level of physical functioning
- < 50% = low level of physical functioning
  Myers AM (1998)

- < 67% = older adults at risk for falling; predictive of future fall
  LaJoie Y (2004)

The Activities-specific Balance Confidence (ABC) Scale
For each of the following activities, please indicate your level of self-confidence by choosing a corresponding number from the following rating scale:

<table>
<thead>
<tr>
<th>0%</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>no confidence</td>
<td>completely confident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“How confident are you that you will not lose your balance or become unsteady when you…”

1. …walk around the house? ____%
2. …walk up or down stairs? ____%
3. …bend over and pick up a slipper from the front of a closet floor ____%
4. …reach for a small can off a shelf at eye level? ____%
5. …stand on your tiptoes and reach for something above your head? ____%
6. …stand on a chair and reach for something? ____%
7. …sweep the floor? ____%
8. …walk outside the house to a car parked in the driveway? ____%
9. …get into or out of a car? ____%
10. …walk across a parking lot to the mall? ____%
11. …walk up or down a ramp? ____%
12. …walk in a crowded mall where people rapidly walk past you? ____%
13. …are bumped into by people as you walk through the mall? ____%
14. … step onto or off an escalator while you are holding onto a railing? ____%
15. … step onto or off an escalator while holding onto parcels such that you cannot hold onto the railing? ____%
16. …walk outside on icy sidewalks? ____%
Montreal Cognitive Assessment
(MoCA)

Administration and Scoring Instructions

The Montreal Cognitive Assessment (MoCA) was designed as a rapid screening instrument for mild cognitive dysfunction. It assesses different cognitive domains: attention and concentration, executive functions, memory, language, visuoconstructional skills, conceptual thinking, calculations, and orientation. Time to administer the MoCA is approximately 10 minutes. The total possible score is 30 points; a score of 26 or above is considered normal.

1. Alternating Trail Making:

   Administration: The examiner instructs the subject: "Please draw a line, going from a number to a letter in ascending order. Begin here [point to (1)] and draw a line from 1 then to A then to 2 and so on. End here [point to (E)]."

   Scoring: Allocate one point if the subject successfully draws the following pattern:
   1 - A - 2 - B - 3 - C - 4 - D - 5 - E, without drawing any lines that cross. Any error that is not immediately self-corrected earns a score of 0.

2. Visuoconstrucational Skills (Cube):

   Administration: The examiner gives the following instructions, pointing to the cube: “Copy this drawing as accurately as you can, in the space below”.

   Scoring: One point is allocated for a correctly executed drawing.
   - Drawing must be three-dimensional
   - All lines are drawn
   - No line is added
   - Lines are relatively parallel and their length is similar (rectangular prisms are accepted)

   A point is not assigned if any of the above-criteria are not met.

3. Visuoconstrucational Skills (Clock):

   Administration: Indicate the right third of the space and give the following instructions: “Draw a clock. Put in all the numbers and set the time to 10 past 11”.

   Scoring: One point is allocated for each of the following three criteria:
   - Contour (1 pt.): the clock face must be a circle with only minor distortion acceptable (e.g., slight imperfection on closing the circle);
   - Numbers (1 pt.): all clock numbers must be present with no additional numbers; numbers must be in the correct order and placed in the approximate quadrants on the clock face; Roman numerals are acceptable; numbers can be placed outside the circle contour;
   - Hands (1 pt.): there must be two hands jointly indicating the correct time; the hour hand must be clearly shorter than the minute hand; hands must be centred within the clock face with their junction close to the clock centre.

   A point is not assigned for a given element if any of the above-criteria are not met.
4. Naming:

**Administration:** Beginning on the left, point to each figure and say: “Tell me the name of this animal”.

**Scoring:** One point each is given for the following responses: (1) lion (2) rhinoceros or rhino (3) camel or dromedary.

5. Memory:

**Administration:** The examiner reads a list of 5 words at a rate of one per second, giving the following instructions: “This is a memory test. I am going to read a list of words that you will have to remember now and later on. Listen carefully. When I am through, tell me as many words as you can remember. It doesn’t matter in what order you say them”. Mark a check in the allocated space for each word the subject produces on this first trial. When the subject indicates that (s)he has finished (has recalled all words), or can recall no more words, read the list a second time with the following instructions: “I am going to read the same list for a second time. Try to remember and tell me as many words as you can, including words you said the first time.” Put a check in the allocated space for each word the subject recalls after the second trial.

At the end of the second trial, inform the subject that (s)he will be asked to recall these words again by saying, “I will ask you to recall those words again at the end of the test.”

**Scoring:** No points are given for Trials One and Two.

6. Attention:

**Forward Digit Span: Administration:** Give the following instruction: “I am going to say some numbers and when I am through, repeat them to me exactly as I said them”. Read the five number sequence at a rate of one digit per second.

**Backward Digit Span: Administration:** Give the following instruction: “Now I am going to say some more numbers, but when I am through you must repeat them to me in the backwards order.” Read the three number sequence at a rate of one digit per second.

**Scoring:** Allocate one point for each sequence correctly repeated, (N.B.: the correct response for the backwards trial is 2-4-7).

**Vigilance: Administration:** The examiner reads the list of letters at a rate of one per second, after giving the following instruction: “I am going to read a sequence of letters. Every time I say the letter A, tap your hand once. If I say a different letter, do not tap your hand”.

**Scoring:** Give one point if there is zero to one errors (an error is a tap on a wrong letter or a failure to tap on letter A).
Serial 7s: Administration: The examiner gives the following instruction: “Now, I will ask you to count by subtracting seven from 100, and then, keep subtracting seven from your answer until I tell you to stop.” Give this instruction twice if necessary.

Scoring: This item is scored out of 3 points. Give no (0) points for no correct subtractions, 1 point for one correction subtraction, 2 points for two-to-three correct subtractions, and 3 points if the participant successfully makes four or five correct subtractions. Count each correct subtraction of 7 beginning at 100. Each subtraction is evaluated independently; that is, if the participant responds with an incorrect number but continues to correctly subtract 7 from it, give a point for each correct subtraction. For example, a participant may respond “92 – 85 – 78 – 71 – 64” where the “92” is incorrect, but all subsequent numbers are subtracted correctly. This is one error and the item would be given a score of 3.

7. Sentence repetition:

Administration: The examiner gives the following instructions: “I am going to read you a sentence. Repeat it after me, exactly as I say it [pause]: I only know that John is the one to help today.” Following the response, say: “Now I am going to read you another sentence. Repeat it after me, exactly as I say it [pause]: The cat always hid under the couch when dogs were in the room.”

Scoring: Allocate 1 point for each sentence correctly repeated. Repetition must be exact. Be alert for errors that are omissions (e.g., omitting "only", "always") and substitutions/additions (e.g., "John is the one who helped today;" substituting "hides" for "hid", altering plurals, etc.).

8. Verbal fluency:

Administration: The examiner gives the following instruction: “Tell me as many words as you can think of that begin with a certain letter of the alphabet that I will tell you in a moment. You can say any kind of word you want, except for proper nouns (like Bob or Boston), numbers, or words that begin with the same sound but have a different suffix, for example, love, lover, loving. I will tell you to stop after one minute. Are you ready? [Pause] Now, tell me as many words as you can think of that begin with the letter F. [time for 60 sec]. Stop.”

Scoring: Allocate one point if the subject generates 11 words or more in 60 sec. Record the subject’s response in the bottom or side margins.

9. Abstraction:

Administration: The examiner asks the subject to explain what each pair of words has in common, starting with the example: “Tell me how an orange and a banana are alike”. If the subject answers in a concrete manner, then say only one additional time: “Tell me another way in which those items are alike”. If the subject does not give the appropriate response (fruit), say, “Yes, and they are also both fruit.” Do not give any additional instructions or clarification. After the practice trial, say: “Now, tell me how a train and a bicycle are alike”. Following the response, administer the second trial, saying: “Now tell me how a ruler and a watch are alike”. Do not give any additional instructions or prompts.
Scoring: Only the last two item pairs are scored. Give 1 point to each item pair correctly answered. The following responses are acceptable:
Train-bicycle = means of transportation, means of travelling, you take trips in both;
   Ruler-watch = measuring instruments, used to measure.
The following responses are not acceptable: Train-bicycle = they have wheels; Ruler-watch = they have numbers.

10. Delayed recall:

Administration: The examiner gives the following instruction: “I read some words to you earlier, which I asked you to remember. Tell me as many of those words as you can remember.” Make a check mark (✓) for each of the words correctly recalled spontaneously without any cues, in the allocated space.

Scoring: Allocate 1 point for each word recalled freely without any cues.

Optional:

Following the delayed free recall trial, prompt the subject with the semantic category cue provided below for any word not recalled. Make a check mark (✓) in the allocated space if the subject remembered the word with the help of a category or multiple-choice cue. Prompt all non-recalled words in this manner. If the subject does not recall the word after the category cue, give him/her a multiple choice trial, using the following example instruction, “Which of the following words do you think it was, NOSE, FACE, or HAND?”
Use the following category and/or multiple-choice cues for each word, when appropriate:

<table>
<thead>
<tr>
<th>Category</th>
<th>Semantic Category</th>
<th>Multiple Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACE:</td>
<td>category cue: part of the body</td>
<td>multiple choice: nose, face, hand</td>
</tr>
<tr>
<td>VELVET:</td>
<td>category cue: type of fabric</td>
<td>multiple choice: denim, cotton, velvet</td>
</tr>
<tr>
<td>CHURCH:</td>
<td>category cue: type of building</td>
<td>multiple choice: church, school, hospital</td>
</tr>
<tr>
<td>DAISY:</td>
<td>category cue: type of flower</td>
<td>multiple choice: rose, daisy, tulip</td>
</tr>
<tr>
<td>RED:</td>
<td>category cue: a colour</td>
<td>multiple choice: red, blue, green</td>
</tr>
</tbody>
</table>

Scoring: No points are allocated for words recalled with a cue. A cue is used for clinical information purposes only and can give the test interpreter additional information about the type of memory disorder. For memory deficits due to retrieval failures, performance can be improved with a cue. For memory deficits due to encoding failures, performance does not improve with a cue.

