FOR PROFESSIONALS

Cochlear®

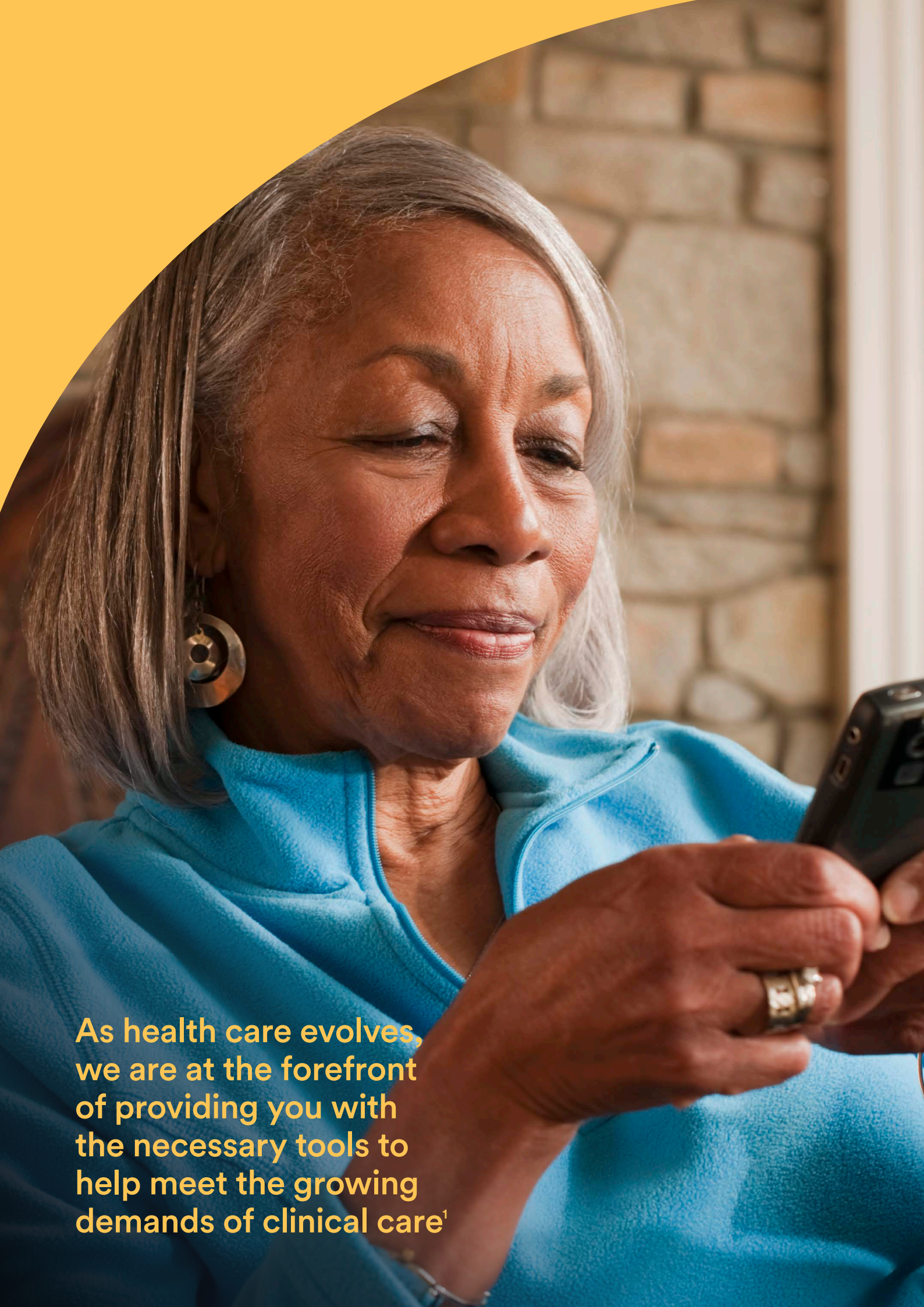


Your patient, your care, anywhere

Getting started with Remote Care for Cochlear™ Nucleus® Sound Processors



Remote Care solutions are part of Cochlear Connected Care


As health care evolves, we are at the forefront of providing you with the necessary tools to help meet the growing demands of clinical care[1]

The flexibility to provide quality care remotely

With Cochlear™ Remote Care, you have the flexibility to monitor patient progress remotely, providing a sustainable way to manage a growing clinical load while still providing high quality and patient-centered care.

This guide* is designed to help as you begin offering Cochlear Remote Care to your patients. It provides detailed product information, troubleshooting guidance, and tips for integrating Remote Care into your routine clinical practice.

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*This guide is supplementary to the Instructions For Use (IFU). Always read the instructions for use.



Cochlear™ Remote Care

The following two Remote Care solutions are available to support your cochlear implant patients:

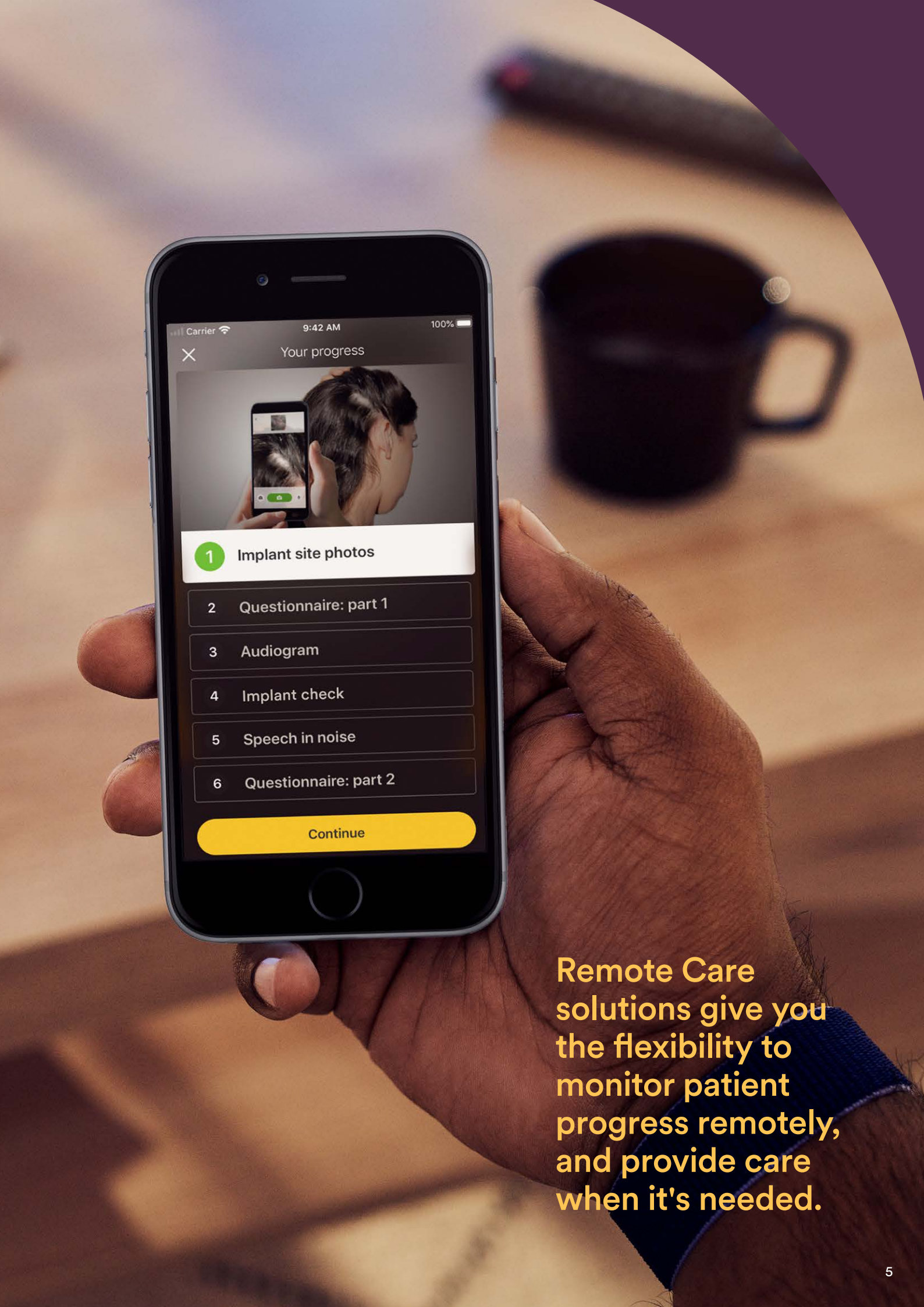
Cochlear Remote Check is a virtual assessment tool you can use to assign hearing tasks for a patient to complete remotely, using a compatible smartphone.* Remote Check results are then sent to you or carer for review to monitor progress and assist with identifying issues you would typically look for during a clinic appointment.

Cochlear Remote Assist allows you to have a pre-scheduled video appointment with a patient using Custom Sound® Pro fitting software and the Nucleus® Smart App. During the live Remote Assist session, you can assess how the patient is progressing and discuss any issues they are experiencing.

You can also connect remotely to their sound processor to make minor MAP or sound processor adjustments.

To offer Remote Check and Remote Assist, you and your clinic require access to Cochlear platforms. myCochlear™ Professional (mCP) is used to schedule and review Remote Checks. Custom Sound Pro fitting software is used for Remote Assist.

* For information regarding the sound processors, implants, operating systems and devices that are compatible with Cochlear's Remote Care services, visit www.cochlear.com/compatibility.



Remote Care solutions give you the flexibility to monitor patient progress remotely, and provide care when it's needed.

User requirements

The user requirements for Cochlear's Remote Care solutions are summarised in the following table:

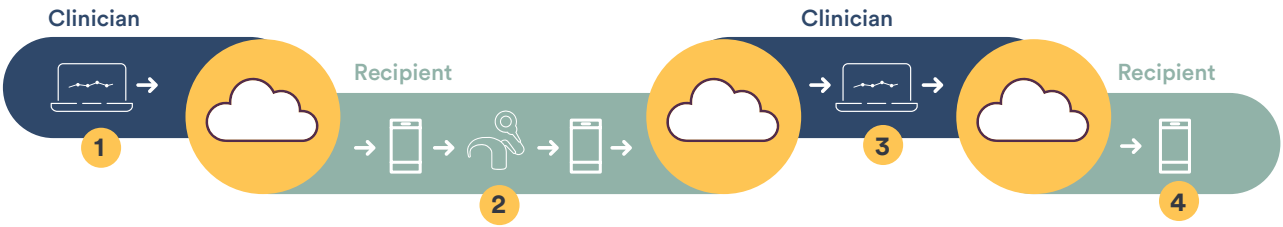
		Remote Check	Remote Assist
For clinics	Clinic access to Remote Care within mCP	✓	
	Clinician log in and password for mCP	✓	
	Compatible web browser (Google Chrome recommended)	✓	✓
	Custom Sound® Pro fitting software		✓
	Computer with video and microphone capability		✓
For patients	Registered Nucleus® 7 (CP1000), Kanso® 2 or later Sound Processor	✓	✓
	Compatible Apple or Android™ device	✓	✓
	The latest Nucleus Smart App downloaded and paired to a sound processor using a registered Cochlear account	✓	✓
	Compatible sound processor firmware version	By connection to Custom Sound Pro fitting software	By connection to Custom Sound Pro fitting software
	Access to Wi-Fi, 4G or 5G	✓	✓
	Data sharing enabled and consent granted to the clinic	✓	

For information regarding the sound processors, implants, operating systems and devices that are compatible with Cochlear's Remote Care services, visit www.cochlear.com/compatibility.

Getting started with Cochlear™ Remote Check

Remote Check allows patients to complete a range of hearing tasks without visiting the clinic, empowering them to partner with you in managing their ongoing hearing health.

1. How Remote Check works



1. **Schedule a Remote Check:** Clinician securely logs in to myCochlear Professional (mCP) and schedules a customised Remote Check for a patient. The patient will receive a notification that a Remote Check has been scheduled.
2. **Complete a Remote Check**: Recipient receives a notification that a Remote Check is ready to start. Recipient logs into the Nucleus Smart App and completes their check while paired to their sound processor. Once finalised the results are submitted to the clinician via the Cochlear Cloud.
3. **Review a Remote Check:** Clinician receives notification that Remote Check data from the patient is available for review and logs into mCP to review it. Clinician exchanges messages with the recipient if required until the review is finalised.
4. **End the Remote Check:** Once finalised, an automatic notification is sent to the recipient's Nucleus Smart App with the Remote Check outcome, including any final messages or requests from their clinician.

2. Remote Check activities

Remote Check tasks are customisable and quick and easy for patients to do, taking as little as 15 minutes to complete.[1,**]

Patient Tasks

Implant photos: The smartphone camera is used to photograph the patient's implant site at different angles to check compatible for skin irritation or inflammation. Photos can be uploaded from the phone photo library and shared. For optimum results, patients should seek help with taking the photos.

Questionnaires: Patients answer a two-part questionnaire covering medical health, listening ability, device performance and training needs. Questions from the Speech, Spatial and Qualities of Hearing Scale (SSQ) self-assessment tool are also included.[2] SSQ is a validated self-assessment scale measuring self-reported listening ability, function and hearing quality in real-world listening situations.

Audiogram test: Patients complete an aided threshold test (ATT) by listening to pure tones streamed from the app to their sound processor. Bilateral recipients have each ear tested separately, with the contralateral ear muted by the app. A practice mode trains patients to swipe right or left on the phone to give "yes" or "no" responses. Feedback is provided if patient responses are unreliable.

Speech in noise test: Patients complete a digit triplet test (DTT) to assess listening performance in adaptive background noise.[3,4] A practice mode trains patients to listen to three spoken digits at varying speech in noise levels and to type their response using the phone keypad. A Speech Reception Threshold (SRT) is calculated for 50% speech understanding of words in competing noise and reported in dB SNR (signal-to-noise ratio). Patients can listen to repeated presentations before responding and feedback is provided if responses are unreliable.

Data captured by the sound processor

Impedance Check: Also called an implant test, this assesses electrode impedances across different modes of stimulation for active electrodes in the MAP, identifying electrode shorts or open circuits. Deactivated electrodes are excluded from measurement.

Hardware Health: Also called sound processor diagnostics, this provides an external equipment check to identify microphone or sound processor issues.

Usage Data: Datalogs capture daily averages and are displayed for the last month or the time period since the last check. The full suite of usage data accessible in Custom Sound® Pro fitting software is also available in Remote Check.

** Remote Check is user-driven, so patient related variables may impact the time taken to complete a session.

3. Implementing Remote Check into your clinical practice

Many clinics have implemented Remote Check into their protocols in the following ways:

- Baseline performance measurement following MAP stabilisation
- Remote monitoring to complement or substitute a routine clinic appointment
- Remote management of long-distance patients and those that need more flexibility in their clinical care
- Troubleshooting and patient triage when something unexpected happens
- Capture of patient feedback following a sound processor upgrade
- Review of daily usage data and trends over time
- Long term performance monitoring

Note: Consider scheduling a Remote Check around 3-6 months post-implant or when patient performance has stabilised to establish a performance baseline for monitoring.

4. Patient eligibility for Remote Check

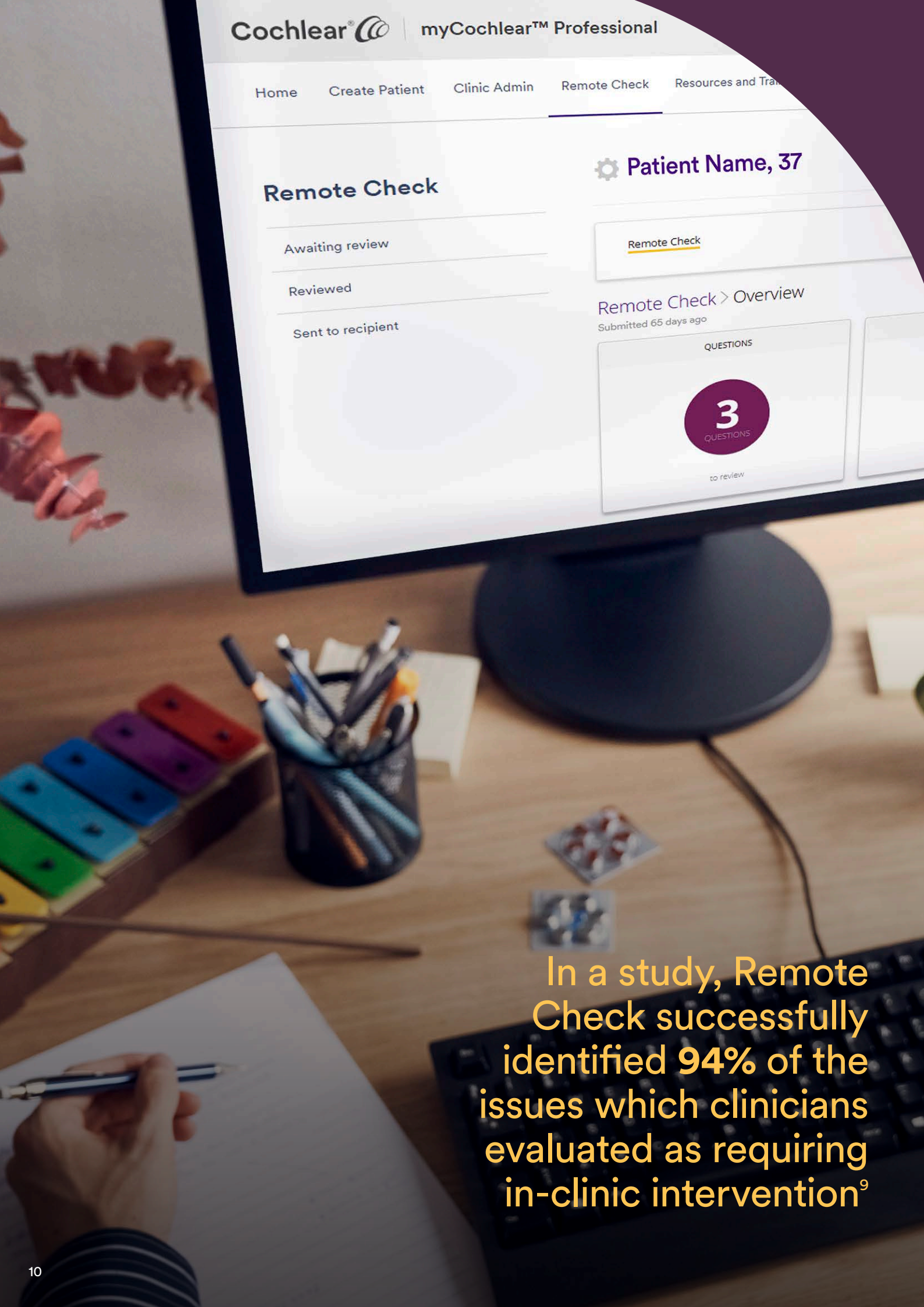
Patient considerations: Any patient may be suitable for a Remote Check, but it may be worth considering the following factors to set them up for success:

- Ability to manage a smartphone and the Nucleus Smart App.
- Capability and motivation for completing activities remotely.
- Availability of others to provide support for Remote Check when needed.

Device considerations: To complete a Remote Check, a patient requires the following:

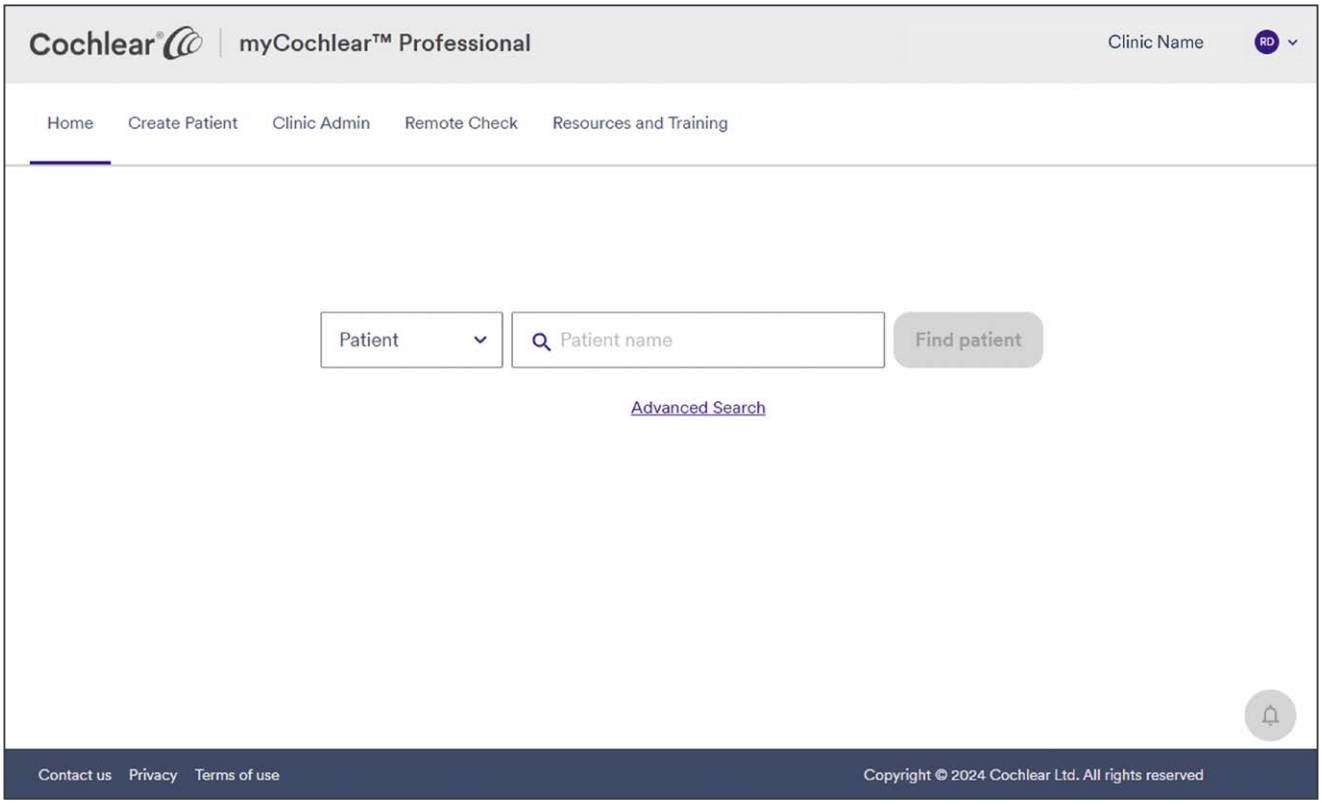
- A Nucleus® 7, Kanso® 2 or later generation Sound Processor paired to the Nucleus Smart App. Devices with an acoustic component and programmed in hybrid mode are not currently supported.
- All implant types other than the Nucleus® CI22M Implant and specialty implants such as an auditory brainstem implant.
- All device configurations (unilateral, bimodal or bilateral). Only the CI side will be directly assessed during a Remote Check and bilateral patients will complete most activities separately for each ear.

Hint: If you are unsure about a patient's capability to complete a Remote Check, invite them to try it at the end of a clinic appointment so you can be there to provide support. Cochlear provides a range of resources to assist and support patients with completing their Remote Checks at home.



In a study, Remote Check successfully identified **94%** of the issues which clinicians evaluated as requiring in-clinic intervention[9]

5. Setting up a Cochlear Account



1. Log into myCochlear Professional portal using the latest version of Google Chrome, Microsoft Edge or Firefox.
2. Select your clinic and then search for the patient you wish to schedule a Remote Check.
3. Check the patient has a Nucleus® 7 (CP1000), Kanso® 2 (CP1150) or newer Sound Processor and that the device is registered to the patient by clicking the 'Devices' tab or add any devices.
4. Check the patient record for a Cochlear account. If they do not have an account set up, simply click 'Create an invite' which will email instructions to the patient. Once the request is sent you can schedule a Remote Check. If the account status is 'Invited' or 'Active' you can schedule a Remote Check.
5. If a caregiver is required to manage Remote Check notifications, add their details to the Carers section. If they do not have an account set up, simply 'Create an invite' which will email instructions to the carer.

