Reviewer's report

Title: How many repeated measures in repeated measures designs? Statistical issues for randomized trials

Version: 1 Date: 11 October 2003

Reviewer: Wei-Ting Hwang

Reviewer's report:

General

Discretionary Revisions (which the author can choose to ignore)

None.

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

1. It is a relevant paper that is very useful for clinical investigators who plan to conduct comparative studies with continuous outcomes. It is not necessary to limit the discussion only for randomized trials as indicated by the title, in fact, when randomization works, the baseline information is not required.

2. It should be clearly point out that the methods discussed here are only suitable when the question of study focus on the difference between two groups of subjects at follow-up. When the research questions are about the time course of the outcomes, different design considerations are needed. Most of the repeated measures studies will have some interests in longitudinal patterns, additional discussions on how to extended the proposed methods to those cases will be able to strongly strength the paper more.

3. Most of the formulae in Appendix 1 and 2 can be easily seen from Frison and Pocock's paper (Stat Med 1992). It may not be necessary to derive them again. Meanwhile, the paper should put the relevant references on page 6.

4. The discussions here are based on the "marginal change" in sample size (i.e., number of subjects) as a function of repeated measurements of r (or p). Alternatively, it will be also interesting to study the marginal change in power as a function of repeated measurements of r (or p), given a fixed sample size.

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

None

What next?: Accept after minor compulsory 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: None