Reviewer's report

Title: Treating frailty. A practical guide.

Version: 1 Date: 25 February 2011

Reviewer: Kenneth Rockwood

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This is an interesting paper, which summarizes a lot of work. This is to be expected, as the authors have set a huge task for themselves, which is to summarize evidence in relation to treating frailty. In as much as frail older adults are the natural constituency of geriatric medicine, in some essential ways the authors are considering the case for the discipline as a whole. As a trip to www.effectiveolderpeoplecare.org will attest, this is often a desultory exercise. That is largely because most of the so-called “rules of evidence” have in mind the paradigm of the placebo-controlled RCT of a pill; in consequence, there is much huffing and puffing about blinding, design, co-intervention, etc. which arise when processes (can not just pills) are tested. Usefully and to their credit, the authors have not gotten bogged down in this and so bring a pragmatic focus. Even so, there are a few points which in my mind need to be revisited, either because the evidence base is not as portrayed or because such evidence as exists (or does not exist) can be viewed in a different context. Specifically, I suggest that the following points might be considered:


2. Reference number 16 (Rockwood et al. Lancet 1999) makes no mention of a frailty index. Instead, it is another rules-based operational definition of frailty (not unlike the phenotype, defining frailty as one of x, two of y, etc.). Instead, the frailty index was introduced in Mitnitski et al. TheScientificWorldJOURNAL 2001; 1:323-336. Of relevance to the authors is the notion of a frailty index based on a comprehensive geriatric assessment, introduced in a JAGS paper in 2004 (Jones et al. 52:1929-1935) and most recently elaborated in a review paper in Clin Ger Med 2011; 27:17-26. While the knock against the frailty index is said to be that it requires too much information to complete it, a frailty index can be operationalized for virtually any clinically relevant assessment, such as the one proposed in your data collection sheet in Additional File One. Proponents also note that the clinical consequences of a frailty assessment are non-trivial; for that reason, they argue, including relevant, non-arbitrary information in calculating the degree of frailty should trump quick, but incomplete assessments.

3. I wonder if the authors could discuss more whether frailty is in fact reversible? In an academic review, it is not wrong to work through some semantics. From my
reading, frailty is non-controversially understood as a vulnerability state (briefly, the variable vulnerability of people of the same chronological age) which can be operationalized as a syndrome, although the equation with a syndrome is disputed (e.g. Whitson et al. J Gerontol Med Sci Biol Sci 2007; 62:728-730). The variable vulnerability state indubitably can be mitigated, but whether it can be reversed seems more controversial, and without empirical foundation as near as I can tell. Still, if reversibility can be demonstrated, I’d be glad to see it – otherwise, mitigation seems to me a fairer reading.

4. It would be impossible for a geriatrician to be against teams (and I am not against them) but I would urge some caution. Not all team-based trials have worked, and while some have, on the whole we do not have sufficient information which aspects of teams work best and which aspects do not help. In my experience, however, where teams fall down is where each discipline works more or less on its own; i.e. where inter-professional practice has not developed to be collaborative, so that each discipline acts in relative isolation. A cautionary note about the need not to assure that valid team-based trials are generalizable and that specific attention needs to be paid to factors which promote inter-professional collaboration would be worthwhile. This problem is sometimes referred to as “needing to look inside the black box” of teams.

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests’ below. If