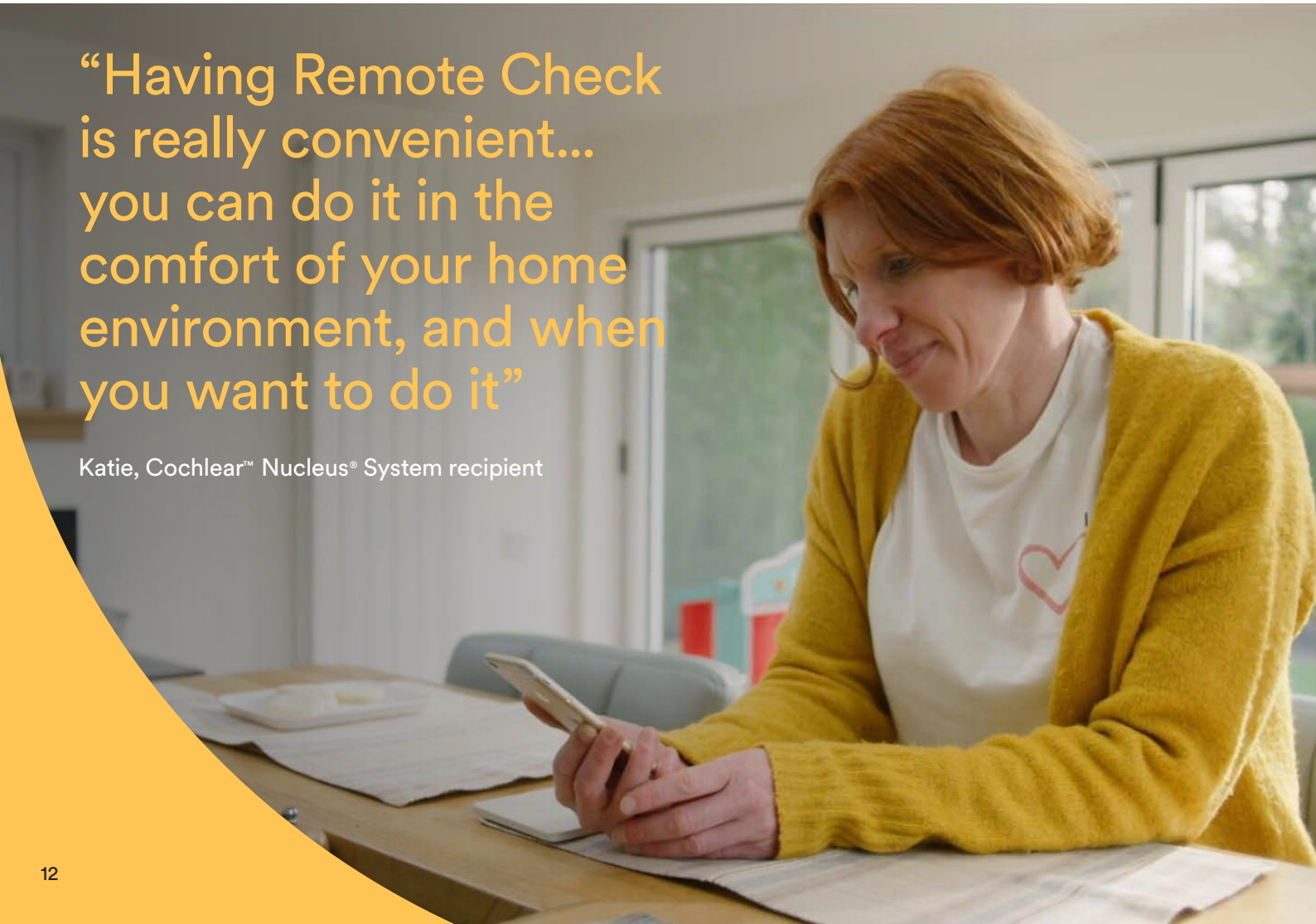
Note: If you have invited a patient to create a Cochlear Account, they will receive an email with instructions to complete the process.

6. Scheduling a Remote Check

Set up and customise a Remote Check in myCochlear Professional using these steps:

1. **Schedule a Remote Check:** Once the Cochlear Account is in an 'Invited' or 'Active' status, go to the Remote Check tab in the patient's record. Select 'Schedule a Remote Check' if this is their first Remote Check, or 'Add' if they have had previous Remote Checks.
2. **Start date:** Select a start date for the Remote Check. Pre-set options of today, 3 months, 6 months, 12 months or a custom date can be chosen. Note that the patient needs to complete the Remote Check within 30 days of the start date.
3. **Customise the Remote Check details:** Choose the Remote Check type as an adult or paediatric check. This will present the appropriate questions for patients or carers. Assign the activities you wish the patient to complete. All activities are selected by default, requiring you to uncheck any tasks not required for the patient to complete. Consider the purpose for the Remote Check and customise accordingly. It is recommended to select all activities for the first check you send to the patient to gain a good understanding of their progress. Usage data and Hardware Health is not customisable and is captured and sent automatically with every check.
4. **Confirm and send:** Select the “Confirm” button. Scheduled Remote Checks will show immediately in the Remote Check menu in the Nucleus Smart App. An email will be sent to the patient when it is time to start their Remote Check.

Tip: You can opt-in to receive email notifications for completed checks awaiting your review. Set up your Notification settings with the 'My Account' section of mCP under 'User details'.



7. Completing a Remote Check

At the time of a scheduled Remote Check, the patient receives a smartphone notification to complete the activities you have assigned to them. They have 30 days to complete them, with reminders sent with 14 days remaining and 4 days remaining. The steps for patients to complete a Remote Check include:

1. **Select MAP and volume setting:** Patients should choose their preferred MAP and volume setting before starting their Remote Check.

   Note: During some Remote Check activities, the sound processor is switched to Hearing Test mode which turns off the processor microphones to block ambient noise. SCAN and SmartSound® iQ (SSiQ) settings will also be overridden, and the accessory mixing ratio set to 100% streaming. Once these activities are completed or if the patient pauses their Remote Check for some time, all original processor settings are restored.

2. **Progress through each activity:** Patients follow the clear, step-by-step instructions within the app to complete assigned activities.

   Note: Some screens require the patient to scroll down to read all the instructions and advance to the next step.

   If the patient's smartphone language setting is supported by Remote Check, then text and audio throughout the process will be presented in that language. If the language setting is not supported, then English is used.

3. **Submit check results:** When completed, results are automatically sent via secure cloud technology to mCP. Patients do not see their Remote Check results in the app.

   Note: If a patient is unable to complete their Remote Check, guidance is provided in the app to help resolve technical issues. Incomplete checks may become overdue requiring your intervention.

4. **Review clinician feedback:** Before finalising a Remote Check, you can message back and forth with your patient in mCP to request more information or send further instructions. Exchanged messages are saved with the Remote Check results. Once you finalise the Remote Check, the patient is notified of the outcome and can read any final messages from you. The patient is not able to repeat or complete another Remote Check until one is scheduled by you.

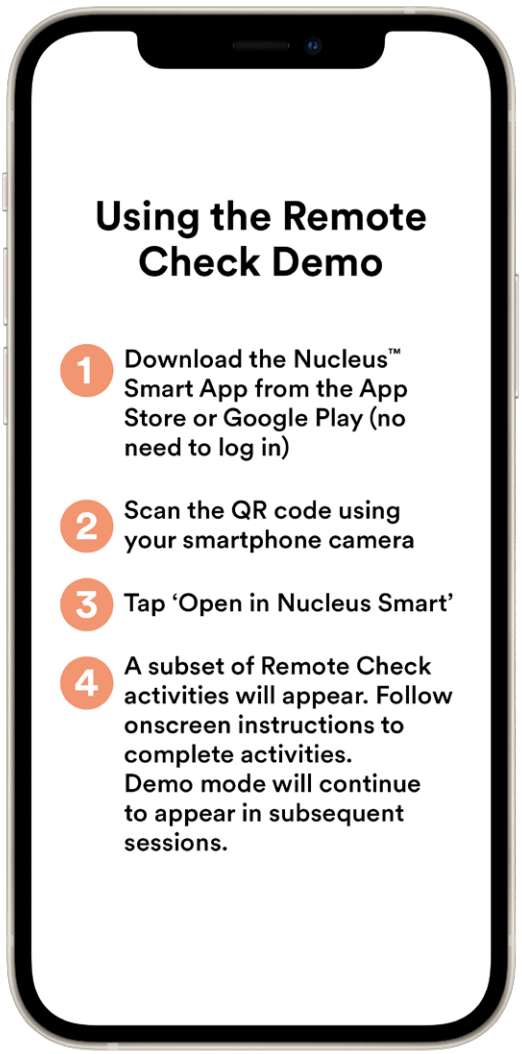
   Note: Cochlear has a range of resources available to give patients information about how Remote Check works, and to have the confidence to give it a go.

In a 2024 study of Remote Check usage published in the American Journal of Otolaryngology, **9 out of 10** patients were satisfied with their experience.[3]

A **Remote Check demo** feature is available so you can experience some of the Remote Check activities which your patients will be doing. This demo is intended for clinician use only. Scan the QR code below to access the Remote Check demo mode within the Nucleus Smart App on an Apple or Android™ device. You do not require a Cochlear Account.

QR scan

SCAN ME







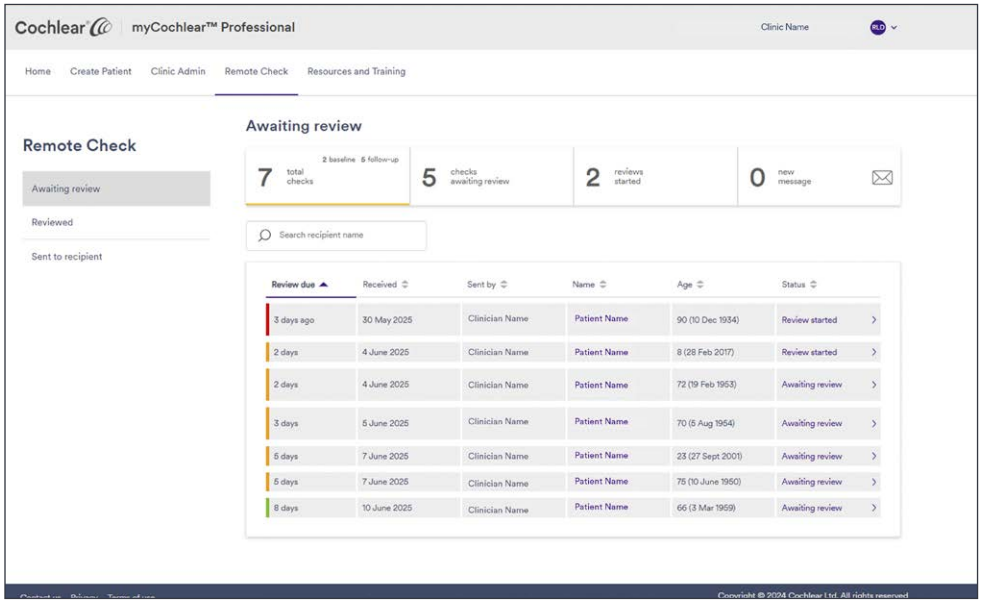
8. Reviewing Remote Check results

The myCochlear Professional portal includes a range of features to assist you with timely review of Remote Check results. Below are the steps for reviewing a Remote Check.

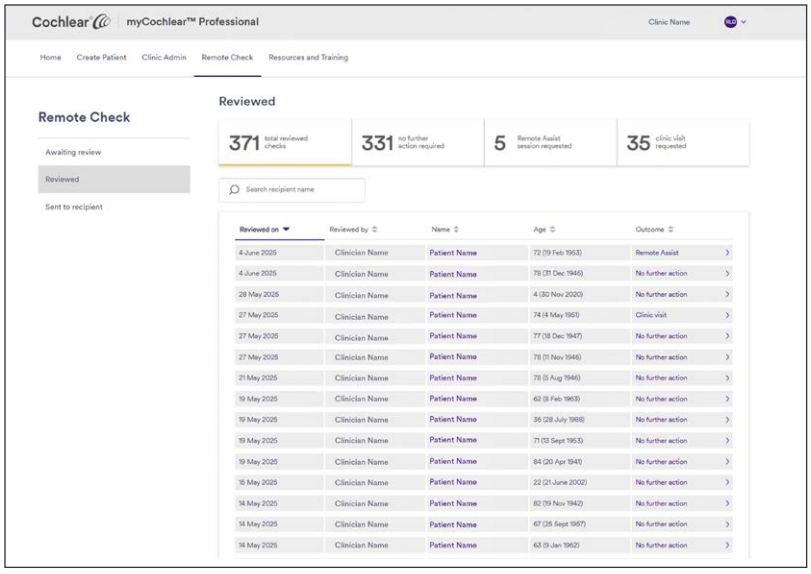
Step 1: Access Remote Check results

Login in to mCP and select ‘Remote Check’ on the top navigation menu. Three options will appear:

1. **Awaiting review:** Select this view to see all Remote Checks which are waiting for your review. A status summary provides a breakdown of how many reviews have already been started and how many have not. Use the traffic light colours to help you prioritise the order of your reviews. To open and review a check, find the patient’s name, then click the ‘awaiting review’ link in the far-right column. If you have partially completed a review, this link will be labelled as ‘review started.’

