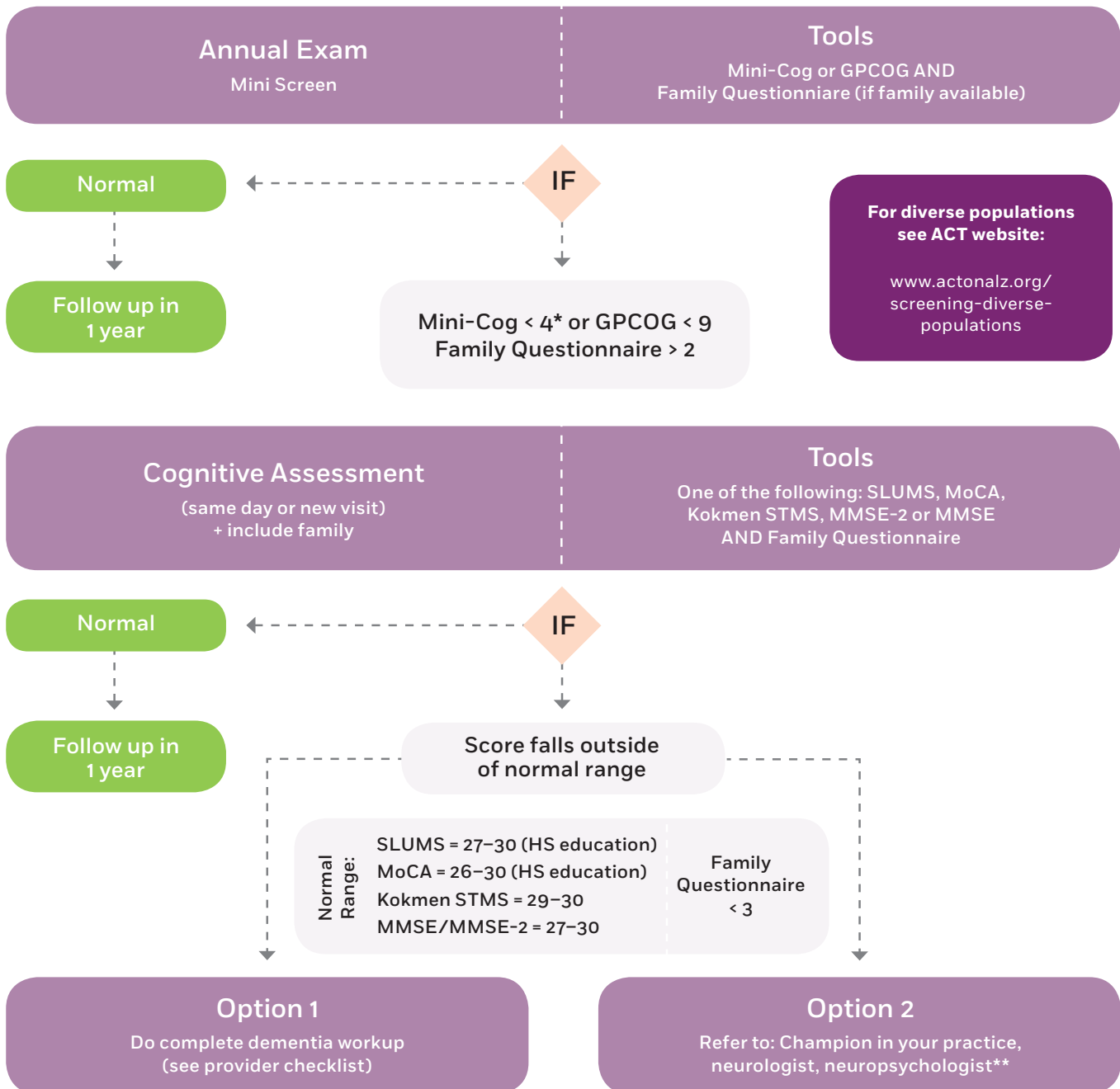


Cognitive Impairment Identification



*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.

