It’s a Great Time to be an Audiology Assistant

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ZPower LLC
Camarillo, CA
First and foremost we must recognize ourselves and our supervisors as professionals and accept the rights and responsibilities of being a professional.
A profession practice requires professional behaviors

- How we introduce ourselves
- Our knowledge and skills
- Our appearance
- Our clinical facilities
- Practice and interpersonal skills
- Our status in the community
As we live and present our practices and ourselves as professionals, we will be viewed by others in that manner.
WHAT MATTERS MOST IS HOW YOU SEE YOURSELF!

[Image of a cat looking at a mirror that reflects a lion]
History and Role of Assistants in Audiology
Military Hearing Technician

“For DoD military personnel or DoD civilians who have Hearing Program duties assigned...”
Examples of Military Hearing Technician Responsibilities

- Maintenance of Audiometric Equipment and Troubleshooting.
- Perform daily documented Functional Listening Checks.
- Perform daily documented Biologic Calibration Checks.
- Perform pure tone air conduction hearing tests.
- Perform Periodic/Annual hearing tests on all personnel in the HCP.
- Schedule follow-up testing.
- Explain how to read the audiogram, what the frequencies and thresholds mean.
- Fit Hearing Protection.
- Refer Patients for Follow-up Care.
- Fit earplugs properly (each ear individually, not depending on ear sizers) & document sizes in medical record.
- Counsel patients on how to insert plugs and how to clean them.
- Provide a variety of hearing protective devices, allow the patient to choose.
- Provide a neat, clean area for testing.
- Protect patient privacy.
“I doubt we ever wrote much about our enlisted Hearing Technicians, as they were so common place. I recall my second year at Ft. Sam (1972). We were the major referral location for the south central, there were tons of tests to be done (draft still active), we had a huge ENT training program (9 residents), and Lyndon Johnson got very ‘p... off’ when his hearing aid wasn't repaired in 30 minutes!

I ran the clinic with 7 hearing technicians, five sound rooms...I had no time to see my own patients, but simply spent all day going from room to room, signing off audiograms... We couldn’t have completed the work without our Hearing Technicians.” Gus
“Ya...no question that there was a lot of audiology done by the ENT techs in the military in the 60s and 70s....they were broadly trained as medics, then OJT in an ENT clinic (plus audiology)....folks like Dan Schumaier and Chris Schweitzer were among our techs and now are prominent audiologists.

I wrote an Audiometric Assistant handbook and course curriculum book back in the mid-1970s under a grant provided by the Department of Labor. It was quite a good program (if I do say so myself!) We trained numbers of audiometric assistants under that grant -at the Colorado Hearing and Speech Center - most were from the Navajo Indian Reservation in Window Rock outside of Albuquerque

I would add that 'yea' or 'nay' for Audiometric Assistants in our profession has been an ongoing battle forever. It was a topic for the first general session of the American Academy of Audiology at Kiawah Island in 1988 --and the attendees loudly split 50-50 for and against -- and neither side would capitulate -- so no progress was made in this area by the Academy for years. I think things are better these days with assistants being used in private offices, military, and the VA.”
Hearing Conservation (CAOHC)

• Occupational Hearing Conservationist (OHC)
  • CAOHC certified
  • Work in industry generally under supervision of audiologist to monitor hearing of employees exposed to noise.
  • "Audiometric tests shall be performed by a licensed or certified audiologist, otolaryngologist, or other physician, or by a technician who is certified by the Council for Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, (CAOHC).
Department of Veterans Affairs (VA)

- Health Technicians (Audiology) in the VA support Audiologists in the provision of professional services. The supervising Audiologist’s scope of practice dictates the duties and responsibilities assigned to the Health Technician (Audiology).
Department of Veterans Affairs (VA)

Developmental Experiences

• Prepare and set up medical equipment
• Identify basic parts of a hearing aid
• Orient a patient on how to use an assistive device
• Identify and practice proper hand hygiene techniques
• Identify characteristics of a normal ear
• Maintain inventory of supplies
• Schedule patients according to clinic guidelines
• Determine reason for patient visit
• Identify proper resource to obtain local policy governing patient care
“The number of audiology support personnel in VA hospitals increased 619% from 1996 to 2004...the ratio of audiologists to support persons decreased from 24:1 in 1996 to 5.26: 1 in 2004” (Dunlop, 2005).
Considerations for the Use of Support Personnel for Newborn Hearing Screening

- Support personnel for newborn hearing screening may perform only those tasks specified by the supervising audiologist. Although the duties of support personnel may vary slightly, their primary responsibility is the completion of hearing screening procedures for all designated infants prior to discharge.