11. Orientation:

Administration: The examiner gives the following instructions: “Tell me the date today”. If the subject does not give a complete answer, then prompt accordingly by saying: “Tell me the [year, month, exact date, and day of the week].” Then say: “Now, tell me the name of this place, and which city it is in.”

Scoring: Give one point for each item correctly answered. The subject must tell the exact date and the exact place (name of hospital, clinic, office). No points are allocated if subject makes an error of one day for the date and date.

TOTAL SCORE: Sum all subscores listed on the right-hand side. Add one point for an individual who has 12 years or fewer of formal education, for a possible maximum of 30 points. A final total score of 26 and above is considered normal.
Name ____________________________ Age ____________________________

Is patient alert? ____________________________ Level of education ____________________________

1. What day of the week is it?
2. What is the year?
3. What state are we in?
4. Please remember these five objects. I will ask you what they are later.
   Apple  Pen  Tie  House  Car
5. You have $100 and you go to the store and buy a dozen apples for $3 and a tricycle for $20.
   1. How much did you spend?
   2. How much do you have left?
6. Please name as many animals as you can in one minute.
   1 0-4 animals       2 5-9 animals       3 10-14 animals       4 15+ animals
7. What were the five objects I asked you to remember? 1 point for each one correct.
8. I am going to give you a series of numbers and I would like you to give them to me backwards.
   For example, if I say 42, you would say 24.
   1 87       2 649       3 8537
9. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o’clock.
   1 Hour markers okay
   2 Time correct
10. Please place an X in the triangle.
    1 Which of the above figures is largest?
11. I am going to tell you a story. Please listen carefully because afterwards, I’m going to ask you some questions about it.
    Jill was a very successful stockbroker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chicago. She then stopped work and stayed at home to bring up her children. When they were teenagers, she went back to work. She and Jack lived happily ever after.
    1 What was the female’s name?
    2 What work did she do?
    2 When did she go back to work?
    2 What state did she live in?

TOTAL SCORE ____________________________

SH Tariq, N Tumosa, JT Chibnall, HM Perry III, and JE Morley. The Saint Louis University Mental Status (SLUMS) Examination for Detecting Mild Cognitive Impairment and Dementia is more sensitive than the Mini-Mental Status Examination (MMSE) - A pilot study. J am Geriatri Psych (in press).

VAMC
SLUMS Examination

Questions about this assessment tool? E-mail aging@slu.edu.
**Instructions:**

Both parts of the Trail Making Test consist of 25 circles distributed over a sheet of paper. In Part A, the circles are numbered 1 – 25, and the patient should draw lines to connect the numbers in ascending order. In Part B, the circles include both numbers (1 – 13) and letters (A – L); as in Part A, the patient draws lines to connect the circles in an ascending pattern, but with the added task of alternating between the numbers and letters (i.e., 1-A-2-B-3-C, etc.). The patient should be instructed to connect the circles as quickly as possible, without lifting the pen or pencil from the paper. Time the patient as he or she connects the "trail." If the patient makes an error, point it out immediately and allow the patient to correct it. Errors affect the patient's score only in that the correction of errors is included in the completion time for the task. It is unnecessary to continue the test if the patient has not completed both parts after five minutes have elapsed.

Step 1: Give the patient a copy of the Trail Making Test Part A worksheet and a pen or pencil.

Step 2: Demonstrate the test to the patient using the sample sheet (Trail Making Part A – SAMPLE).

Step 3: Time the patient as he or she follows the “trail” made by the numbers on the test.

Step 4: Record the time.

Step 5: Repeat the procedure for Trail Making Test Part B.

**Scoring:**

Results for both TMT A and B are reported as the number of seconds required to complete the task; therefore, higher scores reveal greater impairment.

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Deficient</th>
<th>Rule of Thumb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trail A</td>
<td>29 seconds</td>
<td>&gt; 78 seconds</td>
<td>Most in 90 seconds</td>
</tr>
<tr>
<td>Trail B</td>
<td>75 seconds</td>
<td>&gt; 273 seconds</td>
<td>Most in 3 minutes</td>
</tr>
</tbody>
</table>

**Sources:**

Trail Making Test Part A – SAMPLE
Trail Making Test Part B – SAMPLE
## Geriatric Depression Scale (Short Form)

Patient’s Name: ___________________________ Date: ____________

**Instructions:** Choose the best answer for how you felt over the past week.

<table>
<thead>
<tr>
<th>No.</th>
<th>Question</th>
<th>Answer</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Are you basically satisfied with your life?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Have you dropped many of your activities and interests?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Do you feel that your life is empty?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Do you often get bored?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Are you in good spirits most of the time?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Are you afraid that something bad is going to happen to you?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Do you feel happy most of the time?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Do you often feel helpless?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Do you prefer to stay at home, rather than going out and doing new things?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Do you feel you have more problems with memory than most?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Do you think it is wonderful to be alive?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Do you feel pretty worthless the way you are now?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Do you feel full of energy?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Do you feel that your situation is hopeless?</td>
<td>YES / NO</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Do you think that most people are better off than you are?</td>
<td>YES / NO</td>
<td></td>
</tr>
</tbody>
</table>

### Scoring:

Assign one point for each of these answers:

1. NO  4. YES  7. NO  10. YES  13. NO
2. YES  5. NO  8. YES  11. NO  14. YES
3. YES  6. YES  9. YES  12. YES  15. YES

A score of 0 to 5 is normal. A score above 5 suggests depression.

### Source:

Cornell Scale for Depression in Dementia

Ratings should be based on symptoms and signs occurring during the week before interview. No score should be given if symptoms result from physical disability or illness.

SCORING SYSTEM

a = Unable to evaluate  0 = Absent  1 = Mild to Intermittent  2 = Severe

Score greater than 12 = Probable Depression

A. MOOD-RELATED SIGNS
   1. Anxiety; anxious expression, rumination, worrying
   2. Sadness; sad expression, sad voice, tearfulness
   3. Lack of reaction to pleasant events
   4. Irritability; annoyed, short tempered

B. BEHAVIORAL DISTURBANCE
   5. Agitation; restlessness, hand wringing, hair pulling
   6. Retardation; slow movements, slow speech, slow reactions
   7. Multiple physical complaints (score 0 if gastrointestinal symptoms only)
   8. Loss of interest; less involved in usual activities (score 0 only if change occurred acutely, i.e., in less than one month)

C. PHYSICAL SIGNS
   9. Appetite loss; eating less than usual
   10. Weight loss (score 2 if greater than 5 pounds in one month)
   11. Lack of energy; fatigues easily, unable to sustain activities

D. CYCLIC FUNCTIONS
   12. Diurnal variation of mood; symptoms worse in the morning
   13. Difficulty falling asleep; later than usual for this individual
   14. Multiple awakenings during sleep
   15. Early morning awakening; earlier than usual for this individual

E. IDEATIONAL DISTURBANCE
   16. Suicidal; feels life is not worth living
   17. Poor self-esteem; self-blame, self-depreciation, feelings of failure
   18. Pessimism; anticipation of the worst
   19. Mood congruent delusions; delusions of poverty, illness or loss

NOTES/CURRENT MEDICATIONS:

ASSESSOR:

Instruction for use: (Cornell Dementia Depression Assessment Tool)

1. The same CNA (certified nursing assistant) should conduct the interview each time to assure consistency in the response.
2. The assessment should be based on the patient’s normal weekly routine.
3. If uncertain of answers, questioning other caregivers may further define the answer.
4. Answer all questions by placing a check in the column under the appropriately numbered answer. (a=unable to evaluate, 0=absent, 1=mild to intermittent, 2=severe).
5. Add the total score for all numbers checked for each question.
6. Place the total score in the “SCORE” box and record any subjective observation notes in the “Notes/Current Medications” section.
7. Scores totaling twelve (12) points or more indicate probable depression.
The Cornell Scale for Depression in Dementia

ADMINISTRATION & SCORING GUIDELINES

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The Cornell Scale for Depression in Dementia
Administration & Scoring

The Cornell Scale for Depression in Dementia (CSDD) was specifically developed to assess signs and symptoms of major depression in patients with dementia. Because some of these patients may give unreliable reports, the CSDD uses a comprehensive interviewing approach that derives information from the patient and the informant. Information is elicited through two semi-structured interviews; an interview with an informant and an interview with the patient. Based on these interviews, the interviewer can score the CSDD by assigning a preliminary score to each item of the scale on the basis of the informant’s report in the “Informant” column. The next step is for the rater to interview the patient using the Cornell scale items as a guide. The interviews focus on depressive symptoms and signs occurring during the week preceding the interview. Many of the items during the patient interview can be filled after direct observation of the patient. If there are discrepancies in ratings generated from the informant and the patient interviews, the rater should re-interview both the informant and the patient to resolve the discrepancies. The final ratings of the CSDD items represent the rater's clinical impression rather than the responses of the informant or the patient. The CSDD takes approximately 20 minutes to administer.

