The Future of Audiologic Rehabilitation

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Approached topic in two ways

1. Investigated the number of articles published with AR related key words over the past 57 years
   • Have the number of articles increased? Or stayed fairly flat?

2. Queried current AuD student and recent AuD graduates about their interest in AR
   – If current students and young audiologyists are interested in AR then the future looks bright. If not…..
How often are AR related articles published in peer reviewed journals?

- Search Engines: Medline, PsychInfo

- Search Terms:
  - Aural Rehabilitation
  - Audiologic Rehabilitation
  - Auditory Management
  - Audiologic Management
Are these articles in a variety of journals?

• Last 3 years
  – 2007, 25 articles in 15 different journals
    • 2 in Audiology & Neuro-Otology
    • 3 in International journal of Audiology
    • 2 in International Journal of Pediatric Otorhinolaryngology
    • 2 in Journal of Communication Disorders
    • 6 in Trends in Amplification
  – 2006, 14 articles in 11 different journals
    • 3 in American Journal of Audiology
    • 2 in Trends in Amplification
  – 2005, 18 articles in 17 different journals
    • 2 in Laryngoscope
Some specific journals

• Over the past 3 years
  – 3 articles in Ear & Hearing
  – 2 articles in Journal of the American Academy of Audiology

• Since 1985
  – 29 articles in the Journal of the American Academy of Audiology (which has published since 1967)
Search Engines: Medline
Search Terms: Hearing Aid, Cochlear Implant

Hearing Aid Publications

Number of Hearing Aid Publications

Publication Year

Cochlear Implant Publications

Number of Cochlear Implant Publications

Publication Year
A few thoughts on this exercise

• It is highly likely that many of the hearing aid related articles and cochlear implant related articles published had AR related content but did not have AR related key words

• Many of the articles published in JARA don’t even have AR related key words
A few more thoughts

• It is also likely that there are additional AR related key words that I didn’t use for this search.

• Perhaps if we reached a consensus on a term to use to describe Rehabilitative Audiology, we would have more articles published using this term and awareness of AR would increase
What are AuD students attitudes about AR?

Current Students, N = 37

University of Connecticut  University of Kansas  University of Louisville

Current Students, N = 37

2nd Year  3rd Year  4th Year

Thanks to: Sarah Ferguson and Kathleen Cienkowski
Do you hope to provide AR services in your job after graduation?

- Yes: N = 32
- No: N = 5
There appears to be increased interest in AR as students gain more experience.
It is possible that students become more interested in AR after they have the opportunity to provide these services.
Why do you have no interest in providing audiologic rehabilitation services? N = 5

• “Studies show that there isn't much of an effect. After a year the people with out it catch up with the people who received AR”

• “Research has shown that although the classes are affective in the short-term. Looking at the long-term, a person that did take an audiologic rehabilitation class compared to a person that did not...the person that did not 'caught up' to the person that did”
Why do you have no interest in providing audiologic rehabilitation services? N = 5

• “At this point, I have very little experience with AR and feel that this may be the reason that I am not interested. Once I complete AR courses and have more experiences with AR, I may change my current viewpoint.”
• “Not sure if I like HA”
• “NO compensation”
What type of AR services would you be interested in providing after graduation?

N = 32 students

- Dual Sensory Loss
- Pediatric Language Development
- Auditory Training
- Speechreading Training
- Tinnitus Management
What type of AR services would you be interested in providing after graduation?

N = 32 students

- Assistive Listening Device
- Counseling/Coaching
- Don't Know/Not Specific
- Communication Strategies
- Group AR for HA or CI users
- Hearing Aid/Cochlear Implant
- Counseling/Training
In order to understand student responses…

• Consider how they define AR
ASHA 1984

• Identification and Evaluation of Sensory Capabilities
  – Evaluation, fitting & monitoring of HAs and CIs
• Interpretation of Results, Counseling and Referral
• Intervention for Communication Difficulties
  – Individual and group training (speechreading, auditory training, communication strategy training)
• Re-evaluation of Client’s Status
• Evaluation and Modification of the Intervention Program
ASHA 2001

• “Audiologic/aural rehabilitation (AR) is an ecological, interactive process that facilitates one’s ability to minimize or prevent the limitations and restrictions that auditory dysfunctions can impose on well-being and communication, including interpersonal, psychological, educational, and vocational functioning.” (pg 394)