Academy of Otolaryngology Head and Neck Surgery
Certification for Otolaryngology Personnel (CPOP)

• Training program to teach otolaryngology (ENT) office personnel basic hearing testing, allowing audiologists to focus on complex audiometric testing and advanced hearing and balance services and increasing otolaryngology office productivity.
Independent and Clinical Practices

• Audiology support personnel engage in tasks to support the needs of the audiologist and their patients.
Consensus Panel on Support Personnel in Audiology 1997

- Academy of Dispensing Audiologists (ADA), American Academy of Audiology (AAA), Educational Audiology Association (EAA), Military Audiology Association (MAA), and the National Hearing Conservation Association (NHCA):

"Audiology support personnel may engage in only those tasks that are planned, delegated, and supervised by the audiologist. The specific roles of audiology support personnel will be influenced by the particular needs of the audiologist and must be determined by the audiologist responsible for the support personnel's training and supervision."

Audiology Assistants (AA)

- Support personnel who, after appropriate training and demonstration of competency, perform tasks that are prescribed, directed, and supervised by an audiologist.

AAA Position Statement (2010)
ADA Membership Classification

• **1.6 Audiology Assistant** – Shall be open to any individual who provides services under the supervision of a licensed audiologist in accordance with applicable state or federal audiology and/or hearing aid dispensing laws and does not meet any of the other membership criteria... Audiology Assistant members shall have the rights and privileges of Fellows, except that Audiology Assistant members may not vote in ADA matters; may not chair committees other than 2 Audiology Assistant committees; may not hold elective office; and may not use the ADA name and/or logo in any form of advertisement or other commercial purpose.
Audiology Technician Affiliate Member. An audiology technician affiliate member is an individual who provides hearing or balance care services in a supporting role for a Fellow member. To be eligible as an audiology technician affiliate member, he or she must be sponsored and require supervision by an Academy Fellow. An audiology technician affiliate member is not an audiologist and is not otherwise eligible for membership as a Fellow. Audiology technician affiliate members hold all rights and obligations of Fellow membership, except they shall not vote or hold office. Audiology technician affiliate members are prohibited from using affiliation with the Academy for the promotion of commercial products or services.
An audiology assistant is a person who, after appropriate training and demonstration of competency, performs delegated tasks that are prescribed, directed, and supervised by a certified and/or licensed audiologist. When hearing aid dealers are serving in the role of assistant, their duties will always be clarified by the supervising audiologist.

Audiology assistants may or may not be regulated by state laws and regulations, and the supervising audiologist is responsible for determining the applicable requirements in his or her state and work setting.
ASHA

• ASHA has established an Associates Affiliation program for support personnel in speech-language pathology and audiology, open to individuals who
  • Are currently employed in support positions providing audiology or speech-language pathology assistant services and
  • Work under the supervision of an ASHA-certified audiologist (CCC-A) or speech-language pathologist (CCC-SLP).
  • Are required to obtain the signature of their ASHA-certified supervisor(s) in order to become ASHA Associates.
What’s in a name?

• A Technician generally works on technical equipment or skilled in mechanical or industrial tasks.

• An Assistant tends to work under the supervision of a licensed professional.

• Other healthcare professions (e.g., physicians, PT, OT, Dentists) primarily work with “assistants.”

