



Sound can directly affect balance

Falls are a leading cause of deadly injuries. Sound can directly affect balance and lead to risk of falling. When people fall, doctors typically focus on vision issues, check feet and bone issues, and ignore hearing. New research highlights the need for more hearing checks among groups at high risk for falls.

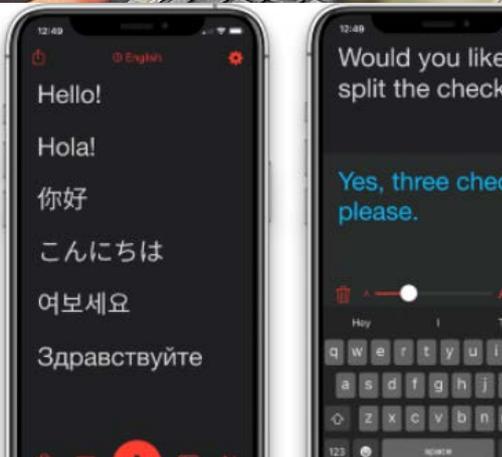


Your parents were right! Too much loud music isn't good for you

In many cases hearing loss is not so much a natural consequence of getting old, as the result of decisions made when young. If we were more careful about protecting our ears during prolonged noisy activities, or completely avoiding them, we could all hear better into old age.

Disability Standards for Education in review

The last review was more than 15 years ago. A current review of the Standards is a vital opportunity to ensure that the Standards are comprehensive and up to date. We encourage you to have your say and help us to spread the word about the consultation process.



Big change coming for National Auslan Booking Service

When a person who communicates in Auslan has a medical appointment, the Government pays for an Auslan interpreter to go with them to the appointment.

But after 31 March 2021, it will only be available to people 65 years and older.

Hair cell loss may explain hearing loss



Credit: Robert Essel NYC / Getty Images

It seems your parents were right. Too much loud music isn't good for you.

US scientists say they have shown that age-related hearing loss – presbycusis – is mainly caused by damage to hair cells, the sensory cells in the inner ear that transform sound-induced vibrations into the electrical signals that are relayed to the brain by the auditory nerve.

This challenges the prevailing view of the past 60 years that age-related hearing loss is mainly driven by damage to the stria vascularis, the cellular “battery” that powers the hair cell's mechanical-to-electrical signal conversion.

In other words, in many cases hearing loss is not so much a natural consequence of getting old, as the result of decisions made when young. In humans at least.

“It's likely that if we were more careful about protecting our ears during prolonged noisy activities, or completely avoiding them, we could all hear better into old age,” says Charles Liberman from Massachusetts Eye and Ear, co-author of a [paper](#) in the Journal of Neuroscience.

The inner ear cannot be biopsied so the research team, led by Pei-zhe Wu, examined 120 specimens collected at autopsy, using multi-variable statistical regression to compare data on the survival of hair cells, nerve fibres, and the stria vascularis with the patients' audiograms to uncover the main predictor of the hearing loss.

They found that the degree and location of hair cell death predicted the severity and pattern of the hearing loss, while stria vascularis damage did not.

The researchers say the findings are good news given recent progress in the development of therapies to regenerate missing hair cells. No one is focusing on approaches to regenerate the stria vascularis.

And why have so many previous studies produced different results? Likely because they have used animals, which don't experience the same auditory abuses (aka loud music) as humans.

In ageing laboratory animals, there is very little loss of hair cells, compared to humans, even at the end of life, the researchers say. However, there is prominent damage to the stria vascularis.

Published in [Cosmos](#)

Deaf association sues to force White House to use sign language interpreters at coronavirus briefings



By [Katelyn Polantz](#) for [CNN Politics](#)

The National Association of the Deaf and five deaf Americans are suing the White House in an attempt to force President Donald Trump and other top officials to have American Sign Language (ASL) interpreters at Covid-19 briefings.

They've asked a federal judge to order the White House to add live televised ASL interpretation at all public coronavirus briefings.

"The White House's failure to provide ASL interpreters during Covid-19 related briefings, including press briefings, is against the law," the new lawsuit said.

The lawsuit claims the lack of live sign language interpretation violates the First Amendment of the US Constitution.

The people who brought the lawsuit range in age from 27 to 92 and say they want "information on how to stay safe during the coronavirus pandemic, as well as how to take care of family, friends, and loved ones" and following developments about a potential vaccine and the pandemic's economic impact.