A program designed to educate a new hearing aid user or an experienced one with new products about hearing loss, the hearing aids, what the hearing aids can do for a person with hearing loss. What are some things someone can do to improve speech understanding in various situations.
Helping patients make the most of their hearing aids or cochlear implant.
Improving the social and emotional well-being of patients with hearing loss by providing adjustment counseling.
• Providing services, beyond hearing aids, that help and assist patients with hearing loss in daily circumstances.
• Helping individual's with hearing loss hear better with hearing aids and other devices and train them to use various strategies to receive the most information when listening.
The process of learning to listen using various strategies, that can be administered in group or individual settings.
• Aural rehab is a process for lessening the consequences of hearing loss people perceive in their everyday life
Which of the following services would you consider to be a component of audiologic rehabilitation? Students N = 36
Which of the following services would you consider to be a component of audiologic rehabilitation? Students N = 36

- Cochlear Implant follow-up appointments
- Tinnitus treatment
- Hearing Aid follow-up appointment
- Assistive Device selection
- Auditory Processing Disorder Treatment
- Informational Counseling (e.g., explanation of a hearing)
Which of the following services would you consider to be a component of audiologic rehabilitation? Students N = 36

- Cochlear Implant orientation
- Hearing Aid orientation
- Assistive Device dispensing & coaching
- Speechreading training
- Auditory training
- Communication strategy Training
What are recent AuD graduates attitudes about AR

Recent Au.D. Graduates, N = 23

Year of Graduation, N = 23
Do you provide AR services in your job?

- Yes: N = 11
- No: N = 12
Current work Setting

- Private Practice
- Physician's Office
- University Based Practice
- Hospital
- VA Hospital
- Industry
- Research
- State commission for children

"No" not providing AR
"Yes" providing AR
Please rank how you spend most of your time

Adult Diagnostics
Adult Treatment
Pediatric Diagnostics
Pediatric Treatment

"No" not providing AR
"Yes" providing AR
What type of audioligic rehabilitation services do you provide?

- HA fittings & Counseling
- Adult Group AR
- LACE CD
- Cochlear Corp Listening Manual
### Additional responses to: **What type of audiologic rehabilitation services do you provide?**

<table>
<thead>
<tr>
<th>Additional Comments</th>
<th>Work Setting</th>
<th>Work Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wish I could offer it</td>
<td>Private Practice</td>
<td>Adult Treatment &amp; Diagnostics</td>
</tr>
<tr>
<td>Two pediatric aural rehabilitation programs for parents of children and for teenagers were designed and offered to the public on several occasions however there was no interest from the public and this was discontinued.</td>
<td>Hospital Based</td>
<td>Adult &amp; Pediatric Diagnostics</td>
</tr>
<tr>
<td>There are 3 speech pathologists who are certified in auditory-verbal therapy and see patients one-on-one. The audiologists do not provide patient specific therapy</td>
<td>Hospital Based</td>
<td>Adult &amp; Pediatric Treatment</td>
</tr>
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How would you define AR?

<table>
<thead>
<tr>
<th>Category</th>
<th>Graduates</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA specific services</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Device specific</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Counseling &amp; Training</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Services beyond the HA</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Broad Definition (device &amp; treatment)</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Training (communication strategies, lipreading, auditory)</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Broad Definition (not treatment specific)</td>
<td>30%</td>
<td></td>
</tr>
</tbody>
</table>

Graduates vs Students
Which of the following services would you consider to be a component of audiologic rehabilitation?

- Cochlear Implant candidacy evaluation
- Cochlear Implant programming
- Tinnitus evaluation
- Auditory Processing Disorder Evaluation
- Hearing Aid Evaluation

Graduates vs. Students comparison chart.
Which of the following services would you consider to be a component of audiologic rehabilitation?

- Cochlear Implant follow-up appointments
- Tinnitus treatment
- Hearing Aid follow-up appointment
- Assistive Device selection
- Auditory Processing Disorder Treatment
- Informational Counseling (e.g., explanation of hearing evaluation)

Graduates: 100%
Students: 100%
Which of the following services would you consider to be a component of audiologic rehabilitation?

- Cochlear Implant orientation
- Hearing Aid orientation
- Assistive Device dispensing & coaching
- Speechreading training
- Auditory training
- Communication strategy Training

![Bar chart showing the percentage of graduates and students who consider each service to be a component of audiologic rehabilitation. The chart includes services like Cochlear Implant orientation, Hearing Aid orientation, Assistive Device dispensing & coaching, Speechreading training, Auditory training, and Communication strategy Training. The percentages range from 40% to 100%.]
Some thoughts about the survey results

• No consistent definition of AR
  – This may result in lack of interest or lack of understanding
• It is likely that many young audiologists are actually providing AR but don’t call it AR.
• With experience, students and young audiologists may learn to recognize and understand AR
Conclusions

• We need consensus on AR terminology
  – It is likely that a single term used to describe what we do will be used more often

• We need consensus on the definition of AR
  – Need a definition that is concise and descriptive