

# Sound Matters

NCIP

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Northern Cochlear Implant Programme

## Introducing Ellen Giles, Adult Team Leader and CI Rehabilitationist



### Ellen Giles

Ellen Giles is the Adult Team Leader and CI Rehabilitationist. She has over 20 years' experience as a cochlear implant clinician (both as a Hearing Therapist and team leader). She started her CI career in Manchester, UK, and joined the CI programme in Auckland in 1997. Ellen has a strong interest in rehabilitation for adults and continues to provide training to the Master of Audiology students, speech and language students as well as the

Hearing Therapists in the community. In addition she has been involved in several research projects over the years and has written a CI text book with colleagues, which was published in 2005.

## NCIP Website is Up & Running

Just a reminder that the NCIP website is up and running. The site allows professionals to download referral and criteria forms, along with information about the different organisations in the Northern Cochlear Implant Programme – Gillies Hospital, Kelston Deaf Education Centre, The Hearing House and University of Auckland.

If you need more information about cochlear implants, how they work and who qualifies please go to [www.ncip.org.nz](http://www.ncip.org.nz)

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## Who's on the NCIP Audiological team?

### ADULT

Ellen Giles - CI Rehabilitationist  
Gayle Watson - Hearing Therapist  
Caroline Selvaratnam - Audiologist  
Derek Hadfield - Audiologist

### PAEDIATRIC

Leigh Martelli - Audiologist  
Ruth Lin - Audiologist  
Claire Spence - Audiologist

# Paediatric & Adult Programme Updates

## UPDATE ON PAEDIATRIC NUMBERS

AGE YRS	Implants received in the past 6 months (01/10/12- 31/03/2013)			
	Public	Private	Re-implant	Total
0-2	8	2	0	10
3-5	2	0	0	2
6-12	1	1	3	5
13-19	3	0	0	3

Twenty cochlear implants have been provided for 16 children in the NCIP Paediatric programme over the past six months (since the previous publication of Sound Matters). This is a significant increase compared to the previous period in which a total of eight implants were received. Interestingly, children aged over two have dominated the number of cochlear implants received. Four children from this group underwent simultaneous bilateral implantations; with two babies whose families funded the second side privately and two babies who received a second CI due to meningitis. Three ears were re-implanted over this period, two of which were due to the 512 internal device failures.

## UPDATE ON ADULT NUMBERS

This current update features the period from the beginning of July 2012 to the end of March 2013. At the start of the financial year we were able to proceed with five fully funded volumes and five subsidised volumes as usual. The NCIT enabled the fifth subsidised volume to become a fully funded volume. In November 2012 the NCIT provided extra funding for 10 adults. The adult programme received more funding in February 2013 for 10 adults. This funding has been allocated to clients who have been on the waiting list for more than two years. Further funding for eight adults was released at the beginning of March 2013. This brings the total funding to 38 adults for the financial year 2012-2013

### To date the following implants have been achieved:

IMPLANTS COMPLETED 01/07/12- 31/03/13	
Number of adults implanted with full funding	22
Number of adults implanted under the subsidised scheme	4

Surgeries for the remaining clients are scheduled in April/May/June.

ADULT NUMBERS 2012-2013 YEAR (AS OF 31/03/2013)	
Number of adults in assessment	9
Number of adults referred but not yet ready to start the assessment (referred to Hearing Therapists or ENT departments in the local area for further testing)	8
Number of adults on eligibility list	64
Number of adults on review - not yet in criteria but close to meeting the criteria	22

The referral rate for July 2012 to March 2013 was an average of seven adults per month.

▶ We have occasionally been asked how many adults have cochlear implants under the public system in New Zealand. Whilst we cannot provide an exact number, we can advise that at the present time The Northern Cochlear Implant Programme supports 310 adults with cochlear implants.

# Hybrid Sound Processors

A hybrid device works by using a combination of electric and acoustic stimulation to make use of any residual hearing that is present in low-frequency regions of the audiogram. For those with good residual low-frequency hearing the hybrid (combined hearing aid/ cochlear implant) has better sound quality for speech, environmental sounds and music than either a hearing aid or a traditional cochlear implant. Speech audibility in quiet and noise is also enhanced over other amplification options.

Traditionally a hybrid fitting required a hybrid processor and a hybrid electrode array (a short electrode in which the depth of insertion is about half that of a traditional electrode array). Even with the proven benefits of a hybrid device, uptake of this technology has been limited because of concerns about lack of stimulation in mid and low frequency regions of the cochlear if hearing deteriorates to the point that the hearing aid component of the device is useless. With the advent of slimmer electrode arrays and different surgical approaches these issues no longer need to be a concern.