• Sometimes defined by professional association and sometimes by regulatory bodies, e.g., license boards.
All States Require an Audiologist to be Licensed

• The legal right for audiologists to practice is defined by State License Laws.
• Not all states regulate assistants.
State Regulations for Audiology Assistants

- 13 require licensure.
- 17 require registration.
- 3 require certification.
- 17 + DC have no regulations.
Assistant’s Law Examples

• California/Arizona: Not in laws
• Florida:
  • Register with Board
Example of Permitted Tasks: Florida

Florida Administrative Code & Register

With DIRECT supervision, AA may:
- Conduct basic audiometry
- Conduct impedance testing
- Assist in evaluation of difficult to test patients
- Record case history
- Assist with real ear measurements
- Assist with ABR, ENG, and OAE testing
- Assist in implementing a treatment plan devised by SA

With RESPONSIBLE supervision, AA may:
- Test HA specifications
- Test equipment to ensure it is up to specifications
- Demonstrate care and use of hearing aids, ear molds, and ALDs
- Screen hearing, including newborns (pass / refer)
- Perform clerical duties
- Prepare clinical materials

AA may NOT:
- Provide services that require diagnostic interpretation or put the patient at physical risk. These include:
  - Providing diagnostic services to those 5 years of age or younger
  - Developing a plan of care or treatment for auditory or vestibular disorders
ADA/AAA Model License Law

• "Audiology assistant," an unlicensed individual who provides specified services under the supervision of a licensed audiologist.
ADA/AAA Model License Law

• An audiology assistant shall work under the supervision of a licensee. A licensee supervising an audiology assistant shall account for the performance and all services provided by the assistant, consistent with rules established by the board.
Sec. 5.1 Restriction on audiology assistants

The assistant may not engage in any of the following activities:

(a) Interpreting obtained observations or data into diagnostic statements of clinical management strategies or procedures.
(b) Determining case selection.
(c) Transmitting clinical information including data or impressions relative to client performance, behavior, or progress either verbally or in writing to anyone other than the professional.
(d) Independently composing clinical reports except for progress notes to be held in the client's file.
(e) Referring a client to other agencies.
(f) Using any title either verbally or in writing other than that determined by the licensee.
<table>
<thead>
<tr>
<th>Task</th>
<th>% agree</th>
<th>Task</th>
<th>% agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain infection control</td>
<td>99</td>
<td>Determine need for HA repair</td>
<td>90.5</td>
</tr>
<tr>
<td>Schedule appointments</td>
<td>98.5</td>
<td>Instruct patient on care of HA</td>
<td>90</td>
</tr>
<tr>
<td>Perform daily calibration checks of equipment</td>
<td>98</td>
<td>Instruct patient on use of HA</td>
<td>88.5</td>
</tr>
<tr>
<td>Enter patient data/set up diagnostic equipment</td>
<td>97</td>
<td>Set up/assist with HA demonstrations</td>
<td>86.5</td>
</tr>
<tr>
<td>Complete routine HA maintenance</td>
<td>95</td>
<td>Prep patient for electrophysiology testing</td>
<td>85.5</td>
</tr>
<tr>
<td>Participate in marketing events</td>
<td>95</td>
<td>Screening tympanometry (e.g. health fairs)</td>
<td>85</td>
</tr>
<tr>
<td>Assist the audiologist with pediatric testing</td>
<td>94.5</td>
<td>Restore HA settings when they return from manufacturer repair</td>
<td>84.5</td>
</tr>
<tr>
<td>Phone communications</td>
<td>92.5</td>
<td>Administer questionnaires (e.g. HHIE-A)</td>
<td>84</td>
</tr>
<tr>
<td>Complete in-office HA repair</td>
<td>92</td>
<td>Physically modify RICs</td>
<td>84</td>
</tr>
<tr>
<td>Enter patient data and set up patient for HA fitting/reprogramming/speech mapping</td>
<td>92</td>
<td>Order prescribed HA / EM</td>
<td>82</td>
</tr>
<tr>
<td>Manage electronic medical records</td>
<td>92</td>
<td>Work on correspondence for insurance/billing/coding</td>
<td>79</td>
</tr>
</tbody>
</table>
## Survey of Audiologists (Andrews, 2016)