Each item is rated for severity on a scale of 0-2 (0=absent, 1=mild or intermittent, 2=severe). The item scores are added. Scores above 10 indicate a probable major depression. Scores above 18 indicate a definite major depression. Scores below 6 as a rule are associated with absence of significant depressive symptoms.

INTERVIEW WITH THE INFORMANT

Who qualifies as an Informant? Informants should know and have frequent contact with the patient. Reliable informants can include nursing staff for patients in the hospital and nursing homes or a family member for outpatients.

The informant interview should be conducted first. The interviewer should ask about any change in symptoms of depression over the prior week. The rater should complete each item on the scale. The rater can expand on the descriptions of the symptoms in order to help the informant understand each item.

Interview Instructions: I am going to ask you questions about how your relative has been feeling during the past week. I am interested in changes you have noticed and the duration of these changes.
A. Mood Related Signs

1. **Anxiety:** *(anxious expression, ruminations, worrying)* Has your relative been feeling anxious this past week? Has s/he been worrying about things s/he may not ordinarily worry about, or ruminating over things that may not be that important? Has your relative had an anxious, tense, distressed or apprehensive expression?

2. **Sadness:** *(sad expression, sad voice, tearfulness)* Has your relative been feeling down, sad, or blue this past week? Has s/he been crying at all? How many days out of the past week has s/he been feeling like this? For how long each day?

3. **Lack of reactivity to pleasant events:** If a pleasant event were to occur today (i.e., going out with spouse, friends, seeing grandchildren), would your relative be able to enjoy it fully, or might his/her mood get in the way of his/her interest in the event or activity? Does your relative’s mood affect any of the following:
   - his/her ability to enjoy activities that used to give him/her pleasure?
   - his/her surroundings?
   - his/her feelings for family and friends?

4. **Irritability:** *(easily annoyed, short tempered)* Has your relative felt short-tempered or easily annoyed this past week? Has s/he been feeling irritable, impatient, or angry this week?

B. Behavioral Disturbance

5. **Agitation:** *(restlessness, handwringing, hairpulling)* Has your relative been so fidgety or restless this past week that s/he was unable to sit still for at least an hour? Was your relative so physically agitated that you or others noticed it? Agitation may include such behaviors as playing with one’s hands, hair, hand-wringing, hair-pulling, and/or lip-biting: have you observed any such behavior in your relative during the past week?

6. **Retardation:** *(slow movements, slow speech, slow reactions)* Has your relative been talking or moving more slowly than is normal for him/her? This may include:
   - slowness of thoughts and speech
   - delayed response to your questions
   - decreased motor activity and/or reactions.

7. **Multiple physical complaints:** In the past week, has your relative had any of the following physical symptoms? (in excess of what is normal for him/her):
   - indigestion?
   - constipation?
   - diarrhea?
   - stomach cramps?
   - belching?
   - joint pain?
   - backaches?
   - muscles aches?
   - frequent urination?
   - sweating?
   - headaches?
   - heart palpitations?
   - hyperventilation (shortness of breath)?
If you have observed any of these physical symptoms, how much have these things been bothering your relative? How severe have the symptoms gotten? How often have they occurred in the past week?

**Rating guideline:** Do not rate symptoms that are side effects from medications or those symptoms that are only related to gastrointestinal ailments.

8. **Acute Loss of interest:** (less involved in usual activities) How has your relative been spending his/her time this past week (not including work and chores)? Has your relative felt interested in his/her usual activities and hobbies? Has your relative spent any less time engaging in these activities?

If s/he is **not** as interested, or has not been that engaged in activities during the past week: Has your relative had to push him/herself to do the things s/he normally enjoys? Has your relative **stopped** doing anything s/he used to do? Can s/he look forward to anything or has s/he lost interest in many of the hobbies from which s/he used to derive pleasure?

**Rating guideline:** Ratings of this item should be based on loss of interest during the past week. This item should be rated 0 if the loss of interest is long-standing (longer than 1 month) and there has been no worsening during the past month. This item should be rated 0 if the patient has not been engaged in activities because of physical illness or disability, or if the patient has persistent apathy associated with dementia.

**C. Physical Signs**

9. **Appetite loss:** (eating less than usual) How has your relative’s appetite been this past week compared to normal? Has it decreased at all? Has your relative felt less hungry or had to remind him/herself to eat? Have others had to urge or force him/her to eat?

**Rating guideline:** Rate 1 if there is appetite loss but still s/he is eating on his/her own. Rate 2 if eats only with others’ encouragement or urging.

10. **Weight loss:** Has your relative lost any weight in the past month that s/he has not meant to or been trying to lose? (If not sure: are your relative’s clothes any looser on him/her?) If weight loss is associated with present illness (i.e., not due to diet or exercise): how many pounds has s/he lost?

**Rating guideline:** Rate 2 if weight loss is greater than 5 lbs. in past month.

11. **Lack of energy:** (fatigues easily, unable to sustain activities – score only if change occurred acutely, or in less than one month) How has your relative’s energy been this past week compared to normal? Has s/he been tired all the time? Has s/he asked to take naps because of fatigue? This week, has your relative had any of the following symptoms due to lack of energy only (**not** due to physical problems):

- heaviness in limbs, back, or head?
- felt like s/he is dragging through the day?

Has your relative been fatigued more easily this week?
Rating guideline: Ratings of this item should be based on lack of energy during the week prior to the interview. This item should be rated 0 if the lack of energy is long-standing (longer than 1 month) and there has been no worsening during the past month.

D. Cyclic Functions

12. Diurnal variation of mood: (symptoms worse in the morning) Regarding your relative’s mood (his/her feelings and symptoms of depression), is there any part of the day in which s/he usually feels better or worse? (or does it not make any difference, or vary according to the day or situation?)

If yes to a difference in mood during the day: Is your relative’s depression worse in the morning or the evening?

If worse in the morning: Is this a mild or a very noticeable difference?

Rating guideline: Diurnal variation of mood is only rated for symptoms that are worse in the morning. Variation of mood in the evening can be related to sundowning in patients with dementia and should not be rated.

13. Difficulty falling asleep: (later than usual for this individual) Has your relative had any trouble falling asleep this past week? Does it take him/her longer than usual to fall asleep once s/he gets into bed (i.e., more than 30 min)?

Rating guideline: Rate 1 if patient only had trouble falling asleep a few nights in the past week. Rate 2 if s/he has had difficulty falling asleep every night this past week.

14. Multiple awakenings during sleep: Has your relative been waking up in the middle of the night this past week? How long is s/he awake?

If yes: does s/he get out of bed? Is this just to go to the bathroom and then s/he goes back to sleep?

Rating guideline: Do not rate if waking is only to go to the bathroom and then is able to fall right back asleep. Rate 1 if sleep has only been restless and disturbed occasionally in the past week, and has not gotten out of bed (besides going to the bathroom). Rate 2 if s/he gets out of bed in the middle of the night (for reasons other than voiding), and/or has been waking up every night in the past week.

15. Early morning awakenings: (earlier than usual for this individual) Has your relative been waking up any earlier this week than s/he normally does (without an alarm clock or someone waking him/her up)?

If yes: how much earlier is s/he waking up than is normal for him/her? Does your relative get out of bed when s/he wakes up early, or does s/he stay in bed and/or go back to sleep?

Rating guideline: Rate 1 if s/he wakes up on his/her own but then goes back to sleep. Rate 2 if s/he wakes earlier than usual and then gets out of bed for the day (i.e., s/he cannot fall back asleep).
E. Ideational Disturbance

16. Suicide: *(feels life is not worth living, has suicidal wishes, or makes suicide attempt)*

During the past week, has your relative had any thoughts that life is not worth living or that s/he would be better off dead? Has s/he had any thoughts of hurting or even killing him/herself?

*Rating guideline:* Rate 1 for passive suicidal ideation (i.e., feels life isn’t worth living but has no plan). Rate 2 for active suicidal wishes, and/or any recent suicide attempts, gestures, or plans. History of suicide attempt without current passive or active suicidal ideation is not scored.

17. Self-deprecation: *(self-blame, poor self-esteem, feelings of failure)*

How has your relative been feeling about him/herself this past week? Has s/he been feeling especially critical of him/herself, feeling that s/he has done things wrong or let others down? Has s/he been feeling guilty about anything s/he has or has not done? Has s/he been comparing him/herself to others, or feeling worthless, or like a failure? Has s/he described him/herself as “no good” or “inferior”?

*Rating guideline:* Rate 1 for loss of self-esteem or self-reproach. Rate 2 for feelings of failure, or statements that s/he is “worthless”, “inferior”, or “no good”.

18. Pessimism: *(anticipation of the worst)*

Has your relative felt pessimistic or discouraged about his/her future this past week? Can your relative see his/her situation improving? Can your relative be reassured by others that things will be okay or that his/her situation will improve?

*Rating guideline:* Rate 1 if s/he feels pessimistic, but can be reassured by self or others. Rate 2 if feels hopeless and cannot be reassured that his/her future will be okay.

19. Mood congruent delusions: *(delusions of poverty, illness, or loss)*

Has your relative been having ideas that others may find strange? Does your relative think his/her present illness is a punishment, or that s/he has brought it on him/herself in some irrational way? Does your relative think s/he has less money or material possessions than s/he really does?
INTERVIEW WITH THE PATIENT

Ratings of some patient interview items should be based principally on direct observation, i.e. anxiety, sadness, irritability, agitation, retardation. Questions to the patient can provide additional information on these items. The remaining items are scored based on the interview behavior and the patient’s response to direct inquiry. 

