2022

AUDIOLOGY CLINICAL PRACTICE ANALYSIS SURVEY:

EXECUTIVE SUMMARY

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The American Academy of Audiology (the Academy) is committed to advancing the science, practice, and accessibility of hearing and balance care for patients and providing services to its stakeholders, specifically audiologists. To support these goals, the Academy realized the need for a practice analysis to provide an in-depth and comprehensive description of current audiology clinical practice. To that end, the Academy initiated the development of a practice analysis survey, the *2022 Audiology Clinical Practice Analysis Survey,* for the purpose of describing current audiology practice.

The selection and composition of a panel of experts (POE) is a critical element in developing a survey that will represent audiologists. The Academy selected a group of dedicated and highly qualified audiologists who were willing to offer their time. This group had the charge of assisting in the development of a national survey targeting audiologists. The POE members represent a variety of years in practice, practice roles and settings ensuring a comprehensive approach to this major initiative.

The project used multiple methods to describe the practice of audiologists: (1) document review, (2) interviews, (3) expertise of subject-matter experts, and (4) a large-scale survey of audiologists. The survey consisted of demographic and practice questions, activities performed in the practice of audiologists, and write-in comments. The Academy distributed the survey using multiple methods, such as direct distribution to audiologists, newsletter links, and various social media outlets. The survey remained open for five weeks with weekly reminders to potential responders. The survey included 25 demographic and practice setting questions and 118 audiology practice activity statements organized into six domains of practice. Of the 512 initial respondents to the survey, 479 qualified to participate based on currently working in clinical practice.

Following is a description of audiologists and their practice setting.

Personal and Demographics

- 270 of the 466 respondents (59.34%) indicated having 10 or more years of audiology experience.
- The AuD is the highest degree earned by 372 of the 454 respondents (81.94%). There were 166 (23.81%) of the 454 respondents who did not select one of the voluntary certifications.
- Of the 243 respondents who answered demographic questions, 65% identified as female, 17% as cisgender, 14% as male, 2% as transgender, and 2% as genderqueer. More than 86% identified as straight or heterosexual, 6% as part of the LGBTQIA+ community, and 8% as neither or not known.
- The survey asked respondents to self-identify as many race and ethnicity categories that apply, and respondents identified as follows: White (97%); Black, African American, or African Heritage (3%); American Indian or Alaskan Native (7 %); Hispanic, Latino, or Spanish Origin (5%); and Asian (4%);

Practice Setting

- 157 of the 456 respondents (34.15%) selected private practice and 75 respondents (16.48%) selected private ENT practice. None of the respondents selected Big Box as a setting.

- When asked in which state or U.S. territory they *primarily* practice, respondents identified Texas and California (7.9%) the most frequently. Of the 434 responses to the question "Select *all* the states or US territories in which you practice," Texas had the most frequent selection by 50 respondents (11.5%). Respondents who selected multiple states mostly identified border states, such as Kansas/Missouri, Missouri/Illinois, New Jersey/New York, New York/Pennsylvania, and Virginia/West Virginia. Selected non-border states included Minnesota/California, Ohio/Utah, and Kentucky/Maine.

Practice

- 421 respondents (97.3%) indicated having their own NPI.
- 393 of the 456 respondents (86.18%) participate in Medicare and 195 (42.67%) participate with third-party administrators.
- 388 of the 456 respondents (85.09%) identified as an in-network provider with one or more commercial health plans.
- 159 of the 457 respondents (34.79%) who provide contract services to the VA.
- 205 (44.86%) audiologists have a practice directly affiliated with an ENT physician (i.e., the ENT is in the same office as the audiologist); 252 (55.14%) are not practicing directly in affiliation with an ENT physician. For those who practice in the same office as the ENT, most of their caseload also sees the ENT on the same day of service. Additionally, the practice accepts outside referrals directly to the audiologist with them coming most frequently from primary care physicians, pediatricians, and word of mouth.
- Respondents identified support staff in their practice setting: 330 (76.74%) selected receptionist; 275 (63.95%) selected billing staff; and 64 (14.88%) selected audiology aide.
- The most frequently selected length of time for hearing aid evaluation appointments and hearing aid fittings is 60 minutes.
- When asked if they are responsible for communication with other professionals outside of the office for coordination of care, 381 (86.20%) of the audiologists responded "Yes."
- Audiologists also noted that 309 (70.39%) complete diagnostic tests or procedures that are excluded from Medicare, and there were 214 (64.65%) respondents who stated that the patients remit payments directly for services.

