DEMENTIA

AGS Geriatrics Evaluation and Management Tools (Geriatrics E&M Tools) support clinicians and systems that are caring for older adults with common geriatric conditions.

From the AMERICAN GERIATRICS SOCIETY

Geriatrics Evaluation & Management Tools

SCREENING

- The US Preventive Services Task Force concludes the evidence is insufficient to recommend for or against routine screening for dementia in all older adults.
- If a patient or family member expresses concerns about cognitive decline, or a provider notices dementia warning signs, a mental status assessment and dementia evaluation is indicated.
  - Possible warning signs include unkempt appearance, poor historian, difficulty following directions, repeating the same question, lost in familiar places.

Examples of Screening Instruments for the Evaluation of Cognition

Instrument Name	Cognitive Domains Assessed	Available
Mini-Cog	Visuospatial, executive function, recall	http://geriatrics.uthscsa.edu/tools/MINICog.pdf
St. Louis University Mental Status (SLUMS) Examination	Orientation, recall, calculation, naming, attention, executive function	http://medschool.slu.edu/agingsuccessfully/pdfsur.veys/slumsexam_05.pdf
Montreal Cognitive Assessment (MoCA)	Orientation, recall, attention, naming, repetition, verbal fluency, abstraction, executive function, visuospatial	www.mocatest.org
Folstein Mini–Mental Status Examination	Orientation, registration, attention, recall, naming, repetition, 3-step command, language, visuospatial	Copyrighted document for purchase: www.minimental.com

DIFFERENTIAL DIAGNOSIS

Normal Aging	Mild Cognitive Impairment	Alzheimer Dementia (*DSM-5* Diagnostic Criteria)
▪ Mild decline in memory ▪ More effort/time needed to recall new info ▪ New learning slowed but well compensated by lists, calendars, etc. ▪ Decreased efficiency in divided attention tasks (ie multi-tasking) ▪ No impairment in social and occupational functioning	▪ Subjective complaint of cognitive decline in at least one domain of memory, executive function, language or visuospatial perception ▪ Cognitive decline is noticeable and measurable (see screening instruments) ▪ No impairment in social and occupational functioning	▪ Significant objective decline in memory and learning in one or more cognitive domain of disturbed executive functioning, language, visuospatial ability, perceptual motor ability ▪ The cognitive decline is steady and progressive. ▪ The cognitive deficits interfere with independence in everyday activities. ▪ Other medical and psychiatric conditions, including delirium, have been excluded

	Alzheimer Disease	Vascular Dementia	Lewy Body Dementia	Frontotemporal Dementia
Onset	Gradual	Sudden or stepwise	Gradual	Gradual (age of onset <70)
Cognitive domains and symptoms	Memory, difficulty learning, language, visuospatial, managing complex tasks	Depends on location of ischemia	Memory, visuospatial, visual hallucinations, fluctuating symptoms; extreme sensitivity to neuroleptic medication	Executive dysfunction, personality changes, disinhibition, language, ± memory
Motor symptoms	Rare early Apraxia later	Correlates with ischemia	Parkinsonism, present at time of onset of cognitive changes; frequent falls	None
Progression	Gradual (over 8-10 yr)	Gradual or stepwise	Gradual, but faster than Alzheimer's disease	Gradual, but faster than Alzheimer disease
Imaging	Possible global atrophy	Cortical or subcortical ischemic changes on brain MRI	Possible global atrophy	Atrophy in frontal and temporal lobes

HISTORY OF PRESENT ILLNESS

- Document cognitive domains affected; interview patient and family or other informant.
- Document time course of onset and progression of cognitive and motor symptoms.
- Document time course of onset and progression of impairment in social and occupational functioning.
  - Impairment in social and occupational functioning may be evidenced by impairment in activities of daily living (ADLs) and instrumental activites of daily living (IADLs).
- Exclude depression (see *Screening*, AGS Geriatrics Evaluation and Management: Depression).
- Exclude delirium (see *Screening*, AGS Geriatrics Evaluation and Management: Delirium).

PAST MEDICAL HISTORY

- Possible risk factors for Alzheimer disease include advancing age, history of head trauma, late-onset major depressive disorder, fewer years of formal education, and risk factors for cardiovascular disease.

FAMILY HISTORY

- Most commonly Alzheimer disease begins late in life.
- Rare forms of familial Alzheimer disease begin before age 60.

