

Audiology Education: Generalist, Specialist?

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Acknowledgements

- Thanks
 - Gold Standards Summit (GSS) and the AuD Survey
 - Christie Yoshinaga-Itano, Maureen Valente, Todd Ricketts, Therese Walden
 - ACAE
 - Ian Windmill, Doris Gordon
 - ABA
 - Jim Beauchamp, Sara Lake
 - CAuDP
 - Ian Windmill, Barry Freeman, Jerry Church et al.

“Generalist”—My Interpretation

- One age all procedures, or one procedure across the age range?
- Assumption—
 - Basic diagnostic evaluations (CPT 92557, 92567) for adults and children over the age of 5
 - Hearing aid treatment

“Specialist”—My Interpretation

- Ages and/or procedures outside of the “Generalist” definition
- Infant diagnostics (electrophysiology)
- Vestibular diagnostics
- Vestibular treatment
- Cochlear Implants
- Industrial/Hearing Loss Prevention
- Tinnitus
- Auditory Processing Disorder
- Intra-operative Monitoring

How is a “Specialist” Defined?

- Self-declared
- Word of mouth
- Research interests
- Certification
 - Audiology
 - Other organizations

What Can ONLY An Audiologist Do?

- These are the areas of greatest need
- Infant Diagnostics and Treatment
- Cochlear Implants
- Rehabilitation (infant, pediatric, adult)
- Educational Audiology

Why Did We Move to AuD?

- Scope of practice of audiologist has expanded in the past 30 years
 - E.g., hearing aid dispensing, cochlear implants, vestibular work, electrophysiologic diagnosis, newborn screening/diagnosis,
- MA insufficient to train audiologists into the full SOP
- Undergraduate emphasis on Speech Pathology was no longer a good match
- Recognition of a growing, autonomous profession

Scope of Practice of an Audiologist American Academy of Audiology

- Defines the range of interests, capabilities and professional activities
- Defines audiologists as independent practitioners
- Provides examples of settings in which they are engaged
- Academy members will provide only those services for which they are adequately prepared
 - Through their academic and clinical training and experience
 - What are the implications of this statement?
- Practice is consistent with the Code of Ethics

SOP--Identification

- Audiologists develop and oversee hearing screening programs for persons of all ages to detect individuals with hearing loss
- May perform speech or language screenings for the purpose of initial identification and referral
- Identification now includes designing, implementing and managing Newborn Hearing Screening Programs

SOP--Assessment and Diagnosis

- Administration and interpretation of behavioral, physiologic, and electrophysiologic measures of the peripheral and central auditory systems
- Assessment of the vestibular system
- Assessment is accomplished using standardized testing procedures and appropriately calibrated instrumentation and leads to the diagnosis of hearing aid/or vestibular abnormality

SOP--Treatment

- Provides full range of audiologic treatment
 - Hearing and vestibular function impairments
- Evaluation, fitting, and verification of amplification devices
 - Including assistive listening devices
- Otoscopy, remove cerumen
- Select, fit, evaluate and dispense hearing aids
- Tinnitus treatment

SOP—Treatment for Vestibular Disorders

- Participate as full members of balance treatment teams to recommend and carry out treatment and rehabilitation of impairments of vestibular function

SOP—Treatment Services for Infants and Children

- Clinical treatment
- Home intervention
- Family support
- Case management

Treatment—Cochlear Implant

- Member of the implant team who determines audiologic candidacy
- Provides pre- and post-surgical assessment, counseling and all aspects of audiologic treatment including auditory training rehabilitation, implant programming, and maintenance of implant hardware and software

SOP—Source of Information

- For family members, other professionals and general public
- Counseling regarding hearing loss
- Strategies for improving speech recognition
- Counseling on the effects of hearing loss on communication, psycho-social status in personal, social and vocational arenas

