Reviewer's report

**Title:** Assessment of the feasibility and coverage of a modified universal hearing screening protocol for use with newborn babies of migrant workers in Beijing

**Version:** 3  **Date:** 26 April 2013

**Reviewer:** Peter Watkin

**Reviewer's report:**

Thank-you for giving me the opportunity of reviewing the revised manuscript of this paper.

The authors have answered most of my uncertainties. Importantly they have clarified the fact that their study does not aim to present data on the outcomes of the neonatal hearing screen in terms of the yield of children with permanent deafness – but rather as the yield of children with a hearing impairment which includes those with a permanent deafness who will require further investigation and intervention. Taking this into consideration I think that the work offers a contribution to understanding the problems and methods of modifying universal hearing screening processes where such population migration makes the implementation of a universal coverage difficult. Importantly the paper highlights the important effect that screen attrition rates have on the achievement of high coverage in such populations. Whilst a very high screen coverage of 99% was initially achieved by the almost universal levels of enrolment in this Beijing cohort, the overall coverage with follow up attrition fell to 89%.

I no longer have any major concerns, but would recommend a couple of minor but probably essential revisions.

i. In the Conclusions of the study the authors state that “our study shows that it is feasible and practical to achieve high coverage rates for screening/ rescreening for hearing loss in newborns of migrant workers”. I find it difficult to accept that this is really an accurate description of their study achievement. The initial coverage in Shangdi hospital was exceptionally high and by offering more screen contacts for those requiring follow up there was clearly a lowering of the attrition rate, but of those 2207 infants who needed follow up after they had received the additional Step 1 and 2 TEOAE contacts, 1006 failed to receive the required follow up test (46%). By introducing the additional TEOAE contacts the attrition rate was unequivocally reduced and coverage improved – but successfully enrolling 54% of the follow ups who required a further test probably can’t be considered as achieving high coverage in this follow up group. The conclusions should in my view reflect this.

ii. In the Methods the sentence “the normal criteria for ABR wave V latency within developmental norms in response to 30 dBnHL clicks on both ears at frequencies from 2 to 4 kHz” is difficult to interpret and isn’t readily intelligible or scientifically correct. It doesn’t add any information important to the understanding of the
paper and would be better omitted.

I other respects I enjoyed learning of the implementation of a successful TEOAE screen for the migratory workers in Beijing and despite the obvious difficulties in implementing the processes, the results confirm that this is a very worthwhile endeavour.

**Level of interest:** An article whose findings are important to those with closely related research interests

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

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests