The Intermountain Cognitive Care Development Team developed this care process model (CPM) to improve the diagnosis and treatment of patients with cognitive impairment across the staging continuum from mild impairment to advanced dementia. It is primarily intended as a tool to assist primary care teams in making the diagnosis of dementia and in providing optimal treatment and support to patients and their loved ones. This CPM is based on existing guidelines, where available, and expert opinion.

Why Focus on Diagnosis and Management of Dementia?

- **Prevalence, trend, and morbidity.** In 2016, one in nine people age 65 and older (11%) has Alzheimer’s, the most common dementia. By 2050, that number may nearly triple, and Utah is expected to experience one of the greatest increases of any state in the nation.\(^6\) One in three seniors dies with a diagnosis of some form of dementia.\(^\text{AL2}\)

- **Costs and burdens of care.** In 2016, total payments for healthcare, long-term care, and hospice were estimated to be $236 billion for people with Alzheimer’s and other dementias. Just under half of those costs were borne by Medicare.\(^\text{HUR}\)

- **Physician support needs.** Dementia goes undetected in 50% of patients at Intermountain who likely suffer from its effects. Based on an Intermountain internal needs assessment, a majority of internal medicine physicians identified support for cognitively impaired patients as a top practice need, and 88% of primary care physicians felt that a care process model addressing cognitive impairment would be helpful.\(^\text{SK1}\)

- **Importance of identification and treatment.** While there is no cure for dementia, treatment (both pharmacologic and non-pharmacologic) has been shown to improve quality of care, quality of life for patients, caregiver assistance, and caregiver mental health as well as to delay nursing home placement and decrease costs to healthcare systems.\(^\text{00R1, WC, GAL1, MITT, BAS, SP, CAL, FRE, MCL}\)

In addition, dementia patients have voiced a need for **more timely diagnosis, better education about dementia management**, and **better support and follow-up** for patients and caregivers from healthcare providers (Alzheimer’s Association focus group).

**Intermountain Best Practice Recommendation**

All Medicare annual wellness visits (AWVs) should include a brief, two- to three-minute cognitive screening with the *Mini-Cog™* cognitive screening tool. Training links (page 3) and forms (pages 21–22) are included in this CPM. Intermountain will begin measuring rates of AWV *Mini-Cog™* screening in 2017.

**What’s Inside?**

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**Measurement & Goals**

- Complete a *Mini-Cog™* cognitive screening for a minimum of 75% of Annual Wellness Visit (AWV) patients
- Administer a MoCA follow-up cognitive screening for at least 50% of patients whose *Mini-Cog™* score showed potential cognitive decline
- Increase the rate of diagnosis of dementia by 5% system wide

*Indicates an Intermountain measure*
MILD COGNITIVE IMPAIRMENT AND DEMENTIA SCREENING AND DIAGNOSIS

KEY RECOMMENDATIONS

- Screen patients to determine if they meet criteria for mild cognitive impairment or dementia using validated screening tools (Mini-Cog™ and MoCA).
- Complete Mini-Cog™ and MoCA training prior to first use, and be sure to administer the screenings the same way every time.
- Conduct a Mini-Cog™ screening at each Medicare annual wellness visit (AWV).
- Understand the overlap between depression and dementia.
- Interview a knowledgeable informant about the patient’s functional status BEFORE making a diagnosis.

DEPRESSION AND DEMENTIA OVERLAP

Depression and dementia are the two, most-diagnosed neuropsychiatric disorders in adults over age 65. Highly comorbid, either disorder may appear first. Depression symptoms in older adults (present in up to one-half of Alzheimer’s disease cases) are often overlooked and untreated because they coincide with other problems encountered by older adults (e.g., low energy, somatic symptoms, and cognitive complaints).

A history of depression is associated with increased risk of dementia. It can be difficult to determine whether cognitive impairment is due to depression or if dementia and depression are both present. In cognitive impairment that is due to depression, it is more common for depressed individuals to display lower motivation, be more concerned about their functioning, and to have greater self-complaints of difficulty with concentration and attention than those with dementia. When symptoms of depression are present in a patient with cognitive impairment, the recommended approach is to treat for depression and reevaluate cognition. Consultation with neuropsychology can be particularly helpful.

Mild cognitive impairment (MCI) and dementia are both clinical syndromes with multiple causes that affect memory and other cognitive functions. Both are diagnosed clinically, using cognitive screening tools to detect and measure possible impairment (see Cognitive screening tools: The Mini-Cog™ and the MoCA on page 3) and a history and physical exam to rule out treatable factors that can influence cognition such as depression, infection, nutrition deficiency, and medication side effects (see algorithm 1 on page 6).

The importance of diagnosis for these syndromes may be overlooked in some healthcare settings because approved medications have shown little benefit for disease modification. However, nonpharmacological interventions and careful care management are effective in preserving patients’ quality of life and independence and in reducing caregiver burnout.

Patients with MCI may experience some difficulty with daily tasks but still manage to function without assistance, whereas patients with dementia require ever more help from caregivers as they progress through stages of impairment from mild to severe. Patients with MCI have a greater-than-normal risk of developing dementia in the future, but not all MCI cases progress to greater impairment; some even improve. The algorithm on page 6 details best practices for diagnosing dementia and MCI.

Mild cognitive impairment (MCI)

MCI is a condition marked by mild changes in memory, language, or another mental function. However, patients with MCI can perform all activities of daily living without any caregiving assistance. Cognitive changes are significant enough to be noticed by others and measured by cognitive screening assessments. Typical cognitive problems in MCI may include:

- Greater dependency on reminders and notes
- Greater difficulties with multitasking
- More distractibility
- Less flexibility
- New difficulties with problem-solving and word finding.

MCI is typically a diagnosis of exclusion. If a patient shows measurable but mild impairment on screening tests with no potential causative factors (medication side effects, infection, nutritional deficiencies, depression) and no functional impairment, the patient is diagnosed with MCI rather than mild dementia (see the diagnosis algorithm on page 6).

Dementia

Dementia is defined as a decline in cognitive function from baseline that is not due to another medical or psychiatric cause and that causes impairment in ability to live and function independently. Mild dementia is distinguished from MCI by an impairment in the patient’s ability to perform daily activities. Input from a caregiver or another knowledgeable informant who can give an accurate report of the patient’s functional status is an absolute requirement for a dementia diagnosis. The diagnosis is primarily clinical and relies heavily on the history and physical examination (including reports from a knowledgeable informant). While labs, imaging, and cognitive testing are helpful in making the diagnosis, they are not diagnostic in and of themselves. If a patient shows cognitive impairment but no functional impairment, the diagnosis is MCI rather than dementia. Once a diagnosis of dementia has been made, the cause and stage of the impairment should be determined (pages 4–5).
Cognitive screening tools: the Mini-Cog™ and the MoCA

In diagnosing dementia, it is important to use validated screening tools for assessing each patient’s cognitive function early in the diagnostic process (see the algorithm on page 6). Intermountain recommends two cognitive screening tools: the Mini-Cog™ and the Montreal Cognitive Assessment (MoCA).1,2,3,5

The Mini-Cog™— for annual wellness visit (AWV) screening

The Mini-Cog™ is a preliminary, two- to three-minute screening tool used to detect possible moderate- to severe-stage dementia among well-appearing patients.1,2,3 Scores of 2 or less indicate possible impairment, signalling the need for further screening with the MoCA (this scoring threshold may not identify cases of MCI). A fast, rough tool, the Mini-Cog™ satisfies the minimum requirements for screening cognition at the Medicare AWV and should be administered at every AWV/well checkup for geriatric patients.3,4

Access instructions and scoring criteria for the Mini-Cog™ on page 21 or by clicking on the image at right. (The sidebar at right provides directions for accessing Intermountain’s computer-based Mini-Cog™ and MoCA training.)

For purposes of this CPM, a score of ≤ 2 is abnormal and requires further evaluation.

The MoCA — for patients showing possible impairment

The Montreal Cognitive Assessment (MoCA), a 10-minute screening tool, helps primary care and intensive medicine providers detect and distinguish among levels of cognitive impairment.4,5 The MoCA assesses different cognitive domains and has good psychometric properties (e.g., test-retest reliability, internal consistency). The MoCA should be administered to all patients who score 2 or less on the Mini-Cog™ or who show impairment (or express concerns about impairment). If it has been 6 months or less since the most recent MoCA administration, then an alternate version of the MoCA should be used. While the MoCA cannot be used on its own to diagnose MCI or dementia, it has demonstrated specificity in distinguishing among those with MCI, typical cognitive aging (87% specificity), and mild-stage probable Alzheimer’s dementia (87% specificity).4,5,6

For purposes of this CPM, scores of ≤ 25 are considered abnormal

MINI-COG™ AND MOCA COMPUTER-BASED TRAINING

Access the computer-based training via the My Learning Portal at https://m.intermountain.net/mylearning/Pages/home.aspx. The training takes about 12 minutes, not including videos of screening delivery.

1. Log into TalentLink.
2. Click Add at the bottom of the "My Learning and Development Activities" window.
3. Choose Learning and Development Activities from a Catalog.
4. Type in "MiniCog” or "MOCA.” As you type, the course name will appear.
5. Click on the course name.
6. Click on the course’s lightning symbol under "Actions."
7. Select Register and Launch. (Or, just select Register to add the course now but complete it later.)

ADMINISTERING THE MOCA

The MoCA is available in multiple languages and in versions for sensory impairment. In addition, providers may use alternate versions to minimize rehearsal/learning effects among retested patients.

Forms and scoring instructions can be found at www.mocatest.org.

NOTE: Reliable administration and scoring of the instrument is crucial in detecting a true change over time. Standardized staff training and ongoing mentoring for quality assurance is strongly recommended.
Etiology

After a diagnosis of the dementia syndrome is made, it is important to determine the etiology because this has implications for treatment. The most common etiology is Alzheimer’s disease, followed by vascular and mixed dementias. These types of dementia may be managed very effectively in a primary care setting. Dementia due to Parkinson’s disease, dementia with Lewy bodies, frontotemporal dementia, and normal pressure hydrocephalus are less common, and neurology consultation is often helpful in diagnosis and management. Criteria for the most common types of dementia are listed below in table 1.

