International Centre for Allied Health Evidence

University of South Australia

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iCAHE

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*i*CAHE JC Critical Appraisal Summary

Journal Club Details

Journal club location: Women's and Children's Health Network

Journal club Facilitator: Lisa Callahan

Journal club Discipline: Children's audiology

Clinical Scenario

Not provided – Direct request for article

Review Question/PICO/PACO

P: N/A

I: N/A

C: N/A

O: N/A

Article/Paper

Beswick, R., Driscoll, C., Kei, J., & Glennon, S. (2012). Targeted surveillance for postnatal hearing loss: A program evaluation. *International Journal of Pediatric Otorhinolaryngology*, *76*(7), 1046-1056.

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the DOHSA librarian.

Article Methodology: Cohort

Returned to JC on:

By iCAHE staff member: Holly

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			**Did the study address a clearly focused issue?** The article aimed to describe a targeted surveillance program using a risk factor registry to identify children with a postnatal hearing loss. P: Children with risk factors I: Targeted surveillance program C: N/A O: Degree of postnatal hearing loss identified
2	✓			**Did the authors use an appropriate method to answer their question?** The authors utilized a cohort study which allowed for the largest population sample to be collected. This was also the most suitable method considering the outcome being tested, and the fact that they were conducting a program evaluation alongside the cohort study. **Is it worth continuing?** Yes
3	✓			**Was the cohort recruited in an acceptable way?** Yes. Recruitment was thorough (all children who were born in Queensland, Australia between September 2004 and December 2009, received a bilateral 'pass' on newborn hearing screening, and had at least one risk factor, were referred for targeted surveillance and therefore were included in this study) and relevant for a cohort study.
4	✓			**Was the exposure accurately measured to minimize bias?** Objective measurements were used (e.g. two-staged automated Auditory Brainstem Response (aABR) screening protocol with either the Natus ALGO3 or the ALGO3i device) which were well validated. All subjects were classified using the same procedure.
5	✓			**Was the outcome accurately measured to minimize bias?** Outcome measurements were objectively measured, well-validated, and had a reliable system established to detect all cases of postnatal hearing loss (Tympanometry, TEOAEs, and VRA. Classified by the degree of hearing loss classification system)
6	✓			**Have the authors identified all important confounding factors? Have they taken account of the confounding factors in the design and/or analysis?** The authors acknowledged potential confounding variables as limitations (e.g. assessment delay), though these were not accounted for in the analysis (no evidence of corrective analysis such as regressions or sensitivity analysis)
7	✓			**Was the follow up of subjects complete enough?** High levels of loss of contact were acknowledged by the authors as a limitation, however the length of follow-up (up to 12 months) would be sufficient to identify postnatal hearing loss.

8	✓			**What are the results of this study?** *Bottom line results:* During the study period, 7320 (2.8% of 261,328) children were referred for targeted surveillance, of which 56 were identified with a postnatal hearing loss (0.77%). Loss of contact, delayed assessment, on-going monitoring, and the extensive time spent on children with normal hearing were identified as limitations.
9			✓	**How precise are the results?** Precision of the results can be determined by the confidence intervals. Confidence intervals were not provided for this study **Notes on confidence intervals [can determine precision of results]* Confidence intervals (CI) describe the uncertainty inherent in the observed effect (e.g. risk of falling), and describe a range of values within which one can be reasonably confident that the true effect actually lies.
10	Discuss this in your Journal Club			**Do you believe the results?**
11				**Can the results be applied to the local population?**
12				**Do the results of this study fit with other available evidence?**
10				**What do the study findings mean to practice (i.e. clinical practice, systems or processes)?**
11				**What are your next steps? (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)**
12				**What is required to implement these next steps?**

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