**Cochlear Implants**

**Policy Statement**

**Our position**

The National Institute Health and Care Excellence (NICE) has approved cochlear implants as a cost-effective treatment for people with severe or profound hearing loss. Improving access to cochlear implants is listed as a priority in national hearing loss strategies and plans, but despite this, only around 5% of adults who have could benefit from cochlear implants have them. Governments and NHS services across the UK should provide funding, resources and training to support the implementation of new NICE guidance, which should increase the number of people eligible to receive cochlear implants in the future. NICE should continue to review and update its guidance on cochlear implants and awareness of this treatment option needs to be raised amongst audiologists and other health professionals.

**Introduction**

This policy statement presents the main issues for adults who want and could benefit from cochlear implantation across the UK. It states what actions need to be taken by Government and NHS services to meet the commitments in national strategies and plansto raise awareness of the benefits of cochlear implantation and improve provision of cochlear implant services.[[1]](#footnote-1)

We use the term 'people with hearing loss', throughout this statement, to refer to people with all levels of hearing loss, including people who are profoundly deaf.

**Background**

Cochlear implants are electronic devices that can help people hear and understand speech and environmental sounds if they have a functioning auditory nerve and gain little benefit from hearing aids. Instead of making sounds louder and clearer – like a hearing aid – cochlear implants directly stimulate the auditory nerve with electrical signals. Cochlear implants consist of a receiver, surgically implanted behind the ear, with electrodes inserted in the inner ear (the cochlea), and an external microphone and sound processor. Cochlear implants convert sounds into electrical signals in the cochlea, which are then sent to the brain through the auditory nerve, where they are perceived as sound.

Cochlear implants have been available on the NHS, across the UK, since 1990 for those who are eligible and choose to have them. Since the technology was first introduced, the number of people who use cochlear implants has grown steadily. As of 2018, there are 17,098 cochlear implants users in the UK. [[2]](#footnote-2) In 2017-18, 995 adults and 509 children received cochlear implants and the number of implantations is growing every year.2

To be considered for a cochlear implant, people with hearing loss need a referral from an ENT (Ear Nose and Throat) specialist or audiology services to a specialist cochlear implant centre. There are 23 specialist cochlear implant centres across the UK. In England and Wales, the National Institute for Health and Care Excellence (NICE) Technology Appraisal (TA) guidance on cochlear implants[[3]](#footnote-3) states that children and adults should be offered cochlear implants if they have severe or profound hearing loss and get little or no benefit from hearing aids. The number of cochlear implants people receive depends on their age and other factors. NICE say that children should be offered two cochlear implants and adults should be offered one (unless they have other disabilities that increase their reliance on hearing).

NICE’s recommendations on cochlear implants have historically been endorsed and implemented by Healthcare Improvement Scotland and Department of Health in Northern Ireland. In 2019, NICE announced changes to its TA guidance, which should increase the number of people eligible to receive cochlear implants in the future (see Evidence section below). These new changes are expected to be adopted in Northern Ireland soon. However, Healthcare Improvement Scotland has said that it no longer endorses guidance of this nature, and there is currently no comparable publication to ensure equality of access to cochlear implants for Scottish citizens.[[4]](#footnote-4) The revised NICE TA guidance on cochlear implants is scheduled to next be reviewed in 2022.

There is good evidence that cochlear implants are highly cost-effective and improve quality of life for people with severe or profound hearing loss of all ages. Despite this, evidence suggests that more people could benefit from cochlear implants than are currently doing so (see Evidence section below).

**Evidence**

Estimates of the number of people who use cochlear implants, and the number of people implanted each year suggest that the UK has low levels of cochlear implantation in adults compared to other European countries.[[5]](#footnote-5) An evidence review also suggests that there are large differences in the level of cochlear implantation across the UK in adults compared to children. 74% of children who could benefit from cochlear implantation aged 0-3 have received cochlear implants, increasing to 94% by the time they reach 17 years of age. The comparable figure for adults who have severe or profound hearing loss is only around 5%.[[6]](#footnote-6)

Improving access to cochlear implants is now a national priority. In England, the Department of Health and Social Care (DHSC) and NHS England’s *Action Plan on Hearing Loss[[7]](#footnote-7)* lists “improved access to a choice of support to manage hearing loss, including innovative technologies (e.g. hearing aids and implants)” as a key outcome measure for reducing unwarranted regional variations in service quality and provision. The World Health Organisation’s (WHO) recent resolution on deafness and hearing loss[[8]](#footnote-8) and the NICE *Hearing Loss in Adults Guideline*[[9]](#footnote-9) calls for better access to hearing aids and other forms of support to help reduce the impact of hearing loss.

