Should Family Physicians Routinely Screen Patients for Cognitive Impairment?

No: Screening Has Been Inappropriately Urged Despite Absence of Evidence

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This is one in a series of pro/con editorials discussing controversial issues in family medicine.

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The evidence base and principles that underpin the introduction of population screening for any condition are accepted internationally.[1,2] Dementia screening should not be exempt from the requirement that it first be shown to improve outcomes before being implemented in practice, despite growing pressure to do so in the United States and the United Kingdom. In the United Kingdom, this is partly driven by an expressed need to increase the proportion of persons diagnosed with dementia to come closer to the government's geographic estimates.[3] Yet, the evidence base for rolling out screening campaigns is not yet available, and accordingly, screening is not supported by expert groups in the United States[4] or the United Kingdom.[5,6]

Several questions should be asked before instituting a broad screening campaign. First, are the tests precise and validated? No. Screening tests for dementia include a range of brief cognitive tests, such as the Abbreviated Mental Test, Mini-Mental State Examination, General Practitioner Assessment of Cognition, and Cambridge Neuropsychological Test Automated Battery.[7] These tests may be useful as part of the evaluation of a patient with cognitive problems, provided there is additional evidence of functional decline and other features of dementia; however, such tests are influenced by many factors apart from dementia, including education, ethnicity, sensory impairment, mood, and comorbidities.[8] When performed in community populations with low prevalence, they can have false-positive rates as high as 23%.[9] Screening methods based on detection of "preclinical" neuropsychological profiles and Alzheimer disease neuropathology (e.g., amyloid scans, cerebral spinal fluid protein measurements) have not yet been validated in relevant population studies for diagnostic or prognostic value.[10,11] Moreover, in older persons in whom the incidence of dementia is greatest, many persons who will never develop dementia have Alzheimer disease pathology.[12]

Next, are there any interventions with demonstrable value in reducing mortality and morbidity for those persons identified by screening as having dementia at an earlier stage than usual clinical presentation? No. Rigorous trial evidence of benefit does not yet exist. Advice regarding exercise, nutrition, smoking, avoiding medications that impair cognition, and making advance care directives is useful for all older persons, not just those with screening tests positive for cognitive impairment.

No pharmacologic therapies delay progression of dementia. Cholinesterase inhibitors and memantine (Namenda) have only modest symptomatic effectiveness,[13,14] and there is no current evidence that patients with cognitive impairment detected by screening will benefit in a meaningful way. Studies that suggest dementia-specific counseling and advice following early

diagnosis might decrease institutionalization are inconclusive.[15]

Finally, are there potential harms of dementia screening and subsequent interventions? Yes. The U.S. Preventive Services Task Force (USPSTF) indicates that harms can be associated with any type of screening, including psychological harms from labeling, and direct harms associated with diagnostic tests, early treatments, and overtreatment.[1] There are reports of stress, stigmatization, suicidality, and loss of autonomy following evaluation for and diagnosis of early dementia,[3,16] and there are clear adverse effects from dementia medications.[13] Screening campaigns also may divert societal attention and resources from those patients with established dementia whose care needs are greatest. A survey in the United Kingdom reported that one in five physicians had received complaints from patients who were unhappy about dementia screening, whereas two-thirds had noted increased waiting times for memory clinics.[17]

Both the USPSTF[4] and the U.K. National Screening Committee[5] have found insufficient evidence to recommend dementia screening. This emphasizes the need for ongoing research into all elements of dementia screening, from tests to robust prognosis and effective interventions. Physicians also need to ensure that resources are not diverted and patients are not alienated by the premature implementation of a screening program that is not yet supported by an appropriate evidence base, including randomized clinical trials.

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