Physical & Functional Assessments in Older Adults

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Faculty Disclosure

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Learning Objectives

At the conclusion of this application-based activity, participants should be able to:

1. Identify appropriate assessment instruments to use for a given set of symptoms or patient complaints.
2. Identify a variety of screening and assessment tools (e.g., mini-cog exam, Katz index of activities of daily living, geriatric depression scale, and others).
3. Apply principles to a geriatric patient case.

Geriatric Assessment

- Full assessment includes
  - Physical assessment
  - Laboratory tests
  - Review of medical problems and medications
  - Cognitive assessment
  - Functional assessment
  - Social Assessment
  - Family history
- Assessment tailored to patient
  - Age
  - Frailty
  - Living situation
  - Includes caregivers / family
  - Includes interdisciplinary team

Geriatric Assessment - Brief Topics

• Physical Assessment
  • Observations
  • Vitals signs, weight
  • Eyes, ears, mouth, skin
  • Cardiovascular, musculoskeletal, abdominal
  • Urologic, neurologic, others

Geriatric Assessment - Brief Topics

• History
  • Social History
    • Tobacco, alcohol, illicit drug-use
  • Full Medication History/Medication Reconciliation
    • Includes where medications are stored and pharmacy used
  • Past Medical History
    • Helps better understand appropriateness
  • Drug-induced adverse events/Prescribing Cascade
Medication Assessment

• **Immunizations**
  - Influenza (inactivated)
    - Standard dose versus high dose
  - Pneumococcal
    - PPSV23 and PCV13

<table>
<thead>
<tr>
<th>If...</th>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 65 and no PPSV23 or no PCV13</td>
<td>PCV13 followed by PPSV23 (6-12 months later)</td>
</tr>
<tr>
<td>≥ 65 and PPSV23 and no PCV13</td>
<td>PCV13 one year after PPSV23</td>
</tr>
<tr>
<td>≥ 65 and PCV13 and no PPSV23</td>
<td>PPSV23 6-12 months after PCV13</td>
</tr>
<tr>
<td>&lt;65 when administered PPS23 and now ≥ 65</td>
<td>PCV13 on year after (initial) PPSV23 then PPSV23 at least one year after PCV13 and at least 5 years after initial PPSV23</td>
</tr>
</tbody>
</table>

http://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html

Medication Assessment

• **Medication Adherence**
  - Understand who is in charge and what method of administration is used
  - Intentional versus non-intentional non-adherence
    - Intentional – costs or adverse effects
    - Non-Intentional – too complex/forgets (or takes too much)

  - Medication adherence tools
    - Modified-Morisky scale
    - Trails B test

  - Medication adherence actions
    - Pill counts
    - Fill history per pharmacy

Chung et al. J Am Geriatr Soc. 2015;63(S1):S76.
Medication Assessment

• Medication Duration
  • Certain medications should only be taken for a specific duration
  • Extended exposure to these medications may provide no further benefit and contribute to harm
  • These, plus other medications, should have initial year of started medications documented or assessed to avoid overtreatment

<table>
<thead>
<tr>
<th>Medication</th>
<th>Duration</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphosphonates</td>
<td>3-5 years</td>
<td>Atypical fractures</td>
</tr>
<tr>
<td>PPI for GERD</td>
<td>≤ 1 month</td>
<td>Fractures, malabsorption, electrolyte issues (Mg)</td>
</tr>
<tr>
<td>Dual-Antiplatelet</td>
<td>1-2.5 years</td>
<td>GI Bleed</td>
</tr>
</tbody>
</table>


Active Learning

You are the consultant pharmacist at a short-term rehabilitation. You’ve made it a point to ensure vaccinations are up-to-date. You are evaluating a 68 year old patient with history of HTN, smoking, and recent stroke. Her vaccinations include:

• Influenza 10/2014
• PPSV23 7/2017
• Tdap Booster 5/2012
• Hepatitis A/B titers present

What vaccinations would you recommend
  a) Vaccinations up-to-date
  b) Herpes Zoster only
  c) PCV13 only
  d) Both Herpes Zoster and PCV13
Active Learning

When performing a medication assessment, which of the following is the most important to assess how long the patient has been taking the medication?

a) Tamoxifen for breast cancer  
b) Loop diuretic for CHF  
c) 5ARI for BPH  
d) Pravastatin for CAD prevention

Other Assessments

• Cognitive  
• Mood  
• Behavior  
• Functional  
• Pain  
• Others
# Cognitive Assessment

<table>
<thead>
<tr>
<th>Test</th>
<th>Abbreviation</th>
<th>Interpretation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini-Mental State Exam</td>
<td>MMSE</td>
<td>24-30 normal; 18-23 mild; 10-17 moderate; &lt;10 severe</td>
<td>30 point evaluation; copyrighted</td>
</tr>
<tr>
<td>Montreal Cognitive Assessment</td>
<td>MoCA</td>
<td>26-30 normal; &lt;26 MCI or dementia</td>
<td>30 point evaluation; validated in &gt;20 languages; more sensitive than MMSE</td>
</tr>
<tr>
<td>St. Louis University Mental Status Exam</td>
<td>SLUMS</td>
<td>27-30 normal; 21-26 MCI; &lt;21 dementia</td>
<td>Rarely used; Normal, MCI, Dementia</td>
</tr>
<tr>
<td>Short Blessed Test</td>
<td>SBT</td>
<td>0-4 Normal; 5-9 questionable; 10 or more dementia</td>
<td>Evaluates 6 items (28 total points); more sensitive than MMSE</td>
</tr>
<tr>
<td>Alzheimer’s Disease Assessment Scale –</td>
<td>ADAS-cog</td>
<td>Changes in 4 points considered significant</td>
<td>Used for Research Purposes; 0-70 → 0=no cognitive impairment</td>
</tr>
<tr>
<td>Cognitive subscale</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Clinical Dementia Rating (CDR)

