Reviewer's report

Title: Validation of multi-stage telephone-based identification of cognitive impairment and dementia

Version: 1 Date: 11 February 2005

Reviewer: Jeremy Silverman

Reviewer's report:

General

This is a well-conceived, -executed and -written report examining the utility of a telephone-based identification of cognitive impairment and dementia. As the authors note, there is tension between the need for epidemiological studies of dementia involving large samples, on the one hand, and the very high costs associated with assessing subjects directly, on the other. A dementia assessment approach that has a lower cost and is easily administered would be valuable providing it was reliable and valid. The authors appear quite cognizant that classification based on a telephone assessment will virtually always fall short of a full clinical workup. They note, however that those more comprehensive methods have their own weaknesses. For example, differential non-response to such direct clinical workup might well be a concern. The authors stress that most methods carry potential biases of one kind or another and that each of the these must be considered and contrasted.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. The authors cite a valuable study by Ellis et al. in this area but there have been a number of studies that are not cited or discussed that have considered closely related questions. In fact, the Dementia Questionnaire (the authors inaccurately refer include the word Telephone to the name, but the instrument can be administered in face to face interviews as well as over the telephone and hence is simply the “DQ”) was first described in 1986 (Silverman et al., American Journal of Psychiatry 143:1279-1282) which looked at inter-informant reliability of the diagnoses and related information derived from this instrument. Another paper considered test-retest reliability (Silverman et al., Alzheimer's Disease and Associated Disorders, 1989, 3:218-223). A third paper looked compared DQ based diagnoses with neuropathologically derived diagnoses (Li et al. Archives of Neurology, 1997; 54:634-640). Kawas et al. looked compared DQ classification with direct clinical classification (Arch Neurol. 1994;51:901-6). Other groups using different but similar assessment have looked at informant based data on dementia (Kukull & Larsen, J Am Geriatr Soc. 1989; 37:521-7; Heun & Maier, Psychiatry Res. 1996;62:227-38; Devi et al. Genet Epidemiol. 1998;15:215-23).

2. There are some ambiguities regarding the numbers of subjects who participated. Ninety-eight were asked to return opt-in postcards if willing to participate and then 50 provided “verbal permission” to contact. Does the quoted phrase here mean that fifty sent in the return postcard? If not, how many subjects send in the postcard but then did not provide verbal permission. Also, of the 50 giving permission to contact, 38 participated directly and 8 were assessed by the DQ through a
proxy. That leaves four unaccounted for, but presumably these subjects did not ultimately agree.

Discretionary Revisions (which the author can choose to ignore)

The rationale for using the multi-stage method might be more explicitly stated. As the authors note, the TICS has been found to have good sensitivity but a weak positive predictive value. On the other hand, the Dementia Questionnaire has very good specificity (sensitivity been also observed to be fairly good but less so and not with the same consistency across groups). Thus, it seems clear that what is intended by this multistage method is to throw a wide net initially in stage one in order to capture most of the true positives, if also including many false ones (keeping sensitivity high at the initial expense of specificity). Then stage 2 is meant to more precisely identify true cases of dementia. This implicit rationale might be stated more explicitly.

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests