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## Artificial intelligence technology set to reduce indigenous ear disease

**EXCLUSIVE**  
By ANGELICA SNOWDEN  
JOURNALIST  
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A smartphone app and artificial intelligence are set to help remote nurses diagnose ear disease in Indigenous children.

Indigenous children in Australia suffer from the highest rates of chronic ear disease in the world, but artificial intelligence and a smartphone app are set to 'close the gap' on hearing loss that leads to lifelong inequalities.

University of Sydney and Westmead Hospital have trialled the AI solution that will use a database of more than 10,000 pictures of Aboriginal children's ears, collected over the last 10 years. Nurses will use an otoscope to take a picture of the patient's ear which will be compared with the database of pictures via an algorithm in a smartphone app.



A remote nurse assesses a young boy for ear disease.

The AI technology will then predict the condition of the ear and help nurses quickly and accurately diagnose the disease.

Chief investigator and fellow of the Royal Australasian College of Surgeons Narinder Singh said the new solution could help to reduce inequalities caused by the "critical" health issue.

"Chronic ear disease in kids has lifelong ramifications in terms of developing their speech, their hearing, their ability to interact with friends and family," Associate Professor Singh said.

"A big part of the problem is getting ear, nose and throat specialists out to the affected children, because in rural and [remote communities](#) there are not many specialists in general," he said.

Associate professor Singh said the idea was successfully tested on a computer with a few hundred images.

"Eventually, we'll create a smartphone app so the untrained health worker out in the community can put an otoscope into the child's ear and get an instant and accurate diagnosis," he said.



Indigenous children in Australia have some of the highest rates of ear disease in the world.

"The results may indicate the child needs to go immediately to a specialist, or this child can have antibiotics and come back in a week, or this child is fine and can come back in a few months' time – it's an immediate point-of-care tool."

The next phase of the trial that will involve several hundred patients in remote communities in Queensland and the Northern Territory.

**ANGELICA SNOWDEN, JOURNALIST**

Angelica Snowden is a reporter at The Australian. She has worked at the Herald Sun, ABC and at Mojo. Angelica is finishing her Masters in Journalism from Monash University and has a BA in Science (Psychology) f... [Read more](#)



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