Reviewer’s report

Title: Observed intra-cluster correlation coefficients in a cluster survey sample of patient encounters in General Practice in Australia

Version: 1 Date: 7 September 2004

Reviewer: John Martin Bland

Reviewer’s report:

General
This is a paper which would be useful to others planning surveys and trials in general practice. Although some of material, such as proportion of consultations where English is not the first language, may be specific to Australia, much of it will be helpful to researchers in many countries. As the authors point out, there is little information about intraculuster correlations available outside the context of cluster randomised trials.

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

None.

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. Method, Design effect. ‘The design effect (Deff) is directly proportional to both the intra-cluster correlation and the mean number of observations per cluster.’ This is not true. The design effect, ICC and cluster size k are linked by

\[ Deff = 1 + (k-1) \cdot ICC \]

Hence Deff increases with ICC but is not proportional to it, i.e. doubling ICC does not double design effect. Increasing cluster size from 2 to 4 does not double design effect either. ‘It is estimated from the sample by taking the ratio of the sample variance adjusted for the cluster, divided by the simple random sample variance of the same sample (calculated without taking the cluster design into account)’ I do not think anyone who is not familiar with ICC would understand this explanation. What is the ‘sample variance adjusted for the cluster’? I think this passage should be revised.

Discretionary Revisions (which the author can choose to ignore)

2. Introduction para 4 line 8. ‘There is, however,’ needs comma as shown.

3. Results para 2. I would suggest that the results for 2003-3 should be shown. Numbers would be much more useful than the bar charts. This applies to Tables 2 and 3 and Figures 1 and 2, which could be dropped.

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:
None.