Cognitive Screening and the Periodic Health Examination: Time for a Re-evaluation?

by Nathan Herrmann, MD, FRCPC

It was a black day for me in 1991 when I opened the latest copy of the Canadian Medical Association Journal and read the recommendations of the Canadian Task Force on “The Periodic Health Examination: Screening for Cognitive Impairment in the Elderly”. The Task Force concluded that, in their opinion, there was “no conclusive evidence to indicate whether the early detection of cognitive impairment will lead to a net benefit or harm to elderly people” (p. 428). Therefore, the Task Force could not recommend including (or excluding) routine cognitive screening in the periodic health examination of people over 65.

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While the scientist in me may have quibbled over their interpretation of the available evidence at that time, the clinician in me was dumbfounded. How could they minimize the potential benefits of early detection even if there was no drug therapy that was consistently clinically significant at that time? The Task Force focused on the evidence for specific detection instruments, drug therapy for dementia, the potential to predict increased risk of delirium, the costs of investigation and the potentially harmful effects of labeling someone with dementia. Given that seven years have passed since the publication of that document, it is worthwhile to review some of the evidence that has accumulated and, I believe, tips the balance in favor of including cognitive screening.

Even seven years ago, there was a plethora of short, easy-to-administer cognitive screening tools. The Task Force concluded that both the Short Portable Mental Status Questionnaire and the Mini-Mental State Examination (MMSE) fulfilled acceptable methodologic criteria and represented practical screening tools for office practice. The MMSE has continued to be the best studied tool with clearly demonstrated reliability and satisfactory validity. More recently, large scale epidemiologic studies have provided norms for the MMSE by age and education level. While clinicians should not make a diagnosis of dementia based on a rating scale score alone, the MMSE has even shown reasonable sensitivity and excellent specificity in a general practice setting. What is not debatable today is the value of the MMSE for communication purposes. Most physicians in clinical practice have heard of, or used the MMSE, and almost all medical students in this country have been taught the MMSE as part of their psychiatry, geriatrics or neurology assessment courses.

The Task Force noted correctly that screening for “reversible” causes of dementia was not particularly cost-effective in view of the low prevalence of partially or fully reversible dementias. What was not considered, however, was the value of screening and laboratory investigations to identify co-morbid medical conditions in patients with an “irreversible” degenerative dementia that might contribute to worse cognitive function (hence the term “excess morbidity”). Furthermore, in 1998, the purpose of screening and diagnostic evaluations is no longer to simply rule out irreversible dementia, but to rule in a specific degenerative dementia (e.g., Alzheimer’s disease [AD], vascular dementia) for therapeutic interventions.
The ability to treat AD and other degenerative dementias is the area that has seen the most progress since 1991. Today, there are several pharmacologic interventions available for use in Canada with modest, but demonstrable benefit: donepezil, a cholinesterase inhibitor, ginkgo biloba and Vitamin E. With other cholinesterase inhibitors about to be introduced and several novel therapeutic classes of cognitive enhancers being intensively investigated, screening becomes essential.

Other potential benefits of screening noted by the Task Force include the identification of patients at risk for delirium and patients in whom medications with anticholinergic effects will worsen cognition or precipitate delirium. More recent research has emphasized these benefits. Curiously, the Task Force underemphasized the advantage of early detection for medical-legal purposes. With the increased public interest in advanced directives (Powers of Attorney and wills), the earlier cognitive impairment is identified, the more likely the patient and family will have the opportunity to plan for the future. This could also include a discussion about participation in research protocols, as certain jurisdictions have taken the unfortunate stance of excluding incompetent patients from research studies. Furthermore, the Task Force did not even consider the value of detecting cognitive impairment in order to identify elderly drivers at risk for motor vehicle accidents. There is mounting evidence from well-designed studies that elderly drivers with even very mild dementia have a higher accident risk than healthy, age-matched controls.

Finally, the Task Force spent an inordinate amount of space speculating on the potential harm of early identification. While they admitted there was little systematic research to support the contention that early identification can have negative consequences, they raised potential issues such as the negative effects of labeling, potential barriers erected by health professionals due to negative attitudes towards elderly patients with cognitive impairment, “practical barriers” (e.g., economic transportation) and the concern that patients themselves may not seek appropriate care for fear of consequences such as institutionalization. Despite the passage of seven years, there continues to be little research to support these contentions.

To screen or not to screen? Reviewing the evidence available in 1998, I believe the balance now falls clearly in favor of including cognitive screening as part of the periodic health examination in patients over 65 years of age. In the real world, however, it is our patients who will likely decide the outcome of this debate. With more media attention focussed on AD and related disorders, and the launch of the Alzheimer Society of Canada’s “The Ten Warning Signs of Alzheimer Disease” (see article on page 12), our patients are more likely to expect or demand such screening on a regular basis.

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