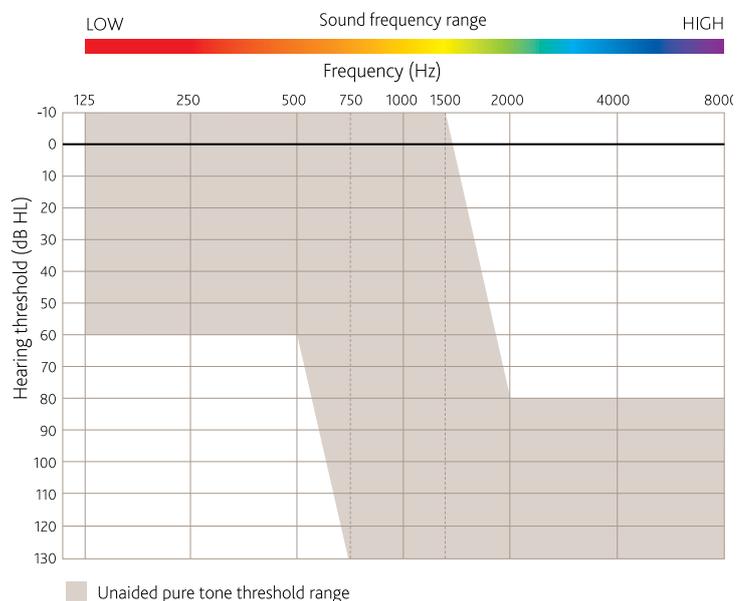
Currently Cochlear is recommending use of the 422 electrode array (full insertion, 22 electrodes) with the Hybrid processor. The 422 electrode array is much thinner than the contour advance electrode and has been shown to better maintain inner ear and organ of corti structure after surgery. Cochlear Limited reports that on average, hearing is preserved to within 12 dB at 250 Hz, 500 Hz and 1000 (six months post surgery).

The Referral criteria for hybrid candidates is the same as for a standard CI.

- NZ resident/ citizen.
- Hearing loss at least at a severe level between 1000 Hz and 8000 Hz.
- Pi max (CVC or AB words) on speech testing no better than 60% in the better ear.
- Some level of aural language needs to be present.
- Hearing aids should be tried and fitted optimally.

Eligibility for a hybrid device will be assessed and depends on level of hearing loss (see hybrid criteria below), size of ear canal and rate of deterioration in hearing.

## HYBRID AUDIOMETRIC CANDIDACY CRITERIA



► **Please contact us if you feel a CI should be considered even though your client is outside of our referral criteria. (Further testing may be recommended to determine eligibility for public funding or the client may be considered for a privately funded implant.)**

## Cochlear Implant Recipients



### ARETHA KNOX

Aretha is one of our newest additions to The Hearing House family. She was referred from the newborn hearing screening programme at birth, and diagnosed with a profound hearing loss bilaterally from Auditory Brainstem Response (ABR) testing. Aretha underwent urgent hearing aid fittings by her local audiologists and was simultaneously referred for CI assessment. Over the next few months, no benefit from wearing the hearing aids was noticed by her parents Katrina and Ash. A combination of behavioural observation and objective tests soon indicated that a cochlear implant was recommended. Aretha underwent bilateral implantation when she was seven months old, with the second ear funded through fundraising by the family.

In early January 2013, Aretha's new "sounds" (speech processors) were switched on. Aretha's older brother, Hendrix, also received bilateral cochlear implants in June 2009 after his hearing loss was detected from newborn screening. He was extremely excited when he found out that Aretha was also receiving her new "sounds" and was looking forward to showing Aretha how important her "sounds" are.

Since Aretha's switch-on, they have attended several mapping appointments and very positive reports are coming out of their weekly Skype sessions for Auditory-Verbal Therapy. Three months after switch on, Aretha's progress has been quite impressive. Aretha has started turning to her name consistently and is showing good attention towards a variety of sounds in her listening environment. She will respond with a wave when someone says "bye bye". Her most recent AV progress report shows that Aretha has begun vocalising to a wide range of vowels and some consonants. It will be very exciting to follow her progress as she continues her CI journey.



From Left: Vince Nicholls  
Lyn Polwart and Donna Smith

Picture courtesy of Franklin County News

### HEROES CHANGE LIVES

In January last year, Lyn Polwart, Donna Smith and Vince Nicholls initiated a petition through the Pindrop Foundation calling for the re-prioritisation of health funding so that deaf New Zealanders would have access to cochlear implants.

There are 30 members in the Auckland consumer group and 50 members in Tauranga, some in Waikato, Whakatane and up north. Impressively, in two and half weeks, Vince Nicholls managed to gather 2000 signatures for their petition in Pukehoke alone. During Hearing Week in March 2012 the group delivered its 8000 signature petition to MP Mojo Mathers on the steps of Parliament. As more than 5000 signatures had been collected the group was invited to present a submission to the Select Health Committee in October. It called for increased funding for adults and access to cochlear implants.

Lyn Polwart decided to fund her own CI as at the age of 75 she felt she could not wait for a CI to be funded when it could take years. Donna Smith had her hearing restored late last year after being unemployed for four years, she was able to go back to work this year for the Census. She said she received her subsidised CI after waiting six months. After receiving her CI, Mrs Smith said her life changed dramatically. "I spoke to my sister in Australia on the phone for an hour and a half six months after the implant and she said, 'I've got my sister back'." Mr Nicholls went deaf in the left ear at the age of 20. "I was driving a truck and the motor was right there. After 16 hours a day, my hearing would go and come back- till finally I lost it." *Meet Lyn, Donna and Vince at the NZAS conference in June and they will tell you all about the benefits of cochlear implants.*

## REFERRALS & FEEDBACK

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