Criteria for When to Use:
As a general cognitive screening tool or as part of an annual exam (Medicare Annual Wellness Visit).

How to Use:
This is the first Decision Support Tool (DST) of three that helps guide you through evidence-based assessment and care for your patients with cognitive impairment. The second is a guide to evaluation for memory loss/dementia, and the third DST is designated for the post-diagnostic follow-up visit.

Evidence Based Practice: Links, Resources & References
American Academy of Neurology
ACT on Alzheimer’s Clinical Provider Practice Parameter

Screening Tool:
Conduct brief objective cognitive screen with the Mini-Cog. If score is < 4 or patient/family express concern regarding deteriorating cognitive function, proceed with workup for possible cognitive disorder/dementia.

Mini-Cog

1.0 Screening Tool

► 1.1 - Documentation

► 1.2 - Orders
   ▼ Labs
     ► Routine Dementia Screening Labs
     ► Contingent Labs

► 1.3 - Imaging

► 1.4 - Specialty Consult

► 1.5 - Patient Instructions
Documentation

Progress Note: Screen Abnormal (Mini-Cog < 4), Schedule Follow-up

Patient screened today for cognitive changes characterized by *** (e.g., forgetfulness, repeating self, misplacing things, confusion, inability to carry out daily routine, etc.). Evaluation with the Mini-Cog yielded an abnormal score of ***/5. A follow-up evaluation is indicated to assess for possible cognitive disorder/dementia. Patient will return in *** weeks to complete work-up.

Progress Note: Screen Normal (Mini-Cog 4-5), Schedule Follow-up

Patient screened today for cognitive changes characterized by *** (e.g., forgetfulness, repeating self, misplacing things, confusion, inability to carry out daily routine, etc.). Evaluation with the Mini-Cog yielded a normal score of ***/5. However, patient/family express concern regarding deteriorating cognition and it appears that follow-up is warranted. Patient will return in *** weeks to complete cognitive disorder/dementia work-up.

Progress Note: Screen Normal (Mini-Cog 4-5), No Follow-up

Patient completed cognitive screening today with the Mini-Cog and obtained a normal score of ***/5. Routine screening will be conducted again during the next annual wellness visit.

Create your own note

Orders

If proceeding with a work-up, diagnostics can be ordered now or at the time of follow-up. Routine orders are automatically checked below.

Labs – all of the following should be obtained in any memory loss evaluation based on American Academy of Neurology (AAN) recommendations. Repeat labs unnecessary if prior results obtained following onset of presenting memory loss.

Routine Dementia Screening Labs:

- BASIC METABOLIC PANEL
- CBC (HEMOGRAM/PLTS)
- LIVER PANEL (HEPATIC FUNCTION PANEL)
- B12 ONLY
- TSH, SENSITIVE

Contingent Labs (per patient history):

- RPR (SYPHILIS SCREEN) – The American Academy of Neurology (AAN) does not recommend routine screening for syphilis in dementia except in specific populations where the disease may be suspected.
- Heavy metals
- Lyme titer
- HIV
According to the American Academy of Neurology (AAN), either a Head CT or Brain MRI are considered appropriate imaging tools in evaluating memory loss.

Repeat imaging unnecessary if prior head CT or brain MRI obtained following onset of presenting memory loss. Consider MRI in cases where patient has focal neurological findings, rapidly progressive dementia, atypical presentation for Alzheimer’s disease, and early onset dementia at age < 65.

- CT HEAD WITHOUT CONTRAST
- MR BRAIN/STEM WITH/WITHOUT CONTRAST

Indication: diagnostic uncertainty, early onset dementia, atypical dementia, dementia medication management, management of moderate-severe dementia with psychosocial factors or management of behavioral symptoms of dementia

- MEMORY SPECIALTY CENTER / DIAGNOSTIC CENTER
- NEUROLOGY CONSULT-ADULTS
- NEUROPSYCHOLOGY CONSULT-ADULTS
  - Neuropsychological evaluation is typically most helpful for differential diagnosis, determining nature and severity of cognitive functioning, and the development of an appropriate treatment plan. Testing is typically maximally beneficial in the following score ranges: SLUMS = 18-27, MoCA = 19-27, Kokmen STMS = 19-33, MMSE/MMSE-2 = 18-28
- PSYCHIATRY CONSULT-ADULTS
- OCCUPATIONAL THERAPY
- MEDICATION REVIEW (e.g., PharmD Consult)
- SLEEP STUDY / SLEEP MEDICINE
- HEALTH CARE HOME REFERRAL
- COMPLEX CARE MANAGEMENT REFERRAL

Patient instructions for coping with memory loss / brain health / healthy aging.
- Please bring all over the counter and prescription medications to the next appointment.
- Please bring a family member or friend (care partner) to the next appointment.
Criteria for When to Use:
During the initial work-up for patients with new onset memory loss OR following abnormal performance on cognitive screening (e.g., Mini-Cog score < 4).