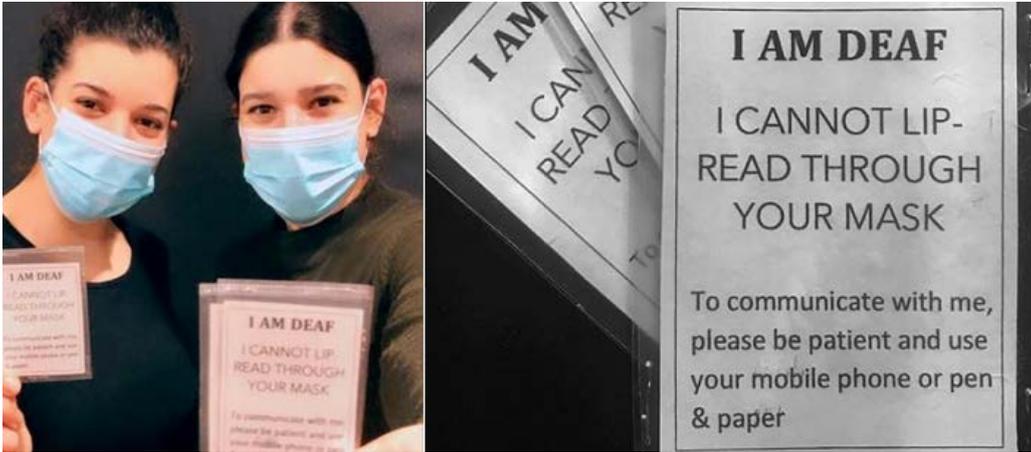
The lawsuit points out how all 50 state governors, as well as leaders in several cities have used live ASL interpreters at covid-19 news conferences. President Trump, however, does not.

Us versus Masks

Seen on Facebook: "The mandatory face mask order has caused a lot of concerns for my fellow deaf community members. Deafness is invisible, and people will assume you can hear.

"Sister and I ran some personal errands, and we appreciated the patience people displayed after we showed them our cards and they accommodated our needs.

"Here's our tip, make your own card, it will help you."



Comment: It would also be great for people who have medical or other exemptions from wearing a mask to make their own cards.



Is there someone you know who has a story to tell to the [Disability Royal Commission](https://www.rcsi.gov.au/) but needs help and privacy?

You can watch this short video about how ["Your Story Disability Legal Support"](https://www.yourstorydisabilitylegal.org.au/) can help you.

It is a free legal service. It is independent from the Royal Commission. It can give legal support in a way that works for you. Their lawyers won't tell anyone what you have told them, unless you agree.

For free legal support, you can contact them on 1800 77 1800 or visit their website www.yourstorydisabilitylegal.org.au

Research into how people recover their ability to sign after a traumatic brain injury or stroke

When we speak, we give little thought to how the words form in our brain before we say them. It's similar for deaf people using sign language.

Speaking and signing come naturally, except when we stumble over words, or swap one word for another when we speak or sign too quickly, are tired or preoccupied. Fluency and the occasional disfluency both happen because of how we choose what to say or sign, when a neural mechanism takes place in our brains as we make decisions and monitor how we communicate.

It's this mechanism that fascinates San Diego State University researchers Stephanie Ries and Karen Emmorey in the School of Speech, Language and Hearing Sciences. Their analysis could help inform rehabilitation therapy for those relearning how to speak or sign after a stroke.

Using electroencephalogram (EEG) recordings, they studied how hearing and deaf signers process the act of signing and found the same monitoring mechanism took place in the brains of both groups. It's important to note that both deaf and hearing signers in the tests were bilingual in English and sign language, except sign language was more dominant for deaf signers.

"When we are doing an action, whether it's speaking, signing, pressing buttons or typing, we see the same mechanism," Ries said. "Any time we are making a decision to do something, this neural mechanism comes into play."

Their study may advance our understanding of how deaf individuals recover their ability to sign after a traumatic brain injury or stroke, when they suffer aphasia: the inability to understand others or express themselves due to brain damage.

"When stroke victims are more aware of their speech errors and have a better functioning speech monitoring mechanism, they have a better chance of recovering than those who don't have that awareness," Ries said.

The work also represents a long-held dream to combine the skills and training of two researchers with niche expertise in complementary fields -- speech monitoring and sign monitoring. Ries is an assistant professor specialising in the neuroscience of speech and language disorders. Emmorey is a distinguished professor and sign language expert.

