

New approach needed for newborns with hearing loss

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Parents are often struggling with hearing aid management for their newborn babies, according to research by University of Manchester and NIHR Manchester Biomedical Research Centre (BRC) experts.

The study of 81 babies, assessed at three to seven months and again at seven to 21 months, shows hearing aid use was low compared to the number of hours an infant is expected to be awake.

Mean hearing aid use as a percentage of waking hours was 73% in the first few months of life falling to 44% when the babies were a little older, reported the study published in "Ear and Hearing."

And that could have implications on their future ability to communicate, they argue.

The work was supported by the NIHR, as well as the Marston Family Foundation, William Demant Foundation.

Around one baby every in every thousand has [permanent hearing loss](#), revealed by screening in the first two days of life.

The simple baby hearing check was rolled out across the NHS in 2006 following a research collaboration between Nottingham and Manchester universities.

As a result, the typical age at which infants with hearing loss now get [hearing aids](#) has reduced from around 12 months to 2.5 months.

The NIHR Manchester BRC bridges the gap between new discoveries and individualised care through pioneering research. The BRC's Hearing Health Theme is improving the lives of adults and children by preventing potentially devastating congenital deafness, diagnosing acquired age-related hearing deficits, and developing new treatments.

Senior investigator on the team Kevin Munro, Professor of Audiology at the University of Manchester and Manchester BRC Hearing Health Lead said: "The challenges associated with hearing aid use have the potential

to undermine the early detection of hearing loss from the highly successful national new-born hearing check."

And infants are still not using hearing aids as much as they need, argues Dr. Anisa Visram Research Fellow in Audiology from The University of Manchester; the study showed hearing aids use actually declined over the first few months of use.

The low use could be related to some parents seeing limited benefit from hearing aid use over time or possibly older babies pulling their hearing aids out, they found.

Though parents were usually well cared for by audiologists, speech and language therapists, teachers of the deaf and other clinical staff, many reported being overwhelmed by the amount of information given to them.

Frequent acoustic feedback and the hearing aids not working correctly also affected their frequency of use as did distractions from family life, the needs of other children, and difficulty getting into a set routine.

Many caregivers told the researchers it was easier to leave hearing aids out as their child would often remove them, constituting a choking hazard.

Dr. Visram said: "Our study found a wide range of daily hearing aid use, though it was generally low compared with the number of hours the infants were is expected to be awake.

"When an infant is diagnosed with a hearing loss, caregivers must receive and understand a lot of information on hearing loss, hearing aids, how to manage them and the support services available.

"It is understandable that caregivers may be overwhelmed by this information and the need to manage hearing aids effectively, and this has the potential to have a [negative impact](#) on effective and consistent hearing aid use."

Developmental psychologist Dr. Ciara Kelly, who recently joined the university's team said: "Early intervention, with hearing aids or cochlear implants, is associated with better outcomes for speech and language and better longer-term educational outcomes such as reading comprehension."

"Newborns are fast developing auditory pathways and an understanding of language so any reduction in hearing aid use—even if it's only partial—can impact the development of the auditory part of the brain, placing speech and language development at risk.

"We are now planning to work on an intervention by first developing a better understanding of the difficulties families face using hearing aids, to then explore how best to support families to increase [hearing](#) aid use."

More information: Anisa Sadru Visram et al. Longitudinal Changes in Hearing Aid Use and Hearing Aid Management Challenges in Infants, *Ear & Hearing* (2020). [DOI: 10.1097/AUD.0000000000000986](https://doi.org/10.1097/AUD.0000000000000986)

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