<table>
<thead>
<tr>
<th>Etiology</th>
<th>ICD 10 Codes</th>
<th>Etiology Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alzheimer’s disease</td>
<td>G30.9 (unspecific) AND F02.80 or F02.81</td>
<td>• Gradual onset of symptoms over months to years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Most prominent feature is memory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Impaired learning and recall of recently learned information</td>
</tr>
<tr>
<td>Vascular dementia</td>
<td>F01.50 or F01.51</td>
<td>• Stepwise decline</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• History of clinically apparent stroke that is temporally related to cognitive decline</td>
</tr>
<tr>
<td>Mixed dementia†</td>
<td>Code predominant etiology first</td>
<td>Criteria for multiple dementia syndrome etiologies are met; mixed vascular and Alzheimer’s disease most common</td>
</tr>
<tr>
<td>Dementia with Lewy bodies</td>
<td>G31.83 AND F02.80 or F02.81</td>
<td>2 of 3 required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fluctuating cognition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Recurrent visual hallucinations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Parkinsonism (bradykinesia, muscular rigidity, tremor, postural instability)</td>
</tr>
<tr>
<td>Frontotemporal dementia</td>
<td>G31.09 AND F02.80 or F02.81, Consider Z55-65 or 91</td>
<td>3 of 6 required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Disinhibition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apathy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Loss of empathy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Compulsive behaviors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hyperorality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Impaired executive function/decision making</td>
</tr>
</tbody>
</table>

**BEST PRACTICE FLASH CARDS**

Flashcards are available for providers to use as quick reminders of key processes outlined in this care process model. There are two flashcards entitled:
1. Dementia: Screening & Diagnosis
2. Dementia: Treatment

Order flashcards from iPrintStore as 4 x 6 preprinted cards, OR view within the Physician App for mobile devices.

To get the Physician App, which includes the Flash Card App:
1. Go to the App store on your phone or tablet (e.g., iTunes on your Apple Device).
2. Search for “Intermountain Healthcare.”
3. Scroll down to “Intermountain Physician,” and “Get” the app.

Once the app downloads, tap the “Best Practice Flashcards” icon in the upper left, and then select “Adult” to find these two flashcards.
Cognitive impairment staging

Once a diagnosis has been made, it’s important to determine the patient’s functional status and corresponding stage of impairment. The impairment stage will determine the appropriate interventions to help preserve the patient’s quality of life for as long as possible and mitigate excessive burdens on caregivers.

Cognitive impairment staging is done based on the results of two assessments — the Functional Activities Questionnaire (FAQ) (page 25) and the Stress Thermometer on (page 26) — as completed by a knowledgeable informant (family member, caregiver, or someone else who knows and sees the patient regularly). It is important that an informant complete these forms because patients with dementia usually cannot provide an accurate report of their functional status. Staging guidance is found in table 2 below.

The earliest stage of cognitive impairment is MCI in which patients show no functional impairment (see page 2). MCI may be a clinical precursor to dementia, but it may never progress and may even improve. In mild dementia, patients require help with (but can participate in) higher-order daily tasks, known as the instrumental activities of daily living (IADLs). IADLs include such activities as paying bills, taking medications, scheduling appointments, and shopping alone. In moderate dementia, patients are dependent on caregivers to perform IADLs and require assistance with (but can participate in) more rudimentary tasks, known as the basic activities of daily living (ADLs). ADLs include such activities as bathing, dressing, and toileting. In severe dementia, patients are totally dependent on others for all IADLs and ADLs.

**TABLE 2. Stages of cognitive impairment based on functional status**

<table>
<thead>
<tr>
<th>IADL or ADL*</th>
<th>Mild Cognitive Impairment</th>
<th>Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mild</td>
<td>Moderate</td>
</tr>
<tr>
<td>Able to pay bills, balance checkbook independently</td>
<td>Yes with some difficulty</td>
<td>Requires assistance</td>
</tr>
<tr>
<td>Able to shop for groceries or clothes alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to bathe, dress self</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Instrumental activity of daily living (IADL) or activity of daily living (ADL), taken from Intermountain’s Health Risk Assessment for the Medicare annual wellness visit.

**DIAGNOSTIC BEST-PRACTICE FORMS**

The forms that support Intermountain’s best-practice process for dementia diagnosis include (see also algorithm 1 on page 6):

- **For cognitive screening, use:** Mini-Cog™ and MoCA
- **For caregiver or informant reports, use:**
  - Functional Assessment Questionnaire (FAQ)
  - Behav5
  - Stress Thermometer

In the sidebar at right, you will find images and links for these forms (many of which are included at the end of this CPM).
ALGORITHM 1: Diagnosing Dementia and Mild Cognitive Impairment (MCI)

**COGNITIVE CONCERN OR SCORE ≤ 2 ON MINI-COG™ AT ANNUAL WELLNESS VISIT (AWV)**

*(If cognitive concern, add to problem list: Code R41.9)*

Delirium present? See DSM-5 criteria (a)

- no
- yes: FIND and TREAT cause of delirium. *(Add to problem list: Code R41.0)*

**MAKE appointment with patient AND caregiver to address cognition (b)**

**PRE-APPOINTMENT — Performed by medical assistant (MA) or care manager (CM)**

- **ADMINISTER** MoCA* to patient. **HAVE** informant do surveys outside room: Functional Assessment Questionnaire (FAQ)* and Stress Thermometer*
- **SCORE** MoCA, FAQ, and Stress Thermometer, and **GIVE** to PCP for appointment

- MoCA score < 26 OR red flags? (c)
  - no
  - yes: If behavioral disturbance, **ASSESS / TREAT** by Behavioral Disturbance Algorithm (page 14); **CONSIDER** MHI referral (d)

- RULE OUT non-dementia causes of impairment
  - CONDUCT history and physical (e), REVIEW / ORDER labs (f), AND RECONCILE medication list (g) with PharmD consult (if available)

**ADDRESS any findings**

- If depression**: **TREAT / MANAGE** care per guidance (pages 9 – 18)

**Determine functional status (based on FAQ result):**

<table>
<thead>
<tr>
<th>Functional status unclear</th>
<th>Function impaired</th>
<th>Function not impaired</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSIDER referral to neuropsychology (j) OR RE-EVALUATE in 3 – 6 months</td>
<td>ORDER brain imaging (h)</td>
<td>DIAGNOSE mild cognitive impairment (MCI), educate on brain health (see page 8), and re-evaluate annually</td>
</tr>
</tbody>
</table>

**TREAT, RE-EVALUATE** by phone in 1 – 2 weeks; then, **FOLLOW UP** monthly X 3 months

- Cognitive impairment remaining? (c)
  - no
  - yes
    - **ADDRESS** any findings
    - Red flags remaining? (c)
      - yes: **DISCUSS** brain health with patient (page 8)
      - no
        - **ORDER** brain imaging (h) AND **REFER** to neurology (i)

**PCP Visit 1 – 3**

**PCP Visit 2 – 4**

**DIAGNOSE** dementia (k)

- Without behavioral disturbance *(Add to problem list: Code F03.90)*
- With behavioral disturbance *(Add to problem list: Code F03.91)*

- **ASSESS** stage using table 2 (page 5)
- **TREAT / MANAGE** care per guidance (pages 9 – 18)

---

**NOTE:** Diagnostic forms and tools appear on pages 21 – 24.
MILD COGNITIVE IMPAIRMENT (MCI) AND DEMENTIA

**Criteria (adapted from information in DSM-5)**
- Changes in awareness and attention control. Onset is usually fast (hours to days) and may change over each day.
- Additional cognitive changes are present and not caused by another neurocognitive problem of coma.
- Workup: CBC, CMP, UTI + culture, reconcile med list, evaluate for alcohol/drug use.
- Watch for somnolence, agitation, inability to follow conversation.

**Moderate: Difficulties with basic ADLs (e.g., feeding, dressing)**
Without behavioral disturbance

- Red flags
- Age < 65
- Family reports rapid progression or significant decline from baseline
- Upper motor neuron signs (upgoing toes, hyperreflexia, myoclonus)
- Parkinsonism
- Focal neurologic deficit
- Significant gait abnormality
- Seizures
- Language dysfunction

**Before cognition appointment**
- Identify caregiver. Document caregiver and contact information. Make sure signed release of information is on file.
- Contact caregiver. Stress importance of caregiver presence at cognition appt. Ask caregiver to bring all pill bottles, including OTCs and supplements. Discuss what visit will entail:
  - Patient should arrive 30 minutes before scheduled appt.
  - MA administers MoCA while caregiver completes FAQ and Stress Thermometer in separate room.
  - Results are given to the PCP before appt.

**Red flags**
- Age < 65
- Family reports rapid progression or significant decline from baseline
- Upper motor neuron signs (upgoing toes, hyperreflexia, myoclonus)
- Parkinsonism
- Focal neurologic deficit
- Significant gait abnormality
- Seizures
- Language dysfunction

**Indications for MHI referral**
- Behavioral disturbance
- Coexisting substance dependence (benzodiazepines, alcohol, narcotics)
- Late onset psychosis
- Preexisting psychiatric diagnosis that has been exacerbated by cognitive impairment
- Moderate to severe depression
- Depression refractory to treatment

**History and physical**
- Obtain history from patient
- Also obtain history from family member or informant
- Review for history of falls
- Screen for obstructive sleep apnea (OSA) if indicated
- Screen for depression with PHQ-2

**Labs (if not done in last 12 months)**
- B12, TSH, CBC, CMP
- If indicated: HIV, RPR, ESR, CRP

**Brain imaging**
- Structural brain imaging recommended for the evaluation of dementia
- Non-contrast MRI preferred. Indicate "IHIC Dementia Protocol"
- If MRI contraindicated, order non-contrast CT
- Do not reimagine for typical cases if MRI has been done within previous 3 years

**Neurology consult (include MRI)**
**Indications for referral (AFTER delirium rule out/treated)**
- Atypical presentation or rapid progression
- Neurologic deficits or findings
- Patient or family request for neurology consult or specialized testing or imaging
- Behavioral manifestations that are suspicious for frontotemporal dementia
- Dementia in setting of another neurologic disorder such as Parkinson’s disease
- Parkinsonism (tremor, slow movement, impaired speech, stiffness, orthostatic hypotension)
- Indicate reason (dementia), any red flags, whether urgent consult is needed
- Findings on brain image(s)

**Referral to Neuropsychology**
- Assist with differential diagnosis
- Identify cognitive/emotional strengths and limitations
- Address patient/family adjustment/intervention/education for patients with MCI and dementia
- Assess capacity, safety (including driving), supervision, assisted-living needs
- Manage psychiatric and behavioral symptoms related to cognitive impairment
- Differentiate between dementia and pseudodementia
- If pseudodementia: Evaluate to what extent psychiatric symptoms are contributing to cognitive deficit

**Dementia (major neurocognitive disorder)**
**Criteria (based on information from DSM-5)**
- Cognitive loss as verified by objective testing (MoCA < 25) is not caused by delirium or another mental disorder.
- The cognitive reduction inhibits performance of daily life activities (such as paying bills or managing medications).