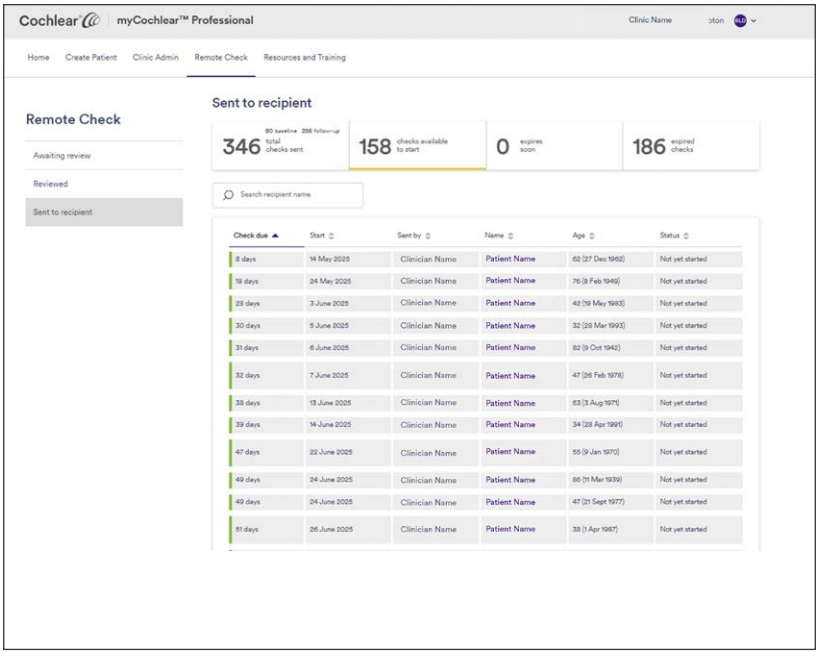


2 **Reviewed:** Select this view to see all checks you have completed. All completed Remote Checks can be found here. A status summary allows you to track the results of all checks including whether a Remote Assist or in-clinic appointment was requested. You can open reviewed checks at any time by filtering the date, recipient or clinician name columns, and then clicking the link in the far-right column.



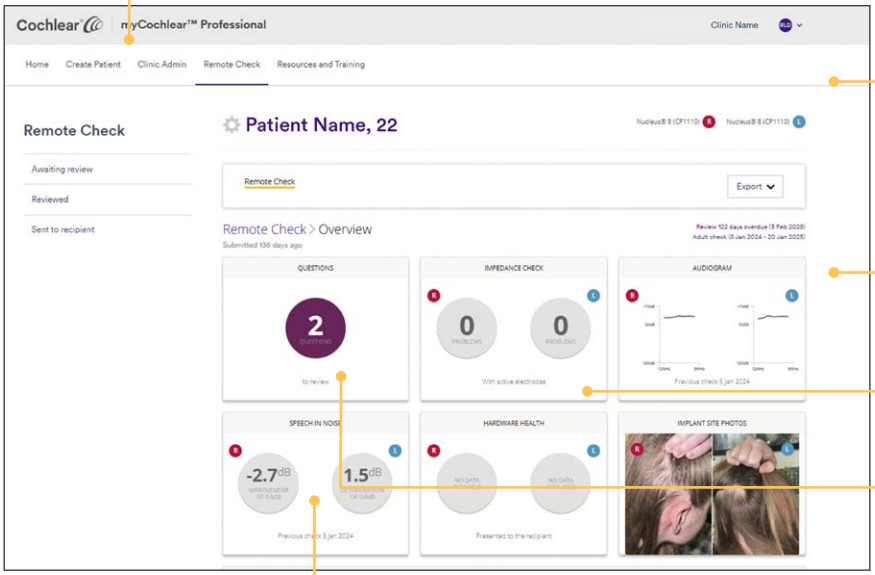
3 **Sent to recipient:** Select this view to see a list of all checks which have been sent to patients. A status summary indicates how many patients have checks available to start, are expiring soon, or have expired. A traffic light system provides visual indication of the progress of those checks. Red indicates a check has now expired, orange indicates the Remote Check should be completed within the next 1 to 14 days, while green indicates the patient has 16 to 30 days to complete the Remote Check.

Note: You may wish to send a reminder or follow up directly with any patient that has a Remote Check that is about to expire. You can find these in the 'expires soon' tab.



Step 2: Open the Patient Dashboard

When you open a Remote Check from the ‘Awaiting review’ list, results are displayed on an interactive patient dashboard as shown below.



The dashboard displays a summary of each activity. Click on each activity to open a more detailed view of the result.

Use the 'Export' option to print a full Remote Check report or to export raw data as a CSV file for analysis in other applications.

For most activities, a comparison to previous results is displayed. Activities must be completed in two consecutive checks for comparisons to be made.

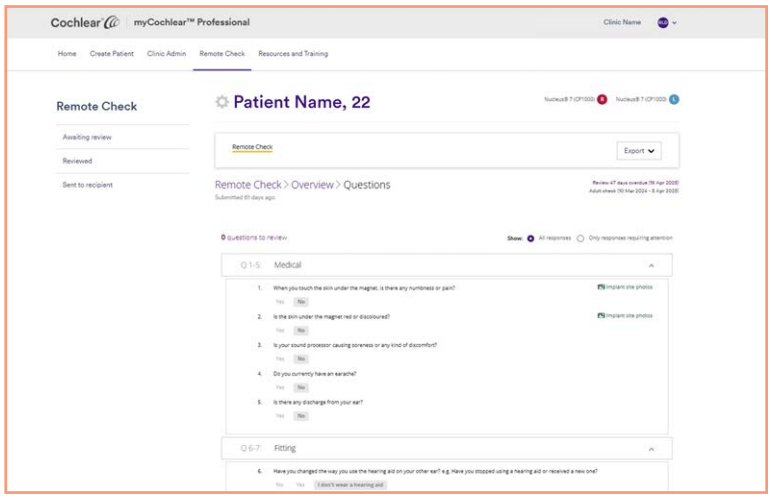
For bilateral patients, results are displayed for each ear.

Purple visual highlights are used to flag any changes requiring closer review.

Activities not assigned for this check are displayed in grey.

Step 3: Review results

1 **Questions:** The dashboard displays the number of questions with identified issues or changes. Click the 'Questions' box to open and scroll through individual responses. Use your judgement to determine whether any clinical action is required. Enter clinical notes as required. To print only the questionnaire responses, click ‘Export > Print’. Click ‘Done’ or ‘Overview’ to return to the main dashboard.



Examples of question responses in Remote Check

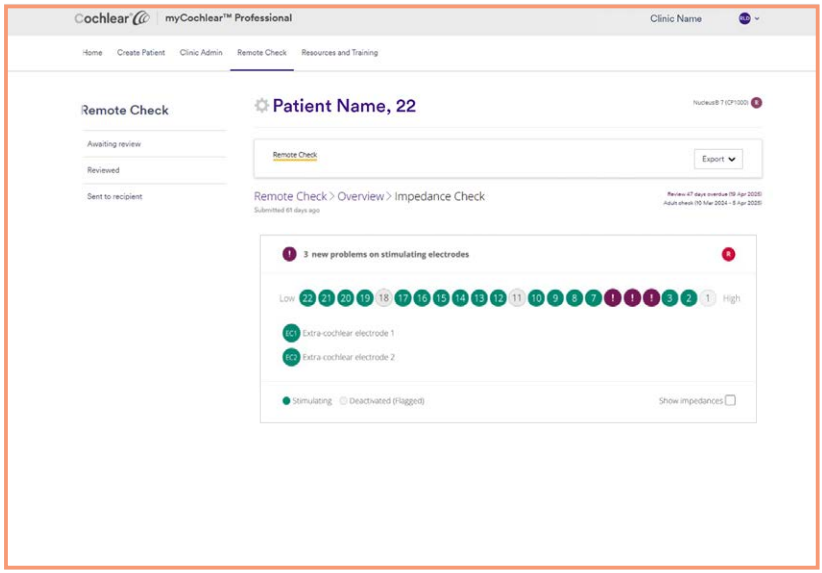
Clinical outcomes with SSQ12:

The SSQ12 (the short form of the SSQ49) has been shown to be suitable for clinical use with scores stabilising by 12 months post-implant in most patients.[2,6,8] SSQ in Remote Check uses an anchored format, enabling you and your patient to compare responses to the previous check. For CI recipients, a difference in SSQ ratings between test intervals of > 1 step on the scale is considered to be clinically important.[6,8]

2 **Impedances:** The dashboard displays the number of identified impedance issues.

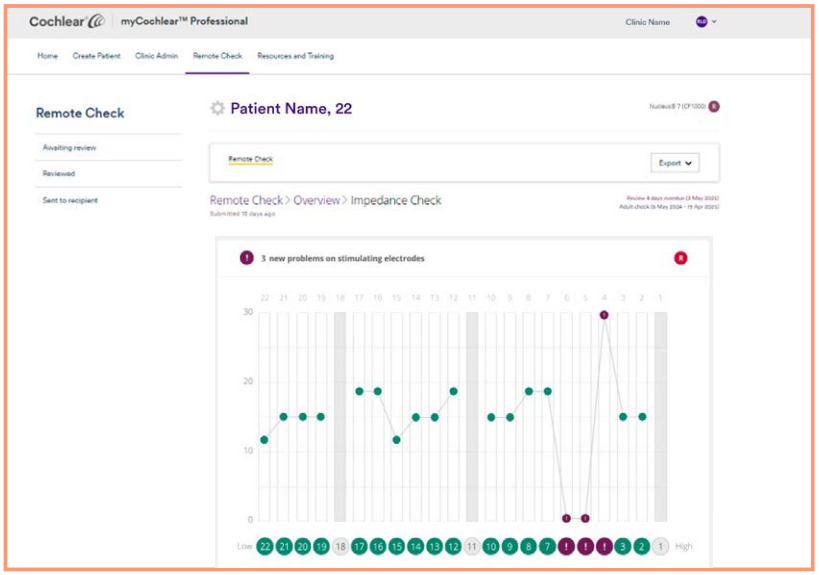
Note: A 'no data' message indicates impedances were not measured due to a coil off at the time of measurement, implant ID disabled or accidental enrolment of a non-supported implant type (such as a Nucleus® 22 Series Implant).

Enter clinical notes as required. To print only the impedance results, click 'Export > Print'. Click 'Done' or 'Overview' to return to the main dashboard.



Click the Impedance Check box to open and view impedance information for each ear (displayed for Common Ground mode). Electrodes with normal impedance ranges are shown in green while new electrodes with short or open circuits are shown in purple. Extracochlear MP1 or MP2 faults will also be displayed in purple.