After reviewing demographic and practice information from the survey, as well as limited comparative information from the Academy database, the POE noted that respondents to the survey, in general, represented their understanding of the population of audiologists.

Almost 90% of the survey respondents agreed that the practice activities on the survey represented their practice "Well" or "Very Well." Moreover, the POE reviewed the 83 comments on "missing" activities and noted that 18 of the comments were "None," "Unsure," and "Very comprehensive." The remaining comments were reviewed in detail by the Audiology Panel of Experts who noted that the activities listed as "missing" were sufficiently addressed on the survey or were not relevant/current.

The survey respondents rated practice activities for importance and frequency using 5-point rating scales. The POE selected the rating scales after reviewing the results of the Audiology Practice Pilot Survey. The POE noted that these scales would allow for an adequate number of meaningful responses without over-burdening the respondents and could reduce the need for scrolling which could decrease response time.

Reliability indices were calculated to assess the capability of the survey rating scales to measure the audiologists' ratings. A Cronbach's alpha coefficient was calculated for the frequency and importance rating scales to measure the internal consistency of the instrument (Cronbach, 1951). Reliabilities of .980 for importance and .967 for frequency, indicating that the scales could produce reliable (repeatable) ratings.

The POE carefully reviewed all the data on each of the 118 activity statements: Response counts including the modal ratings of importance and frequency for each activity, the averages and weighted averages, and the combined ratings (frequency rating multiplied by the importance rating). The POE reviewed and discussed the data provided for each of the 118 activity statements as they reviewed each domain. Additionally, the POE reviewed the categorization of the activities within each domain. After discussion and careful deliberation, the POE retained all activity statements and determined the appropriate categorization of the activities.

The POE recommends the following six domains of practice for clinical audiology, with a complete set of task statements available in the appendix.

Audiology Domains
Domain 1: Assessment and Diagnosis of Patients with Auditory Disorders
Domain 2: Treatment of Patients with Auditory Disorders
Domain 3: Assessment and Diagnosis of Patients with Vestibular Disorders
Domain 4: Treatment of Patients with Vestibular Disorders
Domain 5: Practice Management and Administration
Domain 6: Advocacy, Public Service and Prevention

In summary, after a thorough analysis and careful deliberation, the POE determined that findings from this clinical practice analysis survey can be used to describe current audiology practice.

APPENDIX

AUDIOLOGY PRACTICE TASK STATEMENTS

Domain I: Assessment and Diagnosis of Patients with Auditory Disorders

Number	Domain 1 Activity Statements
1	Obtain comprehensive case history through patient/caregiver interviews
2	Complete medical record and/or document review to establish reason for visit and to guide assessment plan
3	Complete questionnaires or self-assessments. (e.g., hearing, balance, cognition, depression, quality of life, social determinant of health, etc.)
4	Perform otoscopy/video otoscopy and physical examination of the ear
5	Perform speech audiometry: Speech reception thresholds
6	Perform speech audiometry: Word recognition (e.g., Performance Intensity for Phonetically Balanced words (PI-PB function)
7	Perform speech audiometry: Loudness discomfort levels
8	Perform speech audiometry: Most comfortable levels
9	Perform speech audiometry: Speech-in-noise
10	Perform acoustic immittance testing: Tympanometry
11	Perform acoustic immittance testing: Acoustic reflex testing
12	Perform acoustic immittance testing: Acoustic reflex decay
13	Perform acoustic immittance testing: Wide-band reflectance
14	Perform electrophysiological evaluations: Screening ABR
15	Perform electrophysiological evaluations: Diagnostic ABR for threshold determination
16	Perform electrophysiological evaluations: Neurodiagnostic ABR
17	Perform electrophysiological evaluations: Electrocochleography
18	Perform otoacoustic emissions (e.g., Distortion Product emissions, Transient evoked emissions)
19	Perform tinnitus evaluations: Pitch-matching
20	Perform tinnitus evaluations: Loudness matching
21	Perform tinnitus evaluations: Minimum masking level
22	Perform tinnitus evaluations: Questionnaires
23	Perform tinnitus evaluations: Loudness discomfort level
24	Perform tinnitus evaluations: Most comfortable level
25	Perform tinnitus evaluations: Residual inhibition test
26	Perform hyperacusis evaluations: Questionnaires
27	Perform hyperacusis evaluations: Ultra high-frequency audiometry
28	Perform hyperacusis evaluations: Loudness discomfort levels
29	Perform hyperacusis evaluations: Speech in noise testing
30	Perform misophonia evaluations: Questionnaires
31	Perform misophonia evaluations: ABR