In recent years, one of biggest barriers preventing people from accessing cochlear implants has been NICE’s overly restrictive candidacy criteria for cochlear implantation. Previous research showed that the audiometric threshold NICE used to determine eligibility for cochlear implants was one of the most restrictive in Europe.[[10]](#footnote-10) Concerns were also raised that the test used in the cochlear implant assessment process to determine whether people get adequate benefit from hearing aids did not fully reflect the impact of hearing loss on people’s lives.[[11]](#footnote-11) As a result of these difficulties, some audiology services reported that they were forced to deny people cochlear implants, even though they could significantly improve qualify of life.[[12]](#footnote-12)

Recent changes to the NICE guidance should go some way to increase the number eligible for cochlear implants in future. In March 2019, NICE changed the definition of severe to profound hearing loss used in their Technology Appraisal (TA) guidance for cochlear implants. Under the new definition, severe to profound hearing loss is defined as greater than or equal to 80 dB HL, instead of 90 dB HL, at two or more frequencies. This new threshold is also applicable over a greater range of frequencies, rather than two specific frequencies in the previous guidance. NICE have also introduced a new speech discrimination test that more appropriately determines whether adults get adequate benefit from hearing aids. This new test should help clinicians better assess whether individuals will benefit from cochlear implants.

NICE estimate that around 1,260 people currently receive cochlear implants in England every year and due to the changes in the guidance, this number will increase to 2,150 by 2024/25.[[13]](#footnote-13) NICE say that the number of people who may receive cochlear implants over the next five years is difficult to predict, as this will be affected by the capacity of NHS cochlear implant centres, awareness of NICE’s new guidance and the number of people who come forward to take up treatment. 12 **To avoid future budget pressures, Governments and NHS commissioners across the UK should increase funding in line with NICE estimates to ensure NHS services are able to meet expected increases in demand for cochlear implants. NICE and NHS services should also provide resources and training for audiology professionals to ensure people eligible to receive treatment under the new TA guidance are offered a referral for cochlear implantation.**

In addition, an increasing body of evidence also shows that providing adults with two cochlear implants instead of one may help people understand speech and provide additional benefits, such as improved quality of life.[[14]](#footnote-14) The cost of cochlear implants has also come down and cochlear implant technology has improved considerably since NICE’s TA guidance was first issued in 2009.13 Despite this, in 2017, NICE noted that the cost of cochlear implants has not come down enough to affect their recommendations on bilateral cochlear implantation. [[15]](#footnote-15) They also stated that new research is unlikely to change this situation because NICE must independently conduct a Randomised Control Trial (RCT) to assess the cost-effectiveness of providing adults with two cochlear implants.14

We welcome that research is already underway to assess the feasibility of conducting a NICE-backed RCT of bilateral cochlear implantation in adults. If this study finds that it is not possible for NICE to conduct a RCT of bilateral cochlear implantation, **we urge NICE to conduct a further review of how best to assess the benefits of providing adults with two cochlear implants.** For example, this reviewshould consider other research,[[16]](#footnote-16) which proposes alternative methodologies for assessing the cost utility gain of bilateral cochlear implantation.

Evidence also suggests that better awareness of cochlear implants could increase the number of audiologists offering people the option of a referral for cochlear implantation. A recent report by the Ear Foundation shows that audiologists often lack the confidence to talk about cochlear implants with their patients. The report also found that that poor-coordination between NHS cochlear implants centres and audiology/Ear, Nose and Throat (ENT) services can lead to delays in people accessing treatment.11 As highlighted in the Ear Foundation’s report, **better information sharing and peer support between audiology services and cochlear implant centres is essential for ensuring patients are able to make informed choices about whether cochlear implants are right for them**.11 This is especially important, given that patient misconceptions about cochlear implantation surgery and cochlear implant technology may put people off accessing treatment.11

**Recommendations**

We recommend the following to raise awareness of the benefits of cochlear implantation – and to ensure cochlear implantation is available to all those who could benefit.

*Governments and NHS commissioners across the UK should***:**

* Provide funding, resources and training to ensure everyone who is eligible for treatment under the new NICE Technology Appraisal (TA) guidance are able to access cochlear implantation.
* Meet commitments in national strategies and plans to raise awareness of cochlear implantation amongst the public and NHS services, to make sure all people who could benefit are offered a referral to a specialist cochlear implant centre.

*NICE should***:**

* Review current guidance, to take account of the reduced cost of cochlear implantation and new evidence on the benefits of two cochlear implants in adults.
* Review candidacy criteria, to make sure cochlear implantation is available and offered as an option to all those who would gain a significant improvement in their quality of life, but who do not qualify under the current criteria.

*NHS audiology services should***:**

* Ensure national guidance is adhered to and make sure cochlear implantation is offered as an option for all those who could benefit.
* Provide regular training and guidance for audiologists on NICE candidacy criteria for cochlear implantation.

*Action on Hearing Loss will*:

* Work with the other members of the **Adult Cochlear Implant Action Group** to raise awareness of the benefits of cochlear implantation in adults, and influence to improve provision of cochlear implant services.