"I've always been interested in what inner signing would be like, and if it's similar to inner speech," said Emmorey, the study's senior author. "It's an internal process. When you speak, you can hear yourself. But if you're signing, are you seeing yourself like in a mirror, or is it a mental image of you signing, or a motor representation so you can feel how you sign?"

These were the underlying aspects of signing no one quite understood, and it has long been Emmorey's goal to tease them apart so we truly understand what sign language processing is like. Knowing this will help sign language educators figure out the best learning strategy for signers, much like the techniques used to teach hearing people foreign languages.

"When we're speaking we catch ourselves when we are about to make an error. That's thanks to this monitoring process which is located in the medial frontal cortex of the brain," Ries said. "It

peaks 40 milliseconds after you begin speaking. We make an error because we may not have selected the right word when semantically related words are competing in your brain."

Words that share similar meanings such as 'oven' and 'fridge' or names may be switched in the brain (e.g., swapping your children's names). Other times, syllables get transposed.

Such errors can happen in signing too, when signs for different words are mixed up or an incorrect handshape is swapped for the desired handshape, which indicates signers are actually assembling phonological units during language production, similar to assembling the phonemes in a spoken word.

"Learning how sign production is represented in the brain will help us understand sign language disorders, and if a signer needs epileptic surgery we will know which part of the brain processes sign," Emmorey said.

[Science Daily](#)



One in Six reader writes,

I am wondering how many people are aware of how effective speech to text apps are now?

They will be super useful with mask-wearing becoming more widespread. You can hold up your phone up and read what people are saying to you.

Google has its speech-to-text service for Android phones.

I have Live Transcribe on my iPhone.

There is a good Q&A with the app's creator on YouTube. It's not surprising that a hearing impaired relative inspired him. He also worked with a deaf audiologist to develop the app.

<https://medium.com/earagami/live-transcribe-for-ios-launches-on-global-accessibility-awareness-day-92cc9cf1f601>

Cheers,

Leonie in Melbourne

Sound therapy for the agitated Tinnitus brain



James Rodley (left) and Rupert Brown, creators of T-Minus app.

Australian tinnitus and hearing health advocate Victoria Didenko attended the British Tinnitus Association's Annual conference in London in late 2019.

During the event, Victoria chanced upon the creators of a new app to help people find relief and respite from the torment of tinnitus.

T-Minus is the product of musician and composer Rupert Brown and the owner of Abbey Records James Rodley. The T-Minus app uses a variety of naturally recorded sounds and tinnitus frequencies intermingled with original music to help the agitated tinnitus brain find some space and relief from the incessant internal noises.

Victoria contacted the duo responsible for this 'brand new kid on the block' app and they accepted her invitation to be interviewed for One in Six.

Victoria: Rupert, how long have you had tinnitus, what do you think caused it and when did you have your 'lightbulb' moment of coming up with the idea of an app to help yourself and others?

Rupert: I first experienced tinnitus over 20 years ago after playing a series of shows at Ronnie Scotts jazz club in Soho. For me this was an utterly life changing experience. I realised that I had eight different tinnitus sounds and quickly developed hyperacusis. I went from live music venues and shows every night to being confined to my front room, even putting pads under my door knocker to mute the sound. It was a tragic transition. My journey with tinnitus and sound therapy has given me the knowledge of how potent it can be as a resource for tinnitus relief and why I began creating the sound therapy library. I know sound therapy can help and that is why I felt an obligation to reach out to the tinnitus community and share what I have created.

Victoria: Your app has been mentioned on ABC classic morning radio here in Australia and has impressed the British Tinnitus Association with its quality sounds.

Rupert: We were delighted to feature on the ABC show with Ed Ayers. I am incredibly passionate about music in general and if I am not creating new music, then I'm thinking about it or listening to my records. So far we have created 47 albums worth of sound therapy music, which has taken a long time as each one contains differing sounds, frequencies and natural recordings. That said, we have another 6 albums scheduled for release this year as well as a new guided meditation series, the first of which will be out in August.

Victoria: Why do you think tinnitus has been ignored as a significant health symptom for so long, and why is it still difficult to get the medical community to understand the possible and often actual debilitating affects of this auditory symptom on the individual and the wider community?

Rupert: It's such a complex question with varying angles from both the patient and clinical perspective. Firstly as a patient there are numerous psychological reasons for avoiding the 'tinnitus discussion'. We all know that thinking and talking about it can make it seem worse but if we don't talk about it, will non-sufferers and the wider community be aware of it? Secondly, there are more complex underlying psychological factors; whether the onset of tinnitus was an accident for example and is associated with a severe lack of perceived control, whether someone is so used to their tinnitus that they fear not having it as a reason to define their lifestyle choices. I'm not a psychologist but when we look internally at the real issues surrounding our tinnitus, then we can begin to uncover complex thoughts – but that digging is what is necessary to begin the journey to wellness.

