BRITISH ACADEMY OF AUDIOLOGY

British Cochlear Implant Group

British Cochlear Implant Group 2024 Crystal Report

Sam Blakemore – University Hospitals Sussex

Lushinka Gopichand – East Suffolk and North Essex NHS Foundation Trust

Nicaida Samuel-Huggins – Somerset NHS Foundation Trust

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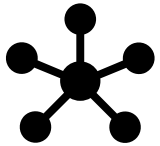
CIRR
Cochlear Implant Referral Report

Data processing – Identify those audiometrically eligible for CI (NICE 2019)
https://www.nice.org.uk/guidance/TA566



Collaboration – Auditdata, Cochlear, Pilot sites

Learning – Identify opportunities for learning, service evaluation and potential change

Research - Contribute and grow evidence base

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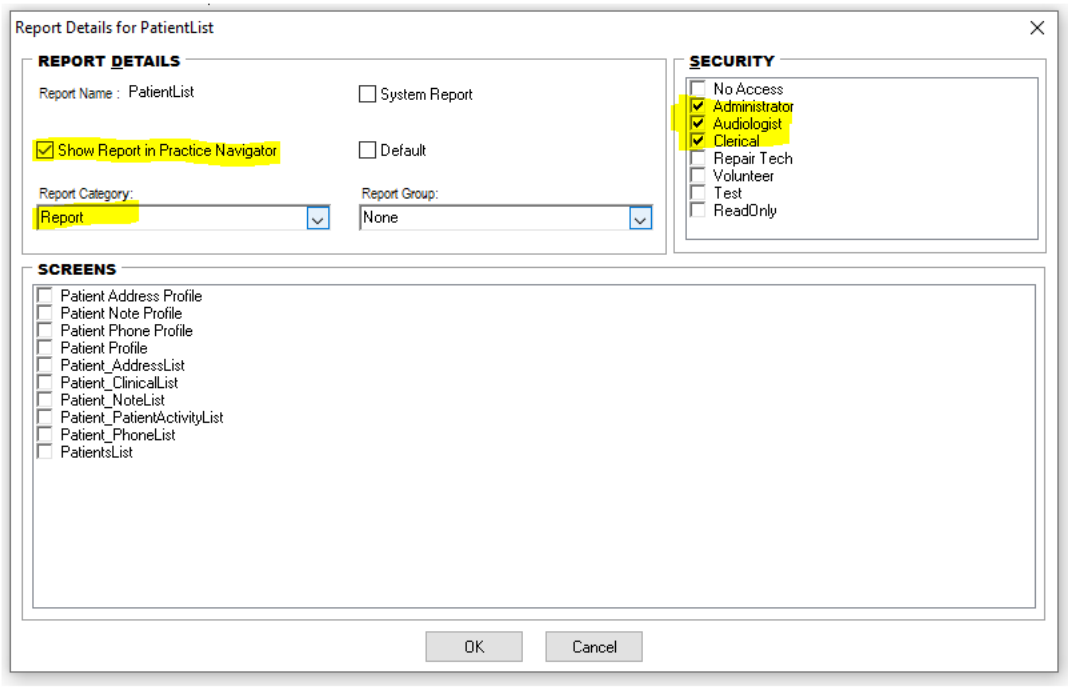
Loading reports into Practice Navigator

1. Log into Report Builder
2. Click on the ‘New Report’ button at the top of the screen
3. Select ‘Load from File’ from the ‘File’ menu on the toolbar
4. Browse to the location of the reports, select the report and click the ‘Open’ button.
5. The report should now be displayed on your screen
6. Select ‘Save as’ from the File menu on the toolbar
7. Once the report has been saved, select ‘Close’ from the ‘File’ menu on the toolbar to return to the report explorer screen
8. If you wish to view the reports in Practice Navigator they must be activated - restart.

The ‘Report settings for PN’ should look something like the image below.



[CI Champions Resources - British Academy of Audiology | British Academy of Audiology (baaudiology.org)]

Practice Navigator: A report, shared by Champion Louise Fletcher from Walsall, can be used to extract ALL audiograms measured in a certain time frame e.g. 1 week, 1 month, 1 year. Download instructions.

