Is the Referral Pathway a Barrier to Candidacy Evaluation for Cochlear Implantation in Adults with a Postlingual Severe To Profound Hearing Loss?

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Disclosures

- Valerie Looi is currently employed by Advanced Bionics as their Asia-Pacific research manager. However the research in this study was completed (and published) before Valerie commenced in this role, and AB has had no input into any part of the study, or this presentation.
Background

- ~122,000 adults in Aust have a HL $\geq 65$dBHL in better hearing ear (Stevens et al., 2011)
- ~10,400 CI recipients (adults & children) in Aust. (2016)
- Implies approx. 8.5% who could potentially benefit from a CI got one.
- This figure is different internationally, but Aust. has one of the highest adult CI penetration rates.
- Suggests – many adults who could benefit for a CI don’t get one.
Possible barriers to CI

- Financial cost, risks of surgery, personal decision, loss of residual hearing, support, expectations, lack of knowledge etc.

- **Australia:** CI funded by Government & private health insurance.
  - We have the resources and skills.
  - But transition from HA services to CI services a key step in accessing CI
  - Possible barrier: referral process.
Research Questions

1. What is the referral rate for adults who meet the CI audiological criteria from a HA clinic?
   • Are adult CI candidates being referred?
     If yes, have they been evaluated for a CI?
     If no, why not?

2. Is the referral process a barrier?
   • If yes, why & how can we improve this process?
Methodology – 2 parts

1) Retrospective File Review
2) Clinician Questionnaire
Part 1

Aim:
1. # HA clients who meet audiological criteria for CI: was CI referral made and/or a discussion of CIs in clinical notes?
2. # HA clients referred but i) did not attend CI assessment, or ii) did not proceed to CI surgery.

Methodology:
- Retrospective review of all clinical files if 4FA ≥ 65 dB HL; word perception score <50% (better ear).
  - Review appointment notes & case history to document: CI discussion, referral, outcome of discussion, decisions made.
Part 2

Aim:
- Determine HA audiologists’ knowledge of CI issues potentially applicable to them

Questionnaire:
- Open-set questions regarding referral, candidacy, outcomes.
- N = 8 (100% of the audiologists in the clinic)
- Online completion (~15mins)
Results – Part 1

- 1,249 files reviewed (period: tested 1/1/15-1/5/16)
- 55 files met 4FA criteria of ≥65 dB HL in the better ear.
- 18/55 (33%) potential CI candidates as per research criteria (word perception ≤50%).
- 16/18 of these (89%) had a CI discussion.
- 11 out of 18 referred for a CI assessment: 61% referral rate.

Note: not all who discussed CIs wanted a referral
Outcomes of potential CI candidates (n=18)

CI penetration rate: 19%

Referred, 11

CI recipients, 3
Met criteria, chose not to go ahead, 2
Did not meet criteria, 1
Other, 11
Results – Part 1

- Of 16 CI discussions, most common reason against CI was ‘lack of motivation’:
  - Satisfied with HAs, not feeling like they need additional help, don’t feel ready, feeling like nothing else can be done.
  - Other concerns: funding, surgery, balance problems, loss of residual hearing.
  - 2 clients had heard of unsuccessful outcomes.
Results – Part 1

- Referred vs. not referred

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Average 4FA</th>
<th>Average age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred (15*)</td>
<td>94.8 (68-120)</td>
<td>65 (45-89)</td>
</tr>
<tr>
<td>Not referred (7)</td>
<td>93.2 (69-119)</td>
<td>64 (42-88)</td>
</tr>
</tbody>
</table>

Age or degree of hearing loss does not appear to be a predictive factor of CI referrals at this clinic

* Includes 4 additional referrals outside of research criteria (AB word scores above 50% in one or both ears)
Results – Questionnaire (Part 2)

“Which clients would you currently refer for a CI? What criteria do you use?”

- 5 responses - **degree of HL:** "severe-to-profound hearing loss", "PTA beyond 80dBHL".

- 4 responses - **poor speech test scores.**
Results – Part 2

“What would stop you referring an adult client for a CI who met the criteria?”

• Most common reason: client says not interested.
• Unrealistic expectations.
• Elderly, poor health, or inadequate support/care.
• Culturally Deaf.
• 3 clinicians would always refer - “would always refer as candidate procedure may iron out issues”

- Consistency between Part 1 & 2: audiologists may not refer if client says not interested.
  But do clients have the right information? Could better information counselling aid this?
Results - Part 2

50% felt current resources are insufficient. They wanted:

- To know how to better assess candidacy; e.g. appropriate speech tests. “Make candidacy criteria more straight-forward”
- Communication between CI & HA clinicians, e.g. visits from a rep with updates in the field
- More “streamlined” referral process.
- Yearly updates from CI clinicians, updated info on candidacy and recipient outcomes

Take home: Clinicians feel don’t have adequate CI resources. Want more information regarding candidacy, referral guidelines & more communication with CI clinicians.
Conclusions

- The referral pathway *is* a potential barrier to CI; not all potential CI candidates are being referred.
- Restrictive candidacy criteria being used - compared to both current criteria and research criteria.
- Suggested ways to improve the referral pathway:
  - Communication between HA & CI clinics.
  - Information sheets on: Objective outcomes of CI recipients, candidacy guidelines, testing procedures.
  - Awareness among HA clinicians of what’s involved in assessing candidates for a CI.
  - Equipping HA clinicians with counselling strategies for initial client concerns
NOTE

- One clinic only and this was a unique clinic: teaching clinic, no commission.
  → May not be representative of other clinics; best case scenario?

- Focused on unaided thresholds & unaided AB words, not best aided measures.

- Strict CI candidacy criteria used...
  → Best case scenario?
This study has been published:

Looi, V; Bluett, C & Boisvert, I. (2017)
Referral rates of postlingually deafened adult hearing aid users for a cochlear implant candidacy assessment.

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THANK YOU
Any Questions?