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Remote Cochlear Implant Programming

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Benefits of Remote CI Programming

- Cost/time efficiencies for families
- COVID friendly service delivery model
- Patient demand

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Benefits of Remote CI Programming, Cont.

- In our work as with other work, we know that many obstacles get in the way of providing appropriate services to our families:
  - Lack of access to services in their geographical area
  - Inability to follow through with recommendations, often due to transportation.

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- When deciding to add tele-audiology there are many considerations which include:
  - Is there a need?
  - Can you be paid?
  - Can you offer seamless integration into your other services?
  - Do you have a protocol that everyone can follow that allows for this seamless integration into your existing practices?
  - Can I afford the equipment?

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What Delivery Model?

- Network link (Rady Main to Rady Murrieta) i.e. to rural clinics/hospitals
- Point-to-point connections to specialty clinics not part of the hospital: Rady consults with another hospital or clinic
- Monitoring center links (checking a patient at home)
- **Web-based direct service provision**

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Cochlear Implant Remote Options

- CI consultations/Device Selection
- CI troubleshooting
- CI programming
- CI Aural rehab/patient information

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Cochlear Implants

- Using Remote Check/CI programming tablets
- We have recently added software to allow us to program Med-/el and AB as well

Cochlear®

Hear now. And always

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REMOTE CHECK

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Program Integration

- Patient enrolled in remote check as recommended by the clinician via MyCochlear.
- Following successful enrollment, a 30 minute telemedicine appointment is scheduled at least 1 week out to provide sufficient time for remote check to be completed.

Quality care, from anywhere
Introducing Cochlear® Remote Check

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MyChart at Rady Children's

Program Integration, Cont.

- The clinician reviews the remote check and plans appointment accordingly.
- On the day of the appointment, the family will check in on MyChart similar to other telemedicine appointments.
- Upon completion of the telemedicine appointment, our center bills a 30 minute AR code.

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Remote Check > Overview
Submitted 84 days ago
Adult check - Baseline (Jul 10, 2020)

QUESTIONS **16** QUESTIONS to review

IMPEDANCE CHECK — R NO DATA AVAILABLE, L **0** PROBLEMS — With active electrodes

AUDIOGRAM R / L
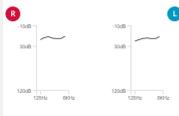
SPEECH IN NOISE — R **-4.1**dB, L **-3.5**dB

HARDWARE HEALTH — R **0** ALERTS, L **0** ALERTS — Presented to the recipient

IMPLANT SITE PHOTOS R / L

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Remote Check > Overview > Impedance Check
Submitted 37 days ago
Paediatric check (Jul 21, 2020 - Dec 28, 2020)

0 new problems on stimulating electrodes

Extra-cochlear electrode 1
Extra-cochlear electrode 2
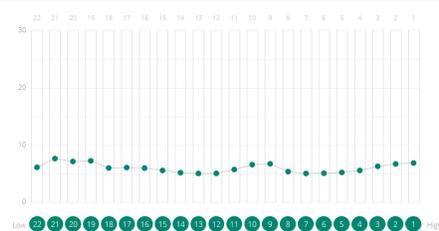
Stimulating / Deactivated (Flagged) / Show impedances

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TIME ON AIR

Month ○ Remote Check period ○

Off air 11.8 hrs · Speech 2.8 hrs · On air 11.1 hrs — Time on Air Daily average · Coil off 1.3 hrs

R

Off air 12.9 hrs · Speech 2.8 hrs · On air 10.2 hrs — Time on Air Daily average · Coil off 1.1 hrs

L

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Rady Children's Hospital San Diego
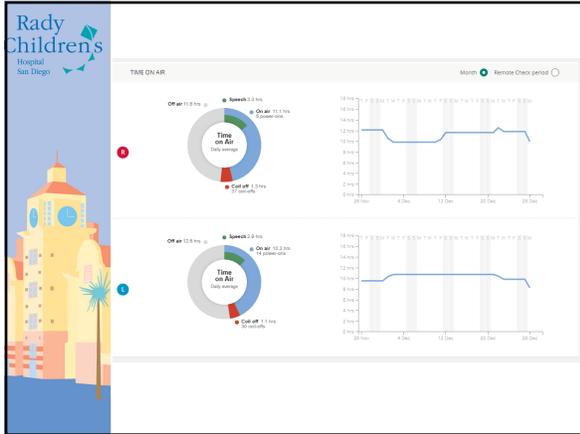
Q 1-5:   Medical

1. Does your child have any numbness or pain when you touch the skin under their magnet?   Yes   No   📷 Implant site photos
2. Is the skin under the magnet red or discolored?   Yes   No   📷 Implant site photos
3. Is your child's sound processor causing soreness or any kind of discomfort?   Yes   No
4. Does your child currently have an earache?   Yes   No
5. Is there any discharge from your child's ear?   Yes   No

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Q 6:   Fitting

6. While using your sound processor, has your child experienced any of the following?

Painful sensations
Twitching near the eye or anywhere on the face
Sounds that feel uncomfortably loud
Sounds that feel too soft or not loud enough
Interruption of sound
Sounds that feel louder in one ear than the other
None of the above

Q 7:   Sound quality

7. Do you think your child's hearing has changed since their last clinic appointment or Remote Check?   Yes   **No**

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Q 8-30:   The next set of questions will ask you to think about the last time your child was in certain scenarios.