Interview Instructions: I am going to ask you some questions about how you have been feeling during the past week.

A. Mood Related Signs:

1. **Anxiety:** *(anxious expression, ruminations, worrying)* Does the subject have an anxious, tense, distressed or apprehensive expression?

   *Ask the patient:* Have you been feeling anxious this past week? Have you been worrying about things you may not ordinarily worry about, or ruminating over things that may not be that important?

2. **Sadness:** *(sad expression, sad voice, tearfulness)* Does the patient have a sad expression or sad voice? Is the patient tearful?

   *Ask the patient:* Have you been feeling down, sad, or blue this past week? Have you been crying at all? How many days out of the past week have you been feeling like this? For how long each day?

3. **Lack of reactivity to pleasant events:** Is the patient able to respond to friendly or supportive remarks or to humor?

   *Ask the patient:* If a pleasant event were to occur today (i.e., going out with your spouse, friends, seeing your grandchildren), would you be able to enjoy it fully, or might your mood get in the way of your interest in the event or activity? Does your mood affect any of the following:
   - your ability to enjoy activities that used to give you pleasure?
   - your surroundings?
   - your feelings for your family and friends?

4. **Irritability:** *(easily annoyed, short tempered)* Observe whether the patient is easily annoyed and short-tempered during the interview.

   *Ask the patient:* Have you felt short-tempered or easily annoyed this past week? Have you been feeling irritable, impatient, or angry this week?
B. Behavioral Disturbance

5. **Agitation:** *(restlessness, handwringing, hairpulling):* Observe the patient for behaviors such as playing with his/her hands, hair, hand-wringing, hair-pulling, and/or lip-biting.

*Ask the patient:* Have you been fidgety or restless this past week? Have you been unable to sit still for at least an hour? Were you so physically agitated to the point that others noticed it?

6. **Retardation:** *(slow movements, slow speech, slow reactions)* This item should be scored exclusively on the basis of the rater's observations. Retardation is characterized by:
   - slow speech
   - delayed response to questions
   - decreased motor activity and/or reactions.

7. **Multiple physical complaints:** In the past week, have you had any of the following physical symptoms in excess to what is normal for you:
   - indigestion?
   - constipation?
   - diarrhea?
   - stomach cramps?
   - belching?
   - joint pain?
   - backaches?
   - muscles aches?
   - frequent urination?
   - sweating?
   - headaches?
   - heart palpitations?
   - hyperventilation (shortness of breath)?

If *yes* to any of the above: How much have these things been bothering you? How bad have they gotten and how often have they occurred in the past week?

*Rating guideline:* Do not rate symptoms that are side effects from taking medications or those that are only related to gastrointestinal ailments.

8. **Loss of interest:** *(less involved in usual activities – score only if change occurred acutely, or in less than one month)* How have you been spending your time this past week (not including work and chores)? Have you felt interested in what you usually like to do? Have you spent any less time engaging in these activities?

If *not* as interested, or has not been engaged in activities during the past week: Have you had to push yourself to do the things you normally enjoy? Have you stopped doing anything you used to do? Can you look forward to anything or have you lost interest in many of the hobbies from which you used to derive pleasure?

*Rating guideline:* Ratings of this item should be based on loss of interest during the past week. This item should be rated 0 if the loss of interest is long-standing (longer than 1 month) and there has been no worsening during the past month. This item should be rated 0 if the patient has not been engaged in activities because of physical illness or disability or if the patient has persistent apathy associated with his/her dementia.
C. Physical Signs

9. **Appetite Loss:** *(eating less than usual)* How has your appetite been this past week compared to normal? Has it decreased at all? Have you felt less hungry or had to remind yourself to eat? Have others had to urge or force you to eat?

*Rate 1 if appetite loss but still eating on his/her own. Rate 2 if eats only with others’ encouragement or urging.*

10. **Weight Loss:** Have you lost any weight in the past month that you have not been trying to lose? (If not sure: are your clothes any looser on you?) If weight loss is associated with present illness (i.e., not due to diet or exercise): how many pounds have you lost?

*Rating guideline:* Rate 2 if weight loss is greater than 5 lbs. in past month.

11. **Lack of energy:** *(fatigues easily, unable to sustain activities – score only if change occurred acutely, or in less than one month)* Does the patient appear fatigued or drained of energy?

*Ask the patient:* How has your energy been this past week compared to normal? Have you been tired all the time? Have you needed to take naps because of fatigue? Have you had any of the following symptoms due to lack of energy only *(not due to physical problems):*

- heaviness in limbs, back, or head?
- felt like you are dragging through the day?

*Rating guideline:* Ratings of this item should be based on lack of energy during the week prior to the interview. This item should be rated 0 if the lack of energy is long-standing (longer than 1 month) and there has been no worsening during the past month.

D. Cyclic Functions

12. **Diurnal variation of mood:** *(symptoms worse in the morning)* Regarding your mood (feelings and symptoms of depression), is there any part of the day in which you usually feel better or worse? (Or does it not make any difference, or vary according to the day or situation?)

If yes to a difference in mood during the day: Is your depression worse in the morning or the evening? If worse in the morning: is this a mild or a very noticeable difference?

*Rating guideline:* Diurnal variation of mood is only rated for symptoms that are worse in the morning. Variation of mood in the evening can be related to sundowning inpatients with dementia and should not be rated.
13. **Difficulty falling asleep:** *(later than usual for this individual)* Have you had any trouble falling asleep this past week? Does it take you longer than usual to fall asleep once you get into bed (i.e., more than 30 min)?

*Rating guideline: Rate 1 if only the subject had trouble falling asleep a few nights in the past week. Rate 2 if s/he has had difficulty falling asleep every night this past week.*

14. **Multiple awakenings during sleep:** Have you been waking up in the middle of the night this past week more than usual? If **yes**: do you get out of bed? Is this just to go to the bathroom and then you go back to sleep?

*Rating guideline: Do not rate if waking is only to go to the bathroom and then is able to fall right back asleep. Rate 1 if sleep has only been restless and disturbed occasionally in the past week, and has not gotten out of bed (besides going to the bathroom). Rate 2 if s/he gets out of bed in the middle of the night (for reasons other than voiding), and/or has been waking up every night in the past week.*

15. **Early morning awakenings:** *(earlier than usual for this individual)* Have you been waking up any earlier this week than you normally do (without an alarm clock or someone waking you up)? If **yes**: how much earlier are you waking up than is normal for you? Do you get out of bed when you wake up early, or do you stay in bed and/or go back to sleep?

*Rating guideline: Rate 1 if s/he wakes up on his/her own but then goes back to sleep. Rate 2 if s/he wakes earlier than usual and then gets out of bed for the day (i.e., s/he cannot fall back asleep).*

**E. Ideational Disturbance**

16. **Suicide:** *(feels life is not worth living, has suicidal wishes, or makes suicide attempt)* During the past week, have you had any thoughts that life is not worth living or that you would be better off dead? Have you had any thoughts of hurting or even killing yourself?

*Rating guideline: Rate 1 for passive suicidal ideation (i.e., feels life isn’t worth living). Rate 2 for active suicidal wishes, and/or any recent suicide attempts, gestures, or plans. History of suicide attempt in a subject with no passive or active suicidal ideation does not in itself justify a score.*

17. **Self-deprecation:** *(self-blame, poor self-esteem, feelings of failure)* How have you been feeling about yourself this past week? Have you been feeling especially critical of yourself, feeling that you have done things wrong or let others down? Have you been feeling guilty about anything you have or have not done? Have you been comparing yourself to others, or feeling worthless, or like a failure? Have you felt “no good” or “inferior”?

*Rating guideline: Rate 1 for loss of self-esteem or self-reproach. Rate 2 for feelings of failure, or statements that s/he is “worthless”, “inferior”, or “no good”.*
18. **Pessimism:** * (anticipation of the worst) Have you felt pessimistic or discouraged about your future this past week? How do you think things will work out for yourself? Can you see your situation improving? Can you be reassured by others that things will be okay or that your situation will improve?

**Rating guideline:** Rate 1 if s/he feels pessimistic, but can be reassured by self or others. Rate 2 if feels hopeless and cannot be reassured that his/her future will be okay.

19. **Mood congruent delusions:** * (delusions of poverty, illness, or loss) Have you been seeing or hearing things that others do not see or hear? Has your imagination been playing tricks on you in any way, or have you been having ideas that others may not understand? Do you think that your present illness is a punishment, or that you have brought it on yourself in some way? Do you think you have a lot less money or material possessions than others say that you have?

**References**


1. GAIT LEVEL SURFACE

Instructions: Walk at your normal speed from here to the next mark (6 m [20 ft]).
Grading: Mark the highest category that applies.
(3) Normal—Walks 6 m [20 ft] in less than 5.5 seconds, no assistive devices, good speed, no evidence for imbalance, normal gait pattern, deviates no more than 15.24 cm (6 in) outside of the 30.48-cm (12-in) walkway width.
(2) Mild impairment—Walks 6 m [20 ft] in less than 7 seconds but greater than 5.5 seconds, uses assistive device, slower speed, mild gait deviations, or deviates 15.24–25.4 cm (6–10 in) outside of the 30.48-cm (12-in) walkway width.
(1) Moderate impairment—Walks 6 m [20 ft], slow speed, abnormal gait pattern, evidence for imbalance, or deviates 25.4–38.1 cm (10–15 in) outside of the 30.48-cm (12-in) walkway width.
(0) Severe impairment—Cannot walk 6 m [20 ft] without assistance, severe gait deviations or imbalance, deviates greater than 38.1 cm (15 in) outside of the 30.48-cm (12-in) walkway width or reaches and touches the wall.