**Specify:**
- Without behavioral disturbance
- With behavioral disturbance (specify disturbance): For example, psychotic symptoms, mood disturbance, agitation, apathy, or other behavioral symptoms

**Specify current stage:**
- Mild: Difficulties with IADLs (e.g., housework, managing money), FAQ ≥ 9
- Moderate: Difficulties with basic ADLs (e.g., feeding, dressing)
- Severe: Fully dependent

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MILD COGNITIVE IMPAIRMENT (MCI) TREATMENT AND CARE MANAGEMENT

MCI may be classified as amnestic (primarily affects memory) or nonamnestic (primarily affects decision-making, judgment, or visual perception). Patients at this stage of cognitive impairment typically do not require daily caregiving and can still perform the same daily activities; although, they may require more time to complete tasks. Recommended treatment includes:

- Evaluating and treating any cerebrovascular risk factors (cholesterol, obesity, etc.)
- Discussing with patient brain health and lifestyle modifications
- Recommending coping strategies (see [http://www.alz.org/i-have-alz/tips-for-daily-life.asp](http://www.alz.org/i-have-alz/tips-for-daily-life.asp#5))
- Possible off-label use of a cholinesterase inhibitor based on provider-patient discussion (see medication tables on pages 15–16)

Brain health and lifestyle modifications

Lifestyle modifications that may enhance brain health involve diet, social interaction, and exercise.

Most major scientific organizations encourage some form of the Mediterranean diet for prevention of major chronic diseases including Alzheimer’s disease and other dementias. A Mediterranean diet is rich in fruits, vegetables, nuts, whole grains, legumes, olive oil, and lean protein with limited sugar, red meat, and unhealthy fat. This type of diet has been associated with slower cognitive decline in adults. However, it is still unknown whether the Mediterranean diet can prevent progression of mild cognitive impairment and dementia.

Regular social interaction and exercise have been shown to reduce the risk of cognitive decline in healthy seniors and may improve or delay the progression of existing impairment. For example, research indicates that people with regular social ties are significantly less likely to demonstrate cognitive decline compared to those who are lonely or isolated.

A meta-analysis of randomized controlled trials shows evidence of improved cognition in cognitively impaired adults who exercise. Cross-sectional studies demonstrate significantly larger hippocampal and gray matter volume among physically fit seniors who maintain a program of 30 minutes of aerobic activity three times a week compared to those who were more sedentary. In addition to providing a neuroprotective effect, aerobic/cardiovascular exercise may also attenuate cognitive decline by mitigating cerebrovascular risks.

Overall studies suggest that people with high levels of aerobic physical activity are less likely to develop dementia. It is unclear if beginning exercise in later life can prevent dementia. A trial of exercise in normal seniors did not find any improvement in cognitive function.

KEY RECOMMENDATIONS

- Evaluate and treat any cerebrovascular risk factors:
  - Hypertension (refer to Management of High Blood Pressure CPM)
  - Obesity
  - Hyperlipidemia (refer to Assessing and Managing Cardiovascular Risk and Cholesterol CPM)
- Counsel on brain health and lifestyle modifications such as following The Mediterranean Diet fact sheet, exercising, and maintaining social interaction.

“BRAIN GAMES”

There is minimal evidence to suggest that commercially marketed brain games prevent or delay progression of dementia. However, cognitive activity based on the patient’s interests and abilities should be encouraged.

WEIGH BENEFITS VS. STRESS OF LIFESTYLE CHANGES

The stress of lifestyle change (starting an exercise program or new diet) may outweigh any benefit to a patient with cognitive impairment. The greater the level of impairment, the greater the stress of life changes.

DEMENTIA TREATMENT AND CARE MANAGEMENT

Currently, non-pharmacologic interventions are shown to have a greater effect than medications on the quality of life of dementia patients and their caregivers. For this reason, first-line treatment should focus on comprehensive care planning and management. Medications can be helpful and should be offered to all patients; however, effect sizes are small and differ among patients.

Comprehensive care planning

Essential components of care planning for dementia patients (see table 3 below) include providing education, caregiver support, and non-pharmacologic interventions. As dementia progresses, caregiver stress increases and can impact caregiver health. Early care planning to identify and mobilize resources has been shown to preserve caregiver health, which, in turn, helps caregivers maintain a predictable home environment where the patient will function the best for the longest period of time. The care plan is thus a critical part of dementia treatment and primary care providers should discuss how best to work with care managers to provide care planning in a way that makes the best use of individual practice resources.

KEY RECOMMENDATIONS

- Focus on nonpharmacological interventions, including education and caregiver support, as first-line treatment.
- Evaluate driving initially and at least annually thereafter.
- Evaluate all possible contributors to behavioral/psychological problems. Modify the environment, and teach caregivers effective communication strategies.
- Avoid medications inappropriate for elderly patients.

### TABLE 3. Guideline for nonpharmacological treatment of dementia

<table>
<thead>
<tr>
<th>Care Plan Area</th>
<th>Care Action (as appropriate for individual patient symptoms and needs)</th>
<th>Physician</th>
<th>Care Manager*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient/Caregiver Education</td>
<td>• Provide referral to community resources (area agency on aging, see pages 19–20 for others)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provide Alzheimer’s Association hotline 1-800-272-3900</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provide printed materials (search iPrint store), and see patient education resources (pages 19–20)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Care Guide</td>
<td>• Assess patient and caregiver goals annually</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Refer to care manager for care plan</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provide nutrition (diet) counseling, or refer to a registered dietician nutritionist (RDN)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Exercise: Silver Sneakers®, LiveFit, MoveFit (for earlier stages)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prescribe medications if indicated (pages 10–11, 14–18)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• (If homebound) Refer to Home Health (see coordination checklist in sidebar on page 10)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>• (If not homebound) Refer to outpatient OT (functional assessment, home safety evaluation)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Evaluate driving (pages 12–13)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Involve family in medication management</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Enroll in Safe Return Program if patient wanders</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Identify financial helper/oversight</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Evaluate need for supervision at home</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Evaluate for elder abuse (hygiene, dress, bruises, skin breakdown, malnutrition)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Refer to Stepping On if at high risk for falls (early stage)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Maximze Function</td>
<td>• Evaluate vision and hearing (refer if appropriate)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Refer to speech therapy if indicated</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Caregiver Support</td>
<td>• Assess for caregiver burden at regular intervals (see Stress Thermometer on page 27)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Refer to resources for caregiver support</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Advance Care Planning</td>
<td>• Recommend completing advance directive (early stages or patient has decision-making capacity) and POLST (patient if early stage; family if later stage)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Discuss preferences about living situation</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Evaluate for hospice (late stage)</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>At Home</td>
<td>• Assess/advise on social engagement and intellectual stimulation</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Advise on establishing a routine</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Advise on physical activity</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Advise on sleep hygiene</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

*May consult with social worker (as needed) if available/appropriate
Pharmacological interventions

Pharmacological interventions have been shown to have a modest effect in some patients. Currently, there is no cure for dementia, and pharmacologic interventions are used to delay disease progression and treat cognitive symptoms. The decision to begin therapy should be based on evaluation of the patient and the risks and benefits associated with medication use. Table 5 (on page 16) reflects the strength of the evidence derived from literature review, package inserts, and clinical experience.

Medications approved for the treatment of dementia include:

- Cholinesterase inhibitors — donepezil, rivastigmine, and galantamine
- NMDA antagonist — memantine

While the effects of the medications are modest, they have been shown to improve or maintain scores on cognitive tests as well as delay nursing home placement in some patients. They may help with agitation and other behavioral disturbances as well. The risks and benefits associated with these medications as well as patient preferences should be taken into account when prescribing, and patients should be monitored for medication effects.

Cholinesterase inhibitors

Studies have shown that these medications modestly delay the worsening of symptoms for 6–12 months in about half of the patients who use them. More specifically, on a 70-point scale measuring cognitive function, the mean difference of change from baseline between the cholinesterase inhibitor and placebo groups is less than 4 points. Evidence for benefits on behavioral, quality-of-life, and time-to-institutionalization outcomes is also limited and shows inconsistent results.

If a provider opts to use a cholinesterase inhibitor, they should choose from those detailed in table 4 (page 15) based on tolerability, adverse effects, ease of use, and cost.

After a patient has received the maximum tolerated medication dose for eight weeks, evaluate a patient’s symptoms, and stop treatment if there has been no improvement in symptoms. Only continue medication if an improvement has been noted.

NMDA antagonist

Memantine is the only currently available NMDA antagonist.

Similar to the cholinesterase inhibitors, the efficacy of memantine is modest on cognition and activities of daily living. However, it has demonstrated a benefit on behavioral outcomes including aggression, delusions, and irritability. While it appears to have fewer side effects in comparison to the cholinesterase inhibitors, memantine should be reserved for patients with moderate-to-severe Alzheimer’s dementia or vascular dementia as there is little evidence of benefit for patients with milder forms of Alzheimer’s dementia or other dementias.

There is also some evidence to suggest that memantine may be disease modifying; therefore, it may be continued even if no clinical improvement is seen after taking the medication for a period of time.
Combination medication
Memantine may also be used in combination with a cholinesterase inhibitor in patients with advanced disease. A recent meta-analysis showed a small benefit in cognition, behavioral disturbances, and activities of daily living when combination therapy was used in moderate-to-severe Alzheimer’s dementia patients.\textsuperscript{MAT}

Medications to avoid in those with dementia
The American Geriatrics Society’s Beers criteria identifies medications that may be inappropriate for elderly patients because of an increased risk of adverse events.\textsuperscript{AGS2} Many of the medications listed in the Beers criteria cause problems particularly in patients with dementia. For example, anticholinergic and sedative medications are associated with memory impairment, functional decline, hallucinations, and increased risk for falls.\textsuperscript{CAR,FOX} Antipsychotic medications used to manage the behavioral symptoms of dementia are associated with an increase in mortality.\textsuperscript{LEN} Table 6 on page 17 outlines medications that should be used cautiously in patients with dementia as well as recommended alternatives.

