



# Sound Matters

Issue №6 • November 2012

Northern Cochlear Implant Programme

## Introducing Claire Spence, Audiologist, The Hearing House



### Claire Spence

Claire joined the Hearing House in September 2012. She graduated from the University of Auckland with a Master of Audiology degree in 2007. Originally from Christchurch, Claire moved back home after her studies and spent the next two years working at Christchurch Hospital and in a private audiology clinic.

In 2009, she embarked on her big OE and moved to London where she worked at Great Ormond Street Hospital for Children. Claire joins The Hearing House with three years' experience in paediatric Cochlear Implants.

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## Launch of NCIP Website



After a slow birthing process, we're delighted to announce the arrival of the Northern Cochlear Implant Paediatric Programme website. The NCIP site will allow audiologists and other professionals to download referral and criteria forms for the first time and will also provide information about the different organisations in the NCIP programme – The Hearing House, University of Auckland, Gillies Hospital, and Kelston Deaf Education Centre - if you need to find out more information about cochlear implants, how they work and who qualifies for one. Please go to [www.ncip.org.nz](http://www.ncip.org.nz)

## Who's on the NCIP Audiological Team?

### ADULT

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

### PAEDIATRIC

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

# Paediatric & Adult Programme Updates

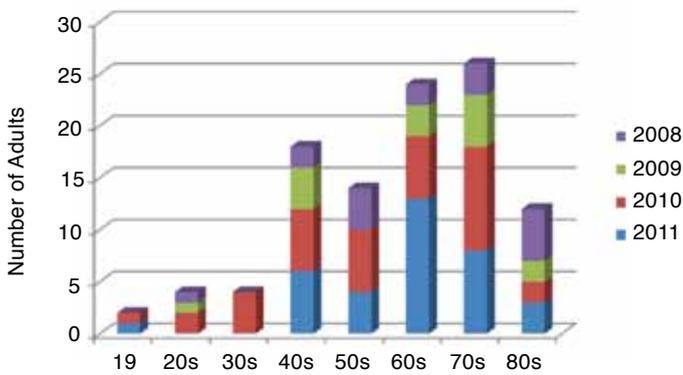
## UPDATE ON PAEDIATRIC NUMBERS

This current update features the period from the beginning of April 2012 to the end of September 2012 (since the previous publication of Sound Matters). During this time, seven children have received a cochlear implant within the Paediatric programme, with one child receiving bilateral implants. It is interesting to see a rising number of families opting for a privately-funded second ear implant through their hard-work with fundraising endeavours. Notably, one of the privately-funded implants have been funded via ACC. No re-implant surgeries occurred during this time frame. There are currently two children who are waiting for their CI surgeries prior to the end of 2012.

AGE YRS	IMPLANT RECEIVED 01/04/12 - 30/09/12		
	Public	Private	Reimplant
0-2	1	2	0
3-5	0	1	0
6-12	2	0	0
13-19	1	1	0

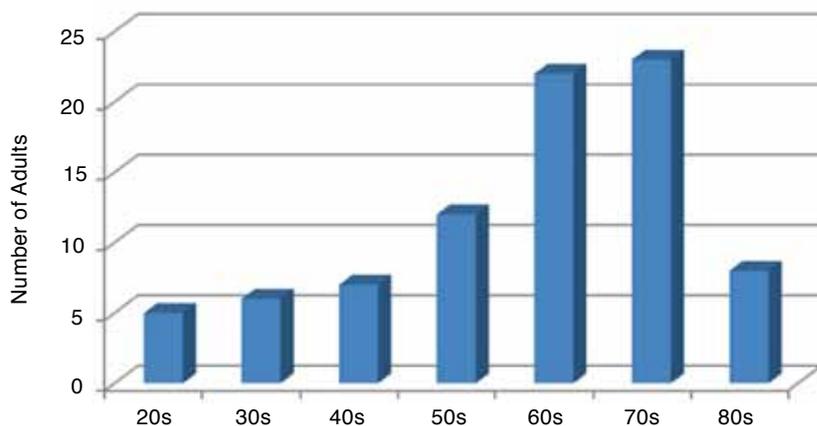
## UPDATE ON ADULT NUMBERS

The following table shows the age at implantation over the last four years.



