

# Remote Services and Cochlear Implant Care

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# Acknowledgements



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  - Stacey Butler

# Outline



- Cochlear Implant Care
  - Historically
  - Changing services
- Outreach
  - Visiting Services
  - Satellite Centres
  - Remote Care
- **Remote Care**
  - TeleCHAT
  - **Home-Based MAPping**
  - Fixed remote MAPping
- Where to Next?

# Cochlear Implant Care



- Historically
  - Small numbers and multidisciplinary; specialist centres
  - Very detailed work-ups and after-care
  - Limited technology options
  - No or limited internet!
- Changing Services
  - Still multidisciplinary; ongoing need for specialist centres
  - Growth in numbers; awareness, funding, and candidacy criteria
  - More flexible programming; alignment with other technology
  - Different expectations
  - Better and more predictable outcomes, sooner

# Problems of Distance

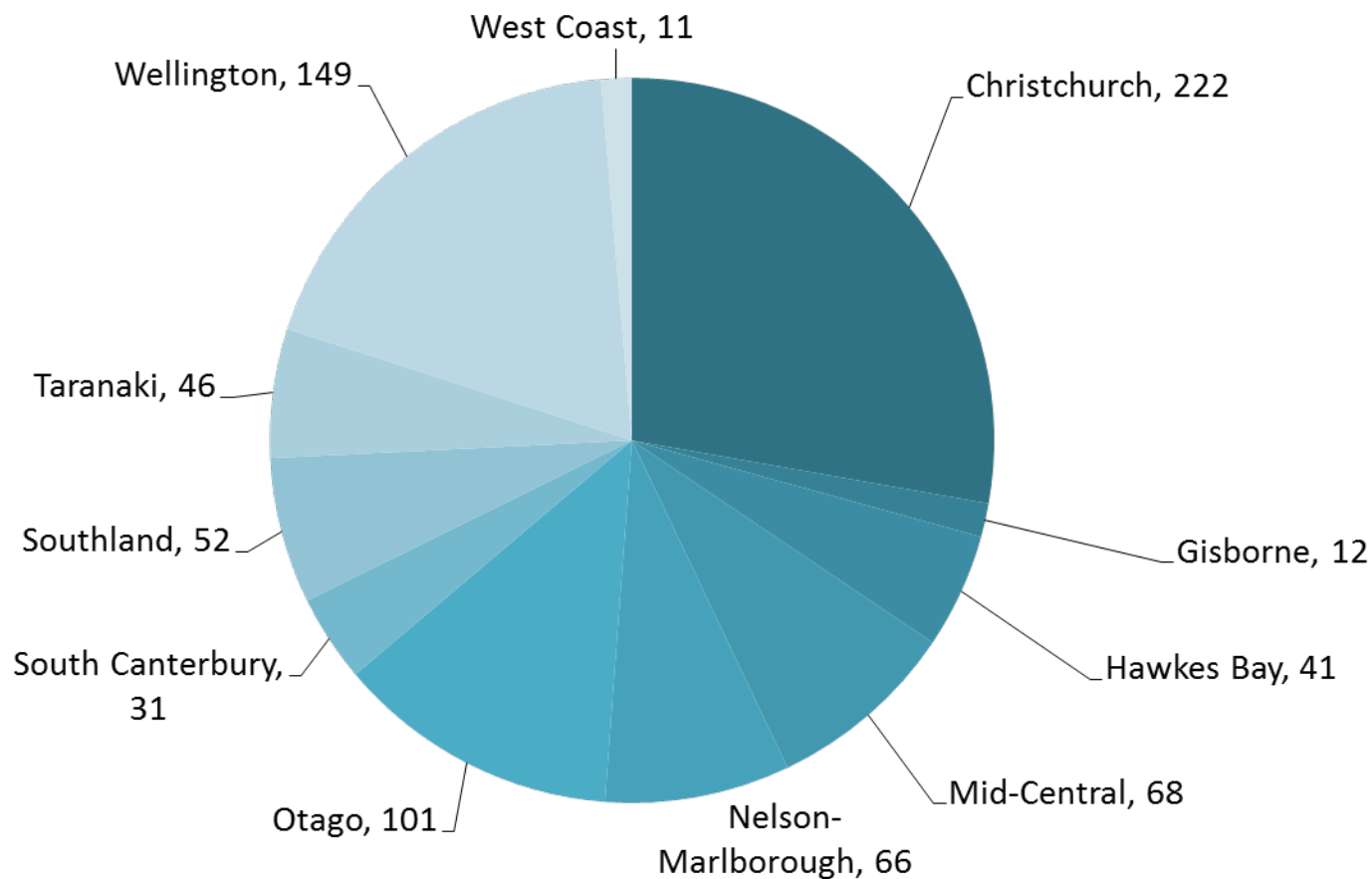


- A small number grows to become a community
- Travel time versus clinic time