The clinical community is a mixed bunch. Some are incredibly caring, understand the difficulties and only wish to help, whereas some are dismissive because they cannot understand the impact tinnitus can have. With no definitive cure, unfortunately so many patients get sent home to self manage, with little further support. No cure also means that there is no simple fix for the medical practitioner, so they too have to invest in long term support, which may or may not be an attractive proposition.

Moving forward it is important that our tinnitus community openly discusses the condition, how it affects them and thereby shed light on the subject. With 1 in 8 suffering from tinnitus, it's not rare, so I encourage the readers here to do just that, even if it's just with friends or family, or with us.

Victoria: The T-Minus app can help accelerate habituation to tinnitus if listened to for several hours a day. How long did it take for you to habituate to your tinnitus. Rupert?

Rupert: My habituation began when I convinced myself that sound wasn't going to hurt me. Although it sounds simple, it was a massive hurdle and one I had to get over quickly if I ever wanted to play the drums again. So I began going out for night time walks, the streets and towns are obviously much quieter at night, so distant cars, gravel under my feet, walking down to the beach and listening to the sea breaking on the shore. These were the experiences that began my habituation process. It took months for me to habituate and along that path I had to re-find myself but that journey is essential and makes you a stronger person. I have had problems and

relapses along the way but I have always been able to return to the sounds I have created to take back control of the situation.

Victoria: What was the trigger for you, James to become involved and support Rupert in this important and creative work?

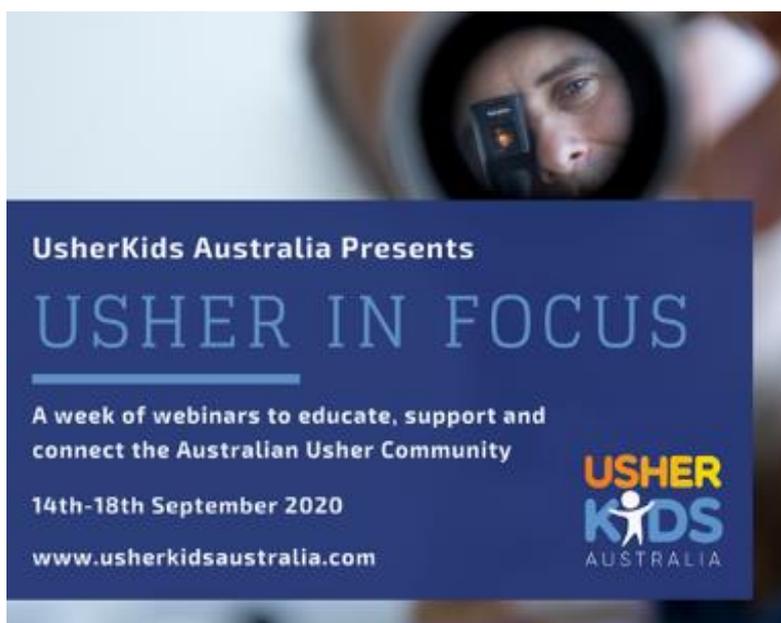
James: I knew Rupert had suffered with tinnitus, but I had never really spoken to him about it until we began talking about his sound therapy works. When I heard the sounds and did sufficient research around this area, I knew that Rupert had created something quite unique! In fact I think I knew it before he did! Ever since that day, we have been working together to keep pushing the project forward.



The T-Minus app is free to download if you have a premium Spotify or Apple Music subscription. The app will become available on other streaming platforms and there is potential for direct subscription.

Victoria Didenko lives with the debilitating effects of tinnitus. She is on a personal journey searching for beautiful sounds that heal and calm.

Victoria uses the T-Minus app regularly when working on the computer and in the evening to unwind and prepare for night-time relaxation.



UsherKids Australia announces its new webinar series.

The webinars will include the latest updates on global clinical research efforts, clinical guidelines, how to support your Usher syndrome student in the classroom and more. You will have the option to participate in live Q&A sessions, or access the recordings to watch in your own time.

With a range of Australian and International leaders in support for children with Usher syndrome joining us to present, we believe this will be a must for families and health care professionals caring for children with Usher syndrome in Australia.

