

NICE responded in December 2017 and said that there is sufficient evidence to suggest that the criteria could be changed but they were not going to do a full review but would look at the criteria for hearing loss and the speech perception aspects. Stakeholders were asked to respond. Various organisations wrote back with recommendations which they thought should be implemented. The evidence compiled by the BCIG candidacy working party has been helpful to support the cases put forwards by many stakeholders. Some of the evidence that has been used is:

1. Rosie Lovett, Quentin Summerfield and I conducted a paediatric study to determine whether the audiometric criteria was appropriate for children receiving cochlear implants. Forty three children with hearing aids and twenty eight with bilateral implants were compared on scores on two different speech tests in two types of noise. Analysis of the data using two frequencies indicated that we could adjust the threshold to greater than or equal to 80 dB HL instead of the current 90 dB HL cut off.
2. We asked clinicians to write about issues they faced on a day to day basis in terms of trying to give the right people cochlear implants. The articles that they wrote were compiled in a supplement for Cochlear Implants International and this can be accessed free of charge through the BCIG website. There are twenty articles covering a range of topics. For example, the importance of considering the use of contralateral hearing aids on the other ear, improvements in hearing preservation in the implanted ear, electro-acoustic devices where there is a hearing aid in the same ear that has an implant. One of the biggest problems clinicians face are people with different losses in each ear or those with low frequency losses who really struggle with speech perception but their audiograms fall outside the criteria. So the criteria appears to be too restrictive and a lot of articles suggested that the criteria for adults could also be lowered to 80dB HL.

We also compared what we are doing with other countries. Typically those with national funding like the UK have very strict guidelines but there is much more flexibility if there is private funding or insurance. We are the most conservative in terms of criteria; most countries have 70 to 80 dB HL as their criteria. In terms of speech testing, 24% of countries use sentence tests like the BKB alone and 76% actually use word tests at some point in the criteria.

3. The adult service evaluation is a data collection exercise that has involved cochlear implant centres across the UK sharing fully anonymised data on pre-implant and post-implant scores from adult cochlear implant recipients with the BCIG. The aim was to look at current day performance of cochlear implants to see if it has changed since the criteria was originally set up and also to ask if BKB sentences are appropriate for assessing adults or whether we should look at word tests. We looked at scores from the AB word test, which can be scored by whole words or by phonemes (individual sounds in a word) and the BKB sentences presented in quiet (scored by words correct). People are now on average achieving higher scores; originally the score at 12 months was 50% but now it is more like 80%. There is a strong relationship between the sentence test and the word test but the word test seems to better represent what speech sounds a person can hear.

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