SOP—Educational Audiology

- Audiologists provide diagnosis and treatment to children of all ages with hearing impairment
- Integral part of the school system team to manage student with hearing impairment and central auditory processing disorders
 - Participates in IEP and IFSP development
 - Consultant in matters pertaining to classroom acoustics, ALDs, hearing aids, communication and psycho-social effects of hearing loss
 - Maintains classroom amplification and personal hearing aids
- Audiologist administers hearing screening programs in schools, and trains and supervises non-audiologists performing hearing screenings

SOP—Hearing Conservation

- Designs, implements and coordinates industrial and community hearing conservation programs
- Includes
 - identification and amelioration of noise-hazardous conditions
 - Identification of hearing loss
 - Recommendation and counseling on use of hearing protection
 - Employee education
 - Training and supervision of non-audiologists performing hearing screening in the industrial setting

SOP—Intraoperative Neurophysiologic Monitoring

- Administer and interpret electrophysiologic measurements of neural function
 - Including sensory and motor evoked potentials

SOP--Research

- Design, implement, analyze and interpret the results of research related to auditory and balance systems

SOP—Additional Expertise

- Some audiologists, by virtue of education, experience, and personal choice choose to specialize in an area of practice not otherwise defined in this document.
- Nothing in this document shall be construed to limit individual freedom of choice in this regard provided the activity is consistent with the AAA Code of Ethics.

73 AuD Programs

- Do they all meet the full SOP in terms of education and training?
- Does the accreditation body ensure competence across the SOP?
- What is the minimum level of competence that an AuD achieves?
- What is the role of the 4th year?

AAA Survey

- Christie Yoshinaga-Itano, Maureen Valente, Todd Ricketts
- Survey conducted prior to 2009 Gold Standards Summit
- 64 programs responded (and responses are being solicited from the remaining 9 programs).

Entering Class Demographics and Considerations

- 6-9 per cohort
- Many with undergraduate degrees other than CSD
- 49% support, and 31% undecided on the question of professional pre-doctoral pre-med training

Can We Meet the Need for the Number of Audiologists Required in the Years Ahead?

- **New positions – in pediatric settings, school systems, hospitals, private practice, or geriatric settings.**
- **Positions vacated by retirements.**
- **Of 64 programs, 48 (75%) graduate 9 students or fewer/year.**
- **16 programs graduate 10 or more students/ year.**
- **3 of these 16 programs graduate 16-20 students/year.**

Clinical Experience

- While 100% of programs assure clinical e experience in adult assessment and amplification, only
 - 40% assure experience in ASSR, ECochG, Intra-operative monitoring
 - 39% in hearing conservation
 - 50% in pediatric cochlear implantation; 56% in adult cochlear implantation
 - 50% in educational audiology
 - 50% in vestibular assessment other than ENG/VNG
 - (survey didn't separate out "infant")

Areas missing from "own" AuD Program

- Electrophysiology
- Intraoperative monitoring
- APD
- Cochlear implants
- Vestibular/balance assessment /rehabilitation
- Adult aural rehabilitation
- Pharmacology
- Genetics
- Business
- Radiology/imaging
- AR clinical experience
- Tinnitus
- Industrial audiology
- Supervision/Mentoring
- Medical Audiology

If Program Admits that these Areas are "Missing"

- Then we are training generalists
 - Whether deliberately or accidentally
- Specialist education will be necessary for these grads if they want to:
 - Work in medical center
 - Electrophysiologic diagnosis/operating room
 - Genetics
 - Cochlear Implants
 - Understand radiographic studies
 - Vestibular
 - Provide auditory rehabilitation to adults
 - Own their own business
 - Do Auditory Processing Evaluations/Treatment
- All of the above areas are growing areas of practice!
- What are the ethical implications?

4th Year Externships

- 67% of programs report that students have achieved clinical competency across the SOP in the 3d year
 - Yet 22% of programs do not guarantee a 4th year placement
 - 46% do not assume full responsibility for finding and placing students in a 4th year
 - 34% advise students to contact the 4th year sites on their own

Preceptors

- 72% of programs do not provide preceptorship training
 - (now required for provisional license in CA)
- Are they
 - Preceptors?
 - Supervisors?
 - Employers?
 - Opportunists?

