AD8 Tool Touted for Annual Cognitive Screening

BY MICHELE G. SULLIVAN

The Affordable Care Act, which became law this January, stipulates that clinicians must assess patients aged 65 years or older for cognitive impairment as part of their annual wellness visit.

But the U.S. Preventive Services Task Force has never endorsed a screening tool for cognitive decline, noting that no data consistently support one of the many existing tools over another.

So, what's a busy primary care physician to do? Some researchers – including Dr. James Galvin of Washington University, St. Louis – think a screening tool called the AD8 could be one answer.

Dr. Galvin created the screening tool along with colleagues at the university's Alzheimer's Disease Research Center. During a Webinar sponsored by the Alzheimer Research Forum, he presented data showing that AD8 is fast, easy, inexpensive, and very accurate in identifying patients who are beginning to show early signs of cognitive decline.

In an unselected population, the tool has a sensitivity of more than 84% and specificity of more than 80%, although both measures were much higher in the dementia clinic where it was piloted. Overall, the AD8 has proved more useful than the Mini Mental State Examination in picking out patients with the very earliest signs of cognitive impairment, Dr. Galvin said during the Webinar (Arch. Neurol. 2007;64:718-24).

The eight-question survey asks an informant whether the patient has experienced any changes in executive function or memory over the past few years.

"It's brief, inexpensive, easy to give and score, reliable, socially acceptable, and culturally sensitive," Dr. Galvin said.

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Because it provides a picture of change related to baseline, the AD8 avoids the problem of a "snapshot" test, which could, for example, falsely identify cognitive problems in someone who has never had a good memory. Because the AD8 does not test patients on acquired learning, it is not educationally biased. The test also is culturally neutral because it focuses on changes in basic activities in which everyone engages.

Most screening tests "share performance-based problems," he said. "They might be insensitive to very early dementia, have a cultural or educational bias, or be heavily weighted toward memory impairment or another single cognitive domain. And unless they are done serially, you really have no idea where the patient was before [the test], and no sense of whether the findings interfere with their occupation or social function."

The AD8 asks informants to answer yes, no, or don't know to whether the patient has changed in eight areas: problems with daily judgment and decision making; decreased interest in hobbies or activities; repeating things over and over; trouble learning how to use a new tool or appliance; forgetting the month or year; trouble with financial affairs; trouble recalling appointments; and daily problems with thinking and memory.

A score of two or more "yes" answers is a positive screen, indicating that cognitive impairment is likely. Positive screening results also strongly correlate with the new Alzheimer's disease biomarker diagnostic standards.

Patients with a positive AD8 are significantly more likely to have brain atrophy in the temporal lobe, hippocampus, and parahippocampal gyrus than are those with a negative screen. Patients with a positive screen also are more likely to have beta amyloid$_{42}$ brain plaques, to have decreased beta amyloid$_{42}$, increased tau, and abnormal beta amyloid/tau ratios in cerebrospinal fluid (Brain 2010;133:3290-300).

However, the test is not a method of diagnosing any particular cognitive dis-

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order – even mild cognitive impairment, Dr. Galvin said. A positive AD8 will most likely mean additional tests for the patient, including brain imaging, biomarkers, neuropsychological testing, and other diagnostic activities.

Validation studies of the AD8 have confirmed that it can identify early changes in a plethora of dementias, including Alzheimer's disease and progressive aphasias, as well as Lewy body, frontotemporal, and vascular dementia. Therefore, early identification is its biggest advantage, he said.

"As new disease-modifying medications are developed, those at the earliest stages of their disease will probably get the biggest benefit," Dr. Galvin said. An earlier diagnosis not only affords the opportunity to benefit from new drugs, when they become available, but also allows families and patients to work together to plan the future, while the patient is still able to make meaningful contributions.

AD8's future is by no means ensured. The tool is available online, free to any clinician who wants to download it. But whether primary care doctors will use it – and whether patients will want it – is another matter, said Dr. Galvin and Dr. Tracey Holsinger of Duke University and the Durham (N.C.) Veterans Affairs Medical Center.

Conflicting directives from the federal government and the USPSTF might make clinicians cringe when faced with the cognitive-screening mandate, Dr. Galvin said. "There is just no clear plan about how best to screen and what instrument to use. … Dementia screening simply has not been a routine part of primary care practice," and certainly not for a nontargeted population that begins at a relatively low-risk age for age-related dementias. "Targeted screening makes a lot more sense, and it's my belief that large population screening will yield very few cases." However, he said, this is the hand that politicians have dealt primary care, "unless the Task Force can be persuaded to review its recommendations and make new ones based on the current data."

Even if physicians quail at the thought of having one more box to tick off in an annual exam, patients will probably like the security an annual cognitive screen can provide, Dr. Holsinger said. She and her colleagues recently conducted a survey of 345 primary care patients at the Durham VA Medical Center. After discussing the risks and benefits of a cognitive screen that could identify early dementia, the subjects were asked whether they would want to know of their probable diagnosis. "Eighty-one percent said they would want to know," she said.

Factors associated with the desire for screening were acceptance of other screening tests (depression, breast, and prostate cancer; odds ratio 3.7), male gender (OR 3.2), and the belief that effective treatment for dementia exists (OR 2) (Int. J. Geriatr. Psych. 2010 [doi:10.1002/gps.2536]).

The AD8 sounds good on the surface, but how it will fit into a busy primary care day is still unclear, said Dr. Eric Tangalos, an internist at the Mayo Clinic, Rochester, Minn. Having an informant fill out the paper might throw some bias into the pot at the very beginning of the process, he said during the webinar. "In my practice, if a 65-year-old shows up for an annual wellness exam with a spouse, that sends my red flags flying. We need to be very cautious about applying an instrument [that was tested in dementia clinics] to a broad population that is not at a high-risk age."

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Primary care physicians already are ultracautious about entering the dementia arena, he said. "We already know primary care docs do not want to open Pandora's box, even when the disease is confronting them. We're saying 'Run toward that diagnosis, rather than run away from it.'"

Dr. Galvin agreed, but reminded the panel that the die has been cast. "There is not a lot of evidence that anyone needs to be seen annually for something like this – this is really a political approach to health care that is quite a bit different from anything the USPSTF policy has recommended. But even though we're not exactly sure how it will all play out, it's going to be up to the practices to get it done."

None of the panel members expressed any financial conflicts related to the screening tool. ■