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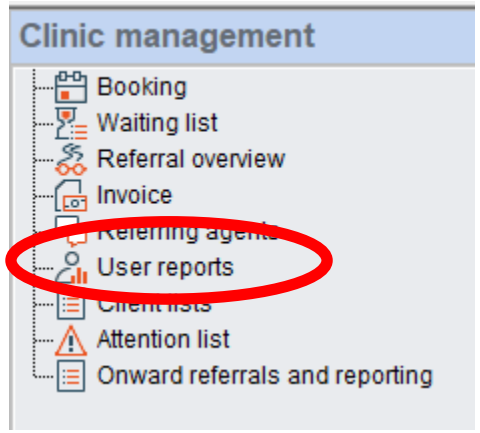
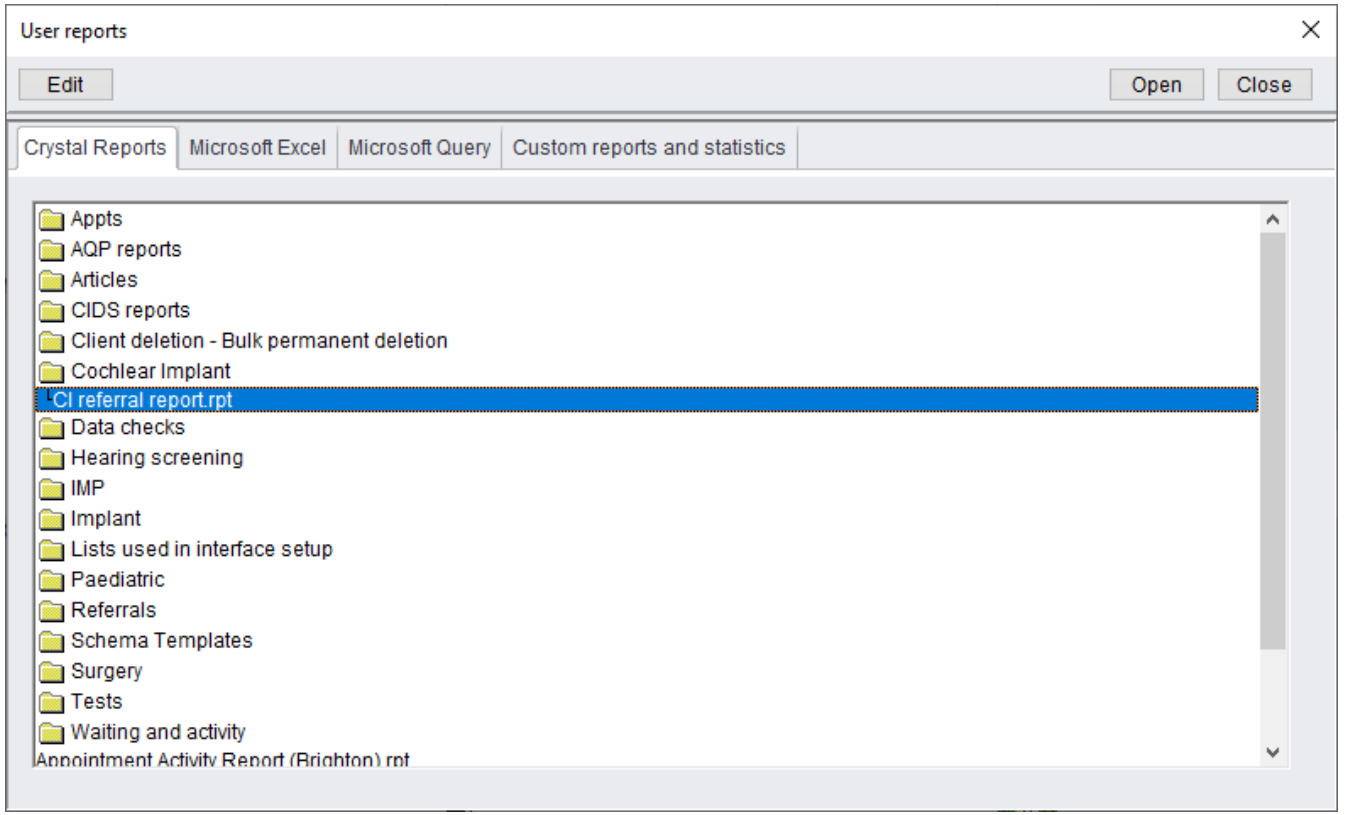
Where is the report? (in AB 6.4)

- Clinic management tab



- User reports
- CI referral report



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No access to the report?

Auditdata

support@auditdata.com

0333 444 4212

Local IT department

BAA

admin@baaudiology.org

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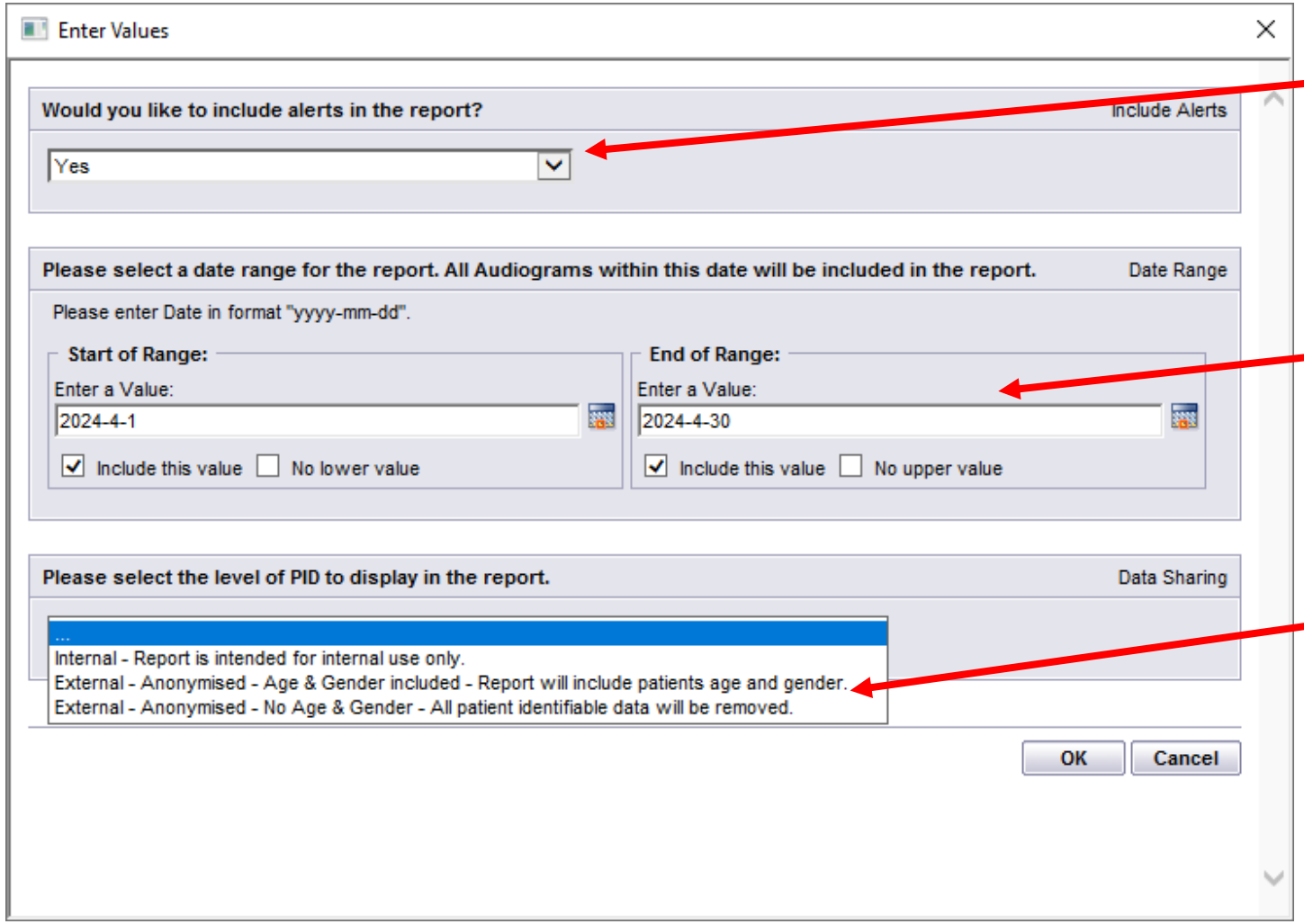
Setting the date range / output