- Financial costs, fatigue, and safety
- Inconvenience; school, home, and work
- Clinical outcomes

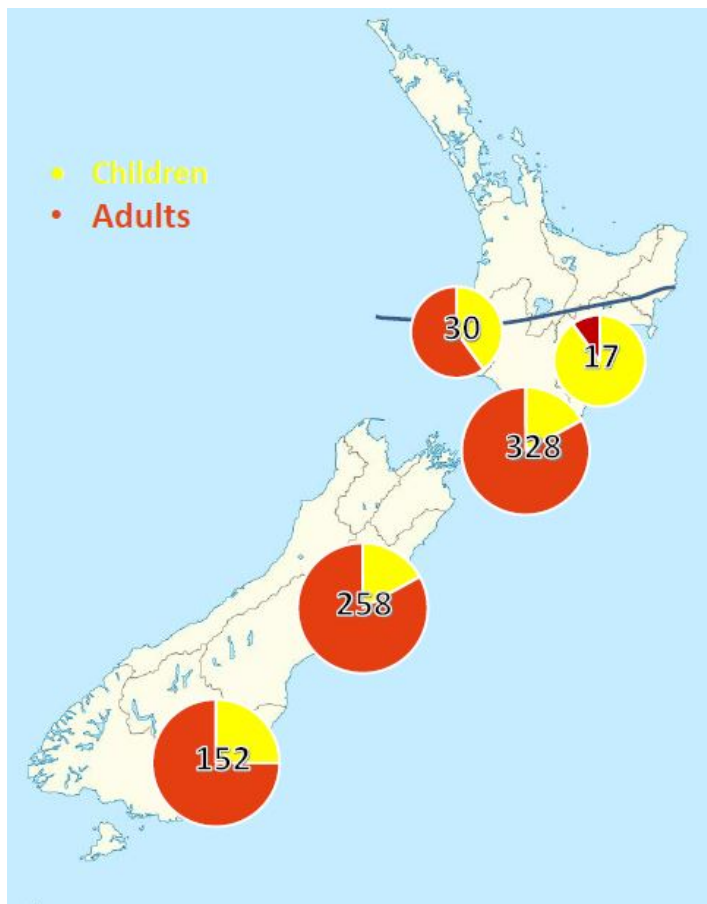
# SCIP Patients



**SCIP Recipients  
By Geographic Region**



# SCIP Patients



Christchurch	222
Gisborne	12
Hawkes Bay	41
Mid-Central	68
Nelson-Marlborough	66
Otago	101
South Canterbury	31
Southland	52
Taranaki	46
Wellington	149
West Coast	11
<b>Grand Total</b>	<b>799</b>

# Outreach Options



- Visiting Services (Habilitation, Audiology)

- Limits re- staff
- Number of appointments
- Clinic facilities
- Cost; travel and accommodation

- Satellite Centres

- Costs (fit-out, staff, lease, equipment and inventory)
- Lack of provision in funding models
- Staff recruitment, training, and retention



# Remote Care



- Any service where the care is delivered at distance
- Falls under the general term “telehealth”

Dictionary

telehealth



**telehealth**

/ˈtelɪˌheɪlθ/

*noun*

noun: telehealth; noun: tele-health

the provision of healthcare remotely by means of telecommunications technology.

