



## Guideline Summary NGC-9977

### Guideline Title

**Alzheimer's Association recommendations for operationalizing the detection of cognitive impairment during the Medicare Annual Wellness Visit in a primary care setting.**

### Bibliographic Source(s)

Cordell CB, Borson S, Boustani M, Chodosh J, Reuben D, Verghese J, Thies W, Fried LB, Medicare Detection of Cognitive Impairment Workgroup. Alzheimer's Association recommendations for operationalizing the detection of cognitive impairment during the Medicare Annual Wellness Visit in a primary care setting. *Alzheimers Dement*. 2013 Mar;9(2):141-50. [61 references] [PubMed](#)

### Guideline Status

This is the current release of the guideline.

### Scope

#### Disease/Condition(s)

Cognitive impairment

#### Guideline Category

Diagnosis  
Evaluation  
Risk Assessment  
Screening

#### Clinical Specialty

Family Practice  
Geriatrics  
Internal Medicine  
Neurology  
Nursing  
Psychiatry  
Psychology

#### Intended Users

Advanced Practice Nurses  
Nurses  
Physician Assistants  
Physicians  
Psychologists/Non-physician Behavioral Health Clinicians  
Social Workers

#### Guideline Objective(s)

To provide primary care physicians with guidance on cognitive assessment during the Annual Wellness Visit (AWV) and when referral or further testing is needed

## Target Population

Medicare beneficiaries during their Medicare Annual Wellness Visit (AWV)

## Interventions and Practices Considered

1. Conversation between clinician and patient/informant
2. Patient completion and clinician review of a Health Risk Assessment (HRA)
3. Use of a structured assessment tool, including:
  - General Practitioner Assessment of Cognition (GPCOG)
  - Mini-Cog
  - Memory Impairment Screen (MIS)
  - Eight-item Informant Interview to Differentiate Aging and Dementia (AD8)
  - Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE)
4. Full dementia evaluation (outside the scope of the Medicare Annual Wellness Visit [AWV])

## Major Outcomes Considered

- Cognitive level
- Functional level

## Methodology

### Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

### Description of Methods Used to Collect/Select the Evidence

A MEDLINE (PubMed) search conducted in October 2011, using the key words "screening or detection of dementia or cognitive impairment," yielded over 500 publications. To narrow the search to tools more applicable to the Annual Wellness Visit (AWV), the workgroup sought to determine whether the literature offered a consensus regarding brief cognitive assessment during time-limited primary care visits.

The workgroup focused on systematic evidence review (SER) studies published since 2000, resulting in four studies by Lorentz et al., Brodaty et al., Holsinger et al., and Milne et al. Although each SER had a similar objective—to determine which tools were best for administration during primary care visits—different comparison criteria to select the tools were applied (see Table 1 in the original guideline document). Two other studies were also considered relevant to the development of the workgroup recommendations: Ismail et al. conducted a literature review designed to identify widely used and most promising newer brief cognitive tools being used in primary care and geriatrics, and an SER by Kansagara and Freeman of six brief cognitive assessment tools that could serve as possible alternatives to the Mini-Mental State Examination (MMSE) for use by the U.S. Department of Veterans Affairs (VA). Neither study was designed to determine which brief tool is the "best," but both provided evidence related to primary care use and performance characteristics of brief assessments of cognition (see Table 1 in the original guideline document).

### Number of Source Documents

The workgroup focused on systematic evidence review (SER) studies published since 2000, resulting in four studies. Two other studies were also considered relevant to the development of the workgroup recommendations.

### Methods Used to Assess the Quality and Strength of the Evidence

Not stated

### Rating Scheme for the Strength of the Evidence

Not applicable

### Methods Used to Analyze the Evidence

Systematic Review

### Description of the Methods Used to Analyze the Evidence

#### Systematic Review

The workgroup's research included comparing five systematic evidence reviews (SERs) of brief dementia screening tools published since 2000 and a 2010 literature review of newer brief assessments of cognition. The workgroup's research focused on determining if there was a consensus among the published SERs as to which tool is most suited for primary care and if there were any common results across the publications.