<table>
<thead>
<tr>
<th>Task</th>
<th>% agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otoscopy</td>
<td>68</td>
</tr>
<tr>
<td>Perform OAE screenings (e.g. newborns)</td>
<td>66</td>
</tr>
<tr>
<td>Physically modify EM / HA shell</td>
<td>63.5</td>
</tr>
<tr>
<td>AC threshold testing as part of periodic check (established patient no masking)</td>
<td>62</td>
</tr>
<tr>
<td>Perform ABR screenings (e.g. newborns)</td>
<td>58.5</td>
</tr>
<tr>
<td>Obtain adult auditory case history</td>
<td>56</td>
</tr>
<tr>
<td>Run feedback test on patient</td>
<td>52</td>
</tr>
<tr>
<td>First fit HA in manufacturer software</td>
<td>49.5</td>
</tr>
<tr>
<td>Counsel on realistic expectations from HA</td>
<td>49.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
<th>% agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain child auditory case history</td>
<td>45</td>
</tr>
<tr>
<td>OAE testing</td>
<td>43</td>
</tr>
<tr>
<td>Measure UCL / MCL</td>
<td>41</td>
</tr>
<tr>
<td>Obtain case history for special diagnostics</td>
<td>40.5</td>
</tr>
<tr>
<td>Take EMI</td>
<td>39</td>
</tr>
<tr>
<td>Comprehensive audiometry – established patient no masking</td>
<td>37</td>
</tr>
<tr>
<td>Diagnostic tympanometry</td>
<td>37</td>
</tr>
<tr>
<td>Acoustic reflex threshold testing</td>
<td>32.5</td>
</tr>
</tbody>
</table>
## Survey of Audiologists (Andrews, 2016)

<table>
<thead>
<tr>
<th>Task</th>
<th>% agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete technical component of VNG</td>
<td>29</td>
</tr>
<tr>
<td>Complete technical component of rotary chair</td>
<td>29</td>
</tr>
<tr>
<td>Complete technical component of posturography</td>
<td>29</td>
</tr>
<tr>
<td>Comprehensive audiometry – new pt no masking</td>
<td>29</td>
</tr>
<tr>
<td>Comprehensive audiometry – est pt with masking</td>
<td>27</td>
</tr>
<tr>
<td>Run initial speech map at HA fitting</td>
<td>24</td>
</tr>
<tr>
<td>Complete technical component of APE</td>
<td>22.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
<th>% agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive audiometry – new pt with masking</td>
<td>21</td>
</tr>
<tr>
<td>Adjust HA gain settings based on patient report (follow-up visit)</td>
<td>20</td>
</tr>
<tr>
<td>Counsel patient on audiometry results</td>
<td>18</td>
</tr>
<tr>
<td>Perform vestibular bedside testing</td>
<td>17.5</td>
</tr>
<tr>
<td>Obtain electrophysiology data (ABR/VEMP/etc.)</td>
<td>16.5</td>
</tr>
<tr>
<td>Make gain changes based on speech mapping findings</td>
<td>16</td>
</tr>
<tr>
<td>Cerumen removal</td>
<td>15</td>
</tr>
</tbody>
</table>
Survey of Audiologists (Andrews, 2016)

<table>
<thead>
<tr>
<th>Experience Working with an Assistant</th>
<th>% of respondents 2016</th>
<th>% of respondents 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently working with an assistant</td>
<td>34</td>
<td>24</td>
</tr>
<tr>
<td>Previous experience working with an assistant</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>No experience working with an assistant</td>
<td>31</td>
<td>55</td>
</tr>
</tbody>
</table>

Andrews (2016); Hamill & Freeman (2001)

- Interest in hiring AA: 48%
- Would increase productivity: 69%
- Enjoy currently working with AA: 86%
### Survey of Audiologists (Andrews, 2016)

<table>
<thead>
<tr>
<th>Typical AA workload (check all)</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assists the audiologist (e.g. VRA)</td>
<td>69</td>
</tr>
<tr>
<td>Sees walk-in HA patients</td>
<td>66</td>
</tr>
<tr>
<td>Maintains own HA patient schedule</td>
<td>26</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
</tr>
<tr>
<td>Does not see patients</td>
<td>13</td>
</tr>
<tr>
<td>Maintain own DX patient schedule</td>
<td>11</td>
</tr>
</tbody>
</table>
Training Programs for Assistants
Lost Opportunities?

• “Master’s degree programs … faced with closure or possibly the reinvention of themselves as partners in the creation of audiologist assistant training programs. If they choose the latter, these programs would no longer provide the master’s degree, or even the bachelor’s degree... but rather, could partner with their community colleges to develop associate degree programs.” Novak, 2004
“If this reinvention of the hearing health care personnel education system is done in a coordinated manner among all audiology programs, it would be possible to transform our audiology education resources in the United States in a way that would be beneficial for all.” (Novak, AT, July/Aug., p. 19)
Training Programs for Audiology Assistants

- 24 credit hours in bachelor’s program
  - Many states still require.
- CAOHC, CPOP
- Nova Southeastern University
  - Audiologist’s Assistant Program
  - Prepares students to assist licensed audiologists as an audiology assistant
  - 2 modules
  - www.nova.edu/aud
Why the increased interest?
Helping People
Hear Better
Audiology
Pre-Mid 70’s

- **Primarily support roles** as employees in hospitals, clinics, university S/H programs
- **Rarely involved** in direct Dx and Tx
- **Marginally involved** in HA dispensing
  - Perhaps recommend
  - Only fit at the VA

(Gnewikow and Gnewikow, 2009)
Supreme Court: 1978

- “A society’s canon of ethics having the effect of limiting the competition among the society’s members is illegal”
- **Audiology professional code of ethics** modified allowing audiologists to fit and sell products for a profit
- **Led to growth** in independent audiology practice
- **Challenge of recognition** and 3rd party reimbursement remained
Impact of Supreme Court Decision on Audiology

• Led to change in Audiology code of ethics to permit audiologists to dispense hearing aids for a profit.
• Beginning of private practice for audiologists.
• Led to new foundation for profession with founding of AAA and ADA.
Transition of the Audiology Profession

• 1988
  • Founding of Audiology Foundation (AFA) with ADA to promote the transition of the profession to the doctoral degree (Au.D.)
  • Founding of AAA and support for doctoral profession.

• 2008
  • Academic programs offer doctoral degree for accreditation.
The Good News

Increased recognition for Audiology
The Road to Professional Autonomy

1988-present

Strategies to achieve

- Dept. of Labor
- Fed Employee Health Benefit Plans and Dept. of Veteran’s Affairs
- CMS: Medicare and Medicaid
- State License Laws
- U.S. Department of Education
<table>
<thead>
<tr>
<th></th>
<th>HIA Survey of “Delight” with Hearing Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Audiologist</td>
</tr>
<tr>
<td>2</td>
<td>Continued Connection to Provider</td>
</tr>
<tr>
<td>3</td>
<td>Verification and validation</td>
</tr>
<tr>
<td>4</td>
<td>Experimentation</td>
</tr>
<tr>
<td>5</td>
<td>Strong Recommendation</td>
</tr>
<tr>
<td>6</td>
<td>Personal Counseling</td>
</tr>
<tr>
<td>7</td>
<td>Thorough Evaluation</td>
</tr>
<tr>
<td>8</td>
<td>Professionalism</td>
</tr>
<tr>
<td>9</td>
<td>Personal Motivation</td>
</tr>
<tr>
<td>10</td>
<td>Hearing Aids Really Work!</td>
</tr>
</tbody>
</table>
Finding a health provider trained in hearing difficulties is a primary concern

Which would be critically important to you if you were to seek help for a hearing difficulty?

- Finding a provider with a high level of training on hearing difficulties: 74%
- The quality of the hearing exam: 65%
- The follow-up services provided by the provider: 53%
- Finding a way to pay for care: 45%
- How concerned and caring the provider seems to be: 45%
- Finding a location that is easy for you to get to: 41%

Q235 All respondents (n=2,232)
The Good News

Demographics

High demand for services
U.S. Hearing Loss

Projected population with hearing loss

- 35.8 million in 2015
- 41 million in 2025

Source: MarkeTrak VII (2005)
Over a billion persons at risk of hearing loss due to recreational and occupational noise, ototoxicity, infections.