NUMBER OF ADULTS IMPLANTED BY YEAR				
Age (yrs)	2011-12	2010-11	2009-10	2008-09
19	1	1	0	0
20s	0	2	1	1
30s	0	4	0	0
40s	6	6	4	2
50s	4	6	0	4
60s	13	6	3	2
70s	8	10	5	3
80s	3	2	2	5
<b>Total</b>	<b>35</b>	<b>37</b>	<b>15</b>	<b>17</b>

We have 83 adults on the list waiting for funding to proceed with a CI. The following table shows the age of the adults on the CI waiting list (as of 30/9/2012). The largest age group on the waiting list is adults in their 70s (N=23), closely followed by adults in their 60s (N=22).



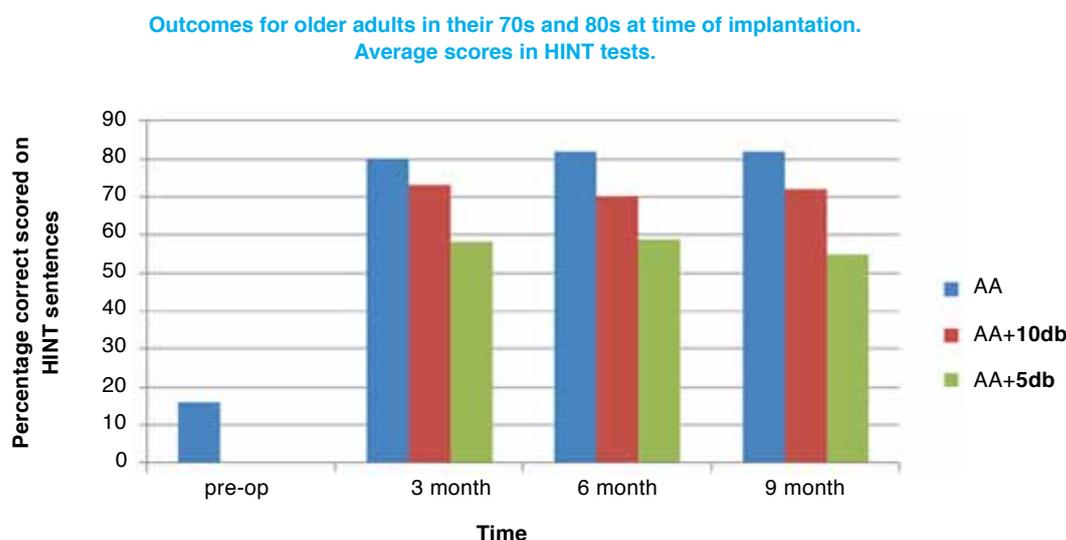
NUMBER OF ADULTS ON WAITING LIST (at 30/10/2012)	
20s	5
30s	6
40s	7
50s	12
60s	22
70s	23
80s	8

## Outcomes for Adults

We have been seeing more adults into their 70s and 80s at the clinic (for a CI assessment and CI fitting) and staff were interested to see how well they were doing as a group. If there is a trend for older adults to be referred to the clinic, we wanted to have information on their outcomes so that we can accurately counsel older adults seeking a CI.

The outcome for older adults on speech perception (auditory alone) with their averaged scores on HINT sentences in quiet and in noise is shown below. The adults were all implanted since 2010 with either a Nucleus CI512, CI24RE(CA) or CI422 device. Most recipients were using a CP810 speech processor, a few had the Freedom processor.

The graph shows the outcome for older adults on percentage score correct on HINT sentences before, after, and for the first nine months of CI use. The data for 31 adults was collated for the three-month data; 18 adults reached the six-month stage and 13 adults reached the nine-month stage.



We were pleased to see that adults have reached a good level of hearing ability (scoring on average 80% correct on sentences presented at 55dB SPL) in quiet by the time they have used their CI for three months. Their performance is maintained at that level over the rest of their first year of CI use. Hearing in noise is a more difficult task; not all adults can manage this, although a good proportion of the group attempted it. (At the nine-month post switch-on appointment, 10 out of 13 adults were able to do the +5dB SNR listening task with an average score of 55% and median score of 59%)

The outcomes for adults implanted in their 70s and 80s was compared with the outcome data for younger adults aged 19-69 years at time of implantation. In order to compare the two groups, only adults with progressive losses were included in this group. The data for adults with congenital deafness was not included in this group. Overall there is no difference between the two groups and this is excellent news for older clients. We are keen to continue monitoring the outcomes over time to see if hearing ability on speech perception is maintained for both groups.

