

## EVALUATION OF DIRECT AND INDIRECT BENEFITS IN THE SELECTION OF COCHLEAR IMPLANT CANDIDATES

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The value of cochlear implants as an established clinical option for profoundly hearing-impaired adults and children has been supported by significant research results over a number of years which clearly established the benefits available (U.S. National Institutes of Health Consensus Statement 1995). Benefit has traditionally been considered as the impact of the cochlear implant procedure on hearing, and in the case of children, on the use of that hearing to develop speech and language. However, as a result of continuing research, improvements have been realised both in hardware and speech processing. As a direct consequence of these improvements, the mean open-set implant-alone speech perception scores for implanted adults have continued to increase. In response to the increased mean scores shown by adult cochlear implant users in quiet, perception tests in background noise are now being used as a direct measure of the potential benefits of cochlear implants available to severely-to-profoundly hearing-impaired candidates.

In addition, consideration in candidature should also be given to indirect benefits, such as reduction in the stress of listening and lipreading, improved performance at work, enhanced opportunity to maintain or in children to develop speech which is understandable to the general community, and the social effects of reducing the isolating effects of profound deafness. Measurement of indirect benefit can be combined with a costing study, enabling evaluation of the implant procedure from a cost-utility standpoint, and comparison of outcomes using other technologies such as hearing aids.

The use of new approaches to candidature, including new measures of direct and indirect benefit is reported using data from the Melbourne cochlear implant program.



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