"the Scottish executive is keen to expand telehealth in a country where much of the population lives in rural and island locations"

## Journal of Telemedicine and Telecare

Swiss Society for Telemedicine  
and eHealth

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## Delivering remote services to children with hearing loss in rural Australia

23/08/13



RIDBC Teleschool provides education and therapy services to children with hearing or vision loss in regional remote Australia

# SCIP Experience



- TeleCHAT
- Home-Based MAPping
- Fixed Remote MAPping (watch this space)

# TeleCHAT



## Tele-CHAT Evaluation: Evaluation of a nationwide tele-habilitation pilot

*October 2013, Janet Digby*





# Home-Based MAPping



- An Audiology service where patients are MAPped in their own home (or at work ...)
- Initiated in collaboration with Cochlear Limited
- Target audience
  - Those not well enough to travel
  - Those with simple needs
  - Those with urgent but low complexity needs
  - Non-attenders
  - Those where time out of school, work, and home is stressful

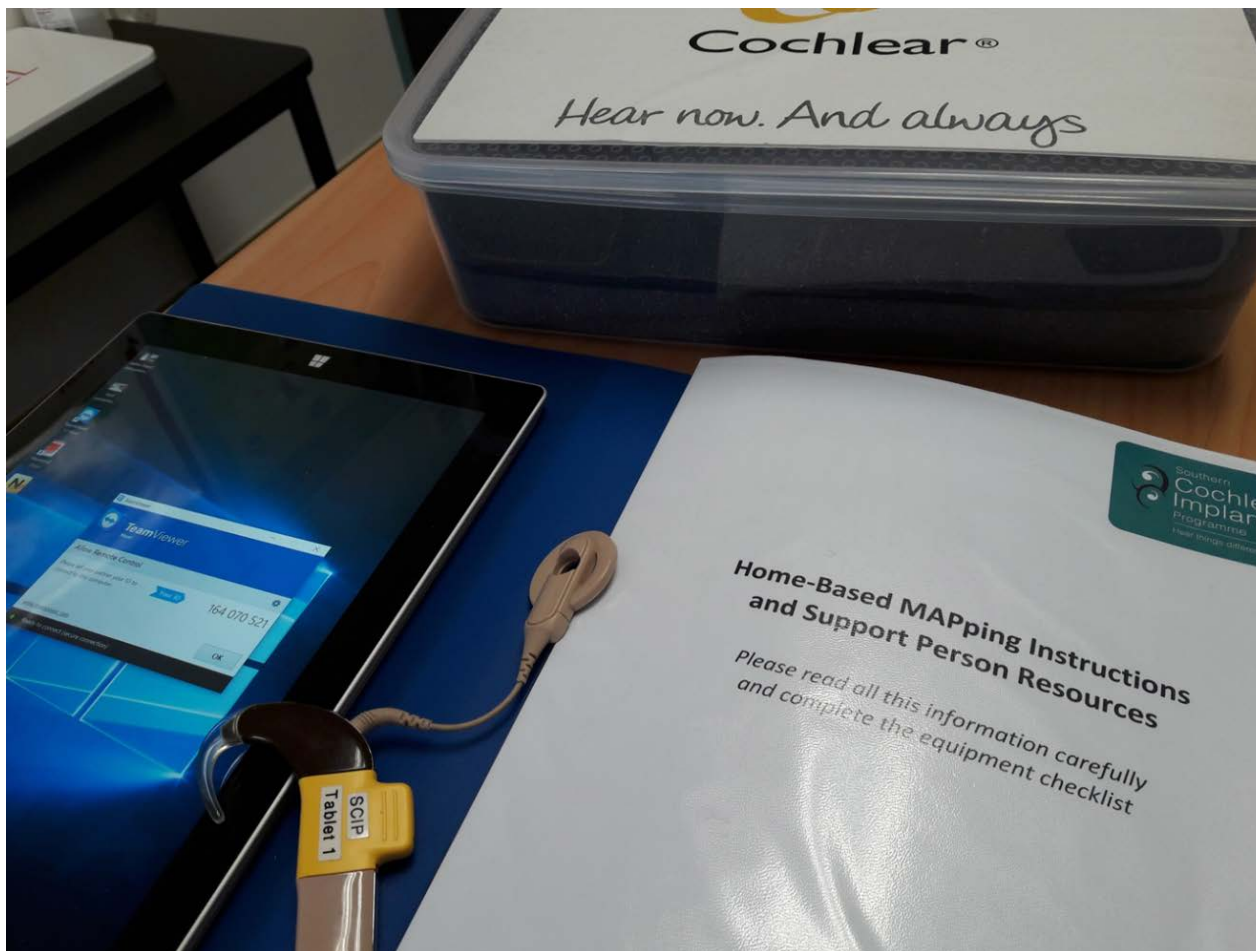
# Technology and Equipment



- Tablet with 4G capability
- TeamViewer remote desktop technology with video
- Back-up processor
- Instructional material



