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Data Collection

Studies included in this review consisted of an ascertainment study and three within groups repeated measures studies. One of the studies was an unpublished non-peer reviewed White paper document. It was necessary to include this non-peer reviewed source in order to appropriately review the relevant literature on the current standard of care (POVR).

Results

Fsp and POVR

The current standard of care in the Ontario Infant Hearing program is the POVR method, a refinement of the Fsp method first described by Don et al, 1984 and Eberling and Don, 1984. More recently, Norton, S., Gorga, M., Widen, J., Folsom, R., Sininger, Y., Cone-Wesson, B., Vohr, B., Mascher, K., Fletcher, K. (2000) evaluated the performance of the Fsp screening ABR for identifying hearing impairment. They evaluated

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period of 6 years to evaluate the children who were found to have a hearing loss later in life.

Results of this study revealed that 201 children who were born between the dates of the study were found to have bilateral hearing thresholds of at least 50 dB HL. Of these 201 children, 51 had been screened using the automatic ABR with a stimulus of 50 dB nHL. An examination of the data from these children's screening results revealed that sensitivity was .90 and specificity was found to be .82. The authors noted that due to the inclusion of suspected progressive hearing losses in their results, specificity estimates are likely lower than they would be had these data points been left out. Test time was reportedly approximately 20 minutes for both ears including set up time.

The method of using an ascertainment study is an improvement over other methods of estimating sensitivity and specificity in that it provides a more applicable estimation based on a population of interest, "at risk infants". However, there are some problems with this type of research. Although this study is considered an ascertainment study, it only followed those children identified as "at risk". This is some improvement over some simulation methods of estimating real world test performance, however, since only the "at risk" infants were followed it is not possible to extend the results to the broader population of all infants undergoing hearing screening.

Keohane, B., Mason, S., and Baguley, D. (2004) **e**valuated the