**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

Dementia Work-Up

Follow these diagnostic guidelines in response to patient failure on cognitive screening (e.g., Mini-Cog) or other signs of possible cognitive impairment.

History and Physical

- Person-centered care includes understanding cultural context in which people are living (see www.actonalz.org/culturally-responsive-resources)
- Review onset, course, and nature of memory and cognitive deficits (Alzheimer's Association Family Questionnaire may assist) and any associated behavioral, medical or psychosocial issues
- Assess ADLs and IADLs, including driving and possible medication and financial mismanagement (Functional Activities Questionnaire and/or OT evaluation may assist)
- Conduct structured mental status exam (e.g., MoCA, SLUMS, MMSE)
- Assess mental health (consider depression, anxiety, chemical dependency)
- Perform neurological exam focusing on focal/lateralizing signs, vision, including visual fields, and extraocular movements, hearing, speech, gait, coordination, and evidence of involuntary or impaired movements

Diagnostics

Lab Tests

- Routine: CBC, lytes, BUN, Cr, Ca, LFTs, glucose
- Dementia screening labs: TSH, B12
- Contingent labs (per patient history): RPR or MHA-TP, HIV, heavy metals

Neuroimaging

- CT or MRI when clinically indicated

Neuropsychological Testing

- Indicated in cases of early or mild symptom presentation, for differential diagnosis, determination of nature and severity of cognitive functioning, and/or development of appropriate treatment plan
- Typically maximally beneficial in the following score ranges: MoCA 19-27; SLUMS 18-27; MMSE 18-28

Diagnosis*

Mild Cognitive Impairment

- Mild deficit in one cognitive function: memory, executive, visuospatial, language, attention
- Intact ADLs and IADLs; does not meet criteria for dementia

Alzheimer's Disease

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

Dementia With Lewy Bodies/Parkinson's Dementia

- Second most common type of dementia (up to 30% of cases)
- Hallmark symptoms include visual hallucinations, REM sleep disorder,

parkinsonism, and significant fluctuations in cognition

Frontotemporal Dementia

- Third most common type of dementia primarily affecting individuals in their 50s and 60s
- EITHER marked changes in behavior/personality OR language variant (difficulty with speech production or loss of word meaning)

Vascular Dementia

- Relatively rare in pure form (6-10% of cases)
- Symptoms often overlap with those of AD; frequently there is relative sparing of recognition memory

* The latest DSM-5 manual uses the term "Major Neurocognitive Disorder" for dementia and "Mild Neurocognitive Disorder" for mild cognitive impairment. This ACT on Alzheimer's resource uses the more familiar terminology, as the new terms have yet to be universally adopted.

Follow-Up Diagnostic Visit

- **Include family members, friends, or other care partners**
- Review intervention checklist for Alzheimer's disease and related dementias
- Refer to the Alzheimer's Association 24/7 Helpline at 1-800-272-3900 and/or the Eldercare Locator at 1-800-677-1116

Dementia Management

Diagnostic Uncertainty & Behavior Management

Refer to Specialist as Needed

- Neurologist (dementia focus, if possible)
- Geriatric Psychiatrist
- Geriatrician
- Memory Disorders Clinic

Counseling, Education, Support & Planning

Family Meeting

- Refer to social worker or care coordinator

Link to Community Resources

- Refer to the Alzheimer's Association 24/7 Helpline at 1-800-272-3900 and/or the Eldercare Locator at 1-800-677-1116
- Resources for diverse populations: www.actonalz.org/screening-diverse-populations
- Provide After a Diagnosis¹
- Provide Taking Action Workbook⁶

Stimulation / Activity / Maximizing Function

Daily Mental, Physical and Social Activity

- Provide Living Well Workbook⁵ (includes nonpharm therapies for early to mid stage)
- Adult day services (mid to late stage)
- Sensory aids (hearing aids, pocket talker, glasses)

Safety

Note: Individuals with dementia are vulnerable adults and may be at a higher risk for elder abuse.

Driving

- Counsel on risks
- Refer for driving evaluation²
- Provide At the Crossroads³

Medication Management

- Family oversight or health care professional

Financial / Legal

- Encourage patient to assign durable power of attorney; elder law attorney as needed

Advance Care Planning

Complete Advance Care Plan

- Refer to advance care planning facilitator within system, if available
- Encourage completion of healthcare directive forms⁴

Medications

- Memory: Donepezil, rivastigmine patch, galantamine and memantine (mid-late stage)
- Mood & Behavior: SSRIs or SNRIs
- Avoid/Minimize: Anticholinergics, hypnotics, narcotics, and antipsychotics (not to be used in Lewy Body dementia)

Tools

Mini-Cog

- Public domain: www.mini-cog.com
- Sensitivity for dementia: 76-99%
- Specificity: 89-93%

Montreal Cognitive Assessment (MoCA)

- Public domain: www.mocatest.org/
- Sensitivity: 90% for MCI, 100% for dementia
- Specificity: 87%

St. Louis University Mental Status (SLUMS)

- Public domain: http://medschool.slu.edu/agingsuccessfully/pdfsurveys/slumsexam_05.pdf
- Sensitivity: 92% for MCI, 100% for dementia
- Specificity: 81%

Measure/Assess IADLs

- <http://consultgeri.org/try-this/dementia/issue-d13.pdf>

Family Questionnaire

- www.actonalz.org/pdf/Family-Questionnaire.pdf

Mini-Mental Status Exam (MMSE)

- Copyrighted: www4.parinc.com/Products/Product.aspx?ProductID=MMSE
- Sensitivity: 18% for MCI, 78% for dementia
- Specificity: 100%

Note: The MMSE is not a preferred tool in memory loss assessment. Accumulating evidence shows it is significantly less sensitive than both the MoCA and SLUMS in identifying MCI and early dementia.

Dementia Management Resources

1. After a Diagnosis

www.dfamerica.org/provider-tools/

2. American Occupational Therapy Association

myaota.aota.org/driver_search/index.aspx

3. At the Crossroads: Family Conversations About Alzheimer's Disease, Dementia & Driving

www.thehartford.com/alzheimers

4. National Hospice & Palliative Care Organization

Download state-specific advance directive forms at www.caringinfo.org

5. Living Well Workbook

www.alz.org/mnnd/documents/15_ALZ_Living_Well_Workbook_Web.pdf

6. Taking Action Workbook

www.alz.org/i-have-alz/downloads/lwa_pwd_taking_action_workbook.pdf

References: Provider Checklist

Borson, S., Scanlan, J.M., Chen, P., & Ganguli, M. (2003). The Mini-Cog as a screen for dementia: Validation in a population-based sample. *JAGS*, 51(10), 1451-1454.

Borson S, Scanlan JM, Watanabe J et al. Improving identification of cognitive impairment in primary care. *Int J Geriatr Psychiatry* 2006; 21: 349-355.

Ismail Z, Rajii TK, Shulman KI. Brief cognitive screening instruments: an update. *Int J Geriatr Psychiatry*. Feb 2010; 25(2):111-20.

Larner, AJ. Screening utility of the Montreal Cognitive Assessment (MoCA): in place of – or as well as – the MMSE? *Int Psychogeriatr*. Mar 2012;24(3):391-6.

Lessig M, Scanlan J et al. Time that tells: Critical clock-drawing errors for dementia screening. *Int Psychogeriatr*. 2008 June; 20(3): 459-470.

McCarten J, Anderson P et al. Screening for cognitive impairment in an elderly veteran population: Acceptability and results using different versions of the Mini-Cog. *J Am Geriatr Soc* 2011; 59: 309-213.