### Methods Used to Formulate the Recommendations

Expert Consensus

### Description of Methods Used to Formulate the Recommendations

Not stated

## Rating Scheme for the Strength of the Recommendations

Not applicable

## Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

## Method of Guideline Validation

Not stated

## Description of Method of Guideline Validation

Not applicable

## Recommendations

### Major Recommendations

#### **Recommended Algorithm for Detection of Cognitive Impairment During the Annual Wellness Visit (AWV)**

##### **Incorporating Assessment of Cognition During the AWV**

The Alzheimer's Association Medicare Annual Wellness Visit Algorithm for Assessment of Cognition for consistency (see Figure 1 in the original guideline document) illustrates a stepwise process. The process is intended to detect patients with a high likelihood of having dementia. The AWV algorithm includes both structured assessments discussed previously (in the original guideline document) and other less structured patient- and informant-based evaluations. By assessing and documenting cognitive status on an annual basis during the AWV, clinicians can more easily determine gradual cognitive decline over time in an individual patient—a key criterion for diagnosing dementia due to Alzheimer's disease and other progressive conditions affecting cognition.

For patients with a previous diagnosis of mild cognitive impairment (MCI) or dementia, this should be documented and included in their AWV list of health risk factors. Annual unstructured and structured cognitive assessments could be used to monitor significant changes in cognition and potentially lead to a new diagnosis of dementia for those with MCI or new care recommendations for those with dementia.

##### **Detection of Cognitive Impairment During the AWV—Initial Health Risk Assessment (HRA) Review, Conversations, and Observations**

The first step in detection of cognitive impairment during the AWV (see Figure 1, Step A in the original guideline document), involves a conversation between a clinician and the patient and, if present, any family member or other person who can provide collateral information. This introduces the purpose and content of the AWV, which includes: a review of the HRA; observations by clinicians (medical and associated staff); acknowledgment of any self-reported or informant-reported concerns; and conversational queries about cognition directed toward the patient and others present. If any concerns are noted, or if an informant is not present to provide confirmatory information, further evaluation of cognition with a structured tool should be performed.

Patient completion of an HRA is a required element of the AWV and can be accomplished with the help of a family member or other knowledgeable informants, including a professional caregiver. Published Centers for Medicare and Medicaid Services (CMS) guidance offers healthcare professionals flexibility as to the specific format, questions, and delivery methods that can be used for an AWV HRA. The following questions may be suitable for the AWV HRA and have been tested and evaluated in the general population through the Behavioral Risk Factor Surveillance System or presented as HRA example questions:

1. During the past 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?
2. During the past 7 days, did you need help from others to perform everyday activities such as eating, getting dressed, grooming, bathing, walking, or using the toilet?
3. During the past 7 days, did you need help from others to take care of things such as laundry and housekeeping, banking, shopping, using the telephone, food preparation, transportation, or taking your own medications?

A noted deficit in activities of daily living (ADLs) (e.g., eating and dressing) or instrumental activities of daily living (IADLs) (e.g., shopping and cooking) that cannot be attributed to physical limitations should prompt concern, as there is a strong correlation between decline in function and decline in cognitive status across the full spectrum of dementia. In addition to clinically observed concerns, any patient- or informant-reported concerns should trigger further evaluation. Positive responses to conversational queries, such as "Have you noticed any change in your memory or ability to complete routine tasks, such as paying bills or preparing a meal?" should be followed up with a structured assessment of cognition.

Upon realizing the time constraints of a typical primary care visit, if no cognitive concerns surface during the initial evaluation and this information is corroborated by an informant, the clinician may elect not to perform a structured cognitive assessment and assume that the patient is not currently demented. This approach is supported by studies in populations with low rates of dementia that suggest the absence of memory difficulties reported by informants and patients reduces the likelihood that dementia is present.

