

Victorian child hearing-loss databank to go global

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Researchers world-wide can use a unique databank to answer questions around childhood hearing loss. Credit: Murdoch Children's Research Institute

A unique Victorian databank that profiles children with hearing loss will help researchers globally understand why some children adapt and thrive, while others struggle.

The Victorian Childhood Hearing Impairment Longitudinal Databank, which has collected information for eight years, is featured in the latest *International Journal of Epidemiology*.

Its data shows that [language development](#) and speech in [hearing-impaired children](#) lags behind other children, despite advancements in earlier detection and intervention in the past decade.

The paper's lead author, Murdoch Children's Research Institute's (MCRI) Dr. Valerie Sung, says researchers world-wide can use the databank to answer questions around childhood hearing loss.

"This register can help us understand why some children with a hearing loss do so well, while others experience greater difficulties," she says.

"Universal newborn hearing screening is detecting hearing loss earlier than ever before, usually within a few weeks of birth.

"Children with hearing loss have very early access to hearing aids, early intervention services and for some, cochlear implantation. It was expected that hearing-impaired children would quickly come to enjoy the same language and educational outcomes as their hearing peers.

"However, early [clinical diagnosis](#) and intervention does not guarantee equality in [health outcomes](#), with language and related outcomes of children with hearing loss remaining on average well below population means and the children's true cognitive potential.

"Demonstrating the reasons for this inequality has been hampered until now by the lack of population based prospective research."

The Victorian Childhood Hearing Impairment Longitudinal Databank (VicCHILD) is a population-based longitudinal databank open to every child with permanent hearing loss in Victoria.

VicCHILD started in 2012 and stems from 25 years of work by The Royal Children's Hospital and MCRI. At the end 2018, 807 children were enrolled and provided baseline data. By 2020 more than 1000 children will be taking part, making it the largest hearing databank in the world.

VicCHILD collects data at enrolment, two years of age, school entry and late primary /early high school. It involves parent questionnaires, child assessments and taking saliva samples.

Dr. Sung, who is also a honorary fellow at the University of Melbourne, says about 600 Australian infants each year are diagnosed with congenital hearing loss within weeks of birth.

"As these children grow, they can face challenges in things that come naturally to others like language and learning. This can impact their quality of life," she says.

"Hearing loss incurs significant burden and medical costs and impacts adversely on educational attainment and employment opportunities.

"This important bank of information could improve interventions and ultimately the lives of children with [hearing loss](#) and their families. It will also act as a platform for research trials to understand the effectiveness of different interventions."

More information: Valerie Sung et al. Data Resource Profile: Victorian Childhood Hearing Impairment Longitudinal Databank (VicCHILD). *International Journal Of Epidemiology* (2019). [DOI: 10.1093/ije/dyz168](#)

Provided by Murdoch Children's Research Institute

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