- Choose Yes to **alerts**
- Choose **start** and **end dates**
- Choose **anonymised** if sending to Cochlear for processing

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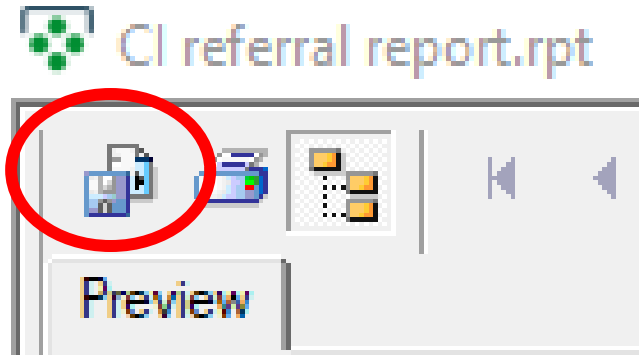
Export data to Excel

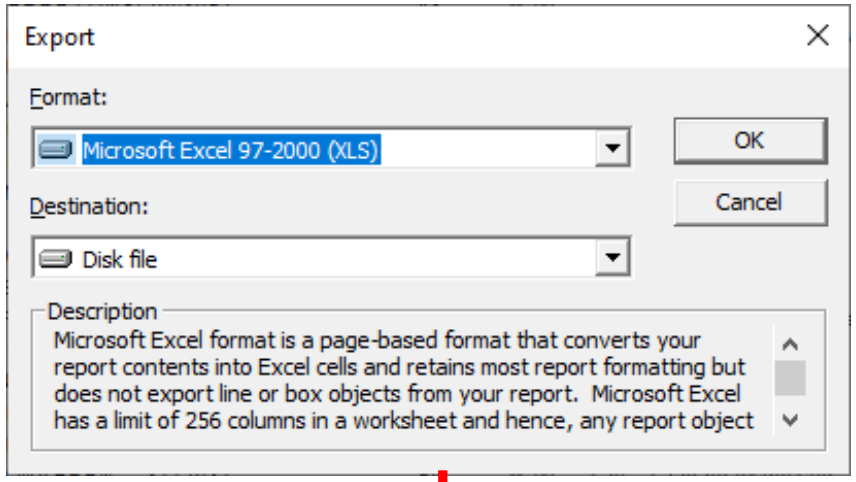
- Choose **export** icon (top L)

