Overview

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• Staff
• Funding
• Population
• Referral Criteria, Candidacy Guidelines
• Assessment Pathway
• Waiting Times
• Device Overview & Outcomes
• Case Study
• Summary
Clinics

- **Christchurch**
  Milford Chambers,
  St Georges Hospital
  249 Papanui Rd
  Merivale

- **Wellington**
  Level 1, JAG Legal Building
  119 Queens Drive
  Lower Hutt

- Appointments from Nov 2014.
- Official opening 7 May 2015
# Christchurch Clinical Staff

- **General Manager** Neil Heslop

- **Clinical Manager** Jill Mustard

- **Audiologists**
  - Shirley Marshall (Adult)
  - Bekah Gathercole (Adult)
  - Naomi Gibson (Paed)

- **Habilitationists**
  - Joanne Lake
  - Megan Chinnery

- **Rehabilitationists**
  - Penny Monteath
  - Nikki Cleine
Wellington Clinical Staff

- Audiologist    Katherine Bayly

- Habilitationists    Karen Watson
                        Lisa Fawcett
Paediatric Public Funding

• Currently funded for 23 children annually (46 implants)

• From 1 July 2014 Govt. funded simultaneous bilateral implants

• Unilateral children < 6yrs at 01.07.14 eligible for sequential bilateral (22 children)

• All existing bilaterally funded children absorbed into the public programme (40)

• UNBHS funding – 8 bilateral implants/yr (included in above figure)
Adult Public Funding

- Increases to adult implant numbers
  - 20 per annum up from 10 per annum
  - Up to 30 “one-off” implants in the last 2-3 years through the Ministry of Health
  - Up to 30 “one-off” implants through economies / SHCT reserves
Private Funded Adults

- Adults able to privately fund

- Surgery, cochlear implant and follow-up services for 2 years approximately $45,000 – 50,000

- Contact SCIP for quote: prices subject to change
Implant Volumes

• 2013-14

• 18 paediatric implants
• 20 (base) + 10 (one-off) + 5 (redirected from UNBHS) = 35 adults
• SHCT reserves – 3 children + 16 adults = 19
• Privately funded – 5 children + 11 adults = 16
• Total = 88 implants
2014-15

Adults                      20
Bi-Simultaneous            46
Bi-Sequential              22
Reserves                   11
Privates                   6
Other Funded (ACC)         2

Total Devices              107
Waiting Times and Waiting Lists

- **Waiting times**
  - 100+ new adult referrals per annum
  - Currently 50-55 waiting for assessment (up to 12 month wait)
  - 80+ waiting for implant surgery (2-3 year wait)
## Population

<table>
<thead>
<tr>
<th>REGION</th>
<th>ADULTS</th>
<th>CHILDREN</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td>Central</td>
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<td>17</td>
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<tr>
<td>Christchurch</td>
<td>153</td>
<td>47</td>
<td>200</td>
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<tr>
<td>Gisborne</td>
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<td>3</td>
<td>13</td>
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<tr>
<td>Hawke's Bay</td>
<td>29</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td>Nelson/Marlborough</td>
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<td>10</td>
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<td>Otago</td>
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<td>South Canterbury</td>
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<td>Southland</td>
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<td>Taranaki</td>
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<td>Wanganui</td>
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<td>4</td>
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<td>Wellington</td>
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</tr>
<tr>
<td>West Coast</td>
<td>5</td>
<td>3</td>
<td>8</td>
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<td><strong>Total</strong></td>
<td><strong>482</strong></td>
<td><strong>188</strong></td>
<td><strong>670</strong></td>
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</tbody>
</table>
SCIP Recipients - Children and Adults - All Centres

- Wellington, 119, 18%
- Central, 48, 7%
- Christchurch, 200, 30%
- Otago, 88, 13%
- Gisborne, 13, 2%
- Hawke's Bay, 39, 6%
- Nelson/Marlborough, 54, 8%
- Southland, 36, 5%
- Taranaki, 31, 5%
- Wanganui, 4, 1%

- West Coast, 8, 1%
Paediatric Referral Criteria, Candidacy Guidelines

- Children with a bilateral severe hearing loss or worse, from 1 kHz to 8 kHz on ABR testing or on an unaided test.

- Children with limited aided speech information above 2 kHz (as seen on speech-mapping). Children with a severe reverse sloping hearing loss or worse whose speech and language is not progressing adequately.

- Children with auditory neuropathy spectrum disorder who are not progressing in their speech and language development.

- Children who have recently suffered from meningitis which has caused a sensori-neural hearing loss should be referred urgently upon diagnosis. A CT and 3-D CISSMRI to be arranged through the local ENT service.
Bilateral Implant Funding and Asymmetric Hearing Loss

• Ministry of Health criteria for a funded cochlear implant have not changed:

  o A cochlear implant is provided primarily to facilitate access to a speech signal
  o Hearing loss should be in severe-profound range in both ears from 1 to 8 kHz*
  o Children will still be assessed on a “best aided” basis

• *the exception to this is a diagnosis of ANSD
Example 1 – Single-Sided Deafness
Example 2 – Asymmetric Hearing Loss
Example 3 – Asymmetric Hearing Loss (Refer)
Out-of-Criteria (Non-Funded) Referrals

• We have not provided cochlear implants in children (or adults) for single-sided deafness

• We are still reviewing the literature as to the risks, likely benefits, and suitable assessment and candidacy protocols that might apply.