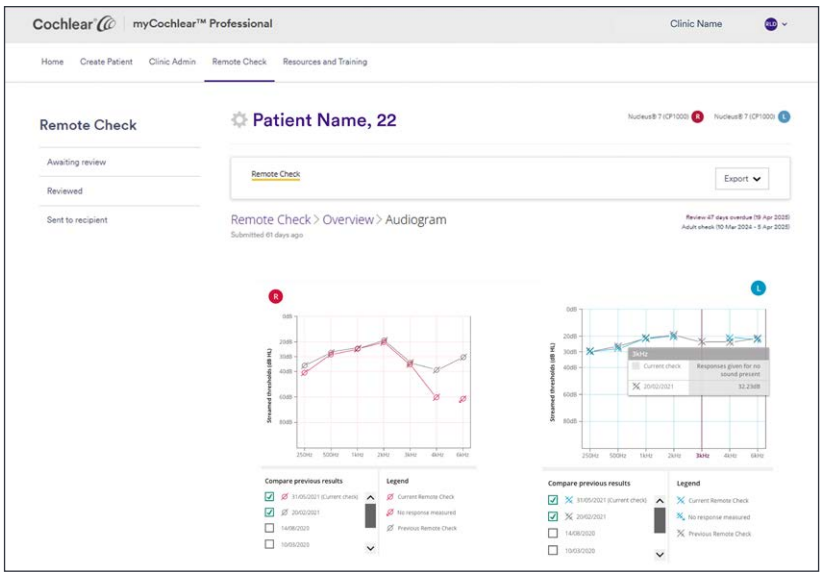
Click 'Show impedances' to view a graph of the individual impedance values.



On the impedance graph, hover the mouse over a channel to display the measured impedance value.

3 **Audiogram (ATT):** The dashboard displays the aided audiogram for each ear acquired through direct streaming. Click the Audiogram box to open and view the aided thresholds for each ear. Thresholds are plotted in dB HL. Previously measured thresholds are displayed in grey.

Note: You can compare thresholds to those obtained in a previous check by selecting from the available date ranges listed.



Hover the mouse over a threshold to see the exact measured value. You will need to review the overall threshold levels and assess whether changes from previous measurements are clinically significant. Best practice is for ATT results to be below 30 dB.[10]

Note: Avoid directly comparing Remote Check thresholds to those obtained via the free-field due to differences in equipment, calibration and testing paradigms.

Enter clinical notes as required. To print audiogram results click 'Export > Print'. Click 'Done' or 'Overview' to return to the dashboard.

Clinical outcomes with ATT:

Mean thresholds: Remote Check ATT is patient-driven, so testing is optimised for measurement accuracy and test-retest reliability. This increases the certainty of patients responding near threshold, reflected in lower aided thresholds than typically seen when assessed in a sound booth. In a study comparing aided audiograms streamed via Remote Check with those measured by a clinician in a sound booth, the mean thresholds obtained with Remote Check were on average 6.7 dB lower overall than mean thresholds obtained in the free-field condition.[12]

No responses: To avoid uncomfortable stimulation during ATT, the maximum stimulation level presented is 62 dB SPL. If three 'no responses' occur at this maximum level, then a 'no response' symbol is plotted on the audiogram at that frequency.

Missing thresholds: A 'gap' between thresholds on the audiogram occurs when that threshold could not be reliably measured. Hover your mouse over the audiogram frequency with the absent threshold to access more information. The following response patterns will be classified by the app as being unreliable: (1) three responses given when no sound is present (2) responses given below the minimum stimulation level of 10 dB HL or (3) no threshold reached before the maximum of 30 attempts.

4 **Speech in Noise (DTT):** The dashboard displays the Speech in Noise score obtained for the digit triplet test, reported as a speech reception threshold. The change in the dB SNR score compared with the previous check is also provided. You will need to review the DTT score and assess whether any changes are clinically significant for the individual. The critical difference for DTT checks is 2.6 dB, meaning that if there is a change in score above this, then this likely represents a true change in performance.[11] If patient responses were unreliable during the DTT, the dashboard displays 'no result available' in purple.

Clinical outcomes with DTT:

Studies show that the DTT is a reliable and repeatable measure of speech in noise performance that correlates well to other speech performance tests commonly performed in clinic such as CNC words[11] and BKB sentences.[4] The DTT can be used to reliably monitor your patient's performance in noise over time.[11]

5 **Hardware Health:** The dashboard displays the number of detected hardware issues in purple. Hardware alerts are generally rare, and in many cases not detectable by patients. Enter clinical notes as required. To print a copy of the results click 'Export > Print'. Click 'Done' to return to the dashboard.

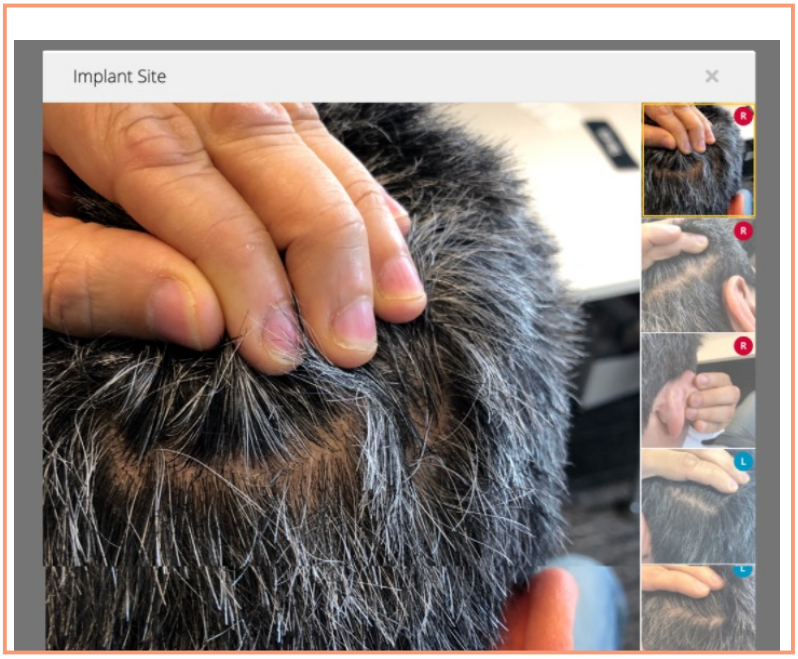
Click the Hardware Health box to review more information. A microphone error indicates a fault with the microphone(s) where the level of audio into the microphone is too low. A sound processor error indicates a processor firmware issue, although these issues most often resolve spontaneously after turning the sound processor off and on.

Note: Microphone or persistent processor errors may require closer investigation of the sound processor.

6 **Implant site photos:** The dashboard displays the implant site photos taken by the patient. Scroll through each photo using the right or left arrows.



Click the Photos box to review photos using a magnified view. Enter clinical notes as required, then click ‘Done’ to return to the dashboard.



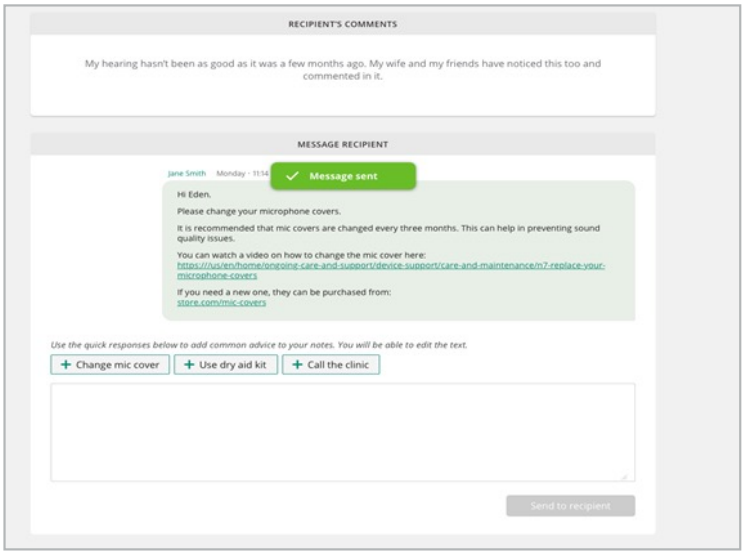
Note: Medical issues identified through Remote Check should be reported in the same way as those identified during in-clinic appointments.

Step 4: Review recipient comments

Once the dashboard activities have been assessed, scroll below to read any comments sent to you by the patient.

Note: Encourage patients to send you any questions they might want to ask you or share any concerns not captured in the Remote Check. For example, they started to lose attention before finishing their Remote Check.

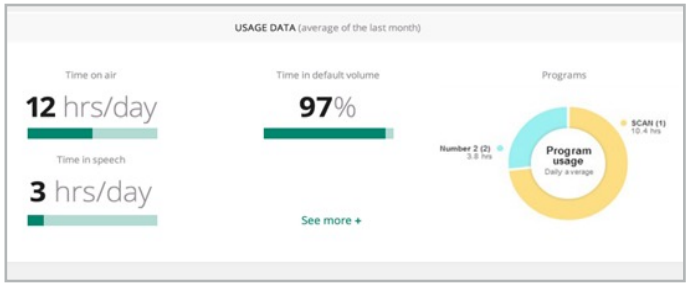
You can respond to these comments using the Remote Check 'Message recipient' feature in the same way you would send a regular text. Your patient will receive your message in the Nucleus Smart App and can reply directly back to you. Additional messages can be sent back and forth until the Remote Check is finalised. Exchanged messages are saved with the Remote Check results.





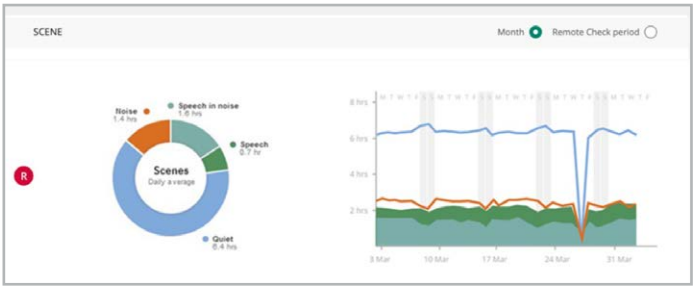
Step 5: Review usage data

Continue scrolling down to access usage data displayed in the form of datalogs. Remote Check offers a convenient way for you to access datalogs between clinic visits. Datalogs are similar to those available in Custom Sound® Pro fitting software including time on air, everyday listening environments, program and accessory use, volume and sensitivity changes and ForwardFocus use.



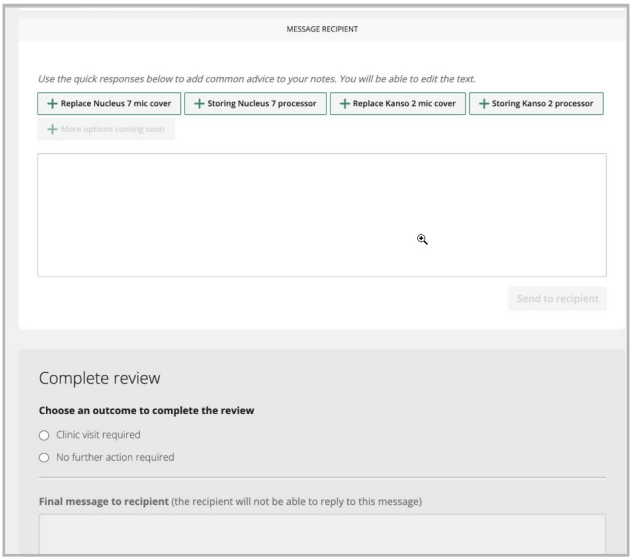
Note: Unlike Custom Sound Pro fitting software which shows an aggregated view of usage data, Remote Check displays detailed, daily usage data across time. As Remote Check captures data directly from the Nucleus® Smart App, encourage patients to place their sound processor in range with the app at least twice per day.

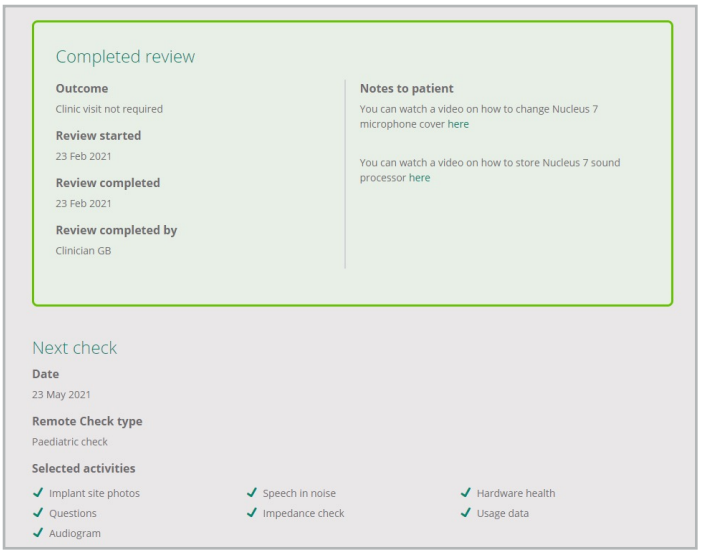
Click ‘see more’ for detailed datalog information viewed for the past month or across the entire Remote Check period.