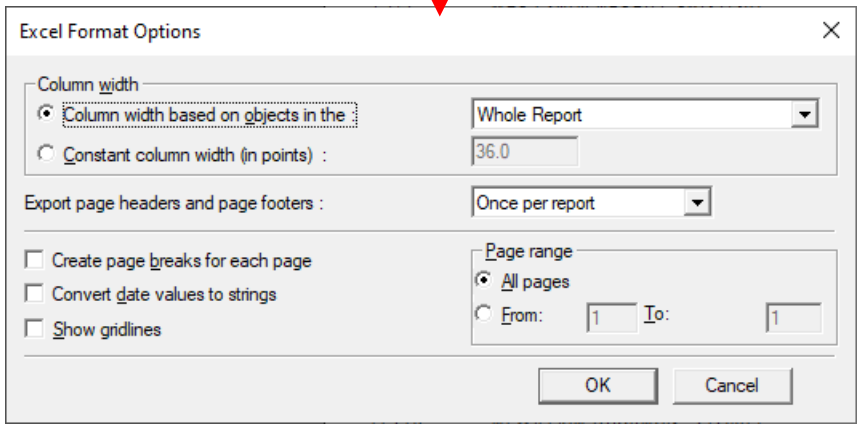


- Then select **Excel**

And

- **Disk File**





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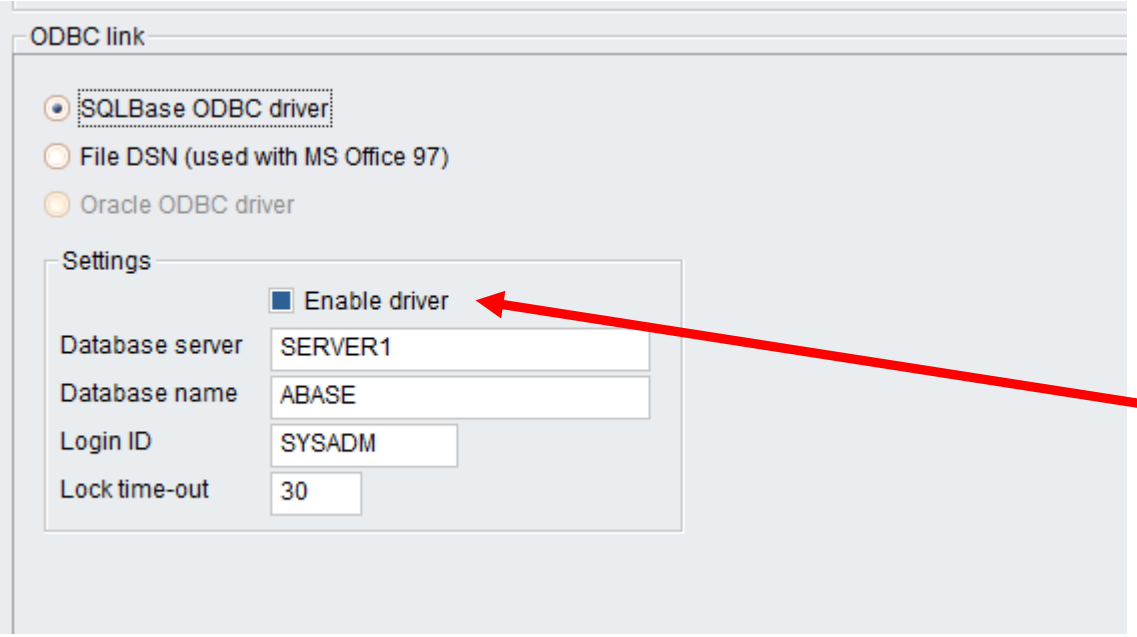
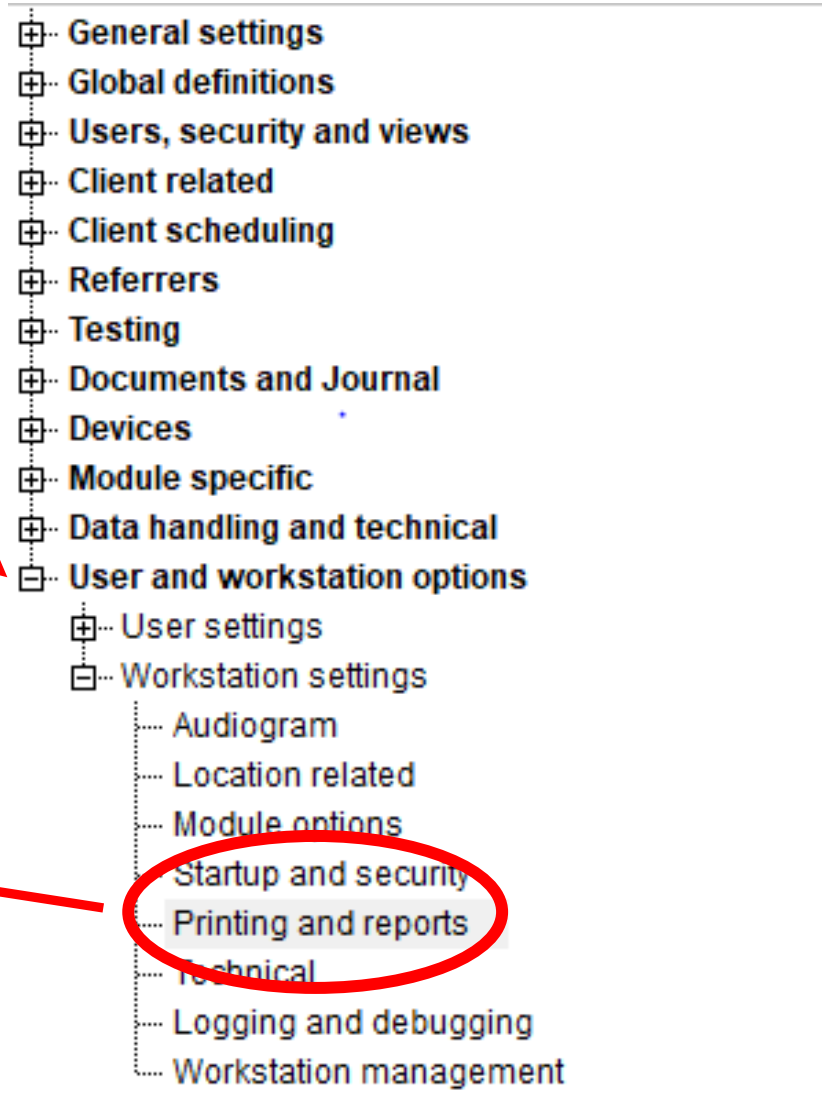
ODBC Error?