The program is available and registrations are open at www.usherkidsaustralia.com

'Generational catastrophe': 1 billion students hit by virus school closures

Edith M. Lederer writing for [The Financial Review](#)

United Nations Secretary-General Antonio Guterres said the coronavirus pandemic has led to the largest disruption of education in history, with schools closed in more than 160 countries in mid-July, affecting over 1 billion students.

In addition, the UN chief said at least 40 million children worldwide have missed out on education "in their critical preschool year."



School has been disrupted for kids all around the world. *Brook Mitchell*

As a result, Guterres warned that the world faces "a generational catastrophe that could waste untold human potential, undermine decades of progress, and exacerbate entrenched inequalities."

Even before the pandemic, Guterres said, the world faced "a learning crisis," with more than 250 million children out of school, and only a quarter of secondary school youngsters in developing countries leaving school "with basic skills."

According to a global projection covering 180 countries by the UN education agency UNESCO and partner organisations, some 23.8 million additional children and youths from pre-primary school to university level are at risk of dropping out or not having access to school next year due to the pandemic's economic impact.

"We are at a defining moment for the world's children and young people," Guterres said.

"The decisions that governments and partners take now will have lasting impact on hundreds of millions of young people, and on the development prospects of countries for decades to come."



The Department of Education, Skills and Employment has opened consultations for the 2020 Review of the *Disability Standards for Education 2005*.

All the information you need including the [discussion paper](#) is at the [Consultation Hub website](#).

There will be webinars focusing on education which you can find information about on the [Consultation Hub website](#).

You can also [make a submission](#) or complete a short online [questionnaire](#).

There are a range of other events and activities you can participate in during the consultations. To find out more and register to be involved visit the [Consultation Hub](#).

Deafness Forum comments

The last review of the Disability Standards for Education was 15 years ago: this review is an important opportunity to ensure that the Standards are comprehensive and up to date. We encourage you to have your say and help us to spread the word about the consultation process.

Making a submission is not the forbidding task it might seem. A submission can be as little as a one page letter, or as much as time and resources allow. Whether it is from an individual or a corporation, all submissions get the same weighting.



The consultations are open until 11.59pm AEST on Friday, 25 September 2020.

The consultation wants to hear from anyone with an interest in making sure students with disability can access and participate in education on the same basis as students without disability.

The consultation is interested in the experiences and views of current, former and prospective students with disability, their families and carers, advocates and educators. The [discussion paper](#) has been developed with guiding questions to help you have your say.

To assist in the consultations for the 2020 Review of the Standards, the Department of Education, Skills and Employment has engaged The Social Deck. If you have questions or need help to contribute, please email The Social Deck at engage@thesocialdeck.com

Big change coming for National Auslan Booking Service

When a person who communicates in Auslan has a medical appointment, the Government pays for an Auslan interpreter to go with them to the appointment.

This service is called the NABS - the National Auslan Interpreter Booking and Payment Service.

After 31 March 2021, NABS will only be available to people 65 years and older.

NABS will cease to exist as a service for people under 65. People who currently use the NABS will get free Auslan interpreting services for medical appointments from NABS until 31 March 2021.

If you are 65, nothing will change

You will be able to get free interpreters from the NABS for your medical appointments. You don't have to do anything.

For people in the NDIS, the NDIS will pay for the interpreter to accompany them on medical appointments. This is why it is important that people who will need the support of an interpreter for visits to the doctor from next year find out now if they can join the NDIS. If you do join the NDIS there will be money set aside in your personal Plan to pay for your use of NABS. You will be able to choose which organisations you use to book an interpreter.

What happens if I am not eligible for the NDIS? You will still get free Auslan interpreting services for medical appointments from NABS until 31 March 2021 even if you are not eligible to join the NDIS. But not after this date unless you are 65 years or older on 31 March 2021, you will be able to get free interpreters from the NABS for your medical appointments. Nothing will change.

More information

1800246945, SMS 0427671261, ndis.support@nabs.org.au

Sharing your experience with the Disability Royal Commission

The Disability Royal Commission wants to encourage people to share their experiences by making a submission to the Commission.

Posters, flyers and postcards have been created. And there is an animated video that explains how to make a video submission.

Check out the accessible resources to help you make a submission at <https://disability.royalcommission.gov.au/publications/brochure-sharing-your-experience-disability-royal-commission>

Anyone who has experience of, has observed or has views about violence, abuse, neglect or exploitation of people with disability, can make a submission.

Deafness Forum receives some funding from the Royal Commission to promote its work.