Step 6: Finalise the Remote Check

Scroll to the bottom of the page to finalise the check and select an outcome from the options listed. Enter notes or instructions for the patient using the free text field. Use the Quick links below the text box to insert pre-formatted responses or links to content on common help topics. Click ‘Complete’ to finalise the check. A ‘Completed review’ confirmation will appear. If another check has been scheduled, those details will appear below the confirmation. You can schedule another Remote Check now or wait and do it at a later time. Return to the Remote Check menu to review another check.

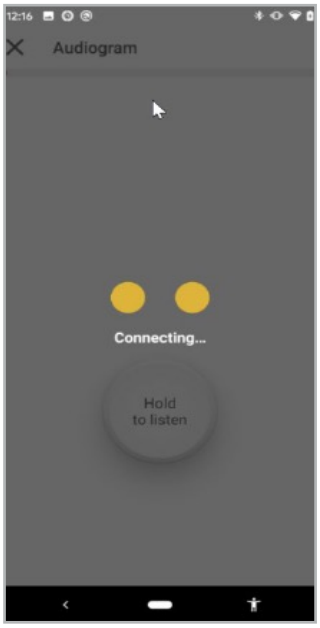


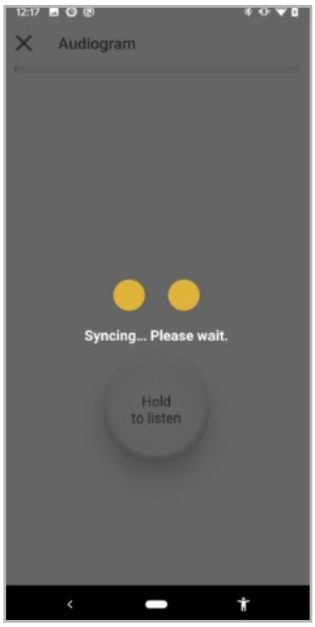


9. Troubleshooting

Remote Check provides guidance in the app to help patients resolve connection or streaming issues. If errors occur, patients will receive notifications with information on the error type.

Patients using Android™ smartphones may occasionally experience a loss of connection during Remote Check. In this instance, the 'connecting' and 'syncing' screens will be displayed. If the Nucleus Smart App cannot re-establish connection, a 'failed to connect' message will be displayed.





Note: To minimise connection issues, advise patients to complete their Remote Check in a location without Bluetooth® interference.

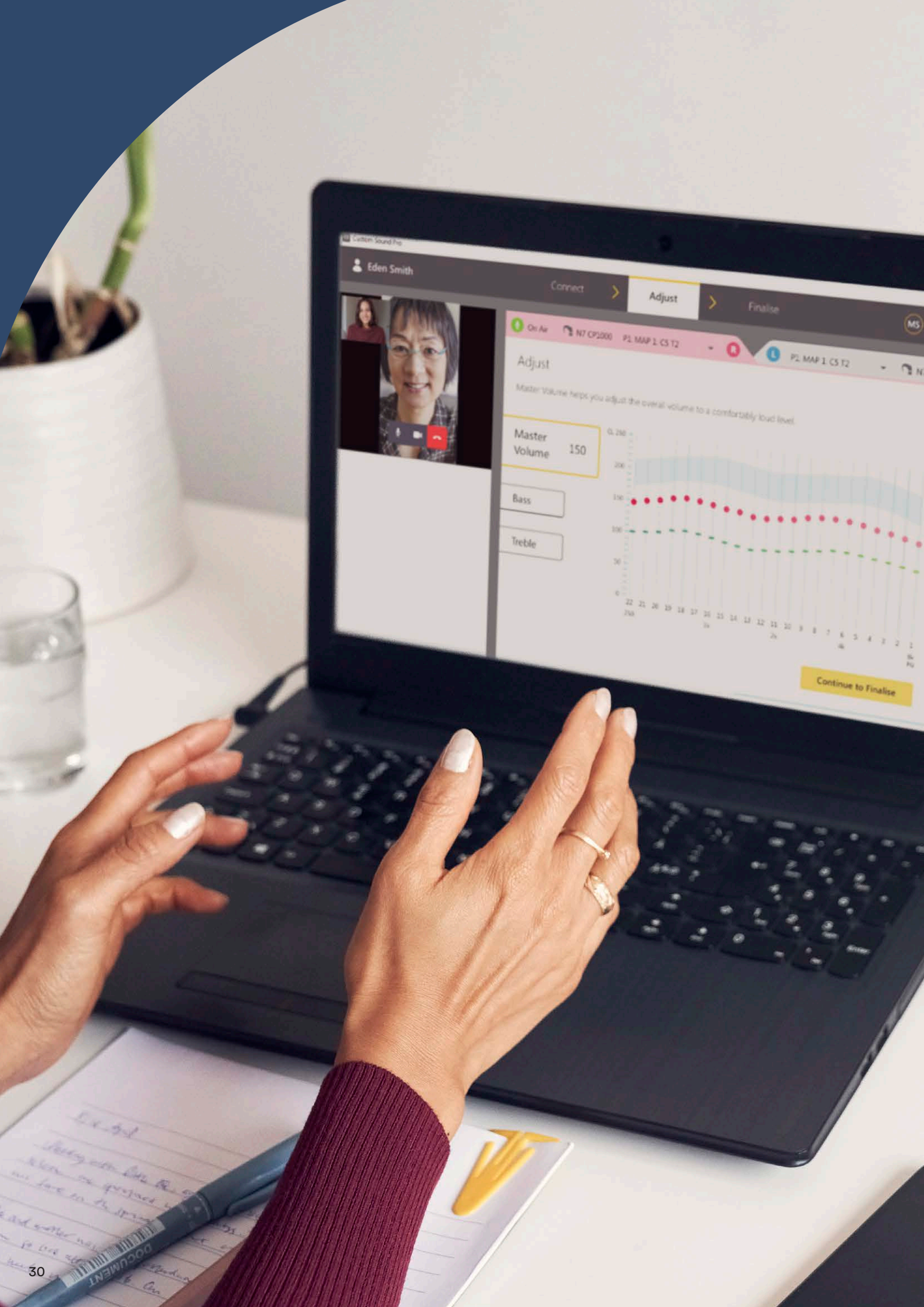


10. Remote Check common questions

Below are some common questions about Remote Check. Additional questions are included in the Remote Check Professional FAQ.

Who can access and review a patient's Remote Check results in mCP?	Every clinician within a clinic who has an assigned login to mCP can retrieve and review Remote Check results for any patient enrolled in their associated clinic. The 'reviewed' tab in Remote Check will show which clinician completed the review for each patient.
What happens if a patient does not complete their Remote Check and it becomes overdue?	If a patient does not complete a Remote Check within 30 days after the schedule start date, it will expire and will be displayed in mCP with a red indicator. The check can no longer be completed once it has expired. Simply schedule a new Remote Check for the patient.
What happens if I forget to complete a review?	Remote Checks waiting longer than 14 days for your review in mCP will be displayed with a red indicator. You can still review the check after this time as well as schedule new checks. One tip to ensure patients are not waiting too long to understand the outcome of their Remote Check is to set aside a regular time to review checks that have been submitted.
What happens if my patient gets interrupted during their Remote Check?	Remote Check saves the progress as it goes along, so a patient can take a break or answer a phone call if they need to. When they restart Remote Check, they may need to repeat some activities depending on where they got to when the check was paused.
How do I reschedule an existing Remote Check?	You can reschedule a Remote Check by clicking on the 3 dots at the end of the Remote Check in the patients record and selecting Edit. This can be done as long as the patient has not started the check or it has expired.
Do sound processor or MAP settings affect Remote Check results?	The MAP selected for use during Remote Check and MAP-related settings like volume, Master Volume, Bass and Treble do impact the streaming of Remote Check performance tests. It's important to remind patients to complete their check using their preferred MAP and processor settings used daily, especially the volume setting.

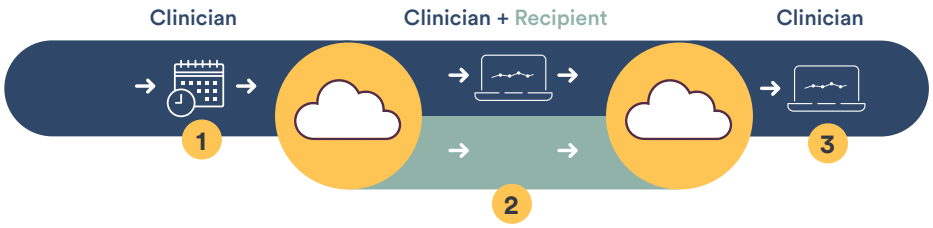
What happens if my patient transfers to another clinic?	Patients can be associated with multiple clinics. If the patient transfers elsewhere, the new clinic can associate itself with the patient and schedule Remote Checks. Note, each clinic will only be able to see Remote Check activity they have sent.
What does a patient hear during the Audiogram test?	At the start of ATT, Remote Check goes into Hearing test mode and disables the external microphones. The app then streams puretone signals at different frequencies and loudness to the patient's sound processor, which the patient hears as a series of beeps. Completing ATT is similar to performing threshold measurements in the fitting software, except that it is patient-driven.
How does DTT compare to other noise tests?	DTT has been used routinely for hearing screening for more than 15 years. Studies have shown that DTT results are highly correlated with clinic BKB sentence scores in quiet and adaptive noise as well as CNC word scores.[11] Clinics around the world are using Remote Check to monitor clinical performance of their patients over time.
How are Remote Check software updates delivered?	From time to time, software updates will become available for mCP and the Nucleus® Smart App. Updates to mCP are automatic and do not require any action from you. Updates to the Nucleus Smart App can be downloaded by the patient from the Apple App store or Google Play store.
Is Remote Check information secure?	Cochlear is committed to protecting the privacy of customer information in accordance with applicable privacy and data protection laws. We use high-level encryption techniques to ensure data security, and personal information is handled in accordance with our Privacy Policy available for viewing at www.cochlear.com/corporate/privacy-current/en


Eden Smith
Connect
Adjust
Finalise
On Air
N7 CP1000
P1. MAP 1. CS T2
P2. MAP 1. CS T2
Adjust
Master Volume helps you adjust the overall volume to a comfortably loud level.
Master Volume
150
Bass
Treble
Continue to Finalise

Getting started with Cochlear Remote Assist

Remote Assist allows you to have live, pre-scheduled video appointments with your patients using the Nucleus® Smart App and Custom Sound® Pro fitting software. With Remote Assist you can also make global adjustments directly to the patient's sound processor to optimise MAP comfort and sound quality.

1. How Remote Assist works



1. **Schedule a Remote Assist appointment:** Use your clinic's regular booking process (not mCP) to schedule the Remote Assist appointment and send a reminder to your patient.
2. **Complete a Remote Assist appointment:** At the scheduled appointment time, both the clinician and patient join the Remote Assist appointment from their respective devices and interact virtually to complete session objectives. The clinician can connect remotely to the patient's sound processor from Custom Sound Pro fitting software to make minor MAP or processor adjustments.
3. **End Remote Assist:** When all activities have been completed, the clinician and patient hang up to exit the Remote Assist session. Any MAP changes or session notes are saved to the Custom Sound Pro fitting software database, but no other data is shared and stored from the Remote Assist session.

2. Remote Assist features

You can interact with patients during a Remote Assist session using video, audio and chat features. Without requiring any extra equipment you can also connect to the patient's sound processor remotely to make MAP adjustments. Sound processor settings, such as ForwardFocus and mySmartSound™ settings can also be enabled or disabled by you during a Remote Assist session.

3. When to use Remote Assist

Remote Assist may be used for a variety of clinical purposes including:

- Real-time counselling sessions to complement or substitute a routine in-clinic check
- Troubleshooting and patient triage when something unexpected happens or the patient requests assistance
- Remote management of long-distance patients
- Follow up after a Remote Check, fitting appointment, or sound processor upgrade
- Remote activation or deactivation of sound processor settings

4. Choosing patients for Remote Assist

Here are some patient and device factors to consider when you are selecting patients for a Remote Assist session:

Device considerations

Patients with all implant types, and those using unilateral, bilateral and bimodal device configurations, can join a Remote Assist session for counselling and support. However, remote MAP adjustments will require a Nucleus® Nexa™ CI1000 Series, Profile™ Plus CI600 Series, Profile CI500 Series, or Nucleus CI24RE Series (including CI422) Implant with a Nucleus 7, Kanso® 2 or later Sound Processor.