2. CHANGE IN GAIT SPEED

Instructions: Begin walking at your normal pace (for 1.5 m [5 ft]). When I tell you “go,” walk as fast as you can (for 1.5 m [5 ft]). When I tell you “slow,” walk as slowly as you can (for 1.5 m [5 ft]).
Grading: Mark the highest category that applies.
(3) Normal— Able to smoothly change walking speed without loss of balance or gait deviation. Shows a significant difference in walking speeds between normal, fast, and slow speeds. Deviates no more than 15.24 cm (6 in) outside of the 30.48-cm (12-in) walkway width.
(2) Mild impairment—Is able to change speed but demonstrates mild gait deviations, deviates 15.24–25.4 cm (6–10 in) outside of the 30.48-cm (12-in) walkway width, or no gait deviations but unable to achieve a significant change in velocity, or uses an assistive device.
(1) Moderate impairment— Makes only minor adjustments to walking speed, or accomplishes a change in speed with significant gait deviations, deviates 25.4–38.1 cm (10–15 in) outside the 30.48-cm (12-in) walkway width, or changes speed but loses balance but is able to recover and continue walking.
(0) Severe impairment—Cannot change speeds, deviates greater than 38.1 cm (15 in) outside 30.48-cm (12-in) walkway width, or loses balance and has to reach for wall or be caught.

3. GAIT WITH HORIZONTAL HEAD TURNS

Instructions: Walk from here to the next mark 6 m (20 ft) away. Begin walking at your normal pace. Keep walking straight; after 3 steps, turn your head to the right and keep walking straight while looking to the right. After 3 more steps, turn your head to the left and keep walking straight while looking left. Continue alternating looking right and left every 3 steps until you have completed 2 repetitions in each direction.
Grading: Mark the highest category that applies.
(3) Normal—Performs head turns with moderate change in gait velocity, slows down, deviates 25.4–38.1 cm (10–15 in) outside 30.48-cm (12-in) walkway width but recovers, can continue to walk.
(2) Mild impairment—Performs head turns with moderate change in gait velocity, slows down, deviates 25.4–38.1 cm (10–15 in) outside 30.48-cm (12-in) walkway width but recovers, can continue to walk.
(1) Moderate impairment—Performs task with moderate change in gait velocity, slows down, deviates 25.4–38.1 cm (10–15 in) outside 30.48-cm (12-in) walkway width but uses assistive device.
(0) Severe impairment—Performs task with moderate change in gait velocity, slows down, deviates 25.4–38.1 cm (10–15 in) outside 30.48-cm (12-in) walkway width, loses balance, stops, reaches for wall).

4. GAIT WITH VERTICAL HEAD TURNS

Instructions: Walk from here to the next mark 6 m [20 ft]. Begin walking at your normal pace. Keep walking straight; after 3 steps, tip your head up and keep walking straight while looking up. After 3 more steps, tip your head down, keep walking straight while looking down. Continue alternating looking up and down every 3 steps until you have completed 2 repetitions in each direction.
Grading: Mark the highest category that applies.
(3) Normal—Performs head turns with no change in gait. Deviates no more than 15.24 cm (6 in) outside 30.48-cm (12-in) walkway width.
(2) Mild impairment—Performs task with slight change in gait velocity (eg, minor disruption to smooth gait path), deviates 15.24–25.4 cm (6–10 in) outside 30.48-cm (12-in) walkway width or uses assistive device.
(1) Moderate impairment—Performs task with moderate change in gait velocity, slows down, deviates 25.4–38.1 cm (10–15 in) outside 30.48-cm (12-in) walkway width but recovers, can continue to walk.
(0) Severe impairment—Performs task with severe disruption of gait (eg, staggers 38.1 cm [15 in] outside 30.48-cm [12-in] walkway width, loses balance, stops, reaches for wall).

5. GAIT AND PIVOT TURN

Instructions: Begin with walking at your normal pace. When I tell you, ”turn and stop,” turn as quickly as you can to face the opposite direction and stop.
Grading: Mark the highest category that applies.
(3) Normal— Pivot turns safely within 3 seconds and stops quickly with no loss of balance.
(2) Mild impairment— Pivot turns safely in >3 seconds and stops with no loss of balance, or pivot turns safely within 3 seconds and stops with mild imbalance, requires small steps to catch balance.
(1) Moderate impairment—Turns slowly, requires verbal cueing, or requires several small steps to catch balance following turn and stop.
(0) Severe impairment—Cannot turn safely, requires assistance to turn and stop.

6. STEP OVER OBSTACLE

Instructions: Begin walking at your normal speed. When you come to the shoe box, step over it, not around it, and keep walking.
Grading: Mark the highest category that applies.
(3) Normal— Is able to step over 2 stacked shoe boxes taped together (22.86 cm [9 in] total height) without changing gait speed; no evidence of imbalance.
(2) Mild impairment— Is able to step over one shoe box (11.43 cm [4.5 in] total height) without changing gait speed; no evidence of imbalance.
(1) Moderate impairment—Is able to step over one shoe box (11.43 cm [4.5 in] total height) but must slow down and adjust steps to clear box safely. May require verbal cueing.
(0) Severe impairment—Cannot perform without assistance.

(Continued)
7. GAIT WITH NARROW BASE OF SUPPORT

Instructions: Walk on the floor with arms folded across the chest, feet aligned heel to toe in tandem for a distance of 3.6 m [12 ft]. The number of steps taken in a straight line are counted for a maximum of 10 steps.

Grading: Mark the highest category that applies.

(3) Normal—Is able to ambulate for 10 steps heel to toe with no staggering.

(2) Mild impairment—Ambulates 7–9 steps.

(1) Moderate impairment—Ambulates 4–7 steps.

(0) Severe impairment—Ambulates less than 4 steps heel to toe or cannot perform without assistance.

8. GAIT WITH EYES CLOSED

Instructions: Walk at your normal speed from here to the next mark (6 m [20 ft]) with your eyes closed.

Grading: Mark the highest category that applies.

(3) Normal—Walks 6 m (20 ft), no assistive devices, good speed, no evidence for imbalance, normal gait pattern, deviates no more than 15.24 cm (6 in) outside 30.48-cm (12-in) walkway width. Ambulates 6 m (20 ft) in less than 7 seconds.

(2) Mild impairment—Walks 6 m (20 ft), uses assistive device, slower speed, mild gait deviations, deviates 15.24–25.4 cm (6–10 in) outside 30.48-cm (12-in) walkway width. Ambulates 6 m (20 ft) in less than 7 seconds.

(1) Moderate impairment—Walks 6 m (20 ft), slow speed, abnormal gait pattern, evidence for imbalance, deviates 25.4–38.1 cm (10–15 in) outside 30.48-cm (12-in) walkway width. Requires more than 9 seconds to ambulate 6 m (20 ft).

(0) Severe impairment—Cannot walk 6 m (20 ft) without assistance, severe gait deviations or imbalance, deviates greater than 38.1 cm (15 in) outside 30.48-cm (12-in) walkway width or will not attempt task.

9. AMBULATING BACKWARDS

Instructions: Walk backwards until I tell you to stop.

Grading: Mark the highest category that applies.

(3) Normal—Walks 6 m (20 ft), no assistive devices, good speed, no evidence for imbalance, normal gait pattern, deviates no more than 15.24 cm (6 in) outside 30.48-cm (12-in) walkway width.

(2) Mild impairment—Walks 6 m (20 ft), uses assistive device, slower speed, mild gait deviations, deviates 15.24–25.4 cm (6–10 in) outside 30.48-cm (12-in) walkway width.

(1) Moderate impairment—Walks 6 m (20 ft), slow speed, abnormal gait pattern, evidence for imbalance, deviates 25.4–38.1 cm (10–15 in) outside 30.48-cm (12-in) walkway width.

(0) Severe impairment—Cannot walk 6 m (20 ft) without assistance, severe gait deviations or imbalance, deviates greater than 38.1 cm (15 in) outside 30.48-cm (12-in) walkway width or will not attempt task.

10. STEPS

Instructions: Walk up these stairs as you would at home (ie, using the rail if necessary). At the top turn around and walk down.

Grading: Mark the highest category that applies.

(3) Normal—Alternating feet, no rail.

(2) Mild impairment—Alternating feet, must use rail.

(1) Moderate impairment—Two feet to a stair; must use rail.

(0) Severe impairment—Cannot do safely.

TOTAL SCORE: _______ MAXIMUM SCORE 30

* Adapted from Dynamic Gait Index. Modified and reprinted with permission of authors and Lippincott Williams & Wilkins (http://bww.com).
Dynamic Gait Index

Description:
Developed to assess the likelihood of falling in older adults. Designed to test eight facets of gait.

Equipment needed: Box (Shoebox), Cones (2), Stairs, 20’ walkway, 15” wide

Completion:
Time: 15 minutes
Scoring: A four-point ordinal scale, ranging from 0-3. “0” indicates the lowest level of function and “3” the highest level of function.
Total Score = 24

Interpretation: ≤ 19/24 = predictive of falls in the elderly
> 22/24 = safe ambulators

1. Gait level surface
Instructions: Walk at your normal speed from here to the next mark (20’)
Grading: Mark the lowest category that applies.
(3) Normal: Walks 20’, no assistive devices, good sped, no evidence for imbalance, normal gait pattern
(1) Moderate Impairment: Walks 20’, slow speed, abnormal gait pattern, evidence for imbalance.
(0) Severe Impairment: Cannot walk 20’ without assistance, severe gait deviations or imbalance.