##### **Structured Cognitive Assessment Tools for Use with Patients and Informants During the AWV**

The second step in detection of cognitive impairment during the AWV (see Figure 1, Step B in the original guideline document) requires cognitive assessment using a structured tool. Based on synthesis of data from the six review articles previously discussed (in the original guideline document), patient tools suitable for the initial structured assessment are the General Practitioner Assessment of Cognition (GPCOG), Mini-Cog, and Memory Impairment Screen (MIS).

Recognizing that there is no single optimal tool to detect cognitive impairment for all patient populations and settings, clinicians may select other brief tools to use in their clinical practice, such as those listed in Table 3 in the original guideline document. The 15 brief tools listed were evaluated in multiple review articles (passed through at least two review search criteria for tools possibly suited for primary care) or are used in the Veterans Administration (VA). Tools listed in Table 3 in the original guideline document are subject to the inclusion/exclusion criteria of each review and do not represent the entire listing of the >100 brief cognitive assessment tools that may be suitable for primary care practices.

If an informant is present, defined as someone who can attest to a patient's change in memory, language, or function over time, it is suitable to use the Eight-item Informant Interview to Differentiate Aging and Dementia (AD8), the informant component of the GPCOG, or the Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE), during the AWV.

### **Primary Care Workflow Considerations**

According to the algorithm, any patient who does not have an informant present should be assessed with a structured tool. For such patients (and for practices that implement structured assessments during all AWVs), completion of this structured assessment can be administered by trained medical staff as the first step for cognitive impairment detection. This could improve office efficiency. To increase acceptance of a structured assessment, the reason provided to the patient can be normalized with a statement such as, "This is something I do for all of my older patients as part of their annual visit." When the initial assessment prompts further evaluation, explanation of results should be deferred until a more comprehensive evaluation has been completed. "There are many reasons for not getting every answer correct. More evaluation will help us determine that," is an example statement that may encourage patients to pursue further testing.

### **Full Dementia Evaluation**

Patients with assessments that indicate cognitive impairment during the AWV should be further evaluated to determine appropriate diagnosis (e.g., MCI, Alzheimer's disease) or to identify other causes. As reflected in the algorithm (see Figure 1, Step C in the original guideline document), initiation of a full dementia evaluation is outside the scope of the AWV, but can occur in a separate visit either on the same day, during a newly scheduled visit, or through referral to a specialist. Specialists who have expertise in diagnosing dementia include geriatricians, geriatric psychiatrists, neurologists, and neuropsychologists. The two-visit approach has been cited as a time-effective process to evaluate suspected dementia in primary care and is consistent with the two-step approach widely used in epidemiologic research on dementia. Regardless of the timing and setting, clinicians are encouraged to counsel patients to include an informant in the diagnostic process.

Components of a full dementia evaluation can vary depending on the presentation and include tests to rule in or out the various causes of cognitive impairment and establish its severity. Diagnostic evaluations include a complete medical history; assessment of multiple cognitive domains, including episodic memory, executive function, attention, language, and visuospatial skills; neurologic exam (gait, motor function, reflexes); ADL and IADL functioning; assessment for depression; and review for medications that may adversely affect cognition. Standard laboratory tests include thyroid-stimulating hormone (TSH), complete blood count (CBC), serum B<sub>12</sub>, folate, complete metabolic panel, and, if the patient is at risk, testing for sexually transmitted diseases (human immunodeficiency virus, syphilis). Structural brain imaging, including magnetic resonance imaging (MRI) or computed tomography (CT), is a supplemental aid in the differential diagnosis of dementia, especially if neurologic physical exam findings are noted. An MRI or CT can be especially informative in the following cases: dementia that is of recent onset and is rapidly progressing; younger onset dementia (<65 years of age); history of head trauma; or neurologic symptoms suggesting focal disease.

### **Clinical Algorithm(s)**

An algorithm titled "Alzheimer's Association Medicare Annual Wellness Visit Algorithm for Assessment of Cognition" is provided in the original guideline document.

## **Evidence Supporting the Recommendations**

### **Type of Evidence Supporting the Recommendations**

The recommendations are supported by systematic evidence reviews and a literature review.

