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'Sweet 16' tool may be useful for detecting cognitive impairment

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A new cognitive assessment tool with 16 items appears potentially useful for identifying problems in thinking, learning and memory among older adults, according to a report posted online today that will be published in the March 14 print issue of *Archives of Internal Medicine*.

An estimated 3.4 million older adults in the United States have dementia, and an additional 5.4 million have milder forms of cognitive impairment, according to background information in the article. "For many older adults, cognitive impairment contributes to loss of independence, decreased quality of life and increased health care costs," the authors write. "While the public health impact of cognitive impairment is clear, this condition is often under-recognized. A simple, rapid cognitive assessment instrument is therefore a valuable tool for use in both clinical and research settings."

The most widely known and used measure of cognitive impairment is the Mini-Mental State Examination (MMSE); however, scores on this assessment may be influenced by education level, and the copyright limits its widespread availability. Tamara G. Fong, M.D., Ph.D., of Hebrew SeniorLife, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, and colleagues developed a new instrument called the Sweet 16 to rapidly assess cognitive status in older adults. To develop the questions, the researchers used information from a group of 774 patients who completed the MMSE as part of a screening process for a large randomized trial of a method to decrease delirium. They then validated their results among 709 participants in another study that also

used two different dementia and cognitive decline rating scales.

The Sweet 16 scale is scored from zero to 16 (with 16 representing the best score) and includes questions that address orientation (identification of person, place, time and situation), registration, digit spans (tests of verbal memory) and recall. "The Sweet 16 required no pencil, paper or other props and was easy to administer with a minimum of training," the authors write. "In the pilot group, completion time for the instrument ranged from 1.4 to 2.9 minutes, with a mean [average] of 2.0 minutes and a median [midpoint] of 1.9 minutes."

When administered to participants in the validation group, a Sweet 16 score of 14 or less correctly identified 80 percent of the individuals with cognitive impairment (as identified by another questionnaire) and correctly identified 70 percent of those who did not have cognitive impairment. In the same group, the MMSE correctly identified 64 percent of those with cognitive impairment and correctly identified 86 percent of those who were cognitively normal.

The researchers also compared the Sweet 16 to clinicians' diagnoses of cognitive impairment. Sweet 16 scores of 14 or less occurred in 99 percent of patients diagnosed with cognitive impairment and 28 percent of those without such a diagnosis.

"The Sweet 16 could be used in place of other screening measures, such as the MMSE, to rapidly identify cognitive impairments in general clinical practice as well as in research settings," the authors write. "Further studies, including prospective studies to establish the predictive validity of the Sweet 16, to assess test-retest reliability and to compare performance with other brief cognitive measures, are greatly needed. Ultimately, it is hoped that this test will help improve assessment of cognitive function across many settings."

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