An initial evaluation includes:
• A thorough history addressing memory loss and cognitive dysfunction
• Objective cognitive screening / assessment
• Dementia-related laboratory studies
• Neuroimaging

How to Use:
This is the second Decision Smart Tool (DST) in a set of three that helps guide you through evidence-based assessment and care for your patients with cognitive impairment. The first is a guide to cognitive screening and the third DST is designated for the post-diagnostic follow-up visit.

Evidence Based Practice: Links, Resources & References
American Academy of Neurology
Alzheimer’s Association
ACT on Alzheimer’s Clinical Provider Practice Parameter

NOTE: Consider distributing a release of information form (ROI) to all family members during the rooming process.

► 2.1 - History
► 2.2 - Cognitive Screening
   ► Montreal Cognitive Assessment
   ► St. Louis University Mental Status Exam
► 2.3 - Documentation/HPI
► 2.4 - Orders
   ▼ Labs
   ► Routine Dementia Screening Labs
   ► Contingent Labs
► 2.5 - Imaging
► 2.6 - Specialty Consult
► 2.7 - Diagnosis
► 2.8 - Patient Instructions
History

History questions to be asked in the presence of a family member or friend (care partner). Select from the tools below.

Family Questionnaire
Functional Assessment Staging of Alzheimer’s Disease (FAST)
Instrumental Activities of Daily Living (IADL)
Activities of Daily Living (ADL)
High Yield Clinical Questions

Cognitive Screening

Montreal Cognitive Assessment

The Montreal Cognitive Assessment (MoCA) is preferred as a cognitive screen over the MMSE, offering a more extensive evaluation with sensitivity of 90% for mild cognitive impairment (vs MMSE 18%) and 100% for dementia (vs MMSE 78%). Estimated administration time is 15 minutes.

Conduct MoCA

- MoCA is available in 30+ languages
- Instructions for administering MoCA
- 30 points is the maximum score
- Abnormal score is less than 26

St. Louis University Mental Status Exam

The St. Louis University Mental Status Exam (SLUMS) is preferred as a cognitive screen over the MMSE, offering a more reliable evaluation with sensitivity of 92% for mild cognitive impairment (vs MMSE 18%) and 100% for dementia (vs MMSE 78%). Estimated administration time is 10 minutes.

Conduct SLUMS

- Instructions for administering SLUMS
- 30 points is the maximum score
- Abnormal score is less than 27 (HS education) or less than 25 (< HS)
Progress Note: Cognitive Impairment Workup

Patient evaluated today for cognitive changes characterized by *** (e.g., Mini-Cog score < 4, forgetfulness, repeating self, misplacing things, confusion, inability to carry out daily routine, etc.). Evaluation with the *** (e.g., MoCA/SLUMS) yielded a score of ***/30. Will review current medication list and order routine dementia labs and neuroimaging to rule out common medical causes of cognitive impairment. A follow-up visit will be scheduled for *** weeks to review diagnosis and discuss treatment recommendations.

Create your own note

Orders

Routine orders are automatically checked below.

Labs – all of the following should be obtained in any memory loss evaluation based on American Academy of Neurology (AAN) recommendations. Repeat labs unnecessary if prior results obtained following onset of presenting memory loss.

Routine Dementia Screening Labs:

- ✓ BASIC METABOLIC PANEL
- ✓ CBC (HEMOGRAM/PLTS)
- ✓ LIVER PANEL (HEPATIC FUNCTION PANEL)
- ✓ B12 ONLY
- ✓ TSH, SENSITIVE

Contingent Labs (per patient history):

- RPR (SYPHILIS SCREEN) – The American Academy of Neurology (AAN) does not recommend routine screening for syphilis in dementia except in specific populations where the disease may be suspected.
- Heavy metals
- Lyme titer
- HIV
2.5 Imaging

According to the American Academy of Neurology (AAN), either a Head CT or Brain MRI are considered appropriate imaging tools in evaluating memory loss.

Repeat imaging unnecessary if prior head CT or brain MRI obtained following onset of presenting memory loss. Consider MRI in cases where patient has focal neurological findings, rapidly progressive dementia, atypical presentation for Alzheimer’s disease, and early onset dementia at age < 65.