**Resources**

The Adult Cochlear Implant Group

<https://actiongrouponadultcochlearimplants.wordpress.com/>

Information on cochlear implants

<https://www.actiononhearingloss.org.uk/hearing-health/hearing-loss-and-deafness/hearing-aids-and-other-treatments/cochlear-implants/>

<https://www.earfoundation.org.uk/hearing-technologies/cochlear-implants>

National Institute for Health and Care Excellence (NICE) Technology Appraisal (TA) guidance: Cochlear implants for children and adults with severe to profound deafness

<https://www.nice.org.uk/guidance/TA566>

Ear Foundation report on cochlear implant services

<https://www.earfoundation.org.uk/research/adult-strategy-reports>

British Cochlear Implant Group

<http://www.bcig.org.uk/>

National Cochlear Implant Users Association

<http://www.nciua.org.uk/pathways/>

1. Please note that, like many policy documents, this statement reflects the issues relevant at the time of writing. Over time, this may be subject to change, such as new legislation being introduced, and we may review and amend the document. [↑](#footnote-ref-1)
2. The British Cochlear Implant Group, 2018. BCIG Annual Data Collection Financial Year 2017-2018. Available at: <https://www.bcig.org.uk/annual-uk-update/> Accessed 12th Jun 2019 [↑](#footnote-ref-2)
3. NICE, 2019. Cochlear implants for severe to profound deafness TA566. Available at: <https://www.nice.org.uk/guidance/ta566>. [↑](#footnote-ref-3)
4. Based on conversation with the Scottish Health Technologies Team at Healthcare Improvement Scotland on 07/08/19 [↑](#footnote-ref-4)
5. De Raeve and Van Hardeveld, 2013. Prevalence of cochlear implants in Europe: What do we know and what can we expect? Journal of Hearing Science, 3 (4). [↑](#footnote-ref-5)
6. Raine, 2013. Cochlear implants in the United Kingdom: awareness and utilisation. Cochlear Implants International, 14 (1), 32-37. [↑](#footnote-ref-6)
7. Department of Health and NHS England, 2015. *Action Plan on Hearing Loss*. Available at: <https://www.england.nhs.uk/wp-content/uploads/2015/03/act-plan-hearing-loss-upd.pdf> Accessed 12th June. [↑](#footnote-ref-7)
8. World Health Organization. (2018). Seventieth World Health Assembly update, 30 May 2017. Available at: <http://www.who.int/mediacentre/news/releases/2017/vector-control-ncds-cancer/en/> Accessed 12th June 2019. [↑](#footnote-ref-8)
9. NICE, 2018. *Hearing Loss: assessment and management*. NG 198. Available at: [www.nice.org.uk/ng98](http://www.nice.org.uk/ng98) Accessed 12th June 2019 [↑](#footnote-ref-9)
10. Vickers et al, 2016a. International survey of cochlear implant candidacy. Cochlear Implants International. 17 (sup1) 36-41. [↑](#footnote-ref-10)
11. Vickers et al, 2016. Preliminary assessment of the feasibility of using AB words to assess candidacy. *Cochlear Implants International,* 17 (sup1); British Cochlear Implant Group (BCIG), 2017. *Consensus statement on candidacy for cochlear implantation*. Available at: <https://www.cicandidacy.co.uk/> [↑](#footnote-ref-11)
12. Allen et al, 2018. *Exploring the barriers and facilitators for adult CI referral by audiologists working in non-CI centres*. Available at: <https://www.earfoundation.org.uk/research/research-categories/current-research/barriers-to-ci-referal> Accessed 1st July 2019 [↑](#footnote-ref-12)
13. National Institute for Health and Care Excellence (NICE), 2019. *Resource impact report: Cochlear implants for children and adults with severe to profound deafness (part review of TA166) (TA566)*. Available at: <https://www.nice.org.uk/guidance/ta566/resources> Accessed 1st July 2019. [↑](#footnote-ref-13)
14. The Ear Foundation, 2017. *Improving access to cochlear implantation: Change lives and save society money*. Available at: <https://www.earfoundation.org.uk/research/adult-strategy-reports/improving-access-to-cochlear-implantation-2016> Accessed 1st July 2019 [↑](#footnote-ref-14)
15. National Institute for Health and Care Excellence (NICE), 2017. *Technology Appraisal Review Proposal paper; Review of TA166; Cochlear implants for children and adults with severe to profound deafness* [↑](#footnote-ref-15)
16. Foteff et al, 2016. Cost-Utility Analysis of Cochlear Implantation in Australian Adults. *Otol Neurotol*, 37(5) 454-61; Smulders et al, 2016. Cost-Utility of Bilateral Versus Unilateral Cochlear Implantation in Adults: A Randomized Controlled Trial. *Otol Neurotol*, 37 (1), 38-45. [↑](#footnote-ref-16)