- Set up driver via S**ystem Admin**
- **Enable driver** (autofills)





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Report format

	A	B	C	D	E	F	G
1	Patient Code	Patient Name	Hosp No	Age	SEX	Parameter	Audiogram Date
2	xxxx	xxxxxxx xxxxxxx	xxxxxxx	29	Male	CI3 – not referred – discussed and further assessment needed	05/04/2024
3	xxxx	xxxxxxx xxxxxxx	xxxxxxx	85	Female	CI4 – not referred – patient declined	09/04/2024
4	xxxx	xxxxxxx xxxxxxx	xxxxxxx	50	Female	CI4 – not referred – patient declined	11/04/2024
5	xxxx	xxxxxxx xxxxxxx	xxxxxxx	94	Male		05/04/2024
6	xxxx	xxxxxxx xxxxxxx	xxxxxxx	70	Female		04/04/2024
7	xxxx	xxxxxxx xxxxxxx	xxxxxxx	66	Male		02/04/2024
8	xxxx	xxxxxxx xxxxxxx	xxxxxxx	89	Male		02/04/2024
9	xxxx	xxxxxxx xxxxxxx	xxxxxxx	86	Female		12/04/2024
10	xxxx	xxxxxxx xxxxxxx	xxxxxxx	59	Male		04/04/2024
11	xxxx	xxxxxxx xxxxxxx	xxxxxxx	26	Female		22/04/2024

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Setting up Parameters (*Gold standard)

Parameter	Definition	When to use
C1*	Referred for CI	Referral made to a CI centre
C2*	Not referred – unsuitable / outside of criteria	Eg if aided AB scores are outside of referral criteria Eg if BAHD more appropriate Eg ?pre-existing medical conditions
C3*	Not referred – discussed and further assessment needed	Eg if awaiting outcome of aided AB speech testing Eg if PTA results may not be accurate Eg not optimally aided yet
C4*	Not referred – pt declined	Offered referral but declined by patient
C5	**CI to be discussed**	**No record that CI discussion took place**
C6*	Under assessment	Referred and CI centre have accepted referral
C7*	CI patient	Already has CI

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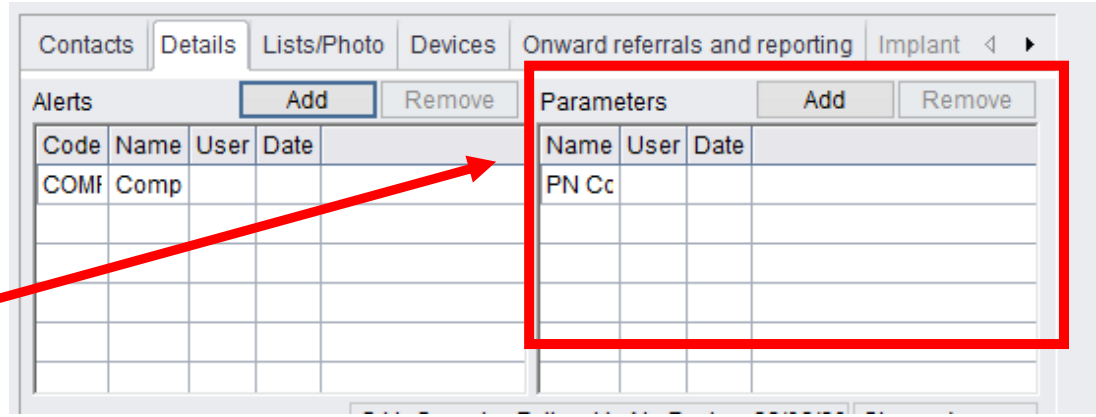
Adding parameters to patient record

- Search in AB for pt record
- Review notes to determine C1-7 status
- Add parameter via **client info / details** tab
- Select **add**
- Choose the correct parameter from the drop down