4th year expectations

- General agreement among programs that full mastery of diagnostic and rehabilitative skills should be accomplished
- General agreement on an experience that provides broad range- however, some indicated that students could choose externship sites that were more specialized, such as adults only or pediatrics
- Issue: Some Programs appear to leave some areas of training entirely to the 4th year, for others it allows specialization and for still others it allows for refinement of existing skills.
 - Is this lack of uniformity hard on externship sites?
 - Does this lack of uniformity lead to unevenness in grads?

4th Year Expectations

- General agreement that full mastery of diagnostic and rehabilitative skills should be accomplished (but this isn't always the case)
- General agreement on experience that provides broad range, however, some indicated that students could choose externship sites that were more specialized
- Issue: Some programs leave some areas of training entirely to the 4th year.
 - Is the lack of uniformity hard on externship sites?
 - Does this lack of uniformity lead to unevenness in grads?

Pros of Generalist Education

- Can be accomplished in most existing AuD programs
 - Specialized experiences not required
 - Does not necessarily require affiliation with medical center
- Prepares student for practice in many settings (e.g., private practice, general medical practice)
- Less expensive for University (equipment, expert teaching, difficult-to-arrange clinical experiences)

Pros of Specialist Education

- Meets needs of students who have a specific career goal
 - E.g., pediatrics, cochlear implants, hearing conservation
- Helps to meet needs in community
 - E.g., infant/pediatric diagnosis/treatment
 - Educational audiologists

Cons of Generalist Education

- Without competence across the SOP, sets students up to accept employment in areas where competence isn't assured
- Student cannot predict where s/he will accept a position and what competencies will be required
- Does not meet demand for specialized skills in the community/country
 - E.g., pediatrics, cochlear implants, educational audiology

Cons of Specialist Education

- More narrow focus may make changing positions difficult
 - As an employee, may be put into position where required to provide a service that s/he is not competent to provide
- UNLESS Specialist Education occurs after education and clinical competence across the SOP
 - Post AuD degree?
 - Specialty Certification?

Other Options for Specialist Education

- Specialty Certification
- American Board of Audiology has specialty certification in cochlear implants
- Currently devising specialty certification in pediatrics
- Optional specialization—assures competence in specific areas

Other Options—Outside Certification

- Auditory-Verbal Therapy (AVT)
- American Board of Neurophysiologic Monitoring (ABNM)

Another Option--Shift Some Academic Education to Undergraduate

- Attract students with broad undergraduate experience to more rapidly and effectively move into specialty training
- E.g., acoustics, biology, chemistry, neuroanatomy/physiology, genetics, basics of electrophysiology, research design, basic business classes, pharmacology, etc.
- Permits time in AuD program for more specialized training

Specialized 4th Year Experiences

- Will become feasible when 4th year sites/preceptors are measured and/or accredited via some uniform metric
- Only reasonable if uniform AuD standards lead to uniform competencies at the end of the 3d year
 - Tied to accreditation
 - Tied to summative assessment(s)

Audiology Assistants

- As audiologists increasingly use assistants, will permit audiologist to be a specialist, supervising assistants to provide more routine work
- Need to prepare AuD students to be supervisors of assistants
- If physicians use “oto-techs”, the demand for generalist audiologists may decrease

Accreditation and Educational Models

- Need uniform, rigorous accreditation standards
 - For generalist education: uniform accreditation
 - For specialist education: may require specialist accreditation
- Need Educational Model that permits
 - Greater number of students per cohort
 - Consortia
- Elimination of some programs?

In Summary

- Audiology professional education is evolving
 - New structure, with uneven application
- Generalist audiologists can no longer meet the full demand for services
- Specialty certification viable option to permit post-degree specialization.