This is approximately 5.3% of the world population.
Onset of Hearing Loss  NIDCD, 2012

Age at Which Hearing Loss Begins

- Females
- Males

<table>
<thead>
<tr>
<th>Age</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>0-2</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>3-5</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>6-19</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td>20-39</td>
<td>32%</td>
<td>30%</td>
</tr>
<tr>
<td>40-59</td>
<td>32%</td>
<td>30%</td>
</tr>
<tr>
<td>60-69</td>
<td>14%</td>
<td>12%</td>
</tr>
<tr>
<td>70+</td>
<td>8%</td>
<td>16%</td>
</tr>
</tbody>
</table>
Figure 1 – Hearing Difficulties Among U.S. Adults (~255m)

- Diagnosed with hearing loss: 1%
- A lot of hearing difficulty: 7%
- Some hearing difficulty: 11%
- A little hearing difficulty: 28%
- No hearing difficulty: 54%

Base: Online U.S. Adults (n=3,424) Q1. Have you been diagnosed with a hearing loss by a medical or hearing health care professional, such as a doctor, audiologist, or hearing aid dispenser?

CES Study (2014)
Industry’s Response
Global Hearing Aid Market
Source: Bernstein Research, 2013

- $5.4 bn wholesale
- $15 bn retail
- 14 m units
  - 45% Europe sales
  - 29% No. America
  - 26% ROW
- Dominated by “Big 6”
U.S. Private Market: Hearing aids sold (Bernstein, 2015)
## Sales by Distribution (Bernstein, 2015)

### U.S. manufacturer-owned retail

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Name of Brands</th>
<th>Ownership Structure</th>
<th>Number of U.S. Stores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starkey</td>
<td>Audibel</td>
<td>Franchise</td>
<td>1,133</td>
</tr>
<tr>
<td>GN ReSound</td>
<td>Beltone</td>
<td>Franchise</td>
<td>1,302</td>
</tr>
<tr>
<td>Sonova</td>
<td>Connect Hearing</td>
<td>Full-ownership</td>
<td>473</td>
</tr>
<tr>
<td>William Demant</td>
<td>Avada, HearingLife</td>
<td>Full-ownership</td>
<td>450</td>
</tr>
<tr>
<td>Sivantos (Siemens)</td>
<td>HearUSA</td>
<td>Full-ownership</td>
<td>180</td>
</tr>
</tbody>
</table>

### U.S. hearing aid chain retail

<table>
<thead>
<tr>
<th>Retailer</th>
<th>Number of Stores</th>
<th>Annual Unit Sales (k)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplifon Miracle Ear</td>
<td>1,173</td>
<td>139</td>
</tr>
<tr>
<td>Amplifon Elite</td>
<td>1,129</td>
<td>203</td>
</tr>
<tr>
<td>Costco</td>
<td>439</td>
<td>248</td>
</tr>
</tbody>
</table>
Global Hearing Aid Market
Source: Bernstein Research, 2013

Chain retail makes up around 20% of global hearing aid distribution...

<table>
<thead>
<tr>
<th>Retail Chain</th>
<th>Main Territories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplifon</td>
<td>Italy, France, Germany, UK, US</td>
</tr>
<tr>
<td>i-Hear</td>
<td>Australia</td>
</tr>
<tr>
<td>Audicia</td>
<td>Australia</td>
</tr>
<tr>
<td>Audika</td>
<td>France, Italy</td>
</tr>
<tr>
<td>HAL AudioNova</td>
<td>Netherlands, Germany, Poland</td>
</tr>
<tr>
<td>Kind Hogerate</td>
<td>Germany</td>
</tr>
<tr>
<td>GAES</td>
<td>Spain, Portugal, Mexico, Argentina</td>
</tr>
</tbody>
</table>

Source: Corporate reports, Bernstein analysis.

...with Amplifon representing half of that total

Source: Corporate reports, Bernstein analysis.
Response of Audiology Profession

• Understanding Demographics and Using information to grow practices.
• Improving and implementing efficiencies.
• Practicing the core principles and scope of practice of profession.
• Surrender & Complacency.
Increased recognition led to demographic challenges
Demography of Audiologists

- Licensed Audiologists: 16,095

*Freeman, 2010
Projected Need to Maintain Current Audiologist/Patient Ratio

Number of Audiologists

Windmill & Freeman, 2014
Projected Need versus Projected Growth of Audiologists

Windmill & Freeman, 2014
Projected Need versus Projected Growth of Audiologists

- **Projected Need**
- **Projected Growth**

Unmet Need?

Windmill & Freeman, 2014
Meeting Demand?

• Increase number of audiologists.
• Improve efficiencies in service delivery.
  • Technology
  • Personnel, e.g., assistants
What are practice choices for an assistant?