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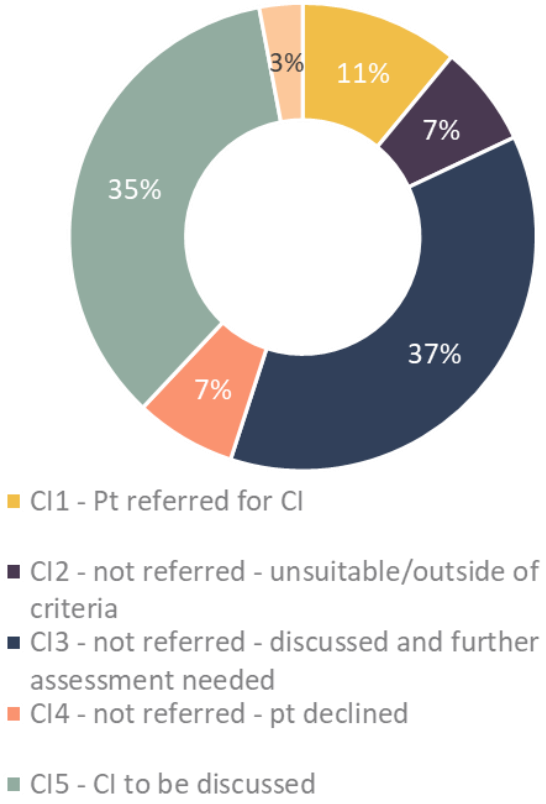
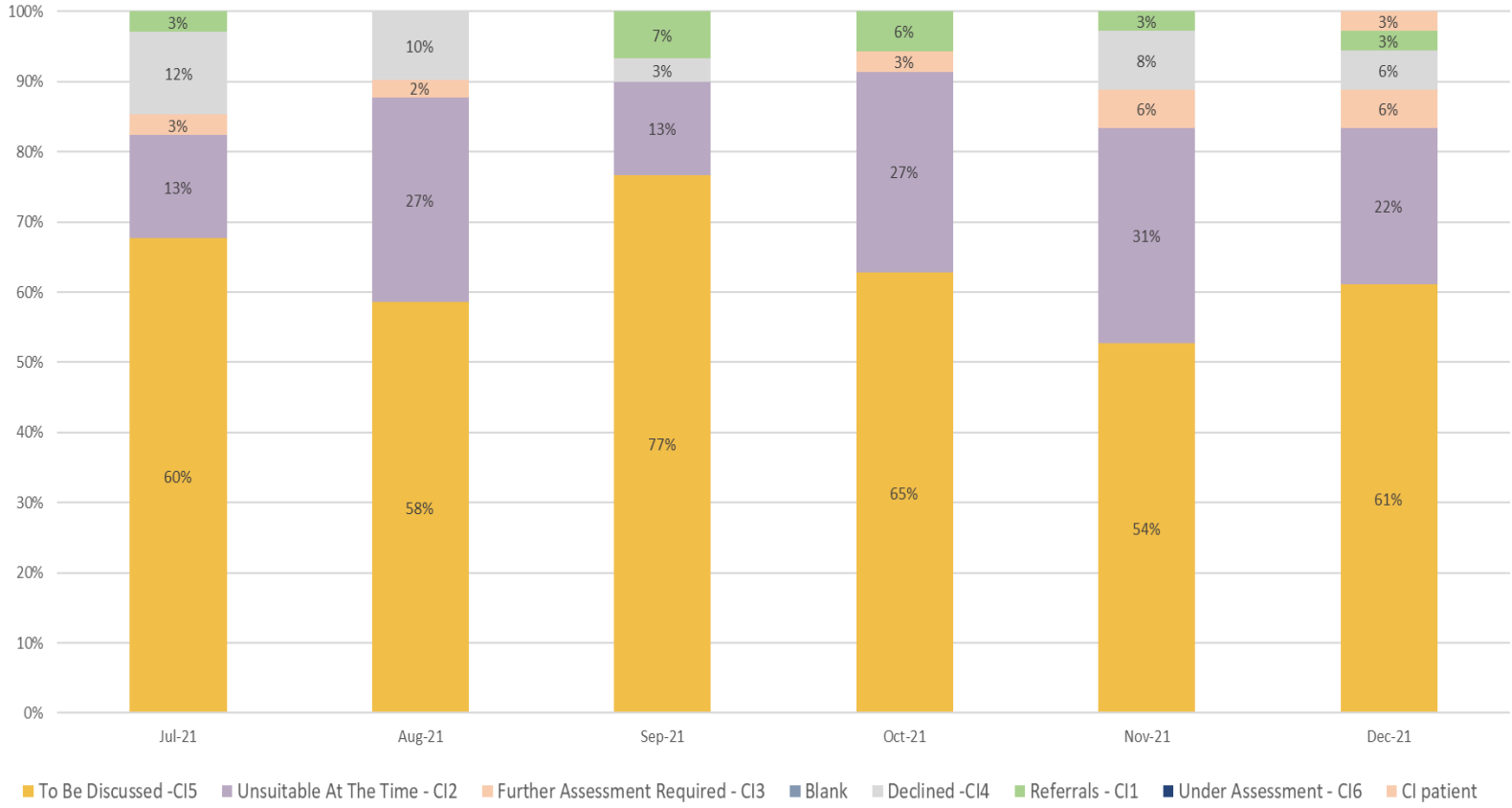
CI Audit Toolkit: How to use the audit results





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The Audit Process: What to do wit[illegible] data

First Audit

- 116 patients were identified. The search dates were March 2019 to July 2019. We completed the audit 2021.
- Crystal report wasn't used
- Pre-CIRCA so the categories used were different
- 10% of the patients were referred for cochlear implant assessment and 90% were not.
- [illegible]of the patients who were not referred had a documented reason and 92% had no documented [illegible]ion.

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The Audit Process: What to do wit[illegible] data

Second audit

- Completed after participating in the CIRCA audit CI 1, CI 2, etc were used
- 205 patients were identified, the search dates were July 2021 to December 2022. We completed the audit 2022

OUR STATS IMPROVED!

[illegible]1 audit 92% of the patients had no documented discussions, in the 2022 audit the percentage reduced

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How to use the audit results

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The primary observation absent record-keeping.

- We added a cochlear implant section to Auditbase hotkeys (direct referral, follow ups etc). In hopes that it may act as a reminder to identify patients who are within criteria and improve documentation.

Does this patient meet cochlear implant referral criteria Y/N

Was a cochlear implant referral discussed Y/N

If YES, did the patient accept or decline referral?

If NO, why wasn't it discussed?

- We also added a note in the journal of patients with a mixed or conductive hearing loss to be considered for a CI assessment if BC thresholds worsen >60dB HL.

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What to do with your data

Recurring themes noticed for patients who did not have a CI discussion with an audiologist	Amount
Cochlear implant section removed from auditbase hot key	15
Patient incorrectly identified as not within CI criteria by audiologist	27
Hot key was not used to complete history in auditbase	30

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What could your training look like

- Patients where no action was documented were sent letters offering the opportunity to have a discussion with an audiologist regarding cochlear implants. https://www.baaudiology.org/app/uploads/2020/10/Considering-a-referral-for-a-cochlear-implant-leaflet.docx
- CI assessment referral templates for WEHIP Bristol and Southampton Implant centre were created to simplify the referral process.
- Created a Cochlear implant folder which includes all the audits, pdf resources from BCIG, Cochlear, Med-El, counselling flip chart and an appropriate referral quick guide.

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What could your training look like

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An additional cochlear implant letter was created for patients identified at clinics.

Emails sent to all staff reminding them of CI referral criteria and the importance of completing CI section in journal.

Invited a cochlear rep for internal training/discussion

Staff who are not comfortable discussing CI with a patient and or referring a patient to an implant centre are asked to forward patient info to CI champion.