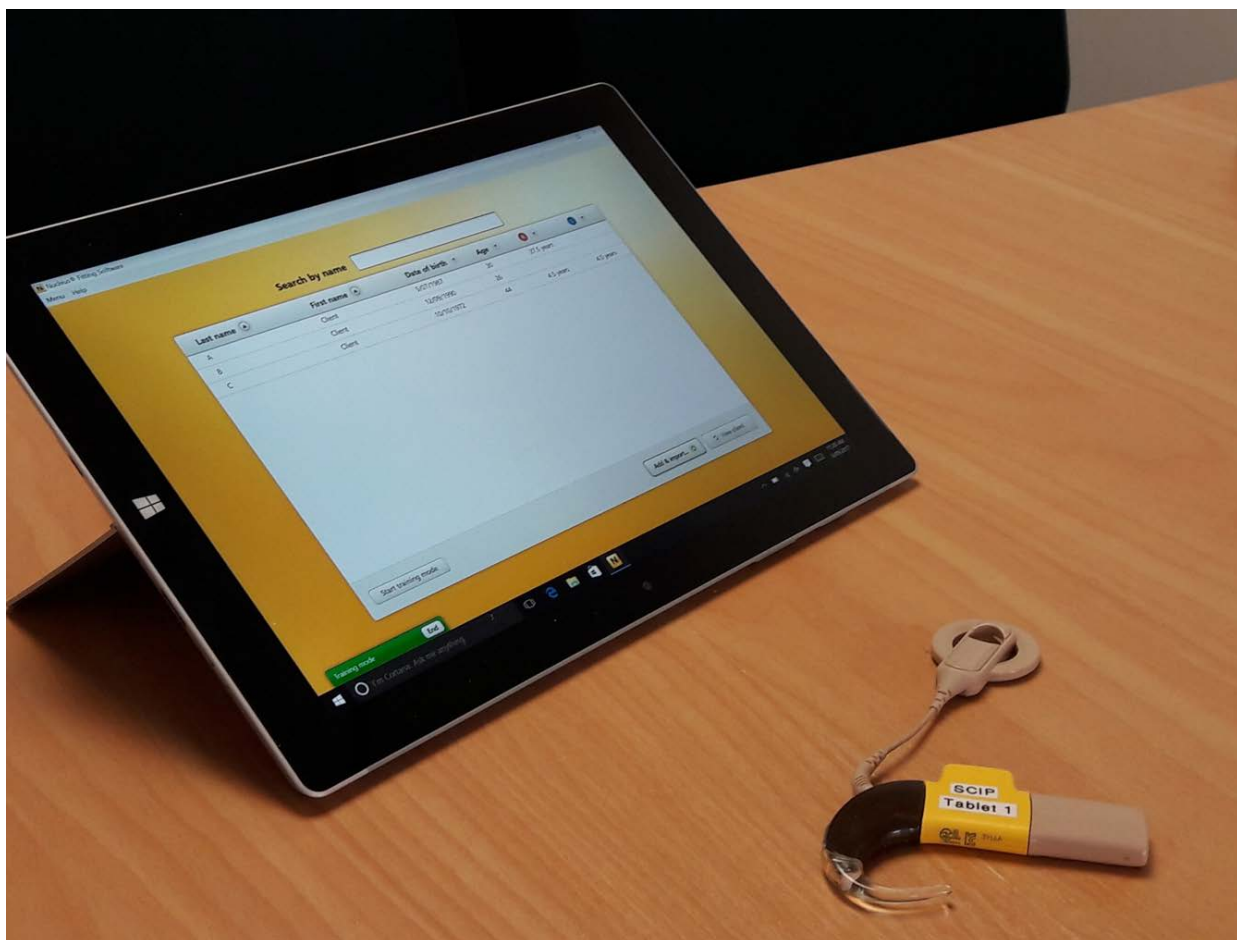
# Technology and equipment



# Wireless programming



# Tablet with integrated 4G



# Process



- HBM offered to appropriate candidates or those we want to see
- Equipment set up (MAP, batteries)
- Couriered out to home address
- Instructions to set up
- MAPping – up to 1 hour
- Completion of survey
- Return of equipment

# Results so far ...



- Total Audiology appointments in 5 months – 180
- 17% are offered HBM; reasons for not offering HBM
  - Some local patients
  - Non Cochlear users
  - Some had need for other services
  - Some had MAPs not supported/ideal
- Of those offered;
  - 25% Yes
  - 45% No
  - 29% No response

# Results so far ...



- Reasons for declining
  - "I prefer to come to Christchurch"
  - Poor internet coverage (WiFi, 4G)
  - "I would need time off work anyway"
  - Lack of support person

# Results so far ...



- Survey comments
  - Commonly people said the process is “very easy”
  - All **satisfied** or **very satisfied** with the sessions
  - All **strongly disagreed** that the sessions either invaded their privacy or made them feel uncomfortable
  - All **moderately** or **strongly agree** that HBM should be offered to other recipients
  - The session length was generally neither too short nor too long
  - There were mixed opinions as to whether this service should replace or augment usual clinic sessions



# Limits



- A support person needed
- Issues of MAP evaluation