Patient Considerations

Remote Assist is suitable for use with adults and children. Examples of where Remote Assist has successfully been utilised are:

- For patients with family or loved ones who want to be involved in care, but can't attend an in-clinic appointment
- For busy adults who aren't able to take time off work
- For children so that they don't have to miss school
- For patients who live a significant distance away from a clinic
- When health concerns make travel difficult
- Patients who have a preference for remote care

If you're unsure about offering a remote session with a patient, invite them to try it at the end of an in-clinic visit so you are there to provide guidance and support.

Note: During the Remote Assist session, your voice will not be directly streamed to the patient's sound processor rather it will be heard by the patient through the smartphone loudspeaker. This is to enable MAP adjustments to be made with live speech and in their own environment.


9:41
mute
camera
chat
5
end

5. Setting up a Remote Assist session

Prepare for a live Remote Assist session using these steps:

1. **Cochlear Account:** Check the patient record for a Cochlear account in mCP. If they do not have an account set up, simply click 'Create an invite' which will email instructions to the patient. If the account status is 'Invited' or 'Active' you can conduct a Remote Assist. They do not need to have completed a Remote Check, however Remote Check results may assist with your clinical management. Remote Assist and Remote Check will appear in the Nucleus Smart App menu.
2. **Schedule the appointment:** Use your clinic's regular booking process to schedule the Remote Assist appointment with your patient. You cannot schedule Remote Assist appointments using mCP. You may wish to send an appointment confirmation to the patient closer to the scheduled date. This could include a reminder for them to not to expect a call or meeting link to be shared by you and to join the call directly through the Nucleus Smart App menu.
3. **Prepare your patient:** Some tips for preparing patients ahead of a Remote Assist session include:



Provide support materials for them to have on hand during the session. Include a loudness scaling chart if you are planning to make remote MAP adjustments.



Remind patients to fully charge their smartphone and sound processor before the session.



Encourage listening practice with audio coming through smartphone speakers rather than direct streaming if the patient is worried about doing this. Having someone on standby for the first Remote Assist session may increase the patient's confidence to give video calling a go.



Suggest use of a phone holder if available or instruct the patient to prop the phone up so their hands are free and the video remains steady. Having paper and a pencil handy will allow them to note down instructions or information given by you during the session.



Have a backup communication plan in place in case a patient is unable to connect to the Remote Assist session or experiences technical issues.

4. **Check your equipment:** If you are planning to make MAP or sound processor adjustments during the session, check the patient's implant, MAP and processor firmware compatibility ahead of time.

Note: To connect to Remote Assist, sound processors must have been previously connected to Custom Sound Pro fitting software during a recent clinic visit to load the correct processor firmware. Go to the patient dashboard and click 'Session history' to confirm that the processor has been previously connected to Custom Sound Pro fitting software.



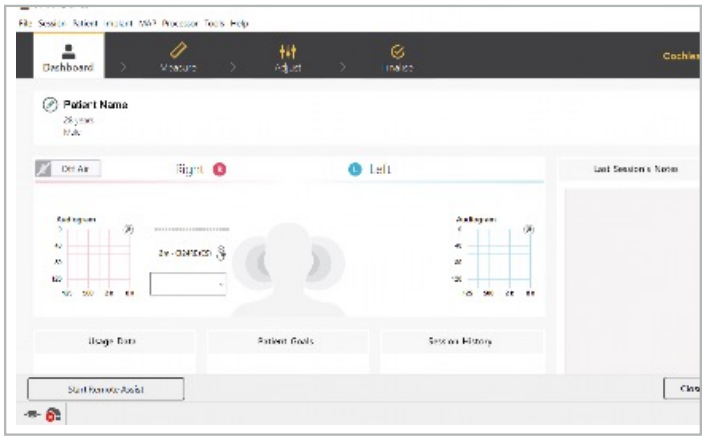
6. Completing a Remote Assist session

These are the steps for completing a live Remote Assist appointment:

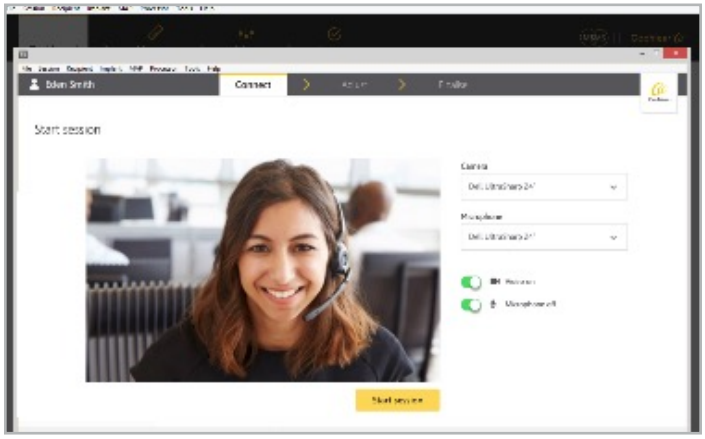
1. **Prepare your space:** Optimise your space, seating and lighting so your patient will clearly see you during the Remote Assist session. Minimise background noise and use a quality microphone to enhance the audio signal.
2. **Join the session:** At the scheduled appointment time, open the patient record in Custom Sound® Pro fitting software and check the session history for notes about the purpose for the Remote Assist session.

1 Click ‘Start Remote Assist’ from the patient dashboard (or click ‘myCochlear Professional Log in’ if you haven't yet logged in). The Remote Assist Connect tab will open.

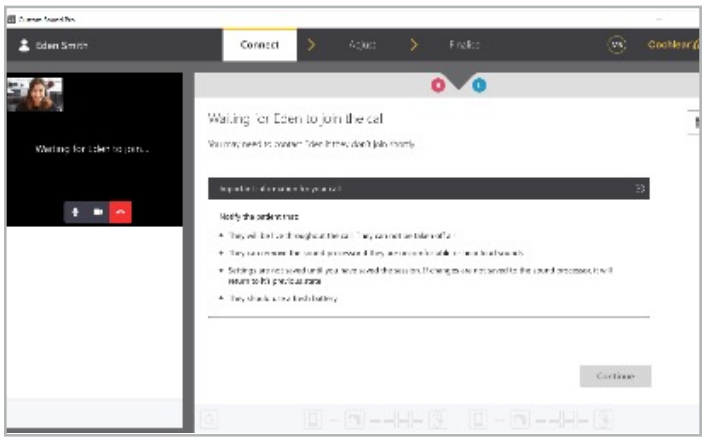
Note: The Remote Assist option is only enabled on the dashboard for patients who have an Active Cochlear Account.



2 Choose your audio and video settings then click ‘Start session.’



3 You will enter and remain in the waiting room until the patient joins the call. If the patient joins before you do, you will be connected immediately to the Remote Assist session.



3. **Check settings:**

   1. Confirm that the patient's smartphone and sound processor are sufficiently charged to last the session. Less than 20% processor battery life is insufficient for a Remote Assist session.

   2. Confirm that your audio is being routed through the smartphone speakers and test the quality of the audio and video feeds for you and your patient. Setting the phone volume to maximum and minimising background noise may improve sound quality. Some patients may rely on lipreading to understand you during the call. Video quality can be affected by a poor internet connection or a low spec clinic computer. This may cause a noticeable lag between the video and audio feeds making lipreading difficult. Patients can maximise internet speed at home by asking family members to avoid streaming entertainment during the Remote Assist session. Follow usual IT guidance to optimise your connection including disconnection of a VPN if permitted.

      Note: If you lose connection at your end during the session, simply rejoin the Remote Assist session again. If the patient loses connection at their end, they can reconnect through the menu in the Nucleus® Smart App.

4. **Complete session objectives and end:** Interact virtually with your patient as you work through the planned objectives for the Remote Assist session. When all activities have been completed and any final instructions provided, you and your patient can hang up and exit the Remote Assist session.



7. Making MAP and sound processor adjustments in Remote Assist

During a Remote Assist session, you have the option of making secure adjustments using the Nucleus Smart App and Bluetooth connection to the sound processor. These include:

- **Global Adjustments -** including Master Volume, Bass and Treble (MVBT) for any compatible MAP retrieved from the patient's sound processor. Datalogs are not uploaded during a Remote Assist session, however you can retrieve patient datalogs saved in Custom Sound Pro fitting software or from Remote Checks reviewed in myCochlear Professional.
- **Remote adjustment of sound processor settings -** including ForwardFocus, mySmartSound™ settings (volume and sensitivity) and MVBT control for Nucleus 7, Kanso® 2 or later Sound Processors. This is a convenient way to enable these features if they have not been enabled in the past. Supporting patients to proactively manage their device settings is a great way for them to optimise their hearing away from the clinic or while on the go.

  Note: If programming tasks other than global adjustments are required (such as creating new MAPs, performing NRT or measuring impedances) then an in-clinic appointment will be required.

How to make adjustments

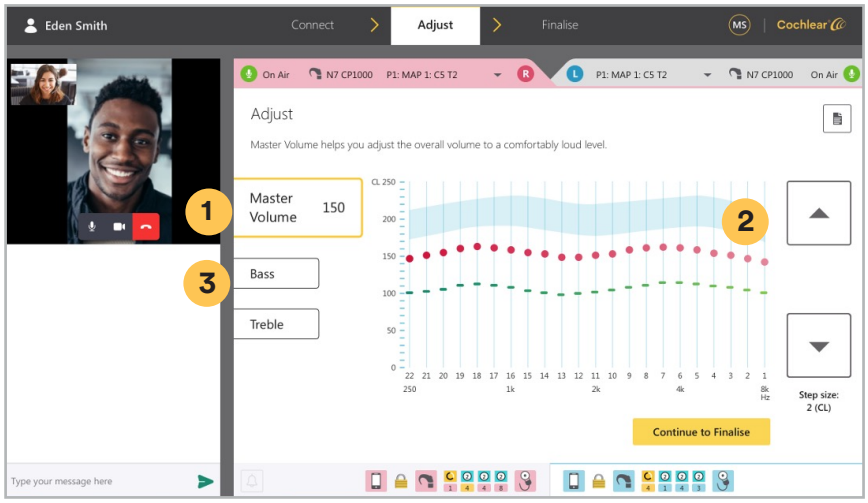
1. **Open the Adjust screen** by clicking 'Connect to sound processor.' Once a remote connection is established, all MAPs saved in the connected sound processor will be uploaded. Only these MAPs can be adjusted during the Remote Assist session.

   Note: To support adjustments, MAPs require monopolar stimulation modes, a compliance measurement, a dynamic range of >10 CLs and uniform pulse widths. MAPs with atypical parameters (including mixed pulse widths, Hybrid mode enabled, or very wide pulse widths) cannot be adjusted remotely. These MAPs will be displayed as read only in the session.

2. **Choose a MAP for adjustment.** Select a MAP from the MAP drop down list. The selected MAP always remains On Air.

   Note: You cannot take a patient Off Air during a Remote Assist session. If levels become uncomfortably loud at any point, the patient should immediately remove their coil while you reduce stimulation levels. For bilateral patients, MAPs on both sides will be live throughout the session. As you start making adjustments, the MAP number will be incremented.

3. **Make adjustments using Master Volume, Bass and Treble.**



1. Click ‘Master Volume’
2. Adjust overall volume using the up and down buttons
3. Click ‘Bass’ or ‘Treble’ and adjust high and low frequency emphasis using up and down buttons. Changes are applied in fixed 2 CL steps to C profiles only or both T and C profiles depending on whether thresholds were previously measured for the MAP. Patients will hear beeps every time an adjustment is made or when changes are saved to the sound processor.

   Note: Increasing levels with MVBT is only permitted when the coil is on the implant. If sound becomes uncomfortably loud, the coil can be removed and MVBT levels decreased to a more comfortable level before the coil is placed back on the patient’s implant.