A cochlear implant video booklet now available for our colleagues to use.

CI alert function on Auditbase

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PRIVATE AND CONFIDENTIAL
Emmeline Centre for Hearing Implants
Box 163
Cambridge University Hospitals NHS Foundation Trust
Hills Rd
Cambridge
CB2 0QQ

Referral for Hearing Implant (CI, BCHD, MEI)

Re: **Title, Full name, Date of birth**
NHS number
Address

Please arrange to see the above patient for a CI/BCHD/MEI (*delete as appropriate) hearing implant assessment.

Patient Details	
Parent/Carer names if applicable	
Preferred means of contact, e.g. phone, text, email (& details)	
Interpreter required? if yes what language	
GP Name, GP Address & Postcode	

Regards

Name
Job Title

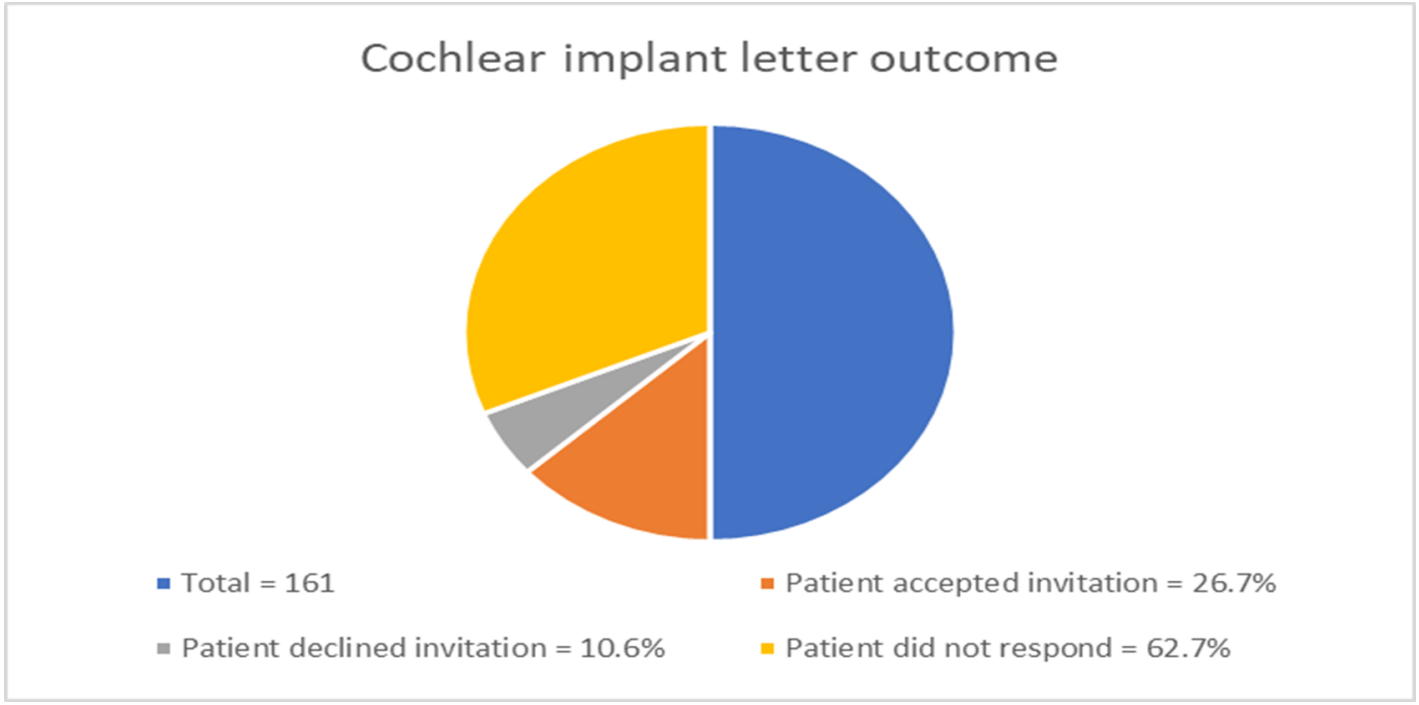
CC GP
Patient

REQUIRED		**Notes**
	Pure Tone Audiogram (PTA) Previous audiograms if significant change in hearing over time/post-surgery (inc. date of test/s)	Insert screenshot/snip
All Referrals	**Hearing Aids** • Date of fitting (Please review aids >3y old before referring) • Model • Fitting details (formula/REM) • Moulds	
Paeds only	**Electrophysiological measurements** e.g. ABR, OAEs, CM, NHSP/S4H Please include copy of traces Please share in S4H patient record	
	Have you discussed CI/BCHD/MEI with the patient and are they interested?	

ADDITIONAL	**Otoscopy**	
	Speech testing results	
	Aetiology/Cause of hearing loss For paed cases, please ensure aetiological investigations have been arranged before referring	
	MRI/CT head scans • Completed/Planned (Date) • Which hospital	
	Ear surgery (including grommets) • Completed/Planned (Date) • Which hospital	
	Significant medical history	
	Other professionals/support agencies involved We will request permission before contacting	
	Any other information	

This referral form can be emailed to the Emmeline team from an nhs.net account to add-tr.emmelinecentre@nhs.net

CI Audit Toolkit: Ongoing Audit



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CI Audit Toolkit: How to use the audit results

Cochlear Implant Criteria & Referral Audit 2022- Adults

INTRODUCTION

New NICE guidelines for Cochlear Implantation, with a more lenient referral criteria, were released in March 2019. Since the new guidelines were published the British Cochlear Implant group (BCIG) and the British Academy of Audiology created the Cochlear Implant Champion scheme.