SOCIAL HISTORY

Document educational level and work history, substance use and abuse, driving, firearms, and caregiver stress.

REVIEW OF SYSTEMS

Screen for behavioral disturbances such as wandering, self-neglect, physical aggression, psychosis, etc. (see *Screening*, AGS Geriatrics Evaluation and Management: Behavioral Disturbances in Dementia).

MEDICATIONS

Thoroughly review medications and decrease or discontinue medications that increase cognitive, physical, or functional disability (see AGS Geriatrics Evaluation and Management: Appropriate Prescribing).

PHYSICAL EXAMINATION

Comprehensive physical exam with focus on neurologic exam to characterize dementia subtype or exclude treatable conditions that cause or exacerbate cognitive impairment:

- Gait (Lewy body dementia, normal-pressure hydrocephalus)
- Motor function (vascular dementia)
- Reflexes (vascular dementia)
- Extrapyramidal signs: rigidity, tremor, bradykinesia (Lewy body dementia)

DIAGNOSTIC TESTING

- Evaluate for potentially reversible causes of cognitive loss:
  - Complete blood count
  - Comprehensive metabolic panel
  - Vitamin B_{12}/folate
  - Thyroid-stimulating hormone
  - If indicated, consider serologic tests for syphilis and HIV.
- Neuroimaging may be useful in the following situations:
  - Onset <65 years old
  - Symptoms begin suddenly or progress rapidly
  - Evidence of focal or asymmetrical neurologic deficits
  - Clinical picture suggests normal-pressure hydrocephalus (eg, onset has occurred within 1 year, gait disorder or unexplained incontinence is present)
  - History of recent fall or other head trauma

MANAGEMENT STRATEGIES

- Evaluate for persistence of cognitive dysfunction after discontinuing or decreasing dosages of medications that affect cognition, treating depression and delirium, and treating potentially reversible causes of cognitive loss (see "Diagnostic Testing" above).
- Primary treatment goals for patients with dementia are to enhance quality of life and maximize functional performance by improving or stabilizing cognition, mood, and behavior. Both to the extent possible, nonpharmacologic and pharmacologic treatments are available.
- Provide patient and/or caregiver with information regarding:
  - Dementia diagnosis, prognosis, and associated behavioral symptoms
  - Home safety (fall prevention, firearm safety, wandering prevention, etc)
  - Adult day care and respite stays
  - Support groups and classes for caregivers
  - Advance care planning and advance directives, including establishing a surrogate decision-maker
  - Examples of resources for education and support
    - Alzheimer's Association (www.alz.org)
    - Family Caregiver Alliance (www.caregiver.org)
    - Alzheimer's Disease Education & Referral Center (www.nia.nih.gov/Alzheimers)
- **Considerations before initiation of treatment with cholinesterase inhibitors (ChIs):**

Alzheimer disease	■ Studies have shown modest clinical benefits for short- and long-term treatment with ChIs. ■ Treatment for 6 months with ChIs improved cognitive function on average only 2.7 points on the 70-point Alzheimer's Disease Assessment Cognitive Subscale, and showed small improvement on measures of ADLs and behavior.
Vascular dementia	■ Widespread treatment with ChIs is not recommended because of limited cognitive benefits. ■ Discussion of initiation of stroke prophylaxis medications is recommended for patients with mild to moderate vascular dementia, because vascular risk factors can worsen cognitive impairment and increase mortality.
Lewy body dementia	■ Some studies suggest ChIs may help manage attention and behavioral disturbances (avoid neuroleptics because of extreme sensitivity).
Frontotemporal dementia	■ There appears to be no role for ChIs, because evidence suggests they may worsen agitation.

- Patients and families should be counseled to have realistic expectations regarding treatment with ChIs.
- Clinical evaluation after 6 months of ChI therapy is suggested to evaluate progression of disease and efficacy of treatment.
- Tapering off ChIs should be considered after a reasonable time if decline continues at the rate expected without treatment or when patients have an initial positive response to treatment followed by continued cognitive decline despite maximal treatment.
- Abrupt discontinuation of ChIs is not recommended.

REFERRAL

- Refer patients with newly diagnosed dementia for a driving assessment or advise them not to drive, depending on severity of impairment.
- Full neuropsychologic testing may be needed to accurately define the character and severity of the cognitive deficits, especially in atypical cases or when presentation may be confounded by a high level of education or subtle changes.