McCarten J, Anderson P et al. Finding dementia in primary care: The results of a clinical demonstration project. *J Am Geriatr Soc* 2012; 60: 210-217.

Nasreddine ZS, Phillips NA, Bedirian V, et al. The Montreal Cognitive Assessment, MoCA: a brief screening tool for mild cognitive impairment. *J Am Geriatr Soc*. Apr 2005;53(4):695-699.

Scanlan J & Borson S. The Mini-Cog: Receiver operating characteristics with the expert and naive raters. *Int J Geriatr Psychiatry* 2001; 16: 216-222.

Tariq SH, Tumosa N, Chibnall JT, et al. Comparison of the Saint Louis University mental status examination and the mini-mental state examination for detecting dementia and mild neurocognitive disorder—a pilot study. *Am J Geriatr Psychiatry*. Nov 2006;14(11):900-10.

Tsoi K, Chan J et al. Cognitive tests to detect dementia: A systematic review and meta-analysis. *JAMA Intern Med*. 2015; E1-E9.

Increasing Disclosure of Dementia Diagnosis

Divergence Between Common Perceptions About Dementia Diagnosis and Published Data

Physicians have cited many barriers to diagnosing dementia, including doubts about the value of diagnosis given limited treatment options, concern over risk of misdiagnosis, and lack of knowledge of local dementia support services.⁷ However, based on published data, perceptions that disclosure of dementia diagnosis is not preferred or causes psychological distress among individuals and family members should be challenged.

A majority of patients want to know if they have Alzheimer's Disease (AD)

A recent 5-country survey⁹ examining public attitudes about AD found that more than 80% of all adults (N=2,678) and 89% of US adults (N=639) responded that if they had memory or confusion symptoms, they would go to a doctor to determine if the cause was AD. This US finding is consistent with previously published reports over the last 2 decades.^{10,11}

“ In gaining knowledge and developing a treatment plan, individuals may realize that they can take an active role in managing the illness, enhancing a sense of self-efficacy where before they might have felt helpless.”

Most family members appreciate the benefits of diagnosis

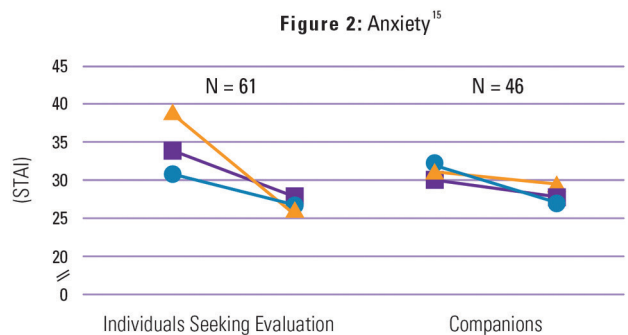
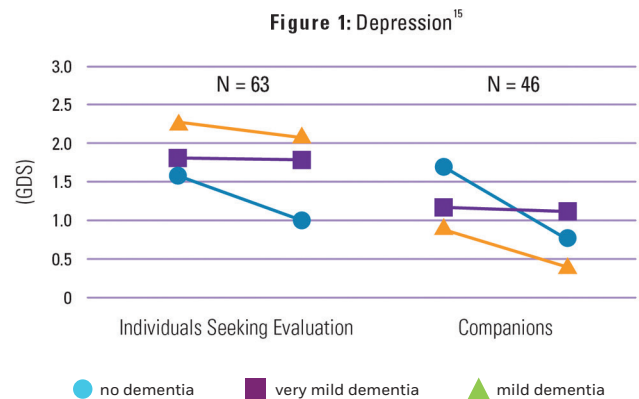
Connell and colleagues surveyed 178 adults who had a family member with AD.

- More than 75% of family members rated the following benefits of diagnosis as being very or extremely important: 1) let family know what was wrong with relative; 2) allowed family to get information about AD; and 3) allowed family to plan for the future.
- Only 6% of all respondents strongly agreed that “it is easier to not know what the diagnosis is.”