One of the aims of the scheme and the role of the champion is to monitor CI referrals and audit the quality and quantity of CI counselling taking place in your service. To achieve this goal we used a crystal report for Auditbase provided by the BCIG. This allowed us to identify patients themes within the data collected.

AIM

This is the second audit taken place for patients who fit within the cochlear implant referral criteria. The aim is to identify whether all patients who meet CI criteria are given the opportunity to discuss cochlear implants and the referral rate. It is also important that all decisions are being appropriately documented.

METHOD

BCIG crystal report for auditbase was used to identify patients who meet CI referral criteria. The search dates chosen were July 2021 to December 2021, in total 244 patients were identified. The journal, audiogram and patient details sections in Auditbase and the medical letters in the electronic patient record system (EPRO) were checked to determine what outcome was recorded for each patient. Some patients were removed from the audit as the crystal report incorrectly included patients who did not meet the CI referral criteria. Patients who were tested before the search dates, but their audiograms were uploaded during the search dates were also removed. We were then left with a total of 205 patients.

RESULTS

7% of patients were referred for cochlear implant assessment and 93% were not referred.

31% of the patients who were not referred had a documented discussion about a cochlear implant with an audiologist. 69% did not have a documented discussion with an audiologist regarding their suitability for a cochlear implant referral.

Documented reasons for not referring (Audiologist discussed cochlear implants with the patient)	Amount
Discussed and not referred: unsuitable/outside of criteria	8
Discussed and not referred: discussed and further assessment needed	18
Discussed and not referred: patient declined	33

As seen in the chart above, for patients who discussed CI with an audiologist the most common reason for not referring was the patient declined referral.

Most recurring themes noticed for patients who did not have a CI discussion with an audiologist	Amount
Unsuitable because patient is wearing a BAHA	2
Patient was seen by Specsavers	10
Patient unsuitable at this current time because of bone conduction thresholds	11
Cochlear implant section removed from auditbase hot key	15
Patient incorrectly identified as not within CI criteria by audiologist	27
Hot key was not used to complete history in auditbase	30

Of the 69% that had no discussion about CI the most recurring theme was the hot key was not used to complete the history in auditbase, therefore there was no visible reminder to discuss cochlear implants with the patient. As these journals did not mention cochlear implants, it is difficult to determine if a conversation was had. It is also important to highlight that 27 patients were also incorrectly identified as not within CI criteria by the audiologists, which suggests more training is needed to identify patients who are within the CI referral criteria.

Also, as noted in the chart above 11 patients were identified as being unsuitable at current time due to bone conduction thresholds. Although, the air conduction (AC) thresholds are within criteria for a CI referral their hearing loss is primarily conductive or mixed as the bone conduction (BC) thresholds are 60dB HL or better. These patients are therefore more suitable at present for a bone anchored hearing aid.

We found that patients whose AC thresholds (500Hz, 1kHz, 2kHz 3kHz and 4kHz) were greater than or equal to 80dB HL at 5 frequencies in the left ear and 3 frequencies in the right ear were more likely to discuss cochlear implants/cochlear implant referrals with an audiologist. Patients with a median age of 77 years were also more likely to have this discussion.

CONCLUSIONS

This is the second audit for CI referrals in the audiology department at Musgrove Park Hospital. NICE guidance recommends monthly reporting of data, which they suggest will help with training, documentation and improved services. We have found the task difficult to achieve due to workload and have decided to conduct audits annually.

From this audit we have seen an improvement in the number of documented discussions had with patients regarding cochlear implants. In the 2021 audit 8% had a discussion and were not referred, for the 2022 audit 31% had a discussion and were not referred. We also saw a decline in no discussion had or not documented, in the 2021 audit the percentage was 92%, in the 2022 audit the percentage was 69%.

Although we have seen a decrease in the number of patients who had no discussion about CI or no documentation, the percentage is still relatively high. Therefore, more changes were made to improve this. Cochlear implant questions were added to more hot keys in auditbase (PTA, Exchange, Post) counselling/AWP). Two cochlear implant assessment referral templates were created in EPRO. One template is for patients identified through the annual audit and the other is for patients identified at clinic.

Patients where no action was documented will be sent letters offering the opportunity to have a discussion with an audiologist regarding cochlear implants. As a department we've discussed cochlear implants and the referral criteria during the November 2022 audit meeting.

This audit will be repeated in 2023.

Auditors: Nicaida Samuel-Huggins and Christina Du Plessis
December 2022

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Resources

- NICE Guidance
- Putting NICE Guidance into practice. A resource impact report
- AoHL Cochlear Implants policy statement
- BAA/BCIG Managing Expectations Factsheet
- BAA/BCIG_Factsheet for Patients
- WHO 2017 Global costs of unaddressed hearing loss and cost effectiveness of interventions
- BAA Onward referral guidance https://www.baaudiology.org/app/uploads/2023/04/Onward-Referral-Guidance-for-Adult-Audiology-Service-Users-Sept-23.pdf

- British Cochlear Implant Group
- www.bcig.org.uk/patients.aspx
- www.baaudiology.org/professional-information/cochlear-implant-champions/
- Cochlear Implant International Community of Action
- National Cochlear Implant Users Association
- Hear Together Reports
- Adult Cochlear Implant Action Group
- Insights into life with a cochlear implant
- Advanced Bionics
- Cochlear
- MED-EL

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- nicaida.samuel-huggins@somersetft.nhs.uk