

School hearing tests: Are they as good as they sound?

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Should every primary school pupil in the UK be given a hearing test and what's the most effective way of doing it? These are questions that a team of academics from Nottingham and Exeter will be tackling as part of a new study.

Their research will compare screening programmes in some areas of the country, with areas where no provision currently exists and will establish whether a nationwide approach would be successful—and cost effective—in picking up [hearing loss](#) in [children](#) aged between four and six years old.

The project is being led by Dr Heather Fortnum, an Associate Professor and Reader at The University of Nottingham's [School of Clinical Sciences](#) and a senior researcher in the National Institute for [Health Research](#) (NIHR) Nottingham Hearing [Biomedical Research](#) Unit in partnership with experts from the University of Exeter [Medical School](#). It has been funded by the NIHR Health Technology Assessment (HTA) programme.

Dr Fortnum explained: "While the majority of children starting primary school in the UK are given a test to pick up any potential hearing problems, there is by no means nationwide provision. Where it is in place there is no standardised approach and results can vary dependent on the equipment used and the criteria against which hearing loss is measured.

"We hope our research will be successful in establishing which approach is most effective at spotting [hearing problems](#) in young children and, for the first time, will also give some prediction on the cost to the [NHS](#) per child tested."

Currently, all babies born in the UK are offered a hearing test within the first few weeks of their life. However, for some children this is the only formal test they will be offered and later in childhood they are reliant on potential problems being spotted by a parent, teacher or GP to receive the referral they need for further investigations.

The research, due to run over the next two and a half years, will be broken down into five smaller studies and the data will then be analysed to produce the full findings of the project.

The first study will compare the effectiveness of two hearing screening methods—the 'pure tone sweep test', which is commonly used in schools and involves pupils wearing headphones and pushing a button when they hear a sound, and the 'HearCheck system', a newer device which emits tones directly into the ear without the need for headphones or for the screener to present the tones.

The two methods will be used to test 160 children aged four to six years with no hearing loss from schools in Nottingham and 80 children the same age with established hearing loss from Nottingham, Leicester, Derby, Mansfield, Chesterfield, Lincoln and Sheffield. The results will then be compared to determine the accuracy of both systems.

The second study will compare Nottinghamshire, where a school screening programme is in place, with information on around 4,550 children referred to audiology between October 2007 and September 2014 in Cambridge where no school-based provision is offered.

The opinions and experiences of the parents of around 150 Nottinghamshire children referred for further hearing investigations will be at the centre of the third study. The researchers aim to establish the impact the screening test and subsequent referral has had on the family, from the potential stress involved to the cost of travel to follow-up audiology appointments.

For the fourth study, a member of the research team will join a school nurse to administer the two types of hearing tests to around 180 children at four Nottinghamshire primary schools. This study will compare the time taken and cost per child of both tests in a bid to find out how much it would cost to implement each system.

The fifth and final study, being conducted by researchers at The University of Exeter, will take all the findings from the previous four studies and analyse them to find out how much school screening costs, both in monetary terms and its impact on family and school nurses.

The findings will offer important information on whether and how school [hearing tests](#) should be provided and could influence policy on whether the programme is provided across the whole of the UK.

Provided by University of Nottingham

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