- Internet availability across regions
- Privacy issues; blurring of home and clinic
- Data security



# Fixed Remote MAPping



- Remote care is provided at a fixed clinic (partner with medical clinic, Audiology clinic, Hearing Therapist, School)
- Provides a more secure internet connection
- Overcomes the privacy issues and blurring of home and clinic

# Fixed Remote MAPping



- Clinic facility can be configured with sound-field evaluation equipment
- Video equipment may be better
- Can be shared with another (related) provider eg. Hearing Therapy (reduced costs, complimentary services)
- Still requires some travel to the facility by the patient

# Fixed Remote MAPping

## Is Remote Fitting of Hearing Aids The Future?



Written by **Geoffrey Cooling**

Updated August 01, 2017  
Published August 01, 2017

## Will Your Next Hearing Care Visit Be A Remote Affair?

Triton Hearing a New Zealand based company announced in April that it would be providing hearing aid services to rural communities in New Zealand via remote tele-health systems. They will test the hearing of customer, recommend and provide hearing aids via the internet using a local nurse and remote audiologist.



# Where to next?



- Uptake of HBM is small at present
- Fixed remote on the horizon
- Improved technology
  - No need to send equipment
  - Programming via recipient device
  - A smart TV in every home
- Do-more-with-less and funding
- Specialisation