   For bilateral patients, remove the coil from one side to allow MAP adjustments to be made one ear at a time, then with both devices on, evaluate loudness balance across ears before finalising MAPs.

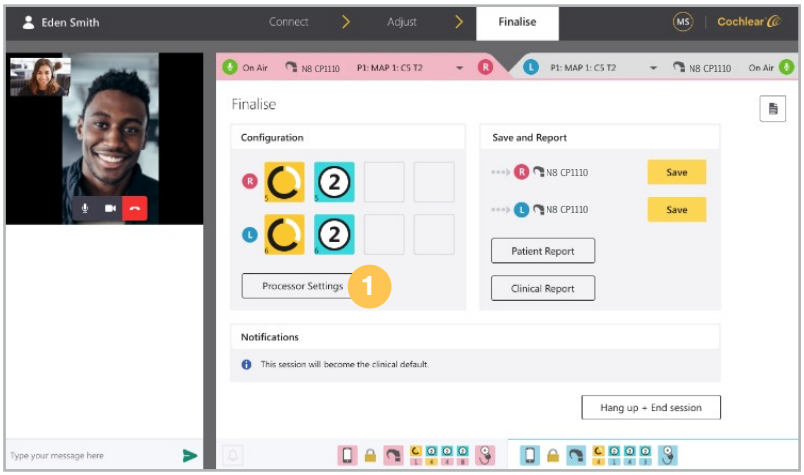
4. **Ask for patient feedback.** Check overall comfort and loudness by asking the patient to listen to their own voice or voices of others around them. In addition, they can use noisy objects around the home (such as keys and cutlery) to also check listening comfort. Comfort sweeps are not available in Remote Assist.

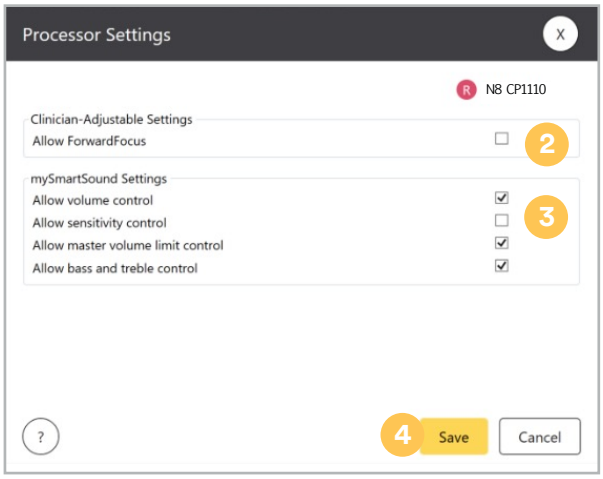
   Note: The volume setting of the smartphone does not affect the stimulation levels delivered by the Nucleus Smart App during adjustments; although it does affect how loud your voice sounds through the phone speakers when the patient is making live loudness judgements.

5. **Monitor compliance.** For later generation implants, an out-of-compliance alert will be displayed when MAP levels approach compliance limits during adjustments. Compliance limits are calculated using the last in-person impedance measurements saved with Custom Sound™ Pro fittting software.

   Note: If pulse width adjustment is required to manage compliance issues, then an in-clinic appointment is required.

6. **Adjust processor settings.** Activate or deactivate processor settings by clicking the 'Continue to Finalise' and selecting processor settings. You cannot configure Program settings during a Remote Assist session.



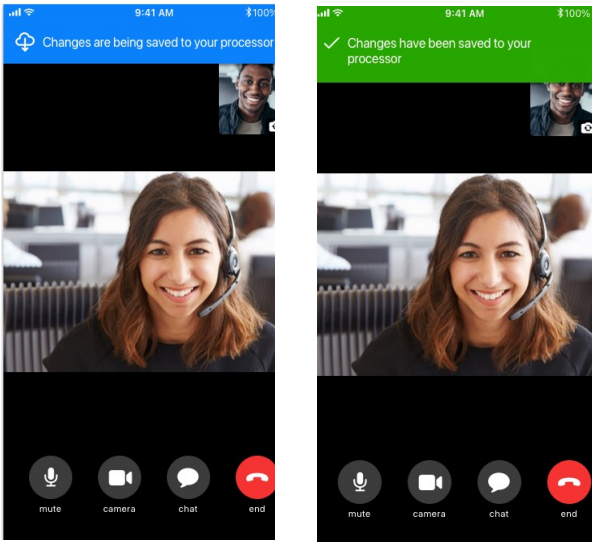


1. In the Finalise screen, click 'Processor settings'
2. Enable or disable ForwardFocus using the tick box
3. Enable or disable mySmartSound settings using the tick boxes
4. Click 'Save' to apply new settings

7. **Save changes.** Up to this point, any MAP adjustments made earlier are not yet saved. Click ‘Save’ on the Finalise screen to save the MAPs to the sound processor and the Custom Sound Pro fitting software database. If changes are not saved, the processor will return to its original state.

   Note: Once a MAP is saved to a program location in the sound processor, it is not possible to go back and save the original MAP during the Remote Assist session.

   Your patient will see a blue notification in the app while changes are being saved to their processor, which changes to green to confirm saving is complete.



8. **End the session.** When you have finished all the desired activities, the patient can leave the call by clicking ‘end.’ They will receive a final notification to restart their sound processors. You can enter session notes or print reports before you exit Remote Assist. Click ‘Hang up and end’ to close the Remote Assist window and return to the Custom Sound Pro fitting software.

   Note: Any session notes entered by you during the Remote Assist session will be saved in the patient’s file within the fitting software.

   A Remote Assist session is logged in the Custom Sound Pro Session History with a ‘Remote Assist’ tag. MAPs that have been saved during a Remote Assist session will be displayed as having been last modified by the ‘Remote Assistant.’

8. Remote Assist common questions

Below are some common questions about Remote Assist. Additional questions are included in the Remote Assist Professional FAQ.

Why is the audio delivered through the smartphone speakers and not streamed directly to the sound processor?	When making global adjustments to MAPs, the patient is required to make sound quality judgements while listening to live speech. This requires audio to be picked up through the sound processor microphones in the same way as when programming in the clinic. Using loudspeaker audio may also provide a clinical check of the sound processor microphones which direct streaming cannot do. In addition, you can be directly heard by others who are present to assist the patient during the Remote Assist appointment.
Why don't I have access to all the full range of programming features found in Custom Sound® Pro fitting software?	During a Remote Assist session, the sound processor is virtually connected using the Nucleus® Smart App, rather than via the usual programming hardware, preventing some tasks such as impedance measurements and parameter adjustments. With Remote Assist, the sound processor permits MVBT adjustments only (up to compliance limits) for currently used MAPs. Creating new MAPs and making individual channel adjustments or parameter changes remotely are not currently supported and will require an in-clinic visit if indicated.
What happens if my patient gets a phone call during the Remote Assist session?	If your patient answers the phone call, you will be unable to see or hear them until they disconnect from the phone call. If answering a call is necessary, instruct the patient to exit Remote Assist first before answering, to avoid any streaming issues. You should remain in the session. Once the phone call is ended the patient should rejoin the Remote Assist session through the app menu.
What happens if the patient moves out of range of the app during the Remote Assist call (for example, to use the bathroom)?	If the coil is removed or the processor is disconnected/goes out of range from the app during adjustments, a warning is displayed. No further adjustments can be made until the connection is re-established. Any MAP changes prior to losing connection will remain, however if the sound processor loses power or restarts, then changes may be lost requiring adjustments to be remeasured.
Are keyboard shortcuts available during a Remote Assist session?	The keyboard shortcuts used with Custom Sound Pro fitting software are not currently available when connected to a Remote Assist session, but are being considered for a future release.

Is it safe to use Remote Assist with my patients?	During a Remote Assist session, all connections are secure and use the same approved safety mechanisms which are in place when patients adjust Nucleus Smart App settings themselves.If the patient experiences loudness discomfort when remote MAP adjustments are made, instruct them to immediately remove the sound processor from their head.
Is Remote Assist technology secure?	Cochlear is committed to protecting the privacy of customer information in accordance with applicable privacy and data protection laws. Chat messages exchanged during a Remote Assist session are not saved. Personal information is handled in accordance with our Privacy Policy available for viewing at www.cochlear.com/corporate/privacy-current/en



Counselling patients about Remote Care

Some patients may lack the confidence to try a virtual care option but when they do use it, 9/10 say they were satisfied with the experience.[3] Identifying and addressing underlying patient concerns upfront may encourage more patients to give it a go. Below are concerns sometimes raised by patients when being introduced to Remote Care, together with some counselling ideas to assist you with your responses.



Concern

Lacking confidence with using a smartphone or app

Counselling suggestions

- Share Remote Care 'how-to' videos and user guides

For Remote Check:

- Customise Remote Check tasks by patient capability and need
- Remind patients to use inbuilt instructions and app guidance
- Invite patients or carers to try a baseline check while they are in-clinic or demonstrate Remote Check using your smartphone demo
- Share data: In a Remote Check study, over 80% of participants found the remote hearing tests easy to complete[12]



Concern

Fearing a lower quality of care compared to in-clinic visits

Counselling suggestions

- Give a reminder that Remote Care is an addition to the care that they already receive and is a great way to keep in touch and monitor progress in between sessions in-person. Reassure them that clinic visits can still be arranged when it's required
- Remind patients that receiving care remotely and in a familiar setting may avoid travel fatigue and stress, allowing patients to be assessed while feeling their best

For Remote Check:

- Reassure that Remote Check provides similar information to in-clinic tests and sometimes additional information not covered during a face-to-face appointment
- Share data: Remote Check studies show that 77% of participants are satisfied with remote testing being used to determine clinical intervention[9] and can increase patient confidence that their clinician is monitoring their progress even when they are not visiting the clinic regularly[5]



Concern

Data privacy and security

Counselling suggestions

- Discuss patient consent required during enrolment and that security measures are in place to prevent unauthorised or unlawful processing of Remote Care data
- Give a reminder that Remote Check data is only shared with the clinic(s) where the patient has been enrolled and only with clinicians associated to that clinic
- Share the consumer data privacy brochure or direct patients to Cochlear's privacy notice at www.cochlear.com/privacy

Patient benefits of receiving virtual care

Talking about the potential benefits of receiving care remotely with your patients may increase Remote Care enrolments in your clinic. Some of the patient benefits of Remote Care include:

1. Care from the convenience of home requiring less time off work/school or reliance on others to bring them to appointments
2. Savings on time and travel to healthcare facilities
3. Accessible hearing health monitoring with you, their trusted clinician
4. Real world progress tracking without the stresses of travelling and booth testing
5. Convenient and timely identification of changes which can then be investigated further



Getting the most from Remote Care in your clinic

Here are some tips for integrating Remote Care solutions into routine care, to get the most out of them for you and your patients:

- Include Remote Care as part of your pre-implant counselling, setting patient expectations for this to be a routine part of your blended care approach to their CI aftercare.
- Schedule eligible patients in Remote Care as soon as possible so they are always ready to have a Remote Assist appointment or complete a Remote Check when it's needed. Add a baseline Remote Check to a patient's clinical protocol if you will be using Remote Care as part of their care.
- Adopt Remote Care options into your routine clinic booking or electronic medical record (EMR) system. Adjust scheduling time as your experience increases.
- Nominate a Remote Care champion on staff to lead adoption of Remote Care in your clinic and provide support and expertise to others.
- Regularly review your criteria for Remote Care patient selection and stay up-to-date with compatibility updates (www.cochlear.com/global/en/compatibility) to ensure all those who might benefit from Remote Care get access.
- Upskill your usage of myCochlear Professional portal to improve clinic efficiency and leverage data insights to inform and shape Remote Care best practice.
- As your Remote Care footprint grows, ensure you adapt your procedures to allocate sufficient administration time for completing reviews and providing appropriate follow up.
- Consider utilising a CI tech or admin person to provide technical assistance or manage Remote Care reminders and follow up.

Hear now. And always

As the global leader in implantable hearing solutions, Cochlear is dedicated to helping people with moderate to profound hearing loss experience a life full of hearing. We have provided more than 750,000 implantable devices, helping people of all ages to hear and connect with life's opportunities.

We aim to give people the best lifelong hearing experience and access to innovative future technologies. We collaborate with leading clinical, research and support networks.

That's why more people choose Cochlear than any other hearing implant company.

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