Diagnosis does not cause psychological stress in most patients and their families

Physician conjecture that a dementia diagnosis may lead to depression or even suicide has been reported.¹² Empirical findings on the issue are primarily limited to retrospective or review studies in populations with comorbid depression, a well-known risk factor for suicide.^{13,14} To examine psychological stress, Carpenter and colleagues evaluated 90 individuals and their companions before a dementia evaluation and after dementia disclosure using the Geriatric Depression Scale (GDS) and the State-Trait Anxiety Inventory (STAI).¹⁵

- No clinically significant changes were noted in depressive symptoms in either the persons diagnosed with dementia or their companion (Figure 1).
- Anxiety decreased or remained unchanged after diagnostic feedback for most groups (Figure 2).



References: Increasing Disclosure of Dementia Diagnosis

1. Markle GB 4th. Telling the diagnosis of Alzheimer's disease. *N Eng J Med*. 1993;328(10):736.
2. Gordon M, Goldstein D. Alzheimer's disease. To tell or not to tell. *Can Fam Physician*. 2001;47:1803-1806, 1809.
3. Bamford C, Lamont S, Eccles M, et al. Disclosing a diagnosis of dementia: a systematic review. *Int J Geriatr Psychiatry*. 2004;19(2):151-169.
4. Carpenter B, Dave J. Disclosing a dementia diagnosis: a review of opinion and practice, and a proposed research agenda. *Gerontologist*. 2004;44(2):149-158.
5. Elson P. Do older adults presenting with memory complaints wish to be told if later diagnosed with Alzheimer's disease? *Int J Geriatr Psychiatry*. 2006;21(5):419-425.
6. Connell CM, Roberts JS, McLaughlin SJ, Carpenter BD. Black and white adult family members' attitudes toward a dementia diagnosis. *J Am Geriatr Soc*. 2009;57(9):1562-1568.
7. Bradford A, Kunik ME, Schulz P, Williams SP, Singh H. Missed and delayed diagnosis of dementia in primary care: prevalence and contributing factors. *Alzheimer Dis Assoc Disord*. 2009;23(4):306-314.
8. Gibson AK, Anderson KA. Difficult diagnoses: Family caregivers' experiences during and following the diagnostic process for dementia. *Am J Alzheimers Dis Other Dement*. 2011;26(3):212-217.
9. Harvard School of Public Health, Alzheimer's Europe. Value of knowing - Research - Alzheimer Europe. Value of Knowing. Available at: <http://www.alzheimer-europe.org/Research/Value-of-knowing>. Accessed October 13, 2011.
10. Turnbull Q, Wolf AMD, Holroyd S. Attitudes of elderly subjects toward "truth telling" for the diagnosis of Alzheimer's disease. *J Geriatr Psychiatry Neurol*. 2003;16(2):90-93.
11. Holroyd S, Snustad DG, Chalifoux ZL. Attitudes of older adults' on being told the diagnosis of Alzheimer's disease. *J Am Geriatr Soc*. 1996;44(4):400-403.
12. Kissel EC, Carpenter BD. It's all in the details: physician variability in disclosing a dementia diagnosis. *Aging Ment Health*. 2007;11(3):273-280.
13. Draper B, Peisah C, Snowdon J, Brodaty H. Early dementia diagnosis and the risk of suicide and euthanasia. *Alzheimers Dement*. 2010;6(1):75-82.
14. Seyfried LS, Kales HC, Ignacio RV, Conwell Y, Valenstein M. Predictors of suicide in patients with dementia. *Alzheimers Dement*. 2011;7(6):567-573.
15. Carpenter BD, Xiong C, Porensky EK, et al. Reaction to a dementia diagnosis in individuals with Alzheimer's disease and mild cognitive impairment. *J Am Geriatr Soc*. 2008;56(3):405-412.

