Reviewer's report

Title: Dental General Anaesthetic Trends Among Australian Children

Version: 1 Date: 20 November 2006

Reviewer: Keith Milsom

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General
The question raised by the authors is well defined and appropriate. Is the frequency of dental general anaesthesia for children increasing in Australia?
This is an important question. There are well defined risks associated with general anaesthesia and whilst dental care under general anaesthesia should be available for children, any decision to deliver this type of care should only be taken when it is clear all other patient control techniques are felt to be inappropriate.

The study methods are straightforward. The authors have reviewed and analysed routinely collected national data on hospital admissions for child dental general anaesthetic procedures over a fixed period. It should be pointed out that this is a simple descriptive study and not a study testing hypotheses, as suggested in the background section (minor essential revision 1).

The raw data must be assumed to be sound, although it is routinely collected shelf data. The authors quite clearly in the discussion section set out the caveats associated with this type of data. It would be helpful if the authors were able to define more clearly the study population (minor essential revision 2). It appears that the age range in question is 0-9 years, but clarification of this point would help the reader. Additionally, the time period under review could be made more precise (minor essential revision 3).

From the results section, it appears that the authors firstly consider the whole 0-9 years population and examine dga trends within this group. Figure 1. clearly shows the trends. The figure is well labelled (the +/- is not required in parentheses next to rate per 100,000)(minor essential revision 4). Next the authors consider two separate age cohorts, 0-4 years and 5-9 years. It would be helpful if this distinction was set out in the methods section (minor essential revision 5 see later).

Table 1. sets out the trend data by various characteristics. The authors suggest that the usually observed male/female ratio of DGA altered in 1995-1996. The data do not support this (minor essential revision 6). Similarly, in table 2, rural/remote dwelling children had higher admission rates than metropolitan children. This is not reflected in the text (minor essential revision 7).

The manuscript adheres to relevant standards for reporting and data deposition

The discussion and conclusions are supported by the data, although the paper would benefit from further development (discussion section- discretionary revision 1). Descriptive reports like this one are designed to raise questions that require further study and this paper raises many interesting issues. The key issue to come from this study is why, against a background of improving dental health, are dga rates increasing? Evidence for this change in Australian child dental health would help the reader (see later). Additionally, it might be helpful to explain how in other countries, dga rates have fallen in the light of critical commentary about this type of intervention- (Poswillo report UK 1991, GDC guidelines, etc). The authors list a number of possible reasons for this upward trend in Australia, yet miss the opportunity to underpin their suggestions with supporting data. For example, ‘not enough dental personnel to treat high risk children’ may be a reason for the increased dga trend, but is there any data to show that there is a dental manpower shortage in the country?

The difference in dga rates between 0-4 year olds and 5-9 year olds is unremarkable and, in my view, does not add anything to the paper. The gender difference in dga rates is an interesting finding and might benefit from further exploration. Again the difference in dga rates between rural and metropolitan communities is relatively modest and perhaps unsurprising, given the geography of the country. The authors suggest that this difference may be accounted for by underlying socioeconomic differences between the two types of community, yet fail to examine dga rates by social class. If social class data were available, and it could be linked to the data presented, a much clearer ‘story’ might emerge.

The trend data for child dga is generally upward in Australia. The authors focus on the extraction rates, yet dga rates involving restoration also increased. It would be helpful if the child dental health trends during the same period were made available. This would allow the reader to see if changes in the nature clinical activity reflect changing disease levels.
The final paragraph considers carer expectations. The authors remind us that affluent families are more likely to demand conservative care than socially disadvantaged families. This phenomenon is well understood. What is more interesting and hasn’t been considered well by the authors, are the views that carers have about dental general anaesthesia as a form of patient control for any clinical care delivered for their children. Is this trend in dga demand led by Australian parents or is it professionally led? This paper has highlighted a fascinating issue and has raised a number of relevant questions. However, in order to maximise its impact, I believe the discussion section should be strengthened by focussing on a smaller number of issues in greater depth. If the authors were prepared to do this, then this paper could make a significant contribution.

The title and abstract convey accurately what has been found.

The writing is acceptable.

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)
7 listed in text

Discretionary Revisions (which the author can choose to ignore)
1- the discussion section

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:
I declare that I have no competing interests