8. You are talking with your child and there is a TV on in the same room. Without turning the TV down, can your child follow what you're saying?
Not at all — Perfectly
Previous result

9. You are talking with your child in a quiet, carpeted lounge-room. Can your child follow what you're saying?
Not at all — Perfectly
Previous result

10. Your child is in a group of about five people, sitting round a table. It is an otherwise quiet place. Your child can see everyone else in the group. Can your child follow the conversation?
Not at all — Perfectly
Previous result

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Q 31-36: About your child's device

31. If the processor often falls off your child's head, would you like help keeping it in place?   **No, I am managing well**   Yes, I would like help   My child's processor does not fall off too often
32. Do you have any concerns about how well your child's implant/sound processor is working?   Yes   **No**
33. When did you last change your child's microphone cover?   In the past 3 months   More than 3 months ago   **I can't remember**
34. How often do you use the dry aid kit for your child's processor?   **Every day**   Not every day   Not sure
35. Has anything happened since your child's last clinic appointment or Remote Check that might have affected how well their implant/sound processor is working? (e.g. Was the processor dropped in a pool? Did your child bump their head on the implant site? etc.)   Yes   **No**
36. Do you need help getting spare parts for your child's processor? (e.g. microphone covers, retention accessories, batteries, etc.)   Yes   **No**

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Q 37:   Training

37. Do you need training on any of the following activities?

Changing zinc air batteries (For N7 Sound Processors)
Charging rechargeable batteries (For N7 Sound Processors)
Changing the volume on your child's sound processor (For N7 Sound Processors)
Changing programs on your child's sound processor (For N7 Sound Processors)
Using the dry aid kit or Home Charger
Using the Nucleus Smart App or Remote control
Changing microphone covers
Using tele-coil (For N7 Sound Processors)
Using wireless accessories
Understanding lights and beeps on your child's processor
None of the above (I don't need training on any of the above)

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CI PROGRAMMING

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Remote Programming of CIs
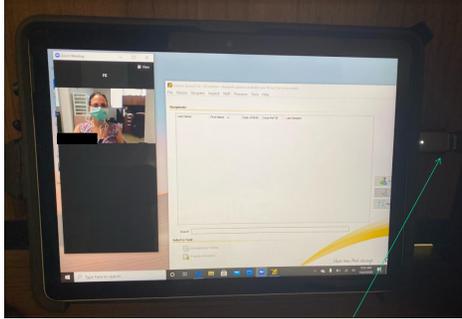
Wireless programming adapter

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Step-by-Step Process

- Mail family Microsoft Surface (powered off) & wireless programming pod/s.
  - Box will include pre-paid label to allow the family to ship the equipment back.
- The CI programming appointment is scheduled with an appointment note that it is a telemedicine appointment.
  - Appointment should NOT be created as telemedicine as the family will not log on to MyChart to join.

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Steps, Cont.

- We contact the family by phone at the scheduled appointment time and guide the family through Surface set up.
  - Power on Surface (top left button when device is horizontal)
  - Provide family with Surface Password which will be changed following each programming session.
  - Once the family has logged onto the Surface successfully, we advise them to connect to their personal Wi-Fi.

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ZOOM

Join a Meeting

Sign In

Steps, Cont.

- Once Wi-Fi connection has been obtained, we advise them to click the Zoom icon on the task bar.
  - Advise them to click "Join a Meeting"
  - Provide them with the meeting ID and click Join
  - Provide them with the password
- Once connected via Zoom, ask family to press share screen at the bottom of their Zoom window. Clinician then requests remote control access of their screen. Family must accept.

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Steps, Cont.

- We log onto Cochlear Software using our clinic password.
- Advise the family to connect the CI recipient's battery (fully charged) to the bottom of the yellow wireless pod and wait for it to connect (will be visible on the bottom of the software screen). Once the pod is connected, the family will then connect the processor/s.
- Program as usual.

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Steps, Cont.
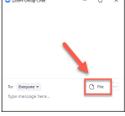
- Once finished, provide instructions for sending their CDX file to the clinician.
  - Clinician will export the patient's file to the desktop.
  - Advise the family to open the zoom chat box and click the "file" button.
  - Add the CDX file and hit send.
  - Once the file has been received, move the CDX file from the Surface desktop to the recycle bin and empty.
  - Delete/archive the patient file from the Cochlear software and close

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Steps, Cont.

- Type in "change password" in the Surface search bar, bottom left. Follow instructions to change the password. Ask the family to power down the device after the Zoom call has ended (family can not see the new password)
- Family advised to return the programming equipment using the prepaid label that was sent within the original shipment.
- End session.

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Steps, Cont.

- Update new Surface password on a log that tracks passwords.
- Import CDX file into the clinic database from the programming computer.
- When the tablet is returned:
  - Log back into stock
  - Physically clean the tablet
  - Verify that there is not any patient data on the computer (there should not be).

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Can you do this with other companies?

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QUESTIONS?

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