2. Change in gait speed
Instructions: Begin walking at your normal pace (for 5’), when I tell you “go,” walk as fast as you can (for 5’). When I tell you “slow,” walk as slowly as you can (for 5’).
Grading: Mark the lowest category that applies.
(3) Normal: Able to smoothly change walking speed without loss of balance or gait deviation. Shows a significant difference in walking speeds between normal, fast and slow speeds.
(2) Mild Impairment: Is able to change speed but demonstrates mild gait deviations, or not gait deviations but unable to achieve a significant change in velocity, or uses an assistive device.
(1) Moderate Impairment: Makes only minor adjustments to walking speed, or accomplishes a change in speed with significant gait deviations, or changes speed but has significant gait deviations, or changes speed but loses balance but is able to recover and continue walking.
(0) Severe Impairment: Cannot change speeds, or loses balance and has to reach for wall or be caught.

3. Gait with horizontal head turns
Instructions: Begin walking at your normal pace. When I tell you to “look right,” keep walking straight, but turn your head to the right. Keep looking to the right until I tell you, “look left,” then keep walking straight and turn your head to the left. Keep your head to the left until I tell you “look straight,” then keep walking straight, but return your head to the center.
Grading: Mark the lowest category that applies.
(3) Normal: Performs head turns smoothly with no change in gait.
(2) Mild Impairment: Performs head turns smoothly with slight change in gait velocity, i.e., minor disruption to smooth gait path or uses walking aid.
(1) Moderate Impairment: Performs head turns with moderate change in gait velocity, slows down, staggers but recovers, can continue to walk.
(0) Severe Impairment: Performs task with severe disruption of gait, i.e., staggers outside 15” path, loses balance, stops, reaches for wall.
4. Gait with vertical head turns

**Instructions:** Begin walking at your normal pace. When I tell you to “look up,” keep walking straight, but tip your head up. Keep looking up until I tell you, “look down,” then keep walking straight and tip your head down. Keep your head down until I tell you “look straight,” then keep walking straight, but return your head to the center.

**Grading:** Mark the lowest category that applies.

1. Normal: Performs head turns smoothly with no change in gait.
2. Mild Impairment: Performs head turns smoothly with slight change in gait velocity, i.e., minor disruption to smooth gait path or uses walking aid.
3. Moderate Impairment: Performs head turns with moderate change in gait velocity, slows down, staggers but recovers, can continue to walk.
4. Severe Impairment: Performs task with severe disruption of gait, i.e., staggers outside 15” path, loses balance, stops, reaches for wall.

5. Gait and pivot turn

**Instructions:** Begin walking at your normal pace. When I tell you, “turn and stop,” turn as quickly as you can to face the opposite direction and stop.

**Grading:** Mark the lowest category that applies.

1. Normal: Pivot turns safely within 3 seconds and stops quickly with no loss of balance.
3. Moderate Impairment: Turns slowly, requires verbal cueing, requires several small steps to catch balance following turn and stop.
4. Severe Impairment: Cannot turn safely, requires assistance to turn and stop.

6. Step over obstacle

**Instructions:** Begin walking at your normal speed. When you come to the shoebox, step over it, not around it, and keep walking.

**Grading:** Mark the lowest category that applies.

1. Normal: Is able to step over the box without changing gait speed, no evidence of imbalance.
2. Mild Impairment: Is able to step over box, but must slow down and adjust steps to clear box safely.
3. Moderate Impairment: Is able to step over box but must stop, then step over. May require verbal cueing.
4. Severe Impairment: Cannot perform without assistance.

7. Step around obstacles

**Instructions:** Begin walking at normal speed. When you come to the first cone (about 6’ away), walk around the right side of it. When you come to the second cone (6’ past first cone), walk around it to the left.

**Grading:** Mark the lowest category that applies.

1. Normal: Is able to walk around cones safely without changing gait speed; no evidence of imbalance.
2. Mild Impairment: Is able to step around both cones, but must slow down and adjust steps to clear cones.
3. Moderate Impairment: Is able to clear cones but must significantly slow, speed to accomplish task, or requires verbal cueing.
4. Severe Impairment: Unable to clear cones, walks into one or both cones, or requires physical assistance.

8. Steps

**Instructions:** Walk up these stairs as you would at home, i.e., using the railing if necessary. At the top, turn around and walk down.

**Grading:** Mark the lowest category that applies.

1. Normal: Alternating feet, no rail.
3. Moderate Impairment: Two feet to a stair, must use rail.

**TOTAL SCORE:** ___ / 24

References:
### Gait Velocity Measurement

**Equipment needed:**
- Masking tape or paper tape (4 pieces).
- Tape measure (English or metric)
- Stopwatch.

**Setup:**
Decide on length of gait test distance, acceleration zone and deceleration zone based on space availability. Be sure to have unobstructed floor space.
- Using masking tape or paper tape mark a start line on the floor (line#1).
- Measure an acceleration zone of 1 step to 3 meters based on available space and place a piece of tape at this distance on the floor (line#2).
- Measure the test distance of 10 ft etc and place a piece of tape on the floor (line#3).
- Measure a deceleration zone of 1 step to 3 meters and place a piece of tape at this distance on the floor (line#4).

**Measuring comfortable gait speed:**

**Start position:** Patient/client stands behind the start line.

**Instructions given:**
- Ask patient to walk at a comfortable pace from before the start line (line#1) to the end line (line#4).

**Measurement:**
- Using a stopwatch, time from when the patient’s leading limb (toe) crosses the test distance line (line #2) until the leading limb crosses the end test distance line (line#3). Be sure patient does not stop at line #3, patient should walk to line #4 to insure deceleration does not occur in the test distance.

**Calculation:**
Comfortable gait speed = test distance/time to complete test distance.

**Measuring fast gait speed:**
Same as cgs except for the instructions given to the patient.
- Ask patient to walk as fast as you safely can from before the start line (line#1) to the end line (line#4).

**Measurement and calculation are the same as cgs.**
### Normative Data for Gait Velocity

**Summary of Gait speed (ft/sec) over 8 and 20 feet stratified by gender and age.**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age Range (years)</th>
<th>Gait Speed over 8 Feet</th>
<th>Gait Speed over 20 Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Means±SD (95%CI)</td>
<td>Means±SD (95%CI)</td>
</tr>
<tr>
<td>Female</td>
<td>50-59</td>
<td>3.61±0.81</td>
<td>3.64±0.73</td>
</tr>
<tr>
<td></td>
<td>60-69</td>
<td>3.28±0.81</td>
<td>3.30±0.75</td>
</tr>
<tr>
<td></td>
<td>70-79</td>
<td>3.01±0.79</td>
<td>3.05±0.75</td>
</tr>
<tr>
<td></td>
<td>80+</td>
<td>2.50±0.71</td>
<td>2.57±0.72</td>
</tr>
<tr>
<td>Male</td>
<td>50-59</td>
<td>3.66±0.77</td>
<td>3.68±0.69</td>
</tr>
<tr>
<td></td>
<td>60-69</td>
<td>3.38±0.75</td>
<td>3.39±0.69</td>
</tr>
<tr>
<td></td>
<td>70-79</td>
<td>3.13±0.80</td>
<td>3.14±0.75</td>
</tr>
<tr>
<td></td>
<td>80+</td>
<td>2.77±0.79</td>
<td>2.73±0.73</td>
</tr>
</tbody>
</table>


### Comfortable and Fast Gait Speed

<table>
<thead>
<tr>
<th>Age (yr)</th>
<th>Group</th>
<th>Mean for cgs (ft/sec)</th>
<th>Mean for fgs (ft/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-69</td>
<td>Male</td>
<td>4.13</td>
<td>6.43</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.07</td>
<td>5.94</td>
</tr>
<tr>
<td>70-79</td>
<td>Male</td>
<td>4.1</td>
<td>6.36</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.1</td>
<td>5.91</td>
</tr>
<tr>
<td>80-89</td>
<td>Male</td>
<td>2.89</td>
<td>4.23</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>2.63</td>
<td>3.94</td>
</tr>
<tr>
<td>90-101</td>
<td>Male</td>
<td>2.36</td>
<td>4.17</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>2.33</td>
<td>3.44</td>
</tr>
</tbody>
</table>

Gait Velocity

Measurement Procedure:

**Equipment:** Masking or paper tape; stopwatch; tape measure

**Set Up:** Decide on length of gait test distance (4M, 10M, 20M), acceleration zone and deceleration zone based on space availability. Be sure to have unobstructed floor space.
- Using take, mark a start line on the floor (line #1)
- Measure an acceleration zone (1 step – 3 meters) based on available space and place a piece of tape at this distance on the floor (line #2)
- Measure the test distance and place a piece of tape on the floor (line #3)
- Measure a deceleration zone (1 step – 3 meters) and place a piece of tape at this distance on the floor (line #4)

**Conversion Table**

<table>
<thead>
<tr>
<th>Meters</th>
<th>Conversion to Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>13 feet 1.48 inches</td>
</tr>
<tr>
<td>10</td>
<td>32 feet 9.70 inches</td>
</tr>
<tr>
<td>20</td>
<td>65 feet 9.40 inches</td>
</tr>
</tbody>
</table>

**Measuring Comfortable (self-selected) Gait Speed:**

**Start Position:** Patient stands behind start line (line #1).

**Instructions Given:** Ask patient to walk at a comfortable pace from start position to end line (line #4)

**Measurement:** Using a stopwatch, begin timer when the patient’s leading limb (toe) crosses the test distance line (line #2) and end timer when the patient’s leading limb crosses the end test distance line (line #3). Be sure patient does not stop at line #3 and continues to walk to line #4 to eliminate deceleration from test distance.

