

New, rapid dementia screening tool rivals 'gold standard' clinical evaluations

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James E. Galvin, M.D., M.P.H., is one of the most prominent neuroscientists in the country and a professor of clinical biomedical science in the Charles E. Schmidt College of Medicine and a professor in the Christine E. Lynn College of Nursing at Florida Atlantic University, and the QDRS is his brainchild. Credit: Florida Atlantic University

Determining whether or not an individual has dementia and to what degree is a long and laborious process that can take an experienced professional such as a clinician about four to five hours to administer, interpret and score the test results. A leading neuroscientist at Florida Atlantic University has developed a way for a layperson to do this in three to five minutes with results that are comparable to the "gold standard" dementia tests used by clinicians today.

The "Quick Dementia Rating System" (QDRS), which uses an evidence-based methodology, validly and reliably differentiates individuals with and without [dementia](#). When dementia is present, it accurately stages the condition to determine if it is very mild, mild, moderate or severe. QDRS has applications for use in [clinical practice](#), to pre-qualify patients in clinical trials, prevention studies, community surveys and biomarker research.

James E. Galvin, M.D., M.P.H., is one of the most prominent neuroscientists in the country and a professor of clinical biomedical science in the Charles E. Schmidt College of Medicine and a professor in the Christine E. Lynn College of Nursing at Florida Atlantic University, and the QDRS is his brainchild. He recently published an article on his findings in *Alzheimer's & Dementia*, the journal of the Alzheimer's Association. Galvin has developed a number of dementia screening tools including the AD8, a brief informant interview to translate research findings to community settings that is used worldwide to detect dementia in diverse populations.

"After extensive testing and evaluation of the Quick Dementia Rating System, we have found it to be as effective as the gold standard used today to screen for the five stages of dementia," said Galvin. "This new tool gives you a lot of power to see the same results as a full screening in a fraction of the time it takes for a complete screening."

The QDRS is a 10-item questionnaire that can be completed by a caregiver, friend or family member, and is brief enough to be printed on one page or viewed as a single screenshot, maximizing its clinical utility. Scores range from 0 to 30 with higher scores representing greater cognitive impairment. The questionnaire covers: 1) memory and recall; 2) orientation; 3) decision-making and problem-solving abilities; 4) activities outside the home; 5) function at home and hobbies; 6) toileting and personal hygiene; 7) behavior and personality changes; 8) language and communication abilities; 9) mood; and 10) attention and concentration.

The total score is derived by summing up the 10 fields and each area has five possible answers increasing in severity of symptoms. The 10 areas capture the prominent symptoms of mild cognitive impairment, Alzheimer's disease, and non-Alzheimer's neurocognitive disorders including Lewy Body Dementia, frontotemporal degeneration, [vascular dementia](#), chronic traumatic encephalopathy and depression.

A total of 267 individuals with various forms of dementia from Alzheimer's disease to Lewy Body Dementia participated in the study, which included 32 healthy controls. Study participants also included their spouses/significant others, adult children, relatives, friends and paid caregivers who completed the QDRS.

"Most patients never receive an evaluation by a neurologist, geriatric psychiatrist, or geriatrician skilled in dementia diagnoses and staging. Early detection will be important to enable future interventions at the earliest stages when they are likely to be most effective," said Galvin. "The QDRS has the potential to provide a clearer, more accurate staging for those patients who are unable to see these more specialized clinicians and get them the treatment, referrals and community services they so desperately need."

The Quick Dementia Rating System is copyrighted and permission to use this tool is required. QDRS is available at no cost to clinicians, researchers and not-for-profit organizations.

Galvin is working to improve clinical detection by combining biomarkers including high density EEG, functional and structural MRI, PET scans and CSF biomarkers to characterize and differentiate Lewy Body Dementia from healthy aging and other neurodegenerative diseases. He led efforts to develop a number of dementia screening tools in addition to the QDRS and AD8, and has done cross-cultural validation of dementia screening methods in comparison with Gold Standard clinical evaluations and biomarker assays. His team also developed sophisticated statistical models to explore transition points in clinical, cognitive, functional, behavioral and biological markers of disease in healthy aging, mild cognitive impairment, Alzheimer's disease and Parkinson's disease.

Provided by Florida Atlantic University

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