ALGORITHM 2: Dementia Treatment

DEMENTIA DIAGNOSED

BEGIN non-pharmacologic treatment care planning (page 9) AND DISCUSS pharmacologic treatment

CONSIDER prescribing medications by dementia type
Refer to medication tables (pages 15–16) for dosing and details about specific medications

<table>
<thead>
<tr>
<th>Alzheimer's disease</th>
<th>Vascular and mixed dementias\textsuperscript{AV}</th>
<th>Frontotemporal, Lewy-body, and Parkinson's Dementias</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>Donepezil* (If nightmares occur, switch to morning dosing.)</td>
<td>Aspirin (unless contraindicated)</td>
</tr>
<tr>
<td></td>
<td>Donepezil* Add memantine*</td>
<td>Treat vascular risk factors as appropriate (hypertension, diabetes, high cholesterol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Donepezil* Consider memantine* (moderate to severe stages)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refer to neurology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avoid antipsychotics in Lewy-body and Parkinson's dementias (if anti-psychotic needed, choose seroquel at lowest possible dose: 12.5mg QHS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cholinesterase inhibitors may or may not be helpful in frontotemporal dementia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Memantine is not recommended</td>
</tr>
</tbody>
</table>

ASSESS medication and adjust dosing as necessary at each follow-up appointment

SUPPLEMENTS / OTHER MEDICATIONS
There is not good quality evidence that vitamins, supplements, and non-dementia prescription medications are effective for preventing or treating dementia. However, significant patient interest in these medications warrants a summary of current evidence. Tables 7 and 8 on page 18 provide usual dosing, potential to either prevent or treat dementia, and safety considerations for these medications.

NOTE: When caring for patients with dementia, stopping offending medications is often a far more important/effective intervention than starting a new medication, such as a cholinesterase inhibitor, and should always be considered first.
REPORTING REQUIREMENTS

For all patients with SEVERE dementia, the primary care provider should report the diagnosis to the Driver’s License Division by either:

- Noting the diagnosis in section F on the Functional Ability Evaluation Medical Report (page 28).
- OR
- Completing the Unsafe Driver Review form, which can be found on the Utah Driver’s License Division website. NOTE: If a medical provider completes this form, notarization is NOT required. A copy of this form is on page 29.

KEY PATIENT AND FAMILY EDUCATION ON DEMENTIA AND DRIVING


MANAGING BEHAVIORAL DISTURBANCE

- Take care of self.
- Restrict patient’s caffeine to before noon.
- Limit patient’s daytime napping.
- Establish structured daytime activities. Include activities that match previous interests.
- Have calming bedtime routine.
- Respond to questions in a calm voice.
- Give one-step instructions or simple questions. Offer only two choices at a time.
- Remove clutter, and eliminate excessive noise.
- Distract or redirect patient rather than arguing.

For more information, see https://www.nia.nih.gov/alzheimers/topics/caregiving#behaviors

Evaluation of driving safety (see algorithm on page 13)

Dementia increases the risk of motor vehicle accidents, but some patients with mild dementia can safely drive provided they have an on-road assessment, no history of accidents, and no concerns from family members.

Performing an objective driving evaluation (either with on-road testing at the DMV or through an occupational therapy consultation) is a critical piece of determining whether or not a patient with mild or moderate dementia will drive safely. Driving ability should be revisited at least annually. It is important to assess independent risk factors apart from cognitive impairment such as a history of crashes and traffic violations. Patients with dementia are often told they can drive “if only in the area”; however, it is important to note that driving < 60 miles per week is an independent risk factor for crashes. Caregiver report is essential for evaluating driving ability.

Driving cessation is perhaps one of the most challenging areas that the primary care provider faces in the management of a patient with dementia, and this can strain the physician-patient relationship. Preserving this relationship depends on the patient trusting that the provider has their best interest at heart. When recommending driving cessation, key considerations for the provider include:

- Understand that loss of driving privileges represents a loss of independence for the patient, which can be very difficult to deal with.
- Assess patients’ transportation needs, and work with patient and family to come up with reliable alternate forms of transportation that will meet their needs.
- Plan to allow extra time for these discussions as they are very sensitive in nature.
- Stress that the goal is to preserve independence but that safety must come first.

Management of psychological and behavioral problems (see algorithm on page 14)

Behavioral or neuropsychiatric symptoms of dementia can include agitation, delusions, aggression, hallucinations, anxiety, sleep disturbance, apathy, depression, and disinhibition — all of which cause great distress for caregivers and may result in the patient requiring institutionalization. Caregivers should be asked regularly about such behavioral symptoms. The Behav5 questionnaire (page 27) should be administered, and caregiver stress should be monitored using the Stress Thermometer (page 26). For any newly observed behaviors, evaluate illness, pain, nutrition, sleep, constipation, dehydration, and medication side effects as possible contributors, and treat if present.

Initially, treat behavioral disturbances by determining the exact behavior as well as circumstances in which it occurs. Identify any triggers for the behavior such as boredom, lack of supervision, lack of daytime structure, chaotic environment, or inappropriate communication techniques (e.g., arguing). Be sure to:

- Ensure patient safety (see Safe Return Program for patients who wander).
- Provide caregiver support and education, and teach caregivers effective communication strategies (this approach has the strongest evidence).
- Modify the environment (see Managing Behavioral Disturbance at left).
Medications are second-line treatment and should be employed only for severe cases and/or when non-pharmacologic treatments have been employed. Some evidence indicates that citalopram can be helpful for treating behavioral disturbance and is well tolerated. Antipsychotics can be considered for severe cases, but benefits must be weighed carefully with significant medication risk. Inform caregivers about possible side effects and any FDA black box warnings about sudden cardiac death.

Patients who have a behavioral disturbance should be referred to the care manager, and the patient should be followed frequently.

**ALGORITHM 3: Driving Assessment**

MILD, MODERATE, OR SEVERE DEMENTIA DIAGNOSED/ASSESSED AND PATIENT DRIVES OR PLANS TO RESUME DRIVING

- Valid drivers license?
  - yes
  - no

  Patient signs disclosure on Functional Ability Evaluation Medical Report form?
  - yes
  - no

**COMPLETE form (a)**

If severe, ADVISE driving cessation  If moderate/mild, ASSESS risk factors (b)

DISCUSS driving ability and risks

- High risk?
  - yes
  - no

OT consult if available; if no OT, recommend DMV road test

REPORT to Utah Driver’s License Division (DLD) (c)

**Driving Assessment and Reporting Forms**

See pages 28–29 for full-size versions of these driving forms:

- Utah Driver License Division: Functional Ability Evaluation Medical Report
- Utah Department of Public Safety Report (DI-117)

**ALGORITHM NOTES**

**a) Completing the Functional Ability Evaluation Medical Report Form**

- MARK Learning/Memory category at the appropriate level (6–8).
- SPECIFY "driving skills test."
- MARK all other pertinent categories.
- SIGN form, and FAX it to UT DLD.

**b) Risk Factors**

- History of traffic citation(s)
- History of crash(es)
- Caregiver report of unsafe driving
- Self-limited driving (daylight, restricted area, limited mileage)
- Impaired judgment
- Coexisting medical conditions
  - Alcoholism
  - Sedating meds
  - Sleep disorders
  - Motor impairment
  - Neurologic impairment

**c) Reporting to DLD**

- Use form DI 117 (page 28).
- Refer patient to care management or other resources for UT ID card and alternate transportation sources.

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ALGORITHM 4: Managing Behavioral and Psychological Symptoms

**ALGORITHM NOTES**

(a) Behavioral and psychological symptoms of dementia
Ask if patient has shown:
- Delusions
- Hallucinations
- Agitation
- Aggression
- Depression
- Anxiety
- Apathy
- Elation
- Disinhibition
- Irritability
- Sleep disturbance
- Appetite and eating disturbances

(b) Evaluate the disturbance
Describe the behavior:
- Patient considerations
  - What was the exact behavior and what was the patient’s perspective?
  - Is the behavior a threat to safety?
- Caregiver considerations
  - How distressing was the behavior?
  - Why was it distressing?
  - How does the caregiver handle it?
- Environmental considerations
  - When/where did the behavior occur?
  - Who was present?
  - What happened before and after?

(c) Treat/intervene
- Patient interventions
  - Discontinue meds with adverse affects
  - Manage pain
  - Treat infection, dehydration, constipation
  - Improve sleep hygiene
  - Treat impaired vision/hearing
- Caregiver interventions
  - Provide education on dementia
  - Teach effective communication strategies
- Environmental interventions
  - Create a predictable daily routine
  - Provide intellectual stimulation and physical activity suitable for dementia stage
  - Simplify/enhance environment as appropriate
- Referrals
  - Care manager
  - Consider neuropsychology consultation

**PATIENT WITH DEMENTIA (SYMPTOMS/DIAGNOSIS)**

- Behavioral or psychological disturbance? (a) yes

  EVALUATE disturbance (b) (give Behav5 to caregiver)
  AND
  ASSESS caregiver burden (use Stress Thermometer)

  EVALUATE for causes and contributing factors
  Patient | Caregiver | Environment
  | --- | --- | ---
  - Medication adverse effects
  - Impaired vision/hearing
  - Poor sleep hygiene
  - Poor nutrition/hydration
  - Illness
  - Undertreated pain
  - Bowel/bladder dysfunction
  - Caregiver arguing, giving too many choices, asking complex questions
  - Caregiver perception that patient behavior is intentional
  - Over- or under-stimulation
  - No predictable routine

  TREAT finding(c): PROVIDE caregiver education; and REASSESS symptoms

  Disturbance/symptom improved? no

  yes

  TREAT/INTERVENE based on disturbance type (d); RE-EVALUATE in 1 month

  yes

  Improved?

  no

  ASSESS for behavioral disturbance every 6–12 months

  REFER to MHI AND CONSIDER medications (d)

