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Best Practices in Nursing Care to Older Adults with dementia

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From The Hartford Institute for Geriatric Nursing, New York University, College of Nursing, and the Alzheimer's Association

Issue Number D14, 2013

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# The AD8: The Washington University Dementia Screening Test

## *("Eight-item Interview to Differentiate Aging and Dementia")*

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**WHY:** Alzheimer's disease (AD) and other dementias are under-recognized and under-diagnosed in the community (Galvin et al., 2005). Primary care practitioners are the most likely provider to detect early symptoms of AD and other dementias in older adults. In primary care settings, providers can expect 13% of people 65 and older and 45% of those 85 and older to have symptoms suggestive of AD (Alzheimer's Association, 2012). Screening to identify older adults early in the disease process is important in order to offer treatment and future planning for the patient and their family caregivers. This *Try This* document introduces The AD8: The Washington University Dementia Screening Test, also known as "*Eight-item Interview to Differentiate Aging and Dementia*" (AD8), a short and simple to use instrument that an informant or older adult can complete prior to seeing the primary care provider or other health care practitioner (Galvin et al., 2005, 2006, 2007a, 2007b).

**BEST TOOL:** The AD8 was developed as a brief instrument to help discriminate between signs of normal aging and mild dementia. The AD8 contains 8 items that test for memory, orientation, judgment, and function. Cut points are: normal cognition 0-1; impairment in cognition 2 or greater. In contrast to instruments such as the Mini Cog and the Folstein Mini Mental State Examination (MMSE), the AD8 assesses intra-individual change across a variety of cognitive domains compared to previous levels of function and is sensitive to early signs of dementia regardless of etiology. The AD8 was originally validated as an informant-based interview, completed by a spouse, adult child, friend who knew the older adult well. Recent studies validated the AD8 as a direct questionnaire for the person with potential dementia who can often rate change in performance into the later stages of dementia (Galvin et al., 2007b). The AD8 is short, simple, and quick to administer (~3 minutes) and culturally-sensitive, thus making it an ideal tool for use in primary care practice during the annual wellness visit and research. Additionally, it has been validated for use in emergency departments and other settings (Carpenter et al., 2011).

**TARGET POPULATION:** Use with Medicare beneficiaries during their Medicare Annual Wellness visits as the AD8 meets requirements for the cognitive assessment component. Given that 90% of people with Alzheimer's disease are 75 years or older (Alzheimer's Association, 2012), in primary care consider screening this population at any visit and update the AD8 record annually. Adults younger than 75 who are experiencing changes in cognition or whose family or friends have noticed a change should also complete an AD8.

**VALIDITY AND RELIABILITY:** In community residing older adults, the AD8 reliably differentiates non-demented from demented community residing individuals and is sensitive to early signs of cognitive change as reported by an informant. Concurrent validity is strong, with the AD8 correlating highly ($r = 0.75$) with the Clinical Dementia Rating (CDR), a gold standard global dementia rating system and a formal neuropsychological evaluation. Sensitivity of >84% and a specificity of >80% has been reported. The Cronbach alpha of the AD8 is 0.84, showing excellent internal consistency. It has strong interrater reliability and stability. It shows excellent discrimination between non-demented and cognitively impaired individuals (positive predictive value >85%; negative predictive value >70%. Area under the Curve: 0.908; 95% CI: 0.888-0.925). Combining the AD8 with a brief performance test such as the MoCA and Mini-Cog greatly enhances the ability to capture early cognitive change (Galvin et al., 2007a) (See *Try This*: MoCA and *Try This*: Mini Cog). The AD8 has been validated in multiple languages, including Spanish, French, Portuguese, Norwegian, Chinese, Korean, Indonesian and Tagalog (Filipino).

**STRENGTHS AND LIMITATIONS:** The strengths of the AD8 are that it is short, takes on average 3 minutes to complete, and requires no advanced training. Items test for intra-individual change in multiple domains. It may be completed by the older adult or by a reliable informant, either in-person or over the phone. It has been tested on a diverse sample of white and nonwhite community residing older adults. In contrast to other measures, the AD8 captures changes in cognition in high functioning individuals and thus lends itself to use in primary care practice. A potential drawback to the AD8 exists if the patient has no informant, although this may only limit the usefulness of the AD8 for ongoing monitoring.

**FOLLOW-UP:** Positive screen on the AD8 require further assessment including history, physical examination, standard cognitive assessment instruments, laboratory testing, and brain imaging to formally establish a dementia diagnosis.

MORE ON THE TOPIC:
Best practice information on care of older adults: www.ConsultGeriRN.org.
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**Administration**

The questions are given to the respondent on a clipboard for self–administration or can be read aloud to the respondent either in person or over the phone. It is preferable to administer the AD8 to an informant, if available. If an informant is not available, the AD8 may be administered to the patient.

When administered to an informant, specifically ask the respondent to rate change in the patient.

When administered to the patient, specifically ask the patient to rate changes in his/her ability for each of the items, ***without*** attributing causality.

If read aloud to the respondent, it is important for the clinician to carefully read the phrase as worded and give emphasis to note changes due to cognitive problems (not physical problems).
There should be a one second delay between individual items.

No timeframe for change is required.

**Scoring**

The final score is a sum of the number items marked "Yes, A change".

**Interpretation of Results**

0-1: Normal cognition:
2 or greater: Impairment in cognition

| Remember, "Yes, a change" indicates that there has been a change in the last several years caused by cognitive (thinking and memory) problems. | **YES, A change** | **NO, No change** | **N/A, Don't know** |
|---|---|---|---|
| **1.** Problems with judgment (e.g., problems making decisions, bad financial decisions, problems with thinking) | | | |
| **2.** Less interest in hobbies/activities | | | |
| **3.** Repeats the same things over and over (questions, stories, or statements) | | | |
| **4.** Trouble learning how to use a tool, appliance, or gadget (e.g., computer, microwave, remote control) | | | |
| **5.** Forgets correct month or year | | | |
| **6.** Trouble handling complicated financial affairs (e.g., balancing checkbook, income taxes, paying bills) | | | |
| **7.** Trouble remembering appointments | | | |
| **8.** Daily problems with thinking and/or memory | | | |

| **TOTAL AD8 SCORE** | |
|---|---|



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