Reviewer's report

Title: Corrective open heart surgery during infancy has better outcome and resource utilization than pre-school patients.

Version: 1 Date: 26 January 2011

Reviewer: peter cosgrove

Reviewer's report:

General

Taking a narrow perspective, the study compared the cost of cardiac surgery for two groups of children aged # 5 years with congenital heart disease. A total of 120 patients undergoing treatment for coronary heart disease were split into two groups by age: group A comprised infants (1-12 months); and group B comprised pre-school children (1-5 years). Data for the study were taken from patients' computerised records and family members.

As a cost of illness study, the concern is with resource use and not outcomes. Hence, the comparison between the groups rests on any difference in costs. However, the difference in costs between the groups is taken by the authors to be an indication of potential gains in technical efficiency from earlier as opposed to later surgery for CHD; all of which, strictly, goes beyond the scope of a cost of illness study.

Major Compulsory Revisions

1. The title of the paper should reflect the tentativeness of the finding (as is shown in the conclusion) on better outcomes and resource utilisation from early intervention for CHD; especially given the study design (a cost of illness study with only limited consideration of outcomes), the use of non-random sampling, the choice of statistical tests and the lack of statistical significance for many of the variables.

2. Other than for the reference to 'expense' (see the last paragraph of Materials, methods and study design under the sub-heading 'resource utilisation') little information is provided on the measurement and valuation of costs incurred. For example, are they based on hospital charges? If so, do the reported medical expenditures reflect the economic cost of resources used?

3. Moreover, reference is made to generating information on postoperative health expenditures 'outside' the hospital (see the second paragraph of Materials, methods and study design) but no details are provided (e.g. the measurement and valuation of these costs).

4. An assumption by the authors is that all levels of socioeconomic status are represented in the sample, but since little information is provided on the study
participants it is difficult to conclude as to whether this is a realistic assumption.

5. In the Discussion (first paragraph) reference is made to 'untransformed cost care'. Presumably (although it is not stated) this refers to the problem of skewed cost data. Clearly, however, this point needs explaining further.

6. An attempt should be made to link the findings highlighted in the introduction with the results of the analysis in the discussion section.

7. Further information is needed in support of the tables e.g. what is meant by 'others' on Table 4?

Minor essential revisions

1. The text needs editing for grammar. For example, the use of articles (several instances of an omitted ‘the’) or the occasional lack of clarity (as with the second paragraph of the Discussion: ‘On average one child in group A and group B with CHD has to undergo Rs. 346019.60 and Rs. 473558.89’).

2. In the introduction to the Abstract (first paragraph), consanguineous marriage is stated as the main reason for congenital heart disease but no mention is made elsewhere in the paper.

3. In the results section of the Abstract (third paragraph), group B (1-5 years) is referred to three times but it is not self-evident as to what it means (in the Abstract).

4. In the fifth paragraph of Materials, methods and study design (under the subheading ‘Data collection and variables’, is it a 'structured pre-test questionnaire’ or a pre-tested questionnaire?

5. I would recommend that the questionnaire used for the data collection be included with the manuscript.

6. How was informed consent obtained? This should be indicated.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests' (but a few years ago worked at the same university hospital; however, I do not know the authors and worked in a completely separate division).