(d) Treatments/interventions by disturbance type

<table>
<thead>
<tr>
<th>First-line treatment for all disturbance types: Implement non-pharmacological interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Train caregivers in behavioral management strategies (see sidebar on page 12)</td>
</tr>
<tr>
<td>• Exercise</td>
</tr>
<tr>
<td>• Music</td>
</tr>
<tr>
<td>• Participation in pleasant events</td>
</tr>
<tr>
<td>• Manage caregiver stress: counseling, support groups, local resources (area agency on aging, Alzheimer’s groups, in-home help, adult day care, out-of-home respite care</td>
</tr>
</tbody>
</table>

| Depression/Anxiety |
|---|---|---|
| • Cholinesterase inhibitor |
| • Memantine (as appropriate by diagnosis) |
| • Sertraline or citalopram (start at low dose and titrate slowly) |

| Agitation/Aggression/Psychosis |
|---|---|---|
| • Cholinesterase inhibitor |
| • Memantine |
| • SSRI if symptoms mild |
| • Antipsychotic if severe symptoms or non-response to SSRI (see table 6 on page 17 for cautions) |

<table>
<thead>
<tr>
<th>Sleep Disturbance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sleep hygiene:</td>
</tr>
<tr>
<td>• Cut off electronics in evening</td>
</tr>
<tr>
<td>• Discontinue caffeine</td>
</tr>
<tr>
<td>• Minimize daytime napping</td>
</tr>
<tr>
<td>• Provide exercise, stimulation, and exposure to light during day</td>
</tr>
<tr>
<td>• Trazodone: (25–100mg given 1 hour before bedtime)</td>
</tr>
<tr>
<td>• Melatonin (limited evidence)</td>
</tr>
</tbody>
</table>
### TABLE 4. Medications used to treat cognitive impairment in dementia (see table 5 for strength of evidence)

<table>
<thead>
<tr>
<th>Class</th>
<th>Medication (common brands) and dosage guidelines*</th>
<th>Tier / Cost**</th>
<th>Side effects and other comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Cholinesterase Inhibitors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>donepezil (Aricept)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Class 1, 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|       | **Initiate**: at 5 mg daily (in the morning) for the first month | Tier 1: $  | Dose-related GI side effects (nausea, vomiting, diarrhea) typically occur during first month and usually subside. 
|       | **Titrate**: May increase to 5 mg BID for one month after patient has been taking 5 mg daily for 1 month. At that point, may increase to 10 mg daily (in the morning) | Tier 3: $$$ | Insomnia, abnormal dreams, vivid dreams, and nightmares can occur. Morning dosing may eliminate these events. |
|       | **Range**: 3 – 12 mg daily.                     |               |                                |
|       | **Patch**: Initiate: at 4.6 mg/24-hr patch daily. | Tier 1 (oral): $ | Dose-related GI side effects (Nausea, vomiting, diarrhea) occur mostly during titration and decrease during maintenance. GI side effects are also less likely to occur when the patch is used rather than the capsules. |
|       | **Titrate**: by 4.5 mg/24 hr at 4-week intervals up to 13.3 mg/day maintenance dose, as tolerated. | Tier 3 (oral and patch): $$$ | Closely monitor for increased GI side effects in patients < 50 kg, and consider reducing the dose if these occur. Oral formulation must be taken with a meal. |
|       | **Caution**: Patients with moderate and severe renal insufficiency or with a Child-Pugh Score of ≥ 5, may be unable to tolerate higher doses. |               | Least likely to interact with other medications. Consider using patch in patients with dysphagia. |
|       | **rivastigmine (Exelon)**                       |               |                                |
|       | Oral: Initiate: at 1.5 mg twice daily with meals. | Tier 1 (oral): $ | GI side effects (nausea, vomiting, diarrhea, anorexia, weight loss) are most common side effects and may occur more frequently than with donepezil. Lucid dreams are possible. Medication must be taken with a meal. |
|       | **Titrate**: to 3 mg twice daily after 2 – 4 weeks, may increase by 1.5 mg daily every 2 – 4 weeks to maximum tolerated dose (max of 6 mg twice daily with meals). | Tier 3: $$$ | Medication has fewer side effects than cholinergic agents. Dizziness is the most common side effect. Medication may increase delusions and agitation, especially in patients with LBD. |
|       | **Range**: 3 – 12 mg daily.                     |               |                                |
|       | **Patch**: Initiate: at 4.6 mg/24-hr patch daily. | Tier 1 (oral): $ | Dose-related GI side effects (Nausea, vomiting, diarrhea) occur mostly during titration and decrease during maintenance. GI side effects are also less likely to occur when the patch is used rather than the capsules. |
|       | **Titrate**: by 4.5 mg/24 hr at 4-week intervals up to 13.3 mg/day maintenance dose, as tolerated. | Tier 3 (oral and patch): $$$ | Closely monitor for increased GI side effects in patients < 50 kg, and consider reducing the dose if these occur. Oral formulation must be taken with a meal. |
|       | **Caution**: Patients with moderate and severe renal insufficiency or with a Child-Pugh Score of ≥ 5, may be unable to tolerate higher doses. |               | Least likely to interact with other medications. Consider using patch in patients with dysphagia. |
|       | **galantamine (Razadyne)**                      |               |                                |
|       | **Immediate-release**: Initiate: at 4 mg twice daily with meals. | Tier 1: $ | GI side effects (nausea, vomiting, diarrhea, anorexia, weight loss) are most common side effects and may occur more frequently than with donepezil. |
|       | **Titrate**: if tolerated, increase to 8 mg twice daily after at least 4 weeks; then, may increase to 12 mg twice daily after at least another 4 weeks. | Tier 3: $$$ | Lucid dreams are possible. |
|       | **Extended-release**: Initiate: at 8 mg daily with meals. | Tier 1 – 2: $$ | Medication has fewer side effects than cholinergic agents. |
|       | **Titrate**: If tolerated, increase to 16 mg once daily after at least 4 weeks; then, may increase to 24 mg daily once daily after another 4 weeks. | Tier 3 (ER): $$$ | Dizziness is the most common side effect. |
|       | **IF moderate renal or hepatic impairment**: Give max dose of 16 mg daily. |               | Medication may increase delusions and agitation, especially in patients with LBD. |
|       | **IF CrCl <9 mL/min or Child-Pugh 10 – 15**: AVOID. |               |                                |
|       | **memantine (Namenda)**                        |               |                                |
|       | **Immediate release**: Initiate: at 5 mg once daily. | Tier 1 – 2: $$ | Dizziness is the most common side effect. |
|       | **Titrate**: to a goal dose of 20 mg daily in 5 mg increments at intervals of at least 1 week. (Use twice daily dosing if more than 5 mg daily.) | Tier 3 (ER): $$$ | Medication may increase delusions and agitation, especially in patients with LBD. |
|       | **Extended-Release** Initiate: at 7 mg daily. |               |                                |
|       | **Titrate**: to goal of 28 mg daily in intervals of 7 mg per week (at least). |               |                                |
|       | **IF CrCl <30 mL/min**: Give max dose of 5 mg twice daily (IR) or max dose of 14 mg daily (ER). |               |                                |
|       | **IF CrCl <30 mL/min or Child-Pugh 10–15**: AVOID. |               |                                |
|       | **Combination Medication**                      |               |                                |
|       | **memantine/donepezil (Namzaric)**              |               |                                |
|       | **Use memantine 28 mg/donepezil 10 mg once daily.** | Tier 3: $$$ | See information above for memantine and donepezil. |
|       | **IF CrCl<30 mL/min**: Use memantine 14 mg/donepezil 10 mg daily. |               |                                |

* Some dosage guidelines are based on usual care experience and may differ from manufacturer’s package data.

** Tier 1 = Generic; Tier 2 = Preferred Brand; Tier 3 = Non-Preferred Brand. Cost is based on 30-day actual cost (not copay), and on generic, when available: $ = $1 – 25; $$ = $26 – 75; $$$ = $76 – 150; $$$$ = > $150
### TABLE 5. Medication strength of evidence*

<table>
<thead>
<tr>
<th>Medication</th>
<th>Alzheimer's Disease</th>
<th>Lewy-Body Dementia</th>
<th>Parkinson's Disease Dementia</th>
<th>Vascular Dementia</th>
<th>Mixed Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>donepezil (Aricept)</td>
<td>Mild to severe — A</td>
<td>B MAL</td>
<td>B SUB2</td>
<td>B MAL</td>
<td>No evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rivastigmine (Exelon)</td>
<td>Mild to moderate — A BR2</td>
<td>B VCK2</td>
<td>B MRK</td>
<td>No evidence</td>
<td>No evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>galantamine (Razadyne)</td>
<td>Mild to moderate — A OLX, WLM1</td>
<td>No evidence</td>
<td>No evidence</td>
<td>No evidence</td>
<td>B MRK, B AUC</td>
</tr>
<tr>
<td></td>
<td>Severe — B GAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>memantine (Namenda)</td>
<td>Moderate to severe — A BR1</td>
<td>No evidence</td>
<td>No evidence</td>
<td>No evidence</td>
<td>C LAV</td>
</tr>
<tr>
<td>memantine / donepezil (Namzaric)</td>
<td>Moderate to severe — A HOW</td>
<td>No evidence</td>
<td>No evidence</td>
<td>No evidence</td>
<td>No evidence</td>
</tr>
</tbody>
</table>

* Strength of evidence key: (A) = Based on data from large controlled trials; (B) = Based on data from smaller controlled trials; (C) = Based on expert opinion, open-label data, or usual-care experience; (D) = No acute efficacy
### Medications to use with caution in dementia

