Reviewer's report

Title: Neonatal hearing screening: modelling cost and effectiveness of hospital- and community-based screening

Version: 1 Date: 14 November 2005

Reviewer: Gil L'Italien

Reviewer's report:

General
Overall well designed study with an equivocal finding; essentially there is no real economic advantage to hospital versus community based screening.

QCMs were appropriately weighted to demonstrate that early early detection is preferable to later detection (ie the earlier the opportunity to intervene, the better the outcome for patients with hearing deficiencies).

In both low and high prevalence populations, economics were similar between hospital and community screening programs. The authors contend that if differences in prevalence were observed between Hospital and community, that would result in significant differences in cost effectiveness, but this seems highly unlikely.

The rationale for screening has already been established, so this is not the purpose of this publication. Its main contribution is the demonstrated comparability between the two screening scenarios in terms of costs.

One important question not answered by this study is: is there a possibility that the sensitivity and specificity of case detection might differ between Hospital and community? The authors admit that this is an important factor, but there appears to be no available data at present.

This study is thus a snapshot presentation of the program in its early stages. However, by no means are its conclusions final, and the authors readily admit this. Further hard data, particularly on sensitivity/specificity of case detection in the two settings will determine which setting is more economical. Further data on actual costs (of screening resources used) will also be required.

The authors must ask themselves the hard question: is it too soon to start looking? So far the two methods do not differ, so no major changes are warranted other than continued data collection. Isn't this what would be done even without this study?

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
Provide more detail as to the derivation of transition probabilities in both the methods and Table 1, particularly those listed as 'authors' estimate')
Expand the range of sens/spec for the screening for the range sensitivity analysis or provide firm evidence that sens/spec ranges given are as tight as the authors contend (in table 1). How was the Weibull (table 1) derived? Which part of the Weibull is entered into the model ( a range or 1 value?)
Aside from the sensitivity analysis, which of the many stated assumptions would completely destabilize the model? ie weight the assumptions in terms of relevance to the analysis and the
conclusions.  

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

Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

I declare that I have no competing interests