Mental Status Assessment in Older Adults: Montreal Cognitive Assessment: MoCA Version 7.1 (Original Version)

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WHY: The incidence of mild cognitive impairment (MCI) increases with age ranging from 7% to 38% (2011 Alzheimer’s disease Facts and Figures). Older adults with MCI have as high as 14% higher risk of developing Alzheimer’s dementia (2011 Alzheimer’s disease Facts and Figures). While studies have shown that treatment with an acetylcholinesterase inhibitor prior to progression has delayed dementia onset by 3 years, currently there is no endorsed treatment recommendations for MCI.

BEST TOOL: The Montreal Cognitive Assessment (MoCA© Version 7.1) was developed as a quick screening tool for MCI and early Alzheimer’s dementia. It assesses the domains of attention and concentration, executive functions, memory, language, visuocostrucional skills, conceptual thinking, calculations, and orientation. There are two alternative MoCA© forms (Version 7.2 and 7.3) available in an effort to decrease possible learning effects when used repeatedly (Phillips et al., 2011). The MoCA© has been tested extensively for use in a variety of disorders affecting cognition such as HIV, Huntington’s chorea, Multiple Sclerosis, Parkinson’s disease, stroke, vascular dementia, and substance abuse in addition to the well older adult. It has been tested in 14 different languages, ages ranging from as young as 49 in two reports to old-old (85+) with a variety of education levels. The total possible score is 30 points with a score of 26 or more considered normal. To better adjust the MoCA for lower educated individuals, 2 points should be added to the total MoCA score for those with 4-9 years of education and 1 point for 10-12 years of education (Johns et al., 2010). The score range for MCI is 19-25.2 and for Alzheimer’s dementia 11.4-21. While the score ranges overlap, differentiation between the conditions is dependent upon associated functional impairment. A modified version, MoCA-B, has been developed for use in visual impairments.

TARGET POPULATION: The MoCA can be used in a variety of settings from primary care to acute care. It may be used in culturally diverse populations, a variety of ages and differing educational levels.

VALIDITY AND RELIABILITY: The MoCA detected MCI with 90%-96% range sensitivity and specificity of 87% with 95% confidence interval. The MoCA detected 100% of Alzheimer’s dementia with a specificity of 87%.

STRENGTHS AND LIMITATIONS: The MoCA takes approximately 10 minutes to administer. It is accessible via the MoCA© website, with clear administration and scoring instructions (refer to website for copyright information). All these items, test, instructions and scoring are available in 36 languages. There is some recent research suggesting that lowering the threshold score to 23 may prevent over identification of normal individuals. It has been tested in a variety of settings and populations and displayed accuracy in identification of MCI and Alzheimer’s dementia.

FOLLOW-UP: The U.S. Preventative Services Task Force in 2003, made no formal recommendations for screening for dementia. The American Academy of Neurology (2001) determined that there is not sufficient evidence to recommend cognitive screening of asymptomatic individuals. This guideline is currently under revision. The American Medical Association Conference (2003) and the American Academy of Family Physicians (2001) recommend that health care providers be alert for cognitive and functional decline in elderly patients for recognition of dementia in its early stages. Annual screening, as a component of the annual physical, is realistic.

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