<table>
<thead>
<tr>
<th>Medication Class / Examples</th>
<th>Adverse Effects</th>
<th>Therapeutic Alternatives</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antihistamines</strong>&lt;br&gt;• diphenhydramine (Benadryl)&lt;br&gt;• hydroxyzine (Atarax)&lt;br&gt;• doxylamine (Unisom)&lt;br&gt;• chlorpheniramine (Chlorphen)</td>
<td>• Constipation&lt;br&gt;• Delirium&lt;br&gt;• Dry mouth&lt;br&gt;• Sedation&lt;br&gt;• Urine retention</td>
<td>• cetirizine (Zyrtec) 5–10 mg daily&lt;br&gt;• fexofenadine (Allegra) 60 mg twice daily&lt;br&gt;• loratadine (Claritin) 10 mg daily</td>
<td></td>
</tr>
<tr>
<td><strong>Benzodiazepines</strong>&lt;br&gt;• alprazolam (Xanax)&lt;br&gt;• clonazepam (Klonopin)&lt;br&gt;• diazepam (Valium)</td>
<td>• Falls&lt;br&gt;• Delirium</td>
<td>• buspirone (Buspar) titrated to 15 mg twice daily&lt;sup&gt;500&lt;/sup&gt;&lt;br&gt;• sertraline (Zoloft) 50–200 mg daily&lt;br&gt;• citalopram (Celexa) 10–20 mg daily</td>
<td>If a benzodiazepine must be used, select a low dose of a short-acting agent such as: lorazepam (Ativan) 0.25–0.5 mg every 8 hours or oxazepam (Serax) 5 mg every 6 hours&lt;sup&gt;510&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Antiemetics</strong>&lt;br&gt;• dimenhydrinate (Dramamine)&lt;br&gt;• meclizine (Antivert)&lt;br&gt;• promethazine (Phenergan)&lt;br&gt;• metoclopramide (Reglan)</td>
<td>• Constipation&lt;br&gt;• Delirium&lt;br&gt;• Dry mouth&lt;br&gt;• Sedation&lt;br&gt;• Urine retention</td>
<td>ondansetron (Zofran)</td>
<td>Metoclopramide (Reglan) 5 mg every 4–6 hours can be used short term; long-term use may cause extrapyramidal side effects.</td>
</tr>
<tr>
<td><strong>Antipsychotics</strong>&lt;br&gt;• aripiprazole (Abilify)&lt;br&gt;• clozapine (Clozaril)&lt;br&gt;• haldol (Haloperidol)&lt;br&gt;• olanzapine (Zyprexa)</td>
<td>• QTc prolongation&lt;br&gt;• Increased mortality when used to treat dementia-related behavioral issues in the elderly</td>
<td>• risperidone (Risperdal) 0.5–1 mg daily&lt;sup&gt;417&lt;/sup&gt;&lt;br&gt;• olanzapine (Zyprexa) 2.5–5 mg daily&lt;sup&gt;413&lt;/sup&gt;&lt;br&gt;• quetiapine (Seroquel) 12.5 mg daily&lt;sup&gt;414&lt;/sup&gt;&lt;br&gt;• sertraline (Zoloft) 50–200 mg daily&lt;sup&gt;116&lt;/sup&gt;&lt;br&gt;• citalopram (Celexa) 10–20 mg daily&lt;sup&gt;102&lt;/sup&gt;</td>
<td>Increased mortality when used to treat behavior problems in elderly patients with dementia. Use should be limited to patients in danger of harming themselves or others. Small studies have indicated sertraline (Zoloft) and citalopram (Celexa) are associated with a modest improvement of psychosis and agitation compared to placebo&lt;sup&gt;402, 116&lt;/sup&gt;. However, there is no statistically significant difference in the effectiveness of SSRIs compared to typical or atypical antipsychotics&lt;sup&gt;402, 403, SEI&lt;/sup&gt;.</td>
</tr>
<tr>
<td><strong>Muscle relaxants</strong>&lt;br&gt;• carisoprodol (Soma)&lt;br&gt;• cyclobenzaprine (Flexeril)&lt;br&gt;• metaxalone (Skelaxin)&lt;br&gt;• methocarbamol (Robaxin)&lt;br&gt;• orphenadrine (Norflex)</td>
<td>• Cognitive impairment&lt;br&gt;• Sedation&lt;br&gt;• Urine retention</td>
<td>• Physical therapy&lt;br&gt;• baclofen (Kemstro) 5 mg TID PRN&lt;br&gt;• tizanidine (Zanaflex) 2 mg every 5–6 hours as needed</td>
<td></td>
</tr>
<tr>
<td><strong>Tricyclic Antidepressants (TCA)</strong>&lt;br&gt;• amitriptyline (Elavil)&lt;br&gt;• clomipramine (Anafranil)&lt;br&gt;• imipramine (Tofranil)</td>
<td>• Constipation&lt;br&gt;• Delirium&lt;br&gt;• Dry mouth&lt;br&gt;• Sedation&lt;br&gt;• Urine retention</td>
<td>• SSRIs for depression&lt;br&gt;• trazodone (Desyrel) 50–100 mg at bedtime for insomnia&lt;br&gt;• lidocaine or capsaicin for neuropathic pain</td>
<td>If a TCA must be used, consider: • desipramine (Norpramin) 25 mg daily OR • nortriptyline (Aventyl) 25 mg daily</td>
</tr>
<tr>
<td><strong>Antispasmodics</strong>&lt;br&gt;• oxybutynin ( Ditropan)&lt;br&gt;• tolterodine (Detrol)&lt;br&gt;• dicyclomine (Bentyl)&lt;br&gt;• hyoscyamine (Levsin)</td>
<td>• Constipation&lt;br&gt;• Delirium&lt;br&gt;• Dry mouth&lt;br&gt;• Sedation&lt;br&gt;• Urine retention</td>
<td><strong>For urge incontinence:</strong>&lt;br&gt;• darifenacin (Enablex) 7.5 mg daily &lt;br&gt;<strong>OR</strong>&lt;br&gt;• mirabegron (Myrbetriq) 25 mg daily &lt;br&gt;<strong>For BPH:</strong>&lt;br&gt;• finasteride (Propencia, Proscar) 5 mg daily &lt;br&gt;<strong>OR</strong>&lt;br&gt;• dutasteride (Duagen) 0.5 mg daily &lt;br&gt;<strong>For diarrhea:</strong> loperamide (Imodium) 4 mg followed by 2 mg after each loose stool (up to a maximum of 16 mg/day)</td>
<td></td>
</tr>
<tr>
<td><strong>Barbiturates</strong>&lt;br&gt;butalbital</td>
<td>• Drowsiness&lt;br&gt;• Dizziness&lt;br&gt;• Heartburn&lt;br&gt;• Dyspepsia</td>
<td>• diclofenac topical (Voltaren gel) &lt;br&gt;• tramadol (Ultram) 50 mg every 4–6 hours as needed, not to exceed 300 mg/24 hours &lt;br&gt;• acetaminophen 500 mg/caffeine 65 mg every 6 hours as needed</td>
<td></td>
</tr>
<tr>
<td><strong>Nonbenzodiazepine hypnotics</strong>&lt;br&gt;• eszopiclone (Lunesta)&lt;br&gt;• zolpidem (Ambien)&lt;br&gt;• zaleplon (Sonata)</td>
<td>• Falls&lt;br&gt;• Delirium</td>
<td>• trazodone (Desyrel) 50–100 mg every night at bedtime&lt;br&gt;• Melatonin (limited evidence) 3–5 mg every night at bedtime</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 7. Supplements

<table>
<thead>
<tr>
<th>Supplement</th>
<th>Usual Dosing</th>
<th>Potential to:</th>
<th>Safety When Used as Directed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Prevent Dementia</td>
<td>Treat Dementia</td>
<td></td>
</tr>
<tr>
<td>Vitamin E (alpha-tocopherol)</td>
<td>800—2,000 IU daily</td>
<td>Possibly Evidence: Limited</td>
<td>Possibly Evidence: Limited</td>
<td>Some risks&lt;br&gt; Risk of side effects, such as bleeding, increase as higher doses (&gt; 1,000 IU) are used. Maintaining healthy levels of vitamin E in the diet may be more advantageous than supplementation. A meta-analysis showed increasing dietary intake of vitamins E and C may reduce the risk of developing Alzheimer’s disease by around 20%.</td>
</tr>
<tr>
<td>Ginkgo biloba</td>
<td>120—240 mg daily</td>
<td>Unlikely Evidence: Strong</td>
<td>Likely Evidence: Limited</td>
<td>Very likely safe</td>
</tr>
<tr>
<td>Long chain omega-3 fatty acids, DHA and EPA</td>
<td>200—3,000 mg daily</td>
<td>Likely Evidence: Limited</td>
<td>Unlikely Evidence: Limited</td>
<td>DHA may improve symptoms of dementia in patients with dementia due to thrombotic cerebrovascular diseases.</td>
</tr>
<tr>
<td>Curcumin (found in turmeric)</td>
<td>400 mg—4 g daily</td>
<td>Possibly Evidence: Limited</td>
<td>Possibly Evidence: Very limited</td>
<td>Very likely safe</td>
</tr>
<tr>
<td>Cinnamon</td>
<td>120—6,000 mg extract daily</td>
<td>Possibly Evidence: Limited</td>
<td>Possibly Evidence: Very limited</td>
<td>Very likely safe</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>500 mcg daily</td>
<td>Unlikely Evidence: Limited</td>
<td>Unlikely Evidence: Limited</td>
<td>Probably safe</td>
</tr>
<tr>
<td>Vitamin B6</td>
<td>20 mg daily</td>
<td>Unlikely Evidence: Limited</td>
<td>Unlikely Evidence: Limited</td>
<td>Probably safe</td>
</tr>
<tr>
<td>Vitamin B9</td>
<td>1 mg daily</td>
<td>Controversial Evidence: Limited</td>
<td>Controversial Evidence: Limited</td>
<td>Probably safe</td>
</tr>
<tr>
<td>Resveratrol</td>
<td>500—2,000 mg daily</td>
<td>Possibly Evidence: Very limited</td>
<td>Possibly Evidence: Very limited</td>
<td>Patients taking anticoagulants and antiplatelets should avoid resveratrol due to increased bleeding risk.</td>
</tr>
</tbody>
</table>

### TABLE 8. Other pharmacologic agents

<table>
<thead>
<tr>
<th>Other Pharmacologic Agents</th>
<th>Usual Dosing</th>
<th>Potential to:</th>
<th>Safety When Used as Directed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Prevent Dementia</td>
<td>Treat Dementia</td>
<td></td>
</tr>
<tr>
<td>Selegiline</td>
<td>10 mg daily</td>
<td>No evidence</td>
<td>Controversial Evidence: Limited</td>
<td>Some risks&lt;br&gt; Carries a black-box warning for suicidal thoughts and behavior</td>
</tr>
<tr>
<td>Statins</td>
<td>Varies based on statin</td>
<td>Possibly Evidence: Limited</td>
<td>Unlikely Evidence: Limited</td>
<td>Likely safe</td>
</tr>
<tr>
<td>Estrogen replacement</td>
<td>0.5—2 mg daily</td>
<td>Controversial Evidence: Moderate</td>
<td>Unlikely Evidence: Limited</td>
<td>Some risks</td>
</tr>
<tr>
<td>Anti-inflammatory drugs</td>
<td>Varies based on medication</td>
<td>Controversial Evidence: Moderate</td>
<td>Unlikely Evidence: Limited</td>
<td>Some risks</td>
</tr>
</tbody>
</table>
RESOURCES

CPM and Best Practice Flashcards (see page 4)
- View online: In either intermountain.net or intermountainphysician.org, choose Clinical Programs > Clinical Topics A-Z > Dementia for all Intermountain-produced patient and provider materials.
- Ordering: Access Intermountain's Online Library and Print Store at iprintstore.org. Search by key terms, or use the topic menu to browse.