☐ CT HEAD WITHOUT CONTRAST
☐ MR BRAIN/STEM WITH/WITHOUT CONTRAST

2.6 Specialty Consult

Indication: diagnostic uncertainty, early onset dementia, atypical dementia, dementia medication management, management of moderate-severe dementia with psychosocial factors or management of behavioral symptoms of dementia

☐ MEMORY SPECIALTY CENTER / DIAGNOSTIC CENTER
☐ NEUROLOGY CONSULT-ADULTS
☐ NEUROPSYCHOLOGY CONSULT-ADULTS
  Neuropsychological evaluation is typically most helpful for differential diagnosis, determining nature and severity of cognitive functioning, and the development of an appropriate treatment plan. Testing is typically maximally beneficial in the following score ranges: SLUMS = 18-27, MoCA = 19-27, Kokmen STMS = 19-33, MMSE/MMSE-2 = 18-28.

☐ PSYCHIATRY CONSULT-ADULTS
☐ OCCUPATIONAL THERAPY
☐ MEDICATION REVIEW (e.g., PharmD Consult)
☐ SLEEP STUDY / SLEEP MEDICINE
☐ HEALTH CARE HOME REFERRAL
☐ COMPLEX CARE MANAGEMENT REFERRAL
Working Diagnosis

- **Memory loss (780.93)**
  Patients presenting with memory loss who have not completed an evaluation to enable a diagnosis can be classified as having “memory loss.”

- **Mild cognitive impairment (MCI) (331.83)**
  Mild deficits in 1 (or more) cognitive function(s): memory, executive, visuospatial, language, attention, intact ADLs and IADLs; does not meet criteria for dementia

- **Unspecified dementia without behavioral disturbance (294.20)**
  Cause of dementia is unknown. No behavioral symptoms are present.

- **Unspecified dementia with behavioral disturbance (294.21)**
  Cause of dementia is unknown. Behavioral symptoms are present.

- **Delirium (780.09)**
  Acute onset confusion and fluctuating consciousness/alertness. Markedly reduced responsiveness to environmental stimuli. Presence of dementia unknown.

Patient Instructions

- **Patient instructions for coping with memory loss / brain health / healthy aging**
- **Bring family member or friend (care partner) to the next / follow-up appointment.**
- **Contact the Senior LinkAge Line® to locate and plan for community resources such as chore/homemaker services, home delivered meals, transportation, caregiver supports and assistance with paying for prescription drugs. You can contact the Senior LinkAge Line® by phone or online:**

  Senior LinkAge Line®
  Call 800-333-2433
  Online at MinnesotaHelp.info
3.0 Treatment/Management Tool

Criteria for When to Use:
During the follow-up visit for patients with new onset memory loss, Mini-Cog score less than 4, MoCA test score less than 26, or SLUMS less than 27 (HS education) or less than 25 (less than HS education).

How to Use:
This is the third Decision Support Tool (DST) of three that helps guide you through evidence-based care for your patients with memory loss / dementia. The first is a guide to cognitive screening and the second DST is designated for the initial evaluation visit.

Evidence Based Practice: Links, Resources & References
American Academy of Neurology
Alzheimer’s Association
ACT on Alzheimer’s Clinical Provider Practice Parameter

NOTE: Consider distributing a release of information form (ROI) to all family members during the rooming process.

► 3.1 - Documentation
► 3.2 - Diagnosis
► 3.3 - Coordination of Care
► 3.4 - Consults/Referrals
  ► Indication: Diagnostic Uncertainty...
  ► Indication: Safety/Driving
  ► Indication: Polypharmacy Contributing to Cognitive Disorder
  ► Indication: Counseling, Education and Support Systems
  ► Indication: Cognitive Stimulation, Rehabilitation, and Healthy Lifestyle
  ► Indication: Newly Diagnosed Dementia Resulting in Difficulty Coping with Diagnosis for both Patient and Care Partners
  ► Indication: Behavioral Interventions
  ► Indication: Sleep Disturbance
► 3.5 - Medication Treatment
  ► Indication: Mild-Moderate Alzheimer’s Disease
  ► Indication: Moderate-Severe Alzheimer’s Disease
  ► Indication: Depression/Anxiety
  ► Indication: Insomnia
  ► Indication: Agitation / Psychosis
Progress Note: Follow-up Memory loss/Dementia

Patient seen today in follow-up for symptoms of memory loss/cognitive impairment. A recent work-up included *** (e.g., labs, neuroimaging, cognitive/functional testing). Neurological exam was *** (e.g., nonfocal; suggestive of parkinsonism; notable for abnormal cognitive screening with the MoCA). The broader work-up was remarkable for *** (e.g., cerebral atrophy; small vessel ischemic disease; vitamin B12 deficiency). My impression is the patient is suffering from *** (e.g., Alzheimer’s disease, Lewy Body dementia). We discussed treatment options today and the patient is agreeable to *** (e.g., starting Aricept 5mg qd). His/her care partner has been identified as *** (e.g., name of spouse, adult child, close friend) and will plan to accompany the patient to all medical appointments. For disease education and support, I have referred the patient/family to *** (e.g., Alzheimer’s Association; local support group; care coordination). A follow-up appointment will be made in *** weeks to monitor progress.

