Reviewer's report

Title: The MRC Trial of Assessment and Management of Older People in the community: objectives, design and interventions

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Reviewer: Erik van Rossum

Level of interest: A paper of considerable general medical or scientific interest

Advice on publication: Unable to decide on acceptance or rejection until the authors have responded to the compulsory revisions

General remarks

This manuscript reports on the design of a relevant and ambitious study in the field of geriatric assessment and follow-up, in which both various assessment methods and treatment schemes are tested in a very large population (33,000 elderly people). From a public health and methodological point of view it is relevant that the rationale and design of this study is published.

I have however some remarks on the manuscript. My main comments relate to the role of the brief assessment in the study, the comparisons in the analyses, the interventions tested, and the choice of (primary) outcome measures and expected effects.

Comments (compulsory revisions)

1. The two main questions of the study are (1) what are the effects of a risk group versus a universal assessment method, and (2) performs PCT or GEM better in managing the problems identified in the assessment. Before a detailed assessment is performed, three methods of administering a brief assessment questionnaire are used: by post, by a layperson, or by a nurse. The rationale of using these various methods in view of answering the main study questions is unclear. Are they used to address an additional question (which method is to be preferred?). If so, one would like to use various methods in the same patient; in the present design one can only see at a population level whether one method leads to the identification of a larger proportion of elderly at risk than another method.

2. A 2-stage design is used in which patients are first randomly allocated to either a detailed assessment "always" or "only if triggered", and then allocated to one of two treatment options of handling problems identified during the assessment (either PCT or GEM). The main analysis focuses on two comparisons: universal versus targeted assessment, and PCT versus GEM. However, part of the patients will not be referred on the basis of the assessment to PCT/GEM, but to other services or to the GP (emergency referral). In addition one may expect that part of the patients, especially in the universal assessment arm, do not need any follow-up or referral (the authors only state that all patients assessed will be
referred to one out of 3 'options', see page 6). How are these patients not referred to PCT/GEM handled in the analysis and what is the expected size of this group?

3. The second stage of the trial needs clarification. What is the difference between the PCT and GEM team, are the GEM teams already active in all research areas, and do they function in a similar way (or are there large differences in experience, composition of teams, etc.). Why is expected that GEM will perform much better than PCT? Details regarding the interventions of PCT and GEM are lacking. What are the treatment protocols for PCT and GEM and are patients followed up regularly (and during a fixed time period)? Is it possible that patients receive PCT or GEM after they have been referred to other services or the GP (contamination). How is this handled in the analysis?

4. The primary outcome measures are mortality, hospital and institutional admissions, and quality of life. The rationale for this choice is lacking. One may doubt whether mortality should be one of the main target effects. Why is the timing of the outcome measurements not the same for all measures (hospital admissions: 2 years follow-up, QoL and mortality: 3 years)? Although a detailed description is given of the sample size calculations, it is not clear to me whether the differences that can be detected between groups (see page 10, estimates of sample size), are considered to be the relevant differences from a clinical point of view. The authors should be clear on that; in this large study population many statistically significant effects will probably be found, but what effects are considered clinically relevant?

Comments (discretionary revisions / details)

1. If possible, the authors may give some more information about the procedures used in the 3 methods of administering the brief assessment questionnaire.
2. Data on hospital admissions (a primary outcome measure) are collected by means of the hospital discharge letters to the GP. How reliable is this method (standard procedure in the UK? is all information mentioned always included in the letters, etc)?
3. page 8, section "use of services": through instead of though. Why are 2 methods used to gather information on service use (what is the additional value of the postal questionnaire and at what time points are they mailed)?
4. The "background section" of the manuscript is clear, although the authors did not include some relevant trials on home visits to elderly performed in the 1990s. These lead to discussions whether a risk group approach should be used or not, which seems relevant for this manuscript. Studies of Pathy et al (1992, Lancet), Hall et al (Can J on Aging), and Van Rossum et al (1993, BMJ) indicated the usefulness of a risk group approach. Other trials, especially those performed by Stuck and colleagues (1995 (NEJM), 1999 (JAGS, first author: Bula), 2000 (Arch Intern Med)), reported that assessment and follow up seems mainly useful for 'low risk elderly'.

Competing interests:

None declared.