Recommended Patient and Caregiver Education Materials

The Alzheimer's Association Resouces for:
- Patients Newly Diagnosed: [http://www.alz.org/i-have-alz/just-diagnosed.asp](http://www.alz.org/i-have-alz/just-diagnosed.asp)
- Tips for Daily Life: [http://www.alz.org/i-have-alz/tips-for-daily-life.asp](http://www.alz.org/i-have-alz/tips-for-daily-life.asp)
- Caregiving for Late-Stage Dementia: [http://www.alz.org/care/alzheimers-late-end-stage-caregiving.asp](http://www.alz.org/care/alzheimers-late-end-stage-caregiving.asp)

National Institute on Aging Resources

Intermountain’s dementia-related fact sheets and other tools
Produced by the same team that created this CPM, these fact sheets help educate patients and families about mild cognitive impairment and dementia symptoms, staging, treatments, and caregiver support.
- FS5000 Mild Cognitive Impairment (MCI) — Covers how MCI is diagnosed as well as “brain health” and driving safety.
- FS485 Understanding Dementia: First Steps after Diagnosis — Covers what the patient needs to know when first diagnosed, how to cope with the diagnosis, and initial supportive messages for caregivers
- FS492 Dementia: Personal Action Plan — Used with a care manager or home health provider; covers self-care strategies including diet, exercise, sleep, maximizing function, and being safe
- FS494 Alzheimer’s Resources: Utah and Southern Idaho — Lists area agencies on aging and support groups

Patients and their families can find all of these materials and links to other reliable dementia resources in the Health Library at Intermountain’s public website (https://intermountainhealthcare.org/health-information/health-library/patient-handouts/).

WHAT DEMENTIA PATIENTS WANT THEIR HEALTHCARE PROVIDERS TO KNOW AND DO (FROM FOCUS GROUPS)
- Take me and my family seriously if we report a concern about memory.
- Do an objective evaluation of memory.
- Give me a diagnosis.
- Explain how you made the diagnosis.
- Give me information about my diagnosis but don’t just throw it at me. Schedule a follow up in 2 – 3 months to review it with me after I have had time to process the information.
- Tell me and my family what to expect and help us plan for the future.
- Tell me what I and my family/caregiver can do to help my situation.
- If you aren’t sure how to make the diagnosis or how to treat it, refer me for specialty consultation.
- If you do refer me to a specialist, please coordinate with them and follow up on their recommendations.
- Give me and my family the number for the Alzheimer’s Association, and encourage us to get involved.
- Set up a time for me and my family to meet with your care manager.
OTHER ONLINE RESOURCES / SUPPORT GROUPS

Alzheimer’s Disease
- Alzheimer’s Association: www.alz.org
- National Institute on Aging Alzheimer’s Disease Education and Referral Center (ADEAR): https://www.nia.nih.gov/alzheimers
- Community Resource Finder: http://www.communityresourcefinder.org/
- Alzheimer’s Navigator: https://www.alzheimersnavigator.org/
- Music and Memory: http://musicandmemory.org/

Research:
- University of Utah Center for Alzheimer’s Care, Imaging, and Research (CACIR) — Memory Study Line: 801-587-7888
- Alzheimer’s Association Trial Match: http://www.alz.org/research/clinical_trials/find_clinical_trials_trialmatch.asp

Local support groups in Utah:
Alzheimer’s Association of Utah
- General Information: Call 801-265-1944 (Salt Lake County office) or 435-669-3664 (Washington County office)
- For information on support groups, visit: http://www.alz.org/utah/in_my_community_support.asp
- 24/7 Helpline: 800-272-3900

Local support group in Idaho: Alzheimer’s Association Greater Idaho Chapter
- General Information: Call 208-206-0041, or visit www.alz.org/idaho
- For information on support groups, visit: http://www.alz.org/idaho/in_my_community_support.asp
- 24/7 Helpline: 800-272-3900

Intermountain’s fact sheet, Alzheimer’s Resources: Utah and Southern Idaho, offers detailed information on Utah and Southern Idaho Alzheimer’s Association Support Groups and Area Agencies on Aging.

Dementia with Lewy Bodies
- Dementia with Lewy Bodies: http://www.lbda.org/
- Lewy Body Dementia Association, Inc.: 912 Killian Hill Road S.W., Lilburn, GA 30047
  - LBD Caregiver Link: 800-539-9767
  - National Office (Atlanta, GA): 404-935-6444
  - National Office Fax: 480-422-5434

Local support group in Salt Lake Valley
Contact Raquel Asay at 801-533-0972 or by email at rachelar39@gmail.com

Driving Safety
- At the Crossroads: Family Conversations about Alzheimer’s Disease, Dementia, and Driving:

Frontotemporal Dementia
- The Association for Frontotemporal Degeneration (AFTD): http://www.theaftd.org/
  Radnor Station Building 2, Suite 320, 290 King of Prussia Road, Radnor, PA 19087, 267-514-7221 OR 866-507-7222 (toll free & HelpLine)
- Southwest Region of the AFTD (California, Arizona, Utah, New Mexico, Colorado, Hawaii): Kathy Urban: kurban.aftd@gmail.com
- Local FTD and related dementias support groups in Utah:
  - Sandy Senior Center, 9310 S 1300 E, Sandy, UT
    Meets the 2nd Wednesday from 10:00 to 11:30 am
    Contact: Bonnie Shepherd, 801-231-3442; bbshepherd@comcast.net
  - Bingham Creek Library, 4834 W 9000 S, West Jordan, UT
    Meets the 2nd Wednesday from 6:00 to 7:30 pm
    Contact: Jamie Gordon, 801-550-3563; jjgordon3@juno.com
  - National phone-based support group for adult children affected by FTD:
    Scheduled the 3rd Thursday of the month from 5:00 to 6:30 pm
    Led and organized by University of California, San Francisco:
    Contact for access number: Jamie C. Fong, M.S., CGC,
    415-476-8613; jfong@memory.ucsf.edu

Parkinson’s Disease Dementia
National Parkinson Foundation: http://www.parkinson.org/
200 SE 1st Street, Suite 800, Miami, Florida 33131
Toll-free Helpline: 800-4PD-INFO (473-4636)
Fax: 305-537-9901
E-mail inquiries: contact@parkinson.org
FORMS

Cognitive screening and staging forms: Full-sized copies of most forms referenced in this CPM can be found below and on the following pages (pages 22–29). To access MoCA forms and administration/scoring instructions, follow the instructions on page 23.

Mini-Cog™

Instructions for Administration & Scoring

ID: ___________ Date: ______________

Step 1: Three Word Registration

Look directly at person and say, “Please listen carefully. I am going to say three words that I want you to repeat back to me now and try to remember. The words are [select a list of words from the versions below]. Please say them for me now.” If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing).

The following and other word lists have been used in one or more clinical studies. For repeated administrations, use of an alternative word list is recommended.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Banana</td>
<td>Leader</td>
<td>Village</td>
<td>River</td>
<td>Captain</td>
<td>Daughter</td>
</tr>
<tr>
<td>Sunrise</td>
<td>Season</td>
<td>Kitchen</td>
<td>Nation</td>
<td>Garden</td>
<td>Heaven</td>
</tr>
<tr>
<td>Chair</td>
<td>Table</td>
<td>Baby</td>
<td>Finger</td>
<td>Picture</td>
<td>Mountain</td>
</tr>
</tbody>
</table>

Step 2: Clock Drawing

Say: “Next, I want you to draw a clock for me. First, put in all of the numbers where they go.” When that is completed, say: “Now, set the hands to 10 past 11.”

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test. Move to Step 3 if the clock is not complete within three minutes.

Step 3: Three Word Recall

Ask the person to recall the three words you stated in Step 1. Say: “What were the three words I asked you to remember?” Record the word list version number and the person’s answers below.

Word List Version: _____ Person’s Answers: ___________________ ___________________ ___________________

Scoring

| Word Recall: _____ (0-3 points) | 1 point for each word spontaneously recalled without cueing. |
| Clock Draw: _____ (0 or 2 points) | Normal clock = 2 points. A normal clock has all numbers placed in the correct sequence and approximately correct position (e.g., 12, 3, 6 and 9 are in anchor positions) with no missing or duplicate numbers. Hands are pointing to the 11 and 2 (11:10). Hand length is not scored. Inability or refusal to draw a clock (abnormal) = 0 points. |
| Total Score: _____ (0-5 points) | Total score = Word Recall score + Clock Draw score. A cut point of <3 on the Mini-Cog™ has been validated for dementia screening, but many individuals with clinically meaningful cognitive impairment will score higher. When greater sensitivity is desired, a cut point of <4 is recommended as it may indicate a need for further evaluation of cognitive status. |

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Mini-Cog™

References

Montreal Cognitive Assessment (MoCA)

Downloadable copies of the MoCA form (in many languages) and administration and scoring instructions are available at no charge at mocatest.org. The site does require registration, and instructions for setting up an account and downloading files are included below.

1. Visit mocatest.org and register for a free account. You will need to complete the form that appears and submit. A confirmation email will be sent to you with a link to use to complete the registration.

2. Once you have clicked on the confirmation link in your email, the following page will open. To access the form, click on the "MOCA TEST FULL" icon as indicated.

3. The next window that opens lists all the different versions of the MoCA test in various languages. Select the appropriate version.

4. Download the test form (see a sample on page 24). You can also print the form from this screen by clicking the icon next to the one for downloading.
Montreal Cognitive Assessment (MoCA)

**VISUOSPATIAL / EXECUTIVE**
- Copy cube [ ] (3 points)
- Draw clock (ten past eleven) [ ] (5 points)

**NAMING**
- [ ] Contour [ ] Numbers [ ] Hands (3 points)

**MEMORY**
- Read list of words. Subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.
- 1st trial
- 2nd trial

**ATTENTION**
- Read list of digits (1 digit/sec.). Subject has to repeat them in the forward order [ ] 2 1 8 5 4 (2 points)
- Subject has to repeat them in the backward order [ ] 7 4 2 (2 points)

**LANGUAGE**
- Repeat: I only know that John is the one to help today. [ ]
- The cat always hid under the couch when dogs were in the room. [ ]

**ABSTRACTION**
- Similarity between e.g. banana - orange = fruit [ ]
- train - bicycle [ ]
- watch - ruler [ ]

**DELAYED RECALL**
- Has to recall words WITH NO CUE
- Points for UNCUED recall only (5 points)

**Optional**
- Category cue
- Multiple choice cue

**ORIENTATION**
- [ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City (6 points)

Total [ ]/30

© Z. Nasreddine MD www.mocatest.org
Normal ≥ 26 / 30
Add 1 point if ≤ 12 yr edu
# Functional Activities Questionnaire (FAQ) for Informants

**INFORMANT NAME:** ______________________  **PATIENT NAME:** ______________________

**DATE:** ______________________  **PATIENT DOB or MRN:** ______________________

## Functional Activities Questionnaire (FAQ)

**PROVIDER INSTRUCTIONS:** Give questionnaire to an informant (caregiver, family member, or friend of the patient).

### How well does the patient:

<table>
<thead>
<tr>
<th></th>
<th>Depends on others to do</th>
<th>Needs help to do</th>
<th>Has difficulty but does by self</th>
<th>Normal</th>
<th>Never did but could do now</th>
<th>Never did and would have difficulty now</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Write checks, pay bills, and balance the checkbook?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>2. Assemble tax records, business affairs, or papers?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>3. Shop alone for clothes, household necessities, or groceries?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>4. Play a game of skill or work on a hobby?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>5. Heat water, make a cup of coffee, and turn off the stove?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>6. Prepare a balanced meal?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>7. Keep track of current events?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>8. Pay attention to, understand, and discuss TV, a book, or a magazine?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>9. Remember appointments, family occasions, holidays, and medications?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
<tr>
<td>10. Travel out of the neighborhood by driving or arranging to take buses?</td>
<td>☐ 3</td>
<td>☐ 2</td>
<td>☐ 1</td>
<td>☐ 0</td>
<td>☐ 0</td>
<td>☐ 1</td>
<td>☐ 0</td>
</tr>
</tbody>
</table>

**TOTAL**

**PROVIDER EVALUATION:** Sum the ratings across the 10 items. Scores ≥ 9 indicated significant functional impairment.

My Stress Thermometer
Caregiver Name: _________________
Patient Name: ____________________ Patient DOB: ______ Date:____

STRESS: Feeling tense, nervous, anxious, restless, or unable to sleep because your mind is troubled all the time.

Please CIRCLE the line that represents your current stress level

Extremely stressed

Very stressed

Moderately stressed

A little stressed

Not stressed at all

ID:______________ Date:______________

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BEHAV5
Borson, Sadak ©

Please check yes for the behaviors that you have observed in your care recipient in the past month.

<table>
<thead>
<tr>
<th>1. AGITATION/AGGRESSION</th>
<th>☐ Yes ☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your care recipient get angry or hostile?</td>
<td></td>
</tr>
<tr>
<td>Resist care from others?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>2. HALLUCINATIONS</th>
<th>☐ Yes ☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your care recipient see and/or hear things that no one else can see or hear?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>3. IRRITABILITY/ FREQUENTLY CHANGING MOOD</th>
<th>☐ Yes ☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your care recipient act impatient and cranky? Does his or her mood frequently change for no apparent reason?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. SUSPICIOUSNESS/PARANOIA</th>
<th>☐ Yes ☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your care recipient act suspicious without good reason (example: believes that others are stealing from him or her, or planning to harm him or her in some way)?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. INDIFFERENCE/SOCIAL WITHDRAWAL</th>
<th>☐ Yes ☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does your care recipient seem less interested in his or her usual activities and in the activities and plans of others?</td>
<td></td>
</tr>
</tbody>
</table>
Utah Driving Assessment Forms (in Idaho, contact the Idaho Transportation Department: 208-334-8000)

FUNCTIONAL ABILITY EVALUATION MEDICAL REPORT

TOP PORTION MUST BE COMPLETED AND SIGNED BY APPLICANT

Last Name First Name Middle or Maiden Name Date of Birth Driver License or DPC #

By signing this form, I authorize my healthcare professional(s) to disclose specific health information regarding my physical, mental and emotional condition relevant to my ability to safely operate a motor vehicle, to the Utah Driver License Division. I understand that if I fail to sign this authorization my driving privilege may be affected. I understand that this information will be classified as a private record in accordance with GRAMA (UCA 63G-2-202). Individuals who are entitled to have a “private” record disclosed to them are limited to the subject of the record, a parent or legal guardian of an unemancipated minor or legally incapacitated individual, an individual with power of attorney or a notarized release signed by the subject of the record, or an individual with a court or legislative subpoena.

APPLICANT’S SIGNATURE: __________________________________________ Date: ________________________________

Form will not be processed without signature

BOTTOM PORTION TO BE COMPLETED AND SIGNED BY HEALTH CARE PROFESSIONAL

The following safety assessment level is for use in determining driving privileges. It is consistent with the current edition of Functional Ability in Driving: Guidelines and Standards for Health Care Professionals. Please indicate level below with a check mark and your initials.

<table>
<thead>
<tr>
<th>Safety Assessment Level</th>
<th>A Diabetes &amp; Metabolic Condition On Insulin</th>
<th>B Cardio-Vascular &amp; High Blood Pressure</th>
<th>C Pulmonary</th>
<th>D Neurologic</th>
<th>E Seizures or Episodic Conditions</th>
<th>F Learning Memory</th>
<th>G Psychiatric or Emotional Condition</th>
<th>H Alcohol &amp; Other Drugs</th>
<th>J Musculo-Skeletal Chronic Debility</th>
<th>K Alertness or Sleep Disorders</th>
<th>L Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>□ Yes</td>
<td>□ No</td>
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<td>N/A</td>
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<tr>
<td>6</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</tr>
</tbody>
</table>

Please indicate if any of the following apply to this medical review:

☐ Non-standard review time frame

☐ Safety Assessment categories not marked are relevant and should be completed by another health care professional. Please list categories which are of concern:

☐ I recommend this driver complete a driving skills test in an appropriate vehicle. (Drive test is not available for level 8)

Recommended Restrictions:

☐ ADD OR ☐ REMOVE

☐ Speed-posted 40 mph or less ☐ Area

☐ Oxygen while driving ☐ Daylight only

Date form is completed: ____________________________

Printed Name of Health Care Professional and Degree: ____________________________

Signature & initials: ____________________________ State License Number: ____________________________

(Must be submitted to Driver License within 6 months)

Street Address: ____________________________

City: ____________________________ State: ____________________________ Zip Code: ____________________________ Telephone: ____________________________ Fax Number: ____________________________

Doctor’s Comments: __________________________________________

Date form is completed: ____________________________

Printed Name of Health Care Professional and Degree: ____________________________

Signature & initials: ____________________________ State License Number: ____________________________

(Must be submitted to Driver License within 6 months)

Street Address: ____________________________

City: ____________________________ State: ____________________________ Zip Code: ____________________________ Telephone: ____________________________ Fax Number: ____________________________

Doctor’s Comments: __________________________________________

For more information regarding the medical program or to view current medical guidelines, please visit: www.driverlicense.utah.gov

DLD 134 Rev. 11-15
Utah Driving Assessment Forms, continued

DEPARTMENT OF PUBLIC SAFETY
DRIVER LICENSE DIVISION
4501 SOUTH 2700 WEST
P O BOX 144501
SALT LAKE CITY UT 84114-4501
Fax Number: (801) 965-4336

THIS FORM IS USED BY THE UTAH DRIVER LICENSE DIVISION FOR THE PURPOSE OF REPORTING DRIVERS WHO MAY BE UNSAFE TO DRIVE. ANY PERSON, WHO IN GOOD FAITH, REPORTS A DRIVER WHO APPEARS TO PRESENT AN IMMINENT THREAT TO DRIVING SAFETY SHALL HAVE IMMUNITY FROM ANY DAMAGES CLAIMED AS A RESULT OF DOING SO. Utah Code Annotated (UCA) 53-3-303.

The notification provided under this section relating to a physical, mental, or emotional impairment is classified as a protected record under Title 63G, Chapter 2, Government Records Access and Management Act, and the identity of the person notifying the Division shall not be disclosed by the Division.

NAME OF SUBJECT ________________________________DATE OF BIRTH____________________
(Print) UTAH LICENSE NUMBER or
RELATIONSHIP (IF ANY) ____________________    DRIVING PRIVILEGE CARD # _______________

SUMMARY: Describe actions or known impairments that you have observed which caused you to submit this report (be specific)

_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________
_________________________________________________________________________________________________________

THE ABOVE STATEMENT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT IT MAY BE PUNISHABLE AS A MISDEMEANOR TO KNOWINGLY GIVE A WRITTEN FALSE STATEMENT (UCA 76-8-504). I understand that if I have made a notification with the intent to annoy, intimidate, or harass the person that is the subject of the notification I may be charged with a class C misdemeanor (53-3-305(5)).

REQUESTER INFORMATION:
NAME:__________________________________________
ADDRESS: _____________________________________
_______________________________________________
PHONE: _______________________________________
SIGNATURE: ___________________________________

NOTARIAL CERTIFICATE:
STATE OF _____________________________________
COUNTY OF ___________________________________
Acknowledged before me this ________ day of ____________________, 20______.
_____________________________________________
Notary Public

DI 117
Rev. 8-12
# REFERENCES

| APA1 | American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). 2013. Washington, DC |
| COR2 | Corbett A, Burns A, Ballard C. Don’t use antipsychotics routinely to treat agitation and aggression in people with dementia. *BMJ.* 2014;3:349:g6420. |


SKI Skibitsky MD, Poll J, Garrett KD, Obrey CM, Hoesch RE. Support for Cognitively Impaired Patients is a Top Primary Care Need. Poster session presented at the Alzheimer’s Association International Conference, Toronto, Canada, July 2016.


This CPM presents a model of best care based on the best available scientific evidence at the time of publication. It is not a prescription for every physician or every patient, nor does it replace clinical judgment. All statements, protocols, and recommendations herein are viewed as transitory and iterative. Although physicians are encouraged to follow the CPM to help focus on and measure quality, deviations are a means for discovering improvements in patient care and expanding the knowledge base. Send feedback to Meg Skibitsky, MD, MPH, Intermountain Healthcare, Medical Director Neurosciences Clinical Program, Cognitive Care Development Team (Meg.Skibitsky@imail.org).