# Professional opinions of radio aid provision for deaf babies and toddlers

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# Introduction

There is growing recognition of the value of radio aid technology for improving speech perception and language development among preschool children<sup>1</sup>. However, its potential impact on infants and toddlers remains largely unexplored, despite the critical role of auditory cues in early cognitive and spoken language development <sup>2</sup>. The possible benefits of radio aids for infants need to be weighed against potential drawbacks, such as limiting exposure to other cognitively important activities.

#### **Objectives**

 To collect and explore the opinions of professionals who work with deaf children under the age of 18 months on the impact of radio aid technology for this age group.

## Method

An online survey was developed collaboratively with paediatric and educational audiologists, teachers of the deaf, and the parent of a deaf child. The survey was distributed via professional organisations including BAA, BSA and BATOD using Opinio.

34%

### **Participants**

A total of 100 participants completed the survey. The sample comprised paediatric audiologists, teachers of the deaf and educational audiologists. Profession Paediatric Audiologist Educational Audiologist Teacher of the Deaf

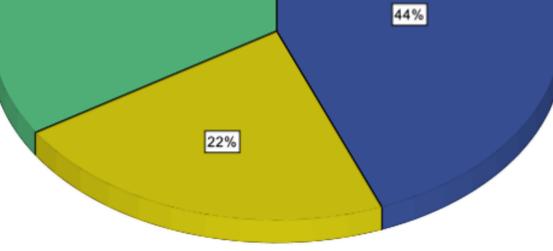
 To identify the benefits and challenges for professionals of using radio aid technology for children under 18 months.

Results

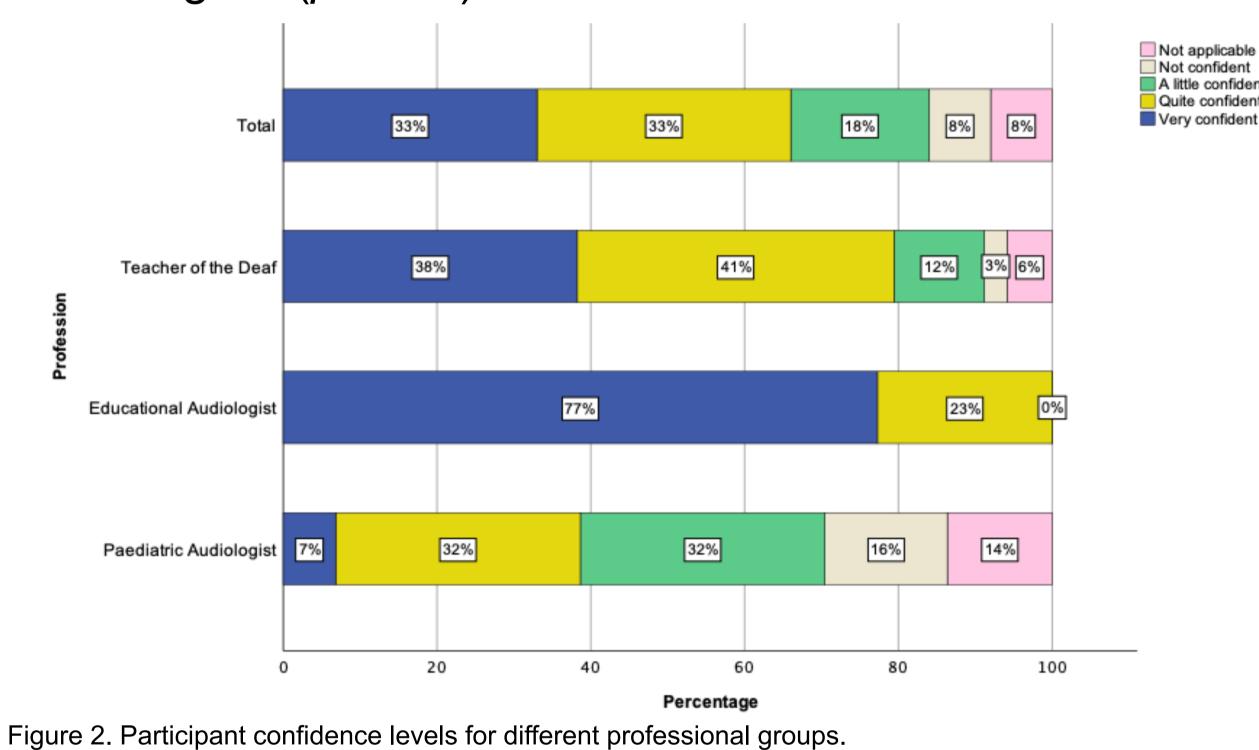
Paediatric audiologists agreed significantly more strongly than other professionals with the NDCS Quality Standard which states "every deaf child should be considered as a potential candidate for provision with a personal radio aid as part of their amplification package, at first hearing aid fitting"<sup>3</sup> (p=.008; Figure 1).