**Calculation:**

\[
\text{Comfortable gait speed} = \frac{\text{test distance}}{\text{time to complete test distance}} \quad (\text{line #2} \rightarrow \text{line #3})
\]

**Measuring Fast Gait Speed:**

**Start position, measurement and calculation:** as comfortable gait speed except for the instructions given to the patient.

**Instructions Given:** Ask patient to walk as fast as safely able from start position (line #1) to end line (line #4)

**Score Interpretation**

<table>
<thead>
<tr>
<th>Walking Speed</th>
<th>Falls Risk</th>
<th>ADL/IADL Status</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 0.6 m/sec</td>
<td>(+); appropriate for intervention to reduce risk</td>
<td>Dependent in ADLs and IADLs</td>
<td>0 – 0.4 m/sec = household walker 0.4 – 0.6 m/sec = ltd community ambulator</td>
</tr>
<tr>
<td>0.6 – 1.0 m/sec</td>
<td>(+); appropriate for intervention to reduce risk</td>
<td>Dependent – Independent in ADLs and IADLs</td>
<td>Lmtd community – safe community ambulator</td>
</tr>
<tr>
<td>&gt; 1.0 m/sec</td>
<td>Less likely to have adverse event</td>
<td>Independent in ADLs and IADLs</td>
<td>Functional community ambulator</td>
</tr>
</tbody>
</table>

Timed Up and Go (TUG)

- The timed “Up and Go” test measures, in seconds, the time taken by an individual to stand up from a standard arm chair (approximate seat height of 46 cm [18in], arm height 65 cm [25.6 in]), walk a distance of 3 meters (118 inches, approximately 10 feet), turn, walk back to the chair, and sit down.

- The subject walks through the test once before being timed in order to become familiar with the test. Either a stopwatch or a wristwatch with a second hand can be used to time the trial.

- The subject wears their regular footwear and uses their customary walking aid (none, cane, walker). No physical assistance is given. They start with their back against the chair, their arms resting on the armrests, and their walking aid at hand. They are instructed that, on the word “go” they are to get up and walk at a comfortable and safe pace to a line on the floor 3 meters away, turn, return to the chair and sit down again.

- Patients are timed (in seconds) when performing the TUG—3 conditions

  1. TUG alone—From sitting in a chair, stand up, walk 3 meters, turn around, walk back, and sit down.
  2. TUG Cognitive—Complete the task while counting backwards from a randomly selected number between 20 and 100.
  3. TUG Manual—Complete the task while carrying a full cup of water.

Anne Shumway-Cook reports: **The cutoff levels for TUG is 13.5 seconds** or longer with an overall correct prediction rate of 90%; for TUG Manual (while carrying a glass of water) is 14.5 seconds or longer with a 90% correct prediction rate; and TUG Cognitive (while counting backwards) is 15.0 seconds or longer with an overall correct prediction rate of 87%.
Barthel Index of Activities of Daily Living

Instructions: Choose the scoring point for the statement that most closely corresponds to the patient's current level of ability for each of the following 10 items. Record actual, not potential, functioning. Information can be obtained from the patient's self-report, from a separate party who is familiar with the patient's abilities (such as a relative), or from observation. Refer to the Guidelines section on the following page for detailed information on scoring and interpretation.

The Barthel Index

Bowels
0 = incontinent (or needs to be given enemata)
1 = occasional accident (once/week)
2 = continent
Patient's Score: ______________

Bladder
0 = incontinent, or catheterized and unable to manage
1 = accidental accident (max. once per 24 hours)
2 = continent (for over 7 days)
Patient's Score: ______________

Grooming
0 = needs help with personal care
1 = independent face/hair/teeth/shaving (implements provided)
Patient's Score: ______________

Toilet use
0 = dependent
1 = needs some help, but can do something alone
2 = independent (on and off, dressing, wiping)
Patient's Score: ______________

Feeding
0 = unable
1 = needs help cutting, spreading butter, etc.
2 = independent (food provided within reach)
Patient's Score: ______________

Transfer
0 = unable – no sitting balance
1 = major help (one or two people, physical), can sit
2 = minor help (verbal or physical)
3 = independent
Patient's Score: ______________

Mobility
0 = immobile
1 = wheelchair independent, including corners, etc.
2 = walks with help of one person (verbal or physical)
3 = independent (but may use any aid, e.g., stick)
Patient's Score: ______________

Dressing
0 = dependent
1 = needs help, but can do about half unaided
2 = independent (including buttons, zips, laces, etc.)
Patient's Score: ______________

Stairs
0 = unable
1 = needs help (verbal, physical, carrying aid)
2 = independent up and down
Patient's Score: ______________

Bathing
0 = dependent
1 = independent (or in shower)
Patient's Score: ______________

Total Score: ______________

Scoring:
Sum the patient's scores for each item. Total possible scores range from 0 – 20, with lower scores indicating increased disability. If used to measure improvement after rehabilitation, changes of more than two points in the total score reflect a probable genuine change, and change on one item from fully dependent to independent is also likely to be reliable.

Sources:
Guidelines for the Barthel Index of Activities of Daily Living

**General**
- The Index should be used as a record of what a patient does, NOT as a record of what a patient could do.
- The main aim is to establish degree of independence from any help, physical or verbal, however minor and for whatever reason.
- The need for supervision renders the patient not independent.
- A patient's performance should be established using the best available evidence. Asking the patient, friends/relatives, and nurses will be the usual source, but direct observation and common sense are also important. However, direct testing is not needed.
- Usually the performance over the preceding 24 – 48 hours is important, but occasionally longer periods will be relevant.
- Unconscious patients should score '0' throughout, even if not yet incontinent.
- Middle categories imply that the patient supplies over 50% of the effort.
- Use of aids to be independent is allowed.

**Bowels (preceding week)**
- If needs enema from nurse, then 'incontinent.'
- 'Occasional' = once a week.

**Bladder (preceding week)**
- 'Occasional' = less than once a day.
- A catheterized patient who can completely manage the catheter alone is registered as 'continent.'

**Grooming (preceding 24 – 48 hours)**
- Refers to personal hygiene: doing teeth, fitting false teeth, doing hair, shaving, washing face. Implements can be provided by helper.
- Should be able to reach toilet/commode, undress sufficiently, clean self, dress, and leave.
- 'With help' = can wipe self and do some other of above.

**Feeding**
- Able to eat any normal food (not only soft food). Food cooked and served by others, but not cut up.
- 'Help' = food cut up, patient feeds self.

**Transfer**
- From bed to chair and back.
- 'Dependent' = NO sitting balance (unable to sit); two people to lift.
- 'Major help' = one strong/skilled, or two normal people. Can sit up.
- 'Minor help' = one person easily, OR needs any supervision for safety.

**Mobility**
- Refers to mobility about house or ward, indoors. May use aid. If in wheelchair, must negotiate corners/doors unaided.
- 'Help' = by one untrained person, including supervision/moral support.

**Dressing**
- Should be able to select and put on all clothes, which may be adapted.
- 'Half' = help with buttons, zips, etc. (check!), but can put on some garments alone.

**Stairs**
- Must carry any walking aid used to be independent.

**Bathing**
- Usually the most difficult activity.
- Must get in and out unsupervised, and wash self.
- Independent in shower = 'independent' if unsupervised/unaided.

(Collin et al., 1988)
Arm Curl Test: Assesses upper-body strength
Equipment: Stopwatch, folding chair without arms, 5-lb. dumbbell for women, 8-lb. dumbbell for men.
Procedure:
- Patient sits on chair with back straight and feet on the floor. Dominant side of body close to the edge of the seat (side). Dumbbell held at side (elbow at 90 degrees) in the dominant hand with a handshake grip.
- From the down position, the weight is curled up with the palm gradually rotating to a facing-up position during flexion. The weight is then returned to the fully extended down position with the handshake grip.
- Demonstrate the test slowly to show proper form, then at a faster speed to show the pace. Have the patient participate one or two repetitions without the weight to ensure proper form.
- On the signal “go” the participant curls the weight through the full range of motion (from full extension to full flexion) as many times as possible in 30 seconds. The upper arm must remain still throughout the test. Bracing the elbow against the body helps stabilize the upper arm.
Scoring: The score is the total number of arm curls completed in 30 seconds. If the arm is more than halfway up at the end of 30 seconds, it counts as a curl.

<table>
<thead>
<tr>
<th>Normative Data for Arm Curl Test.</th>
<th>Women</th>
<th>60 - 64</th>
<th>65 - 69</th>
<th>70 - 74</th>
<th>75 - 79</th>
<th>80 - 84</th>
<th>85 - 89</th>
<th>90 – 94</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm Curl Test (# of reps)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>13-19</td>
<td>12-18</td>
<td>12-17</td>
<td>11-17</td>
<td>10-16</td>
<td>10-15</td>
<td>8-13</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>16-22</td>
<td>15-21</td>
<td>14-21</td>
<td>13-19</td>
<td>13-19</td>
<td>11-17</td>
<td>10-14</td>
<td></td>
</tr>
</tbody>
</table>
30 second Chair Stand Test

<table>
<thead>
<tr>
<th>Equipment needed:</th>
<th>Start Position:</th>
<th>Procedure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop watch</td>
<td>Seated in the middle of the chair</td>
<td>Demonstration of sit to stand by tester</td>
</tr>
<tr>
<td>Straight back or folding chair (without arms)</td>
<td>Back Straight</td>
<td>On the signal, “go” the subject rises to a full stand then returns to a fully seated position</td>
</tr>
<tr>
<td></td>
<td>Feet flat on floor</td>
<td>Subject will perform 1 to 3 repetitions and is checked for proper form</td>
</tr>
<tr>
<td></td>
<td>Arms crossed at wrist and held against chest</td>
<td>Subject is encouraged to complete as many full stands as possible with in 30 seconds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perform 30 second trial</td>
</tr>
</tbody>
</table>

Scoring:
The score is the total number of stand-executed correctly within 30 seconds. If the participant is more than halfway-up at the end of 30 seconds, it counts as a full stand. If a subject needs to stop or slow down during the 30 second trial, the clock continues to run.