Create your own note

Diagnosis

Mild cognitive impairment (MCI) (331.83)
- Mild deficits in 1 (or more) cognitive function(s): memory, executive, visuospatial, language, attention
- Intact ADLs and IADLs
- Does not meet criteria for dementia

Alzheimer’s disease (331.0)
- Most common type of dementia (60%-80% of cases)
- Memory loss, confusion, disorientation, dysnomia, impaired judgment/behavior, apathy, depression

Dementia with Lewy bodies (331.82)
- Second most common type of dementia
- Hallmark symptoms include visual hallucinations, parkinsonism and fluctuations in cognition

Frontotemporal dementia (331.19)
- Third most common type of dementia affecting individuals in their 50s and 60s
- Either marked changes in behavior/personality OR language (difficulty with speech production or word meaning) with relative sparing of episodic memory

Vascular dementia (290.40)
- Relatively rare in pure form (6%-10% of cases)
- Symptoms often overlap with AD: there is sparing of recognition memory
Consults/Referrals
Indication: diagnostic uncertainty, early onset dementia, atypical dementia, dementia medication management, management of moderate-severe dementia with psychosocial factors or management of behavioral symptoms of dementia.

MEMORY SPECIALTY CENTER / DIAGNOSTIC CENTER
NEUROLOGY CONSULT-ADULTS
NEUROPSYCHOLOGY CONSULT-ADULTS

Neuropsychological evaluation is typically most helpful for differential diagnosis, determining nature and severity of cognitive functioning, and the development of an appropriate treatment plan. Testing is typically maximally beneficial in the following score ranges: SLUMS = 18-27, MoCA = 19-27, Kokmen STMS = 19-33, MMSE/MMSE-2 = 18-28.

Coordination of Care

Care coordination referral
Instructions for check-out staff: Patient to fill out ROI for care partner.
Instructions for check-out staff: Enter care partner name and contact information into EMR patient demographics.

Other
- CJD (Creutzfeldt-Jakob disease) (046.19)
- Normal pressure hydrocephalus (331.5)
- Unspecified dementia without behavioral disturbance (294.20)
- Unspecified dementia with behavioral disturbance (294.21)
- Memory loss (780.93)
- Delirium (780.09)
- Primary progressive aphasia (784.3)
- Corticobasal degeneration (331.6)
- Posterior cortical atrophy (331.9)

3.4 Consults/Referrals

Indication: diagnostic uncertainty, early onset dementia, atypical dementia, dementia medication management, management of moderate-severe dementia with psychosocial factors or management of behavioral symptoms of dementia.

MEMORY SPECIALTY CENTER / DIAGNOSTIC CENTER
NEUROLOGY CONSULT-ADULTS
NEUROPSYCHOLOGY CONSULT-ADULTS

Neuropsychological evaluation is typically most helpful for differential diagnosis, determining nature and severity of cognitive functioning, and the development of an appropriate treatment plan. Testing is typically maximally beneficial in the following score ranges: SLUMS = 18-27, MoCA = 19-27, Kokmen STMS = 19-33, MMSE/MMSE-2 = 18-28.
**Indication: Safety/Driving**

A formal driving evaluation is recommended for newly diagnosed dementia patients who drive

- OCCUPATIONAL THERAPY DRIVING EVALUATION
- OCCUPATIONAL THERAPY – Home Safety and Medication Compliance (e.g., medication management, home safety evaluation)
- OCCUPATIONAL THERAPY – Fall risk assessment

**Patient and Care Partner Instructions:**

- Read *At the Crossroads: Family Conversations about Alzheimer’s & Driving*
- Visit Alzheimer’s Association Dementia & Driving Resource Center

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**Indication: Polypharmacy Contributing to Cognitive Disorder**

- MEDICATION REVIEW (e.g., PharmD Consult)

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**Indication: Counseling, Education and Support Systems**

