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Best Practices in Nursing Care to Older Adults

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Mental Status Assessment of Older Adults: The Mini-Cog™

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WHY: Five and a half (5.5) million Americans of all ages have Alzheimer's disease or other dementias (2017 Alzheimer's Disease Facts and Figures, 2017). Age is by far the greatest risk factor. One in ten individuals over 65 and 32% of those over 85 are affected (2017 Alzheimer's Disease Facts and Figures, 2017). The increased availability of successful interventions for dementia and dementia-related illnesses means there is a substantial need for increased early identification of cognitive impairment, particularly in the older adult population. Using a reliable and valid tool that clinicians can quickly implement facilitates early identification and allows the person to receive prompt treatment. Early identification and intervention in the form of medication and behavioral therapy may slow disease progression, delay functional decline, allow for pre-planning, and postpone nursing home placement. Whereas the U.S. Preventative Services Task Force (USPSTF) does not recommend routine cognitive screening in asymptomatic community-dwelling older adults, the Alzheimer's Association and the American Geriatrics Society do recommend incorporation of assessment of cognitive impairment into the Medicare AWV. The Centers for Medicare & Medicaid Services has included routine cognitive screening as a required component of the Medicare Annual Wellness Visit (AWV). The Mini-Cog™ is one of three tools endorsed by the Alzheimer's Association for use in the Medicare AWV.

BEST TOOL: The Mini-Cog™ is a simple screening tool that is well accepted and takes up to only 3 minutes to administer. This tool can be used to detect cognitive impairment quickly during both routine visits and hospitalizations. The Mini-Cog™ serves as an effective triage tool to identify individuals in need of more thorough evaluation. The Clock Drawing Test (CDT) component of the Mini-Cog™ allows clinicians to quickly assess numerous cognitive domains including cognitive function, memory, language comprehension, visual-motor skills, and executive function and provides a visible record of both normal and impaired performance that can be tracked over time.

TARGET POPULATION: The Mini-Cog™ is appropriate for use in all health care settings. It is appropriate to be used with older adults at various heterogeneous language, culture, and literacy levels.

VALIDITY AND RELIABILITY: The Mini-Cog™ was developed as a brief screening tool to differentiate patients with dementia from those without dementia. Depending on the prevalence of dementia in the target population, the Mini-Cog™ has sensitivity ranging from 76-99%, and specificity ranging from 89-93% with 95% confidence interval. A chi square test reported 234.4 for Alzheimer's dementia and 118.3 for other dementias ($p<0.001$). This tool has strong predictive value in multiple clinical settings (Borson et al., 2003). Research suggests that a 5-point numerical scoring system based on the original algorithm may be easier to apply: repeating three items (0 points), a clock drawing distractor (CDT) (0-2 points), and recall of the earlier three items after the CDT (0-3 points). A score of 0-2 out of 5 is a positive screen for dementia, 3-5 out of 5 is a negative screen for dementia (Borson et al., 2006), but a cut score of 4-5 out of 5 may increase detection of mild cognitive impairment (McCarten et al., 2012). The Mini Cog™ by itself is not considered a valid tool for this use. For further assessment of mild cognitive impairment, consider administering the Montreal Cognitive Assessment (MoCA) (See *Try this:*® MoCA).

STRENGTHS AND LIMITATIONS: The Mini-Cog™ takes up to 3 minutes to administer. The clock drawing component of the test is scored simply as normal or abnormal for the purpose of the Mini-Cog™ and specific scoring rules are included with the tool. More comprehensive analysis of the CDT does not improve detection of dementia and would increase complexity of the currently simple training requirements for clinicians and perhaps decreases its attractiveness as a simple screening tool. The Mini-Cog™ is not strongly influenced by education, culture, or language; it was perceived as less stressful to the individual than other longer mental status tests. The accuracy of the Mini-Cog™ in heterogeneous groups may increase the identification of dementia in populations less diagnosed thereby increasing minority participation in research and improving parity of early treatment.

MORE ON THE TOPIC:

Best practice information on care of older adults: https://consultgeri.org.
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Scanlan, J.M., Binkin, N.B., Michieletto, F., Lessig, M., Zuhr, E., & Borson, S. (2007). Cognitive impairment, chronic disease burden, and functional disability: A population study of older Italians. *American Journal of Geriatric Psychiatry, 15*(8), 716-724.

The Mini Cog™

Administration:

1. Instruct the patient to listen carefully to and remember 3 unrelated words and then to repeat the words. The same 3 words may be repeated to the patient up to 3 tries to register all 3 words.
2. Instruct the patient to draw the face of a clock, either on a blank sheet of paper or on a sheet with the clock circle already drawn on the page. After the patient puts the numbers on the clock face, ask him or her to draw the hands of the clock to read a specific time. The time 11:10 has demonstrated increased sensitivity.
3. Ask the patient to repeat the 3 previously stated words.

Scoring: (Out of a total of 5 points)

Give 1 point for each recalled word after the CDT distractor. Recall is scored 0-3.

The CDT distractor is scored 2 if normal and 0 if abnormal.

(Note: The CDT is considered normal if all numbers are present in the correct sequence and position, and the hands readably display the requested time. Length of hands is not considered in the score.)

Interpretation of Results:

0-2: Positive screen for dementia

3-5: Negative screen for dementia

Sources:

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