• Any decision to recommend implants under these circumstances would be on a non-funded basis
Adult Referral Criteria, Candidacy Guidelines

- Bilateral moderate to profound sensorineural hearing loss (i.e. ≥ 90dBHL at 2000Hz and above for better ear) including ski slope or reverse losses.

- No maximum age for referral.

- Patients with additional needs are not excluded.

- Oral/aural communication skills.

- Limited or no useful benefit from hearing aids.

- 60% or less on HINT Sentences, 30% on CNC Words
Who can refer?
- ENT
- Audiologists
- AODC

We are happy to provide information and advice if you are uncertain about whether to refer
Adult Assessment - Public

Referral
Assessment
CPAC
Surgery
Switch on

Average 1 year
Average 2 years
3 weeks
Referral Process

• SCIP receives referral - Sends out a consent form (Patient Details Form), information pack & MOH Travel Assistance Form

• Patient Details/Consent form signed and returned

• Assessment appointment sent
  - audiology, (re)/habilitation, medical

• Most assessments take place over 2 days
CI Assessment (Audiology + Habilitation / Rehabilitation)

- Unaided and aided testing
- Speech perception
- Functional use of hearing
- Language assessment (Paediatric)
- Quality of Life questionnaire (Adult)
- Device information
- Expectations form
Assessment (ENT)

- Medical history
- Discuss implantation
- Request CT scan
- Request MRI sometimes
- Ear health
Surgery

- Surgery usually at St George’s Hospital

- Overnight hospital stay

- Post op x-ray

- Stay another night at motel

- Then heal for 2-3 weeks
Post Implantation Pathway

- Surgery
- Switch-on
- MAPping Appts + Hab

2-3 weeks

2 wks, 4 wks, 2 mths, 3 mths, 6 mths, 9 mths, 1 yr, 2 yrs etc
Devices

• Currently offering Cochlear Ltd to (newly) publicly funded patients

• Still supporting range of devices -
  • Cochlear – N6 or CP910
    N5 or CP810
    Freedom

• MED EL – Synchrony
  Opus 2
  RONDO
Cochlear N6 / CP900 series
Cochlear N6/ CP900 series

1. Coil
2. Coil magnet
3. Microphones and microphone protectors
4. Indicator light – Green is good. Orange indicates problem
5. Coil cable
6. Upper button - telecoil. Blue light
7. Processor
8. Lower button – Programme change
9. Accessory socket
10. Earhook
11. Serial number
12. Standard rechargeable battery module
Cochlear Nucleus N6

The differences:
- Automatically turns on when battery attached
- Smart Sound iQ software which automatically adjusts settings to deliver the best listening experience
e.g. Wind & background noise
N6 Wireless Accessories
Cochlear Ltd Waterwear

• Aqua + for N5 & N6.

• To be used with rechargeable batteries.

• Not Government funded
MED-EL SONNET

SONNET v/s OPUS 2:
- No breakable/moveable parts on the processor
- Auto turn on
- Water resistant

- Water wear coming
- Wireless accessories coming
MED-EL Rondo

Waterwear for Rondo
CI Outcomes - MAPping Details
Who needs a CI?!
Raising Expectations

- Is the patient missing **any** of the speech spectrum?

- Is the child making **year for year progress?** (re: speech, language and listening development)

- Is the patient reaching their potential?
Case Study

- 7 year old girl

**History:**
- Breathing difficulties at birth
- SLT between age 3 - 4.5 yrs – made poor progress
- HL diagnosed at 4.5 yrs & hearing aids fit
- HL fluctuated with a general progressive nature
- Support pre CI Assessment from MoE SLT, RTD, AODC, ENT, Audiologist
Case Study - Audiogram

First Audiogram
Post Diagnosis
Case Study - Audiogram

Audiogram for referral to SCIP
Assessment Outcomes

- Couldn’t hear ‘s’ & ‘sh’ when aided
- Lots of speech errors - unintelligible speech
- Formal language assessment:
  - PPVT-4 SS 64 bottom 1%ile, SPELT-4 below the scoring bracket of 4 years (85 – 115 Standard Score-normal range)
- 0-1 item auditory memory
- Expressive language better than receptive language
- Normal non verbal cognition
- Possible ANSD?
Child presented with.....

- Very short attention span
- Could only follow 2 words instructions e.g. “sit down” “don’t touch”
- **Very** poor auditory memory – zero item recall from a short story (what was she understanding in class?)
- Expressive language better than receptive
- Hearing but not understanding
- Blankly staring at speaker
- Not receiving expected benefit from HA’s: sometimes appeared to hear just as well without aids
- Frustration presented as behavioural issues
- A lot of extra input from family at home but progress had stopped
- **SCIP** requested **ANSD** work-up
Cl outcomes

• MRI + CT scan showed normal anatomy

• Bilateral Cl operation

• Within 2 weeks of switch on
  - 4 item memory
  - imitate a 8 word sentence
  - Can hear grammatical markers - started working on future & past tense sentences
Summary

• We are **very open to informal discussions** about a patient prior to any referrals

• If in doubt – **refer, refer, refer**

• **Remember** timely referrals for adult and children are important.
SCIP Contact Details

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