- COMPLEX CARE MANAGEMENT REFERRAL
- HEALTH CARE HOME REFERRAL

**Patient and Care Partner Instructions:**

- For disease education, counseling support and dementia-specific resources, contact: Alzheimer’s Association 24/7 Helpline (call 800-272-3900), online at [alz.org](http://alz.org)
  Senior LinkAge Line® (call 800-333-2433), online at [MinnesotaHelp.info](http://MinnesotaHelp.info)

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**Indication: Cognitive Stimulation, Rehabilitation, and Healthy Lifestyle**

**Patient and Care Partner Instructions:**

- Read the *Living Well Workbook.*

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**Indication: Newly Diagnosed Dementia Resulting in Difficulty Coping with Diagnosis for both Patient and Care Partners**

- REFERRAL TO BEHAVIORAL HEALTH
**Indication: Behavioral Interventions**

Each link opens patient education handouts provided by the Alzheimer’s Association. The handouts can be printed and given to the patient or care partner.

- Behaviors
- Communication: Best Ways to Interact
- Agitation
- Tips to Minimize Unwanted Actions in Persons with Dementia
- Communicating Using a Therapeutic Response/Emotional Truth

☐ REFERRAL TO BEHAVIORAL HEALTH

☐ REFERRAL TO GERIATRIC PSYCHIATRY

**Indication: Sleep Disturbance**

☐ REFERRAL FOR SLEEP STUDY / SLEEP MEDICINE

**3.5 Medication Treatment**

Patients with mild cognitive impairment or dementia should be followed every 1-3 months in the setting of newly initiated medications. Patients with stable symptoms and medication dosing may be followed at 6 month to 1 year intervals at which time cognitive, behavioral and functional status should be reassessed.

**Contraindicated Medications:**
The use of anticholinergics (e.g., diphenhydramine, oxybutynin, Tylenol PM), benzodiazepines (e.g., lorazepam, alprazolam, zoldipem), mood stabilizers (e.g., valproic acid), and narcotics (e.g., oxycontin, methadone, morphine) should be avoided in dementia.

**Indication: Mild-Moderate Alzheimer’s Disease**

**Alzheimer’s Medications (description):** Medications in Alzheimer’s disease provide symptomatic benefit, but do not impact disease course.

**Cholinesterase Inhibitors:** Decrease to maximally tolerated dose if patient experiences cholinesterase-related side effects of GI intolerance, insomnia, weight loss, dizziness, etc. Consider baseline EKG in patient with history of bradyarrhythmia as these medications may result in sinus arrhythmia or AV block.

☐ donepezil (ARICEPT) 10 MG tablet (5 mg for one month, increase to 10 mg after first month)

☐ galantamine (RAZADYNE) 8 MG tablet (8 mg for one month, increase to 16 mg after first month)
**Indication: Depression/Anxiety**

- sertraline (ZOLOFT) 25 MG tablet PO qAM x 1 week, then 50 mg qAM. May increase by 50 mg increments to maximum dose of 200mg/day as needed and if tolerated
- escitalopram oxalate (LEXAPRO) 10 MG tablet (For Depression with Predominant Anxiety Component)
- mirtazapine (REMERON) 15 MG PO qhs. May increase by 15 mg increments to maximum dose of 45 mg PO qhs if needed and tolerated.

**Indication: Insomnia**

- trazodone (DESYREL) 50 MG tablet (Start at 25-50 mg, increase to 75-100 mg within 1 month if desired effect is not obtained)

**Indication: Agitation / Psychosis**

- **Neuroleptics**: Recommend starting neuroleptic as PRN medications with gradual transition to standing medication if patient has continued behavioral problems. Suggest obtaining baseline EKG due to impact upon QT interval.
- ECG 12-LEAD ROUTINE (EKG)

**Atypical antipsychotics**: Atypical antipsychotics may result in increased mortality in the elderly and have not shown to be any more effective than behavioral interventions within the geriatric population (See NEJM article). If behavioral interventions are insufficient, quetiapine and risperidone are recommended.

- quetiapine (SEROQUEL) 12.5 MG tablet PO qd as needed
- risperidone (RISPERDAL) 0.25 MG tablet PO qd as needed

**Rivastigmine**: Suggest using rivastigmine (EXELON) patch in instances of oral cholinesterase inhibitor intolerance. Prescribe 4.6 mg patch q24 hours x 1 month; increase to 9.5 mg after 1 month.

- rivastigmine (EXELON) 4.6 MG/24HR patch
- rivastigmine (EXELON) 9.5MG/24HR patch
- ECG 12-LEAD ROUTINE (EKG)