Sound can directly affect balance and lead to risk of falling

New research highlights the need for more hearing checks among groups at high risk for falls.



What people hear and do not hear can have a direct effect on their balance, according to new research from the New York Eye and Ear Infirmary of Mount Sinai (NYEE).

The research provides a better understanding of the relationship between hearing loss and why people fall, especially in the elderly population. The findings could lead doctors to screen for hearing loss in patients at high risk for falls, detect hearing loss in its early stages, and treat it quickly.

Falls are a leading cause of deadly injuries.

"Prior studies have shown that hearing loss is an independent risk factor for falls, even for those who were not dizzy. However, the reason why has never been completely understood, although it is believed to be related to the inner ear. This study found that the sounds we hear affect our balance by giving us important information about the environment. We use sound information to keep ourselves balanced, especially in cases where other senses such as vision or proprioception are compromised," said senior research author Maura Cosetti, MD at the Icahn School of Medicine at Mount Sinai.

"Balance is complicated and involves the coordination of many different sensory inputs. When people fall, doctors typically focus on vision issues, check for neuropathy in their feet and bone issues, and fully ignore issues related to hearing. This review highlights the importance of hearing for our sense of balance. And because hearing loss is treatable, getting hearing checked is a crucial first step."

The research examined how sounds affected someone's ability to keep their balance while standing still, often with their eyes closed and when standing on a pliable, squishy surface. They also looked at how wearing noise-cancelling headphones (a complete lack of sound) affected balance. Some studies played white noise or static, while others used environmental sounds such as cocktail party chatter or running water. They found that people had more difficulty staying

balanced or standing still on an uneven surface when it was quiet, but had better balance while listening to sounds.

The researchers found that the type of sound was important when it comes to balance. Continuous background noise (usually static) was the most helpful for subjects to keep their centre of gravity. Some types of sounds actually caused poor balance; for example, some people who listened to sound jumping back and forth through headphones had difficulty standing upright. The researchers believe this may be because sound can act as an "auditory anchor."

The research analysis also showed that sound became more important for balance when the subjects were given difficult balancing tasks (e.g., standing on a moving floor) or if the patients had pre-existing sensory issues. When people with vision loss, hearing loss, or balance problems heard stationary sounds, their posture dramatically improved. This suggests people rely more on hearing when other senses are impaired.

"This research suggests that sounds can have a stabilising effect on balance -- maybe acting as an anchor that patients can lean on when other senses are less reliable -- and shows that being unable to hear sounds resulted in poorer balance. Ultimately an inability to hear puts patients at higher risk for instability and falls," said Dr. Cosetti.

"Elderly patients have a number of factors that put them at greater risk of falling, and hearing loss is a significant and under-recognised contributor. Age related hearing loss is prevalent, affecting up to two-thirds of those over the age of 70, and should be considered and checked in those at high risk for falls. Future research will confirm whether treating that hearing loss (with devices) will also serve as a type of 'balance aid' like a cane, giving access to important information that could be used to improve balance and decrease fall risk."

The analysis highlighted large gaps in research on hearing loss and balance. Future studies are needed that look at different levels of hearing loss, and how hearing devices affect balance. The researchers added that more studies using everyday sounds like traffic or shopping malls or airports are necessary to understand more about fall risks in people with hearing loss.

Story Source: [The Mount Sinai Hospital / Mount Sinai School of Medicine](#). Published by [Science Daily](#)

Know someone who might like to get their own One in Six?

Drop us a line: hello@deafnessforum.org.au

We acknowledge the traditional owners of country throughout Australia, and their continuing connection to land, sea and community. We pay respect to them and their cultures, and to elders past, present and future. We acknowledge the challenge of overcoming high levels of ear health issues among First Nation people and its role in Closing the Gap. We acknowledge the risk to indigenous sign languages of disappearing and the importance of Auslan.

People with disability have and continue to be subjected to isolation, exploitation, violence and abuse in institutions. We thank the Australian Parliament for its bipartisan support of a Royal Commission into the evil committed on people with disability.

Items in Deafness Forum communications may incorporate or summarise views, standards or recommendations of third parties, which is assembled in good faith but does not necessarily reflect the considered views of Deafness Forum or indicate commitment to a particular course of action. We make no representation or warranty about the accuracy, reliability, currency or completeness of any third party information. We want to be newsworthy and interesting and our aim is to be balanced and to represent views from throughout our community sector but this might not be reflected in particular editions or in a short time period. Content may be edited for style and length.