## **Benefits/Harms of Implementing the Guideline Recommendations**

### **Potential Benefits**

- Detection of cognitive impairment during the Medicare Annual Wellness Visit
- Establishment of a baseline for longitudinal assessments for those with normal assessments

### **Potential Harms**

Not stated

## **Qualifying Statements**

### **Qualifying Statements**

- There are limitations to these recommendations. They are based on assessment of recommendations from review articles and on expert opinion, not on a new, comprehensive review of original research to define the optimal approach to detection of cognitive impairment or review of emerging technologies that could assist in testing (e.g., use of online or electronic tablet applications). Further complicating systematic evidence reviews (SERs) of brief cognitive assessment tools is that sensitivity and specificity will vary depending on the dementia prevalence of the study population, the tool



(s) used, and the cut score selected for each tool. Brodaty et al. recognized that published research concerning cognitive impairment screening tools is uneven in quantity and quality. The literature also is lacking in comparative validity of brief cognitive assessment tools in low-education or illiterate populations.

- The Alzheimer's Association Medicare Annual Wellness Visit Algorithm for Assessment of Cognition is based on current validated tools and commonly used rule-out assessments. The use of biomarkers (e.g., cerebrospinal fluid [CSF] tau and beta amyloid proteins, amyloid tracer positron emission tomography scans) was not considered as these measures are not currently approved or widely available for clinical use.

## Implementation of the Guideline

### Description of Implementation Strategy

An implementation strategy was not provided.

### Implementation Tools

Chart Documentation/Checklists/Forms

Clinical Algorithm

Patient Resources

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

## Institute of Medicine (IOM) National Healthcare Quality Report Categories

### IOM Care Need

Living with Illness


### IOM Domain

Effectiveness

Patient-centeredness

## Identifying Information and Availability

### Bibliographic Source(s)

Cordell CB, Borson S, Boustani M, Chodosh J, Reuben D, Verghese J, Thies W, Fried LB, Medicare Detection of Cognitive Impairment Workgroup. Alzheimer's Association recommendations for operationalizing the detection of cognitive impairment during the Medicare Annual Wellness Visit in a primary care setting. *Alzheimers Dement*. 2013 Mar;9(2):141-50. [61 references] [PubMed](#) 

### Adaptation

Not applicable: The guideline was not adapted from another source.

### Date Released

2013 Mar

### Guideline Developer(s)

Alzheimer's Association - Disease Specific Society

### Source(s) of Funding

Alzheimer's Association

### Guideline Committee

Medicare Detection of Cognitive Impairment Workgroup

### Composition of Group That Authored the Guideline

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## Financial Disclosures/Conflicts of Interest

Soo Borson is the developer of the Mini-Cog and is the owner of its copyrights.

Over the past 5 years, Malaz Boustani has received research support for investigator-initiated projects from Forest Pharmaceutical and Novartis; honoraria from Novartis and Pfizer, Inc.; and research support for investigator-initiated projects from the National Institutes of Health (NIH) and the Agency for Healthcare Research and Quality (AHRQ). Dr Boustani was a member of the US Preventive Services Task Force that published the systematic evidence review *Dementia Screening* for the AHRQ in 2003.

## Guideline Status

This is the current release of the guideline.

## Guideline Availability

Electronic copies: Available from the [Alzheimer's & Dementia, the Journal of the Alzheimer's Association Web site](#).

Print copies: Available from the Alzheimer's Association, National Office, 225 N. Michigan Ave., Fl. 17, Chicago, IL 60601-7633, Phone: 1-800-272-3900.

## Availability of Companion Documents

A variety of resources, including the Medicare Annual Wellness Visit fact sheet, recommended cognitive assessment tools, and instructional videos, are available from the [Alzheimer's Association Web site](#).

## Patient Resources

A variety of resources for patients concerned with cognitive decline and their families and caregivers are available from the [Alzheimer's Association Web site](#).

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

## NGC Status

This NGC summary was completed by ECRI Institute on September 27, 2013. The information was verified by the guideline developer on October 22, 2013.

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