- Medical ENT
- VA
- University Clinic
- Manufacturer or Corporate owned practice
- Independent Private Practice
What are practice choices as an assistant?

- Medical ENT
- Independent Private Practice
- VA
- Manufacturer or Corporate owned practice
- University Clinic
Rationale for Appropriate Use of Support Personnel

- Practice efficiency
- Improved patient management
- Better patient access
Core Focus: A shift from LLP to Retail Sales

Historic

Diagnose

Manage

Treat

Current

Product Sales
“If all you do is sell a product, differentiation is impossible because your industry can be cannibalized by corporate America.”

Woods (2013)
Cannibalization

A shift from our goal of becoming LLPs who Diagnose, Manage, and Treat their patients

To

A goal of selling more products today than yesterday
Audiologists Diagnose, Manage, and Treat Individuals with Hearing and Balance Disorders?

- Audiology

- Patient Visits & Patient Centered Care
- Hearing and Balance Exams; Treatment & Management Recommendations
- Hygiene, Prevention, & routine follow up care
- Practice Differentiation Based on Quality of Care, Credentials, & Trust
Building a Relationship of Trust for Individuals with Hearing & Balance Disorders

- Audiologists differentiate their practices from other profession and practices

Diagram: Treatment, Prevention, Management, Diagnosis

AuDACITY
Case Examples
Re-Engineering Audiology Departments by Adding Audiology Assistants to Maintain Quality Patient Care and Profitability (Ramos, 2013)
Audiology Practice Overview

• Reduction in revenue
  • Third party reimbursement lower (e.g., Medicare, private insurances).
  • More dependence on product sales at lower margins (e.g., 45% Medicare Advantage now have hearing aid benefits).

• High overhead costs
  • Labor
  • Hearing aid COGS
  • Expensive equipment
  • Shortage of Audiologists
  • 25% - 50% of audiologist daily appointments spent on non revenue producing hearing aid activities
Solution

• Hire assistants to support audiologists
Diagnostic Audiology

- Completes patient history, documentation and otoscopy
- Conducts technical component of audiologic testing (e.g., ABR, ECOG, VNG, VEMP)
- Improve audiologist productivity by handling non revenue producing functions such as:
  - HA Repairs, programming and fitting issues
  - Pickup of hearing aid after purchase and/or repair
  - Discussion of contract and warranty
  - Care, use and maintenance
  - Paperwork component of completing a hearing aid sale
    - Initial order, order tracking and communication with vendor
    - Inventory management
    - Warranty/repairs
- Prior to audiology assistants
  - 25% - 50% of audiologist daily appointments spent on non revenue producing hearing aid activities
Value of Audiology Assistants (Ramos, 2013)

• Productivity
  • 50% increase in hearing aid revenue ($1.8m to $2.7m)
  • 2% increase in # of diagnostic tests (27,900 to 28,384)
• Personnel and patient satisfaction
4780 walk-in visits in 2004
• Compared effectiveness of having 4 AA versus hospital without AA
  • 3 times more patients served in clinic with Assistants
  • 60% cost savings estimated at clinic with assistants

(From Hamill and Freeman, 2006)
Audiologists Say...

• “We use assistants to free up AuD time for diagnostics, initial fittings, and hearing aid evaluations.”
• “Our clinic would not run without our Assistants.”
• “Our assistant is indispensible to our working day.”
• “Our assistants perform all of our regular 4/6 month checks and annual rescreens, we are able to focus on diagnostics, HAEs, and HA fittings/follow ups... I could not imagine functioning without them. AAs allow us to see and help more patients in a day. Our patients also love the personalized attention they receive from the AAs.”
It’s a Great Time to be an AA and It’s a Great Time for Audiologists to work with Assistants
It’s a Good Time to be an Audiologist Assistant!

- Forbes magazine:
  The “Offices of Audiologists” are #15 of the 20 Most Profitable Small Businesses in America.

- Time magazine
  Audiology is the best profession...

US News & World Report/U.S. Department of Labor:
- 4 consecutive years #1
- “One-on-one helping career”
- “Under-the-radar career”
- “Great independent practice opportunities”
Thank you for listening


• Patti Ramos, (2013) Re engineering audiology department...