30 second Chair Stand Test Normative Data

<table>
<thead>
<tr>
<th>Normal Range of Scores for 30 second chair stand test*</th>
<th>60-64</th>
<th>65-69</th>
<th>70-74</th>
<th>75-79</th>
<th>80-84</th>
<th>85-89</th>
<th>90-94</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair stand (no. of stands)</td>
<td>14-19</td>
<td>12-18</td>
<td>12-17</td>
<td>11-17</td>
<td>10-15</td>
<td>8-14</td>
<td>7-12</td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chair stand (no. of stands)</td>
<td>12-17</td>
<td>11-16</td>
<td>10-15</td>
<td>10-15</td>
<td>9-14</td>
<td>8-13</td>
<td>4-11</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Normal defined as the middle 50% of the population

Agency Checklist for developing objective test competency

Define baseline Competence.

The therapist should be able to identify, administer, document findings, interpret results (form opinions), form interventions (establish plan of care), and set appropriate goals based on 2 assessment tools for each of the 6 impairment categories listed here.

1. Aerobic capacity/endurance.
2. Balance/Gait
3. Falls risk
4. Cognition/depression
5. Self-care/ADL’s
6. Strength

Define the toolbox for yourself and agency.

Provide education/training to staff including:

a. Competence standards as defined by agency and staff.
b. Competence evaluation tools (via practicals, assessment checklists, field visits, annual appraisals and knowledge based testing (pen and paper tests)).
c. Instruct staff in administration, interpretation etc of the tools in the toolbox via practical, video, lecture - multi-modal learning.

Evaluate staff competence (for identification of appropriate test and administering these tests) via practicals, assessment checklists, field visits, annual appraisals and knowledge based testing (pen and paper tests).

Perform chart audits (to assess for appropriate documentation of test findings, goal setting and establishment of POC) specifically looking at goals, interventions, objective testing and look for interpretative statements, professional opinions.

Provide ongoing education via home study modules, onsite courses, mentorship opportunities, CEU courses, journal clubs, etc.

Have staff develop own learning plan once minimal competency is met. This will encourage continuing competence and a life long learning process. This is the key to bringing up the baseline of practice and providing best care practices that will last.

Unfortunately, most training sessions will bump up the practice in the short term then over time the implementation slips requiring an update of the same material previously presented.

Establishing a culture for continued competence, life long learning and professionalism the gains in practice will be long lasting and more permanent.
## Objective Test Measure Competency

### Self-Assessment Tool

Directions: Place an “X” in the box that BEST describes behavior observed for aspects of competency.

<table>
<thead>
<tr>
<th></th>
<th>Unsatisfactory Performance</th>
<th>Satisfactory Performance</th>
<th>Superior Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Objective Test Measure Selection and Clinical Decision Making.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) I am involved in the tool selection process for objective measures to be utilized.</td>
<td></td>
<td></td>
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<tr>
<td>(b) I use objective measures based on the impairment categories as defined by the Home Health Section Tool Box Task Force.</td>
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<td></td>
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<tr>
<td>(c) I administer the objective tests according to standardized protocols.</td>
<td></td>
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<tr>
<td>(d) I use the results of the objective measures to formulate professional opinion of the patient’s current status and prognosis.</td>
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<td></td>
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</tr>
<tr>
<td>(e) I use the results of the objective measures to develop an appropriate individualized plan of care.</td>
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<tr>
<td>(f) I set goals based on the objective test measures using normative data when appropriate.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rate your overall performance for this competency and record rating:**
- (1) Unsatisfactory, (2) Satisfactory, (3) Superior

**Overall Rating**

### 2. Communication/Collaboration.

<table>
<thead>
<tr>
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<th>Superior Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) I communicate with other disciplines and the Home Health Agency on a regular basis to determine sum total (cumulative) visit counts.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(b) I collaborate with the physician to establish plan of care (POC) and to obtain orders for the agreed upon POC.</td>
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<td></td>
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</tr>
<tr>
<td>(c) I collaborate with the physician when required to discuss patient status, effectiveness of POC and progress towards goal attainment and updating of the POC when necessary.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rate your overall performance for this competency and record rating:**
- (1) Unsatisfactory, (2) Satisfactory, (3) Superior

**Overall Rating**

### 3. Performance of reassessments.

<table>
<thead>
<tr>
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<th>Unsatisfactory Performance</th>
<th>Satisfactory Performance</th>
<th>Superior Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) I perform required 13th visit/19th visit/30 day reassessment before 14th visit/20th visit/30 day reassessment deadlines.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Rate your overall performance for this competency and record rating:**
- (1) Unsatisfactory, (2) Satisfactory, (3) Superior

**Overall Rating**

### 4. Documentation following PPS 2011 Requirements.

<table>
<thead>
<tr>
<th></th>
<th>Unsatisfactory Performance</th>
<th>Satisfactory Performance</th>
<th>Superior Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) I include required elements of reassessment including objective test results in the documentation.</td>
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<tr>
<td>(b) I determine if the current POC is effective in meeting established goals based on objective test results and document this in the clinical record.</td>
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<tr>
<td>(c) If the POC is determined minimally effective or ineffective, I update the POC with physician collaboration and document this in the clinical record.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rate your overall performance for this competency and record rating:**
- (1) Unsatisfactory, (2) Satisfactory, (3) Superior

**Overall Rating**

### 5. Education.

<table>
<thead>
<tr>
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<th>Unsatisfactory Performance</th>
<th>Satisfactory Performance</th>
<th>Superior Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) I participate in the agency’s continuing competence program and/or have developed a professional development plan.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(b) I seek to stay current with my knowledge base by attending continuing education courses, etc.</td>
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<tr>
<td>(c) I have a life long learning plan in place.</td>
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</tr>
</tbody>
</table>

**Rate your overall performance for this competency and record rating:**
- (1) Unsatisfactory, (2) Satisfactory, (3) Superior

**Overall Rating**

_________________________/_______  Date

Signature

Adapted from APTA Self-Assessment Tool for Physical Therapists: Geriatric (2001)
OBJECTIVE TEST MEASURE COMPETENCY
Home Health Agency Assessment Tool

Directions: Place an “X” in the box that BEST describes behavior observed for aspects of competency.

| Unsatisfactory Performance 1 | Satisfactory Performance 2 | Superior Performance 3 |

(a) The therapist is involved in the tool selection process for objective measures to be utilized.
(b) The therapist uses objective measures based on the impairment categories as defined by the Home Health Section Tool Box Task Force.
(c) The therapist administers the objective tests according to standardized protocols.
(d) The therapist uses the results of the objective measures to formulate professional opinion of the patient’s current status and prognosis.
(e) The therapist uses the results of the objective measures to develop an appropriate individualized plan of care.
(f) The therapist sets goals based on the objective test measures using normative data when appropriate.

Rate your overall performance for this competency and record rating:
(1) Unsatisfactory, (2) Satisfactory, (3) Superior
Overall Rating  

2. Communication/Collaboration.
(a) The therapist communicates with other disciplines and the Home Health Agency on a regular basis to determine sum total (cumulative) visit counts.
(b) The therapist collaborates with the physician to establish plan of care (POC) and to obtain orders for the agreed upon POC.
(C) The therapist collaborates with the physician when required to discuss patient status, effectiveness of POC and progress towards goal attainment and updating of the POC when necessary.

Rate your overall performance for this competency and record rating:
(1) Unsatisfactory, (2) Satisfactory, (3) Superior
Overall Rating  

(a) The therapist performs required 13th visit/19th visit/30 day reassessment before 14th visit/20th visit/30 day reassessment deadlines.

Rate your overall performance for this competency and record rating:
(1) Unsatisfactory, (2) Satisfactory, (3) Superior
Overall Rating  

4. Documentation following PPS 2011 Requirements.
(a) The therapist includes required elements of the reassessment including objective test results in their documentation.
(b) The therapist determines if the current POC is effective in meeting established goals based on objective test results and documents this in the clinical record.
(c) If the POC is determined minimally effective or ineffective, the therapist updates the POC with physician collaboration and documents this in the clinical record.

Rate your overall performance for this competency and record rating:
(1) Unsatisfactory, (2) Satisfactory, (3) Superior
Overall Rating  

5. Education.
(a) The therapist participates in the agency’s continuing competence program and/or has developed a professional development plan.
(b) The therapist seeks to remain current with their knowledge base by attending continuing education courses, etc.
(c) The therapist has a life long learning plan in place.

Rate your overall performance for this competency and record rating:
(1) Unsatisfactory, (2) Satisfactory, (3) Superior
Overall Rating  

________________________/______ Date ___________________/______ Date
Therapist Signature Supervisor/Director Signature

Adapted from APTA Self-Assessment Tool for Physical Therapists: Geriatric (2001)