<table>
<thead>
<tr>
<th>Impairment</th>
<th>None (0)</th>
<th>Questionable (0.5)</th>
<th>Mild (1)</th>
<th>Moderate (2)</th>
<th>Severe (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td></td>
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<tr>
<td>Orientation</td>
<td></td>
<td></td>
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<tr>
<td>Judgement/Problem</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Solving</td>
<td></td>
<td></td>
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<tr>
<td>Community Affairs</td>
<td></td>
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<tr>
<td>Home/Hobbies</td>
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<tr>
<td>Personal Care</td>
<td></td>
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</tbody>
</table>


https://www.alz.washington.edu/cdrnacc.html
Executive Function

- Trail-Making Tests
  - TMT-B
    - Variable cut-offs
    - >273 seconds – impaired

Neuropsychiatric Assessment

- Depression
  - Geriatric Depression Scale (GDS)
    - Long-Form (30 items)
    - Short-Form (15 items)
  - Patient Health Questionnaire
    - PHQ-2 and PHQ-9
  - Cornell Scale for Depression in Dementia
    - Ratings based on patient signs and symptoms over one week
    - Scale of 0-12 with >12 is probable depression
  - Beck Depression Inventory
    - Self-rated scale containing 22 questions
  - Hamilton Depression
    - Training rated
    - Needs existing diagnosis of depression
Neuropsychiatric Assessment

• Behavior
  • Behavioral Pathology in Alzheimer’s Disease Rating Scale (BEHAVE-AD)
  • Neuropsychiatric Inventory (NPI)
    • BEHAVE-AD and NPI-Q used in research settings

• Neuropsychiatric Inventory Questionnaire (NPI-Q)
  • Can be completed in <5 minutes and validated against NPI
    • 13 Yes/No and Severity questions
      • Delusions, hallucinations, agitation, depression, anxiety, elation, apathy,
      • Disinhibition, irritability, motor disturbance, nighttime behaviors, appetite


Functional Assessment

• Function
  • Measures of Physical Function (ADLs & IADLs)
    • Ability to perform without human assistance
      • Independent
    • Ability to perform with some human assistance
      • Partially independent
    • Inability to perform, even with assistance
      • Dependent
  • Vulnerable Elders Survey
    • Predictors risk for death or functional decline
    • Assesses
      • ADLs/IADLS
        • Shopping, light housework, finances, walking across room, and bathing
      • Patient characteristics/Disease states
        • Age, Self-rate health, and disease states – dementia, DM, stroke, MI, valvular disease, etc
        • Score 3 or more are 4x at risk compared to <3

http://www.rand.org/health/projects/acoee/survey.html
### Functional Assessment

#### Falls/Balance

<table>
<thead>
<tr>
<th>Name</th>
<th>Abbreviation</th>
<th>Description</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timed Up and Go Test</td>
<td>TUG</td>
<td>From seated position → rise, walk 3M, return and sit</td>
<td>&lt;20 seconds – independent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;14 seconds – fall risk</td>
</tr>
<tr>
<td>Romberg Test</td>
<td>RT</td>
<td>Stand with feet together with eyes open and closed</td>
<td></td>
</tr>
<tr>
<td>Five Times Sit to Stand</td>
<td>FTSS</td>
<td>Arms crossed, stand and sit 5 times</td>
<td>&gt;14 seconds – fall risk</td>
</tr>
</tbody>
</table>


### Assessment for Pain

- **P** – Provoking
- **Q** – Quality
- **R** – Region/Radiates
- **S** – Severity
- **T** – Timing / Temporal
- **U** – Impact on “U”
Pain Scales

- Scales for Assessing Pain Severity
  - 0-10 Numeric Rating Scale
  - Verbal Descriptor
  - Faces Pain Scale
    - [http://www.wongbakerfaces.org/](http://www.wongbakerfaces.org/)
  - Pain Thermometer
    - [http://www.geriatricpain.org/Content/Assessment/Intact/Pages/PainThermometerScale.aspx](http://www.geriatricpain.org/Content/Assessment/Intact/Pages/PainThermometerScale.aspx)

Nutritional Assessment

- Mini-Nutritional Assessment (MNA)
- Mini-Nutritional Assessment-Short Form (MNA-SF)
- Malnutrition Universal Screening Tool (MUST)
  - [http://www.bapen.org.uk/screening-for-malnutrition/must/introducing-must](http://www.bapen.org.uk/screening-for-malnutrition/must/introducing-must)
Nutritional Assessment

- Simplified Nutrition Assessment Tool (SNAQ)
- Subjective Global Assessment (SGA)
- Seniors in the community: Risk Evaluation for Eating and Nutrition Version II (Screen II)

Other Assessments

- Abnormal Involuntary Movement Scale (AIMS)
  - Tests for tardive dyskinesia over time
  - Dopamine blocking agents
    - 1<sup>st</sup> generation antipsychotics (AP) > 2<sup>nd</sup> generation AP
    - Other DA blocking agents → metoclopramide
  - Highest level of severity
    - Not simply adding up numbers
Active Learning

You would like to incorporate a cognitive assessment into clinic. What is the best/most practice assessment tool that can be used?

a) MMSE
b) MOCA
c) ADAS-Cog
d) CDR

You would like to incorporate an assessment for depression screening into clinic. All of the following tools, EXCEPT ________ should be considered.

a) GDS
b) PHQ-9
c) Cornell
d) Hamilton
Conclusion

• There are many assessments that can be performed in older adults
  • Pharmacists should be able to perform medication-related assessments
  • Pharmacists should be able to understand other assessments