Paying with Interest for a High Interest in Screening

The interesting paper by Dale et al. suggests that, despite clear lack of evidence of benefit, most members of a sample of adults drawn from two university-affiliated geriatrics outpatient clinics were interested in screening and treatment for mild cognitive impairment (MCI). This phenomenon is not restricted to cognitive decline. For example, Jokowitz et al. found that elderly patients offered carotid artery ultrasound did not understand the potentially harmful implications of a positive screening test that they had agreed to undergo. Another study, using a population-based telephone survey, found that, despite the lack of firm evidence of efficacy for prostate cancer screening, more men availed themselves of prostate-specific antigen tests than colon cancer screening, although the evidence for the latter is much better.

There are several aspects of this phenomenon that deserve comment. Let us begin with an eminent British editor’s two-pronged judgment about the suitability of publication of any manuscript submitted to him: Is it new? Is it true? With respect to “true,” given Dale’s methodology, there is no reason to think otherwise. If so, are these results generalizable? Probably not yet—at least according to the hard evidence. However, one cannot avoid a nagging suspicion that they would be if the authors extended their study to other and larger populations. In other words, a lot of older people (supported by their doctors) would likely seek out screening for MCI.

With respect to “new,” in a society so medicalized and in which so many patients and practitioners believe in a “can do” kind of approach (or to use an earlier term, “heroic medicine”), perhaps Dale et al.’s results will come as no surprise. However, as the authors point out, MCI does not meet most of the usual criteria for screening: that the condition must be common (it is); that there must be a valid, acceptable test to identify it (there is not); that there must be an efficacious treatment available (not yet); and finally, overall, that the benefits of screening, with resultant early diagnosis and subsequent treatment, must outweigh the harm in not offering this maneuver (probably not). Even for Alzheimer’s disease, for which MCI is arguably a precursor, no authoritative body of which I am aware recommends screening.

So if there is no hard evidence for early detection, why would some patients want such a service, and what possible harm apart from a waste of resources could accrue even if screening is not beneficial? To begin with the first question, we in the medical profession are largely responsible for the present state of affairs. The history of screening goes back to at least the middle of the 19th century, when a British physician, Horace Dobell, proposed “as the only means by which to reach the evil and to obtain the good, that there should be instituted, as a custom, a system of periodical examination, to which all persons should submit themselves.” Relevant to, among other issues, screening for MCI, Han points out, that “Central to his [Dobell] thesis were the notion that diseases are preceded by ‘pre-existent physiological states’ of ‘low health’ and the idea that therapeutic efforts are more effective at these earlier stages.”

Other physicians and soon too the insurance industry—especially but not exclusively in the United States—joined the crusade. Of interest (especially to geriatricians given the name of the organization he founded) will be the person of Eugene Lyman Fisk, who in 1913 opened the “Life Extension Institute,” devoted to performing periodic health examinations on behalf of life insurance companies.

So, over the last 150 years, it appears that the professionals, with the more recent collusion of various interest groups (organizations as the Alzheimer’s societies and cancer associations) and an unusually uncritical media (scientific and popular) have sold the public a bill of goods—the value of which often remains questionable.

There is no doubt that childhood immunizations and avoiding smoking are examples of efficacious preventive measures. And, most probably, the early diagnosis and treatment of conditions such as hypertension and hypercholesterolemia, at least in certain groups, are also beneficial. But in many cases, we in the profession and our patients as well have gone far beyond the evidence. Recommending screening for Alzheimer’s disease and especially for MCI are good examples of where magical thinking trumps scientific logic.

Can such screening actually be harmful? In some conditions, yes. For example, where the criterion standard (gold standard) confirmation or resulting therapy has a high risk/benefit ratio, indeed overall, more harm than good can often result. In the field of dementia, a universal neuroimaging policy will result in some proportion of patients being harmed by surgery, in an often futile attempt to repair a rare case of normal-pressure hydrocephalus. Will these be fewer than the number cured? No one knows, but there is some evidence that more will be harmed than helped. Moving caudad down the human frame, an uncritical approach to prostate-specific antigen testing and the resultant surgery for a disease that many older men will die with rather than of often causes a great deal of harm to continence—urinary and sexual, not to speak of sometimes causing death.
At the other end of the age spectrum, with members of whom our frail elderly patients have so much in common in a trenchant critique of preventive medicine, Sackett reminds us of just a few of the harmful measures we as a profession have over the years recommended for children without good evidence: “supplemental oxygen for healthy premies (causing retrolental fibroplasia), healthy babies sleeping face down (causing SIDS), thymic irradiation in healthy children,” and he warns, “The list goes on.” An additional problem involves the fact that most research into the diseases affecting frail older people have not included this kind of patient in their study samples. In other words, even if they were, which saintly doctors and which ideal healthcare system would have the time and the energy to perform all of the recommended tests offered? In an attempt to answer this question, Yarnell et al. calculated that just to meet the A- and B-grade U.S. Task Force recommendations would take a family doctor more than 7 hours a day (in a practice of 2,500 patients).

In part as a result of such findings, others even challenge the ethics of “opportunistic disease prevention,” offering, “An extensive preventive agenda may divert the dialogue between patient and doctor away from important social and relational issues relevant to the patient’s health.” Returning to MCI, in a comprehensive examination of the policy and practice issues involved, Whitehouse and Juengst remind us that as is always the case in screening, simply labeling a patient with MCI can contribute “to the medicalization of cognitive aging” and may offer to otherwise normal older people a new diagnostic concern about which they did not have previously to worry. We must never forget that our role is above all to preserve well-being and not, via poorly thought-out and unproven “preventive” measures, to contribute to the sum total of human suffering. Odd as it may seem at first, when a patient presents with a symptom, the level of evidence demanded for our intervention is actually lower than for those interventions that we, unbidden, offer the asymptomatic.

Goodwin goes even further, warning us that much of what drives us in the care of frail older people has its origin in ideology. As a result, we are often tempted to take various actions at the expense of the long-term ongoing care of our elderly patients. Although his thoughtful piece was written 15 years ago, before the pressure began to make an “early” diagnosis of MCI, his warning rings true on this issue as well. As can be seen from the work by Dale et al., our profession has a long way to go before we will get the balance right. Partly in innocence and sometimes for more craven reasons, we seem to have gone down a road more traveled. Perhaps we should retrace our steps and recall the adage that should be posted at every fork of the clinical road: *Primum non nocere* (“First, do no harm”). On the present evidence, despite the enthusiasm of the profession and probably the public, screening for MCI is not justified.

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REFERENCES