### Discussion

The outcomes for the older adults (70- and 80-year-olds) are good; they hear as well as the younger adults (19-69 year-olds) who have similar progressive hearing loss prior to having their CI. Each group achieved very good scores of 70-80% in quiet and maintained this ability over their first year of CI use. The ability to hear in noise was more variable. Both groups scored significantly better with their CI compared to the pre-op test result with their hearing aid(s) (in their best aided condition).

Generally, older adults are not keen to be in a lot of noise in their everyday living, so testing them in this situation may be doubly difficult for them. In addition, the results of the customer survey (2011-12) indicated that all adults are highly satisfied with their cochlear implant – it keeps them in touch with the world; with their families and friends, and for the older CI recipients, especially with their grandchildren.

## Cochlear Implant Recipients

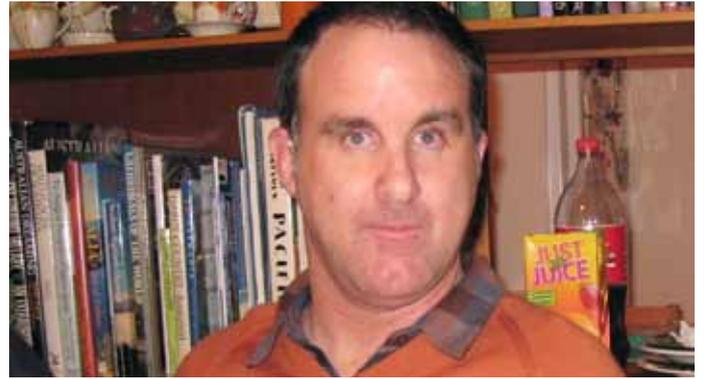


### JULIA ILETAU

Julia is a four-year-old girl who received her cochlear implant in August this year, after a long journey of hearing aid use and assessments. Julia received fetal-maternal blood transfusions with subsequent anaemia at birth and was diagnosed with Cerebral Palsy. Her hearing loss was first diagnosed in 2008 when she underwent ABR testing as a baby, as there were concerns regarding her extensive oxygen needs and seizures at the time. However, as her family was leaving for the Philippines, Julia was fitted with hearing aids in the Philippines when she was 18 months old.

Upon returning to New Zealand with her family, Julia was monitored with further assessments; whereby an ABR under general anaesthetic in June 2012 revealed steeply sloping hearing losses for which her hearing aids were unable to provide adequate access to speech sounds in the high frequencies. Subsequently, Julia underwent CI surgery with Michel Neeff, and was switched on in mid-September.

A fortnight after her switch-on, Julia's mother Annette reported really positive responses from her. Julia has been more alert and attentive towards sounds such as the telephone ringing, the doorbell, and she enjoys dancing to the music on TV and radio. Julia has been positive since the switch on, showing great tolerance to sound and enjoys playing the games during her mapping sessions. Annette happily reports that Julia seems pleased whenever her speech processor is turned on!



### ROBIN LOCKWOOD (A mother's perspective)

My son, Robin, was born in 1969 – the year the rubella vaccine was developed. Too late for Robin! Congenital rubella syndrome gave him severe deafness, partial sight, and impaired intellectual development. But, with two hearing aids, he learned to speak. And that made all the difference.

In the 1990s, I had some contact with children who had received cochlear implants. I was impressed, but saddened. Too late for Robin! His hearing was deteriorating. I was afraid for his future. In 2009, a friend reported excitedly that older people were receiving cochlear implants. Perhaps Robin could qualify. He did! Amazingly, his deaf-blindness gave him priority.

In November 2010, he received his implant. The unfolding process had banished all my fears. The operation was explained to Robin; he understood. He was calm in hospital and co-operative in follow-up procedures. At switch-on he experienced the unforgettable, magical moment of full hearing. In follow-up clinical sessions, Robin heard and repeated increasingly complex language patterns. Eighteen months later, his surgeon, scanning the latest audiogram, exclaimed, "But that's normal!"

What difference has this made for Robin? Above all it has saved his hearing. Now he can hear and respond to complex sentences, and use longer sentences himself. He speaks more quietly. People understand what he says. He listens well, acts confidently in social settings. He has been given a priceless gift for the rest of his life – and no, it was not too late at all for Robin!

## REFERRALS & FEEDBACK

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The Hearing House  
deaf kids talking  
a firstvoice centre

THE UNIVERSITY OF AUCKLAND  
NEW ZEALAND  
Te Whare Wānanga o Tāmaki Makaurau