Strongly disagree
Disagree
Neutral
Agree
Strongly Agree



Participant confidence levels when providing information about radio aids to parents of deaf babies and toddlers were variable depending on their professional group (Figure 2). Educational audiologists were significantly more confident than both QToDs (p=.002) and paediatric audiologists (p<.001).



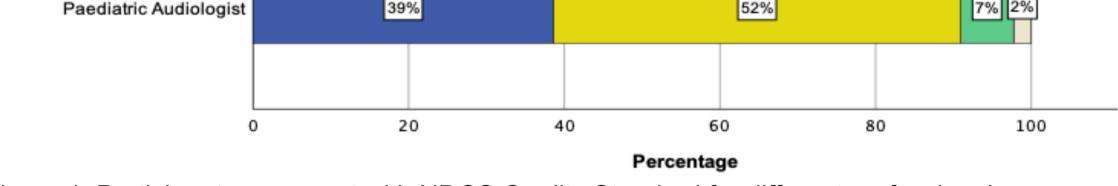


Figure 1. Participant agreement with NDCS Quality Standard for different professional groups.

#### **Benefits and challenges**

Free text responses showed that there were a variety of opinions from professionals about the benefits of, and challenges with, radio aids for babies and toddlers:

#### Quality and quantity of language:

"The home can be a noisy, busy place. I believe that a radio aid will provide a clearer speech signal for young children developing language."

"Much language acquisition comes from incidental hearing. Young children might miss a lot of language learning in noisy environments like the car, but a radio aid can help."

#### Funding and access:

"In an ideal world and if money were no object, then it would be perfect if NHS audiology services could fund and provide this for every young child with hearing loss to maximise speech intelligibility in all environments."

#### Individual needs and circumstances:

*"It is important that good hearing aid thresholds have been established and also good wear. It is important parents and staff are on board, willing to be trained and use the equipment appropriately."* 

"Good personal aid use (hearing aids/CI) needs to have been established with the personal aids being managed well by the child's caregivers before introducing another piece of equipment for them to manage."

#### **Parent/carer behaviour:**

"I think that better access to speakers voice would always help a child with a hearing loss to gain good access to speech especially in noisy environments but at up to 18months of age it would be parents wearing it and that runs the risk of the radio aid not being used optimally ... I think some parents may struggle to use the radio aid appropriately or may use it in a way that might change the way they would normally communicate."

# Discussion

- Professionals disagree about whether deaf children under 18 months of age should be provided with a radio aid.
- Confidence when talking to parents about radio aids for deaf young children is variable across professionals with paediatric audiology
  professionals being particularly underconfident. Although radio aids are often seen as the domain of the qualified teacher of the deaf or
  educational audiologist, paediatric audiologists have a crucial role in ensuring hearing aid set up is appropriate for a radio aid and therefore
  may be in need of further training to increase confidence.
- Professionals are concerned about a number of challenges including parent abilities to manage technology this may or may not be valid and further research is required.

#### References

- 1. Allen, S. et al. (2017). 'Using radio aids with preschool deaf children', The Ear Foundation
- 2. Torkildsen, J. von K. et al. (2019). 'Speech-in-Noise Perception in Children with Cochlear Implants, Hearing Aids, Development: The Effects of Linguistic and Cognitive Abilities', Frontiers in Psychology.
- 3. National Deaf Children's Society (2017) Quality Standards for the use of personal radio aids : Promoting easier listening for deaf children, The UK Children's FM Working Group. Available at: www.ndcs.org.uk.