Number	Domain 1 Activity Statements
32	Perform misophonia evaluations: Ultra high-frequency audiometry
33	Perform misophonia evaluations: Loudness discomfort levels
34	Perform auditory processing behavioral assessments. (e.g., questionnaires, test of temporal processing; Dichotic listening (speech) tests; tests of monaural low-redundancy speech perception; tests of localization and lateralization and other binaural interaction)
35	Perform auditory processing assessment with electrophysiologic measures (e.g., Complex Auditory Brainstem Response (cABR); middle latency responses; and late auditory evoked potentials)
36	Perform hospital-based newborn hearing screenings
37	Perform industrial hearing screenings
38	Perform ototoxicity monitoring
39	Determine diagnoses based on synthesis and interpretation of case history and test results
40	Assess and diagnose auditory disorders through: In-person delivery
41	Assess and diagnose auditory disorders through: Telehealth delivery
42	Assess and diagnose auditory disorders through: Remote delivery (with support staff in patient location and audiologist in the different location)
43	Perform cerumen management
44	Communicate diagnoses and need for intervention to patient/family/caregiver
45	Educate and counsel patient/family/caregiver regarding implications of diagnoses and interventional choices and ensure comprehension of plan by patient/family/caregiver

Domain 2: Treatment of Patients with Audiology Disorders

Number	Domain 2 Activity Statements
46	Develop a treatment/management plan based on results of assessments and patient-specific factors
47	Make appropriate referrals (for example, medical, educational, occupational)
48	Recommend and/or prescribe devices: Hearing aids & earmolds
49	Recommend and/or prescribe devices: Cochlear implants
50	Recommend and/or prescribe devices: Implantable and non-implantable bone conduction devices (for example, osseo-integrated, soft-band)
51	Recommend and/or prescribe devices: Hearing Assistive Technology including signaling, alerting, and FM system technology
52	Recommend and/or prescribe devices: Sound generators/sound therapy devices
53	Recommend and/or prescribe devices: Hearing protection devices
54	Collaborate with health-care providers, educators, employers, early intervention specialists, to implement treatment/management plan
55	Provide aural (re)habilitative services (e.g., Communication strategies training; informational/educational counseling; personal adjustment counseling and psychosocial support; communication partner training; in-service training)
56	Provide auditory training and/or speechreading training
57	Provide rehabilitative services for tinnitus
58	Provide rehabilitative services for hyperacusis
59	Fit/program devices (e.g., hearing aids, cochlear implants, etc.)
60	Provide ongoing education and counseling of prescribed devices regarding operation, expectations, maintenance, and use
61	Perform device verification through: Electroacoustic analysis

62	Perform device verification through: Real-ear measures
63	Perform device verification through: Soundfield measures for functional gain
64	Perform device verification through: Soundfield measures of speech recognition in quiet
65	Perform device verification through: Soundfield measures of speech in noise testing
66	Perform device validation using outcomes assessment (e.g., client-oriented scale of improvement)
67	Perform ongoing monitoring, programming, and maintenance to evaluate effectiveness of treatment
68	Implement and manage solutions for hazardous noise exposure (e.g., engineering controls, hearing protection devices, education)
69	Treat auditory disorders through: In-person delivery
70	Treat auditory disorders through: Telehealth delivery
71	Treat auditory disorders through: Remote delivery (with support staff in patient location and audiologist in the different location)

Domain 3: Assessment and Diagnosis of Patients with Vestibular Disorders

Number	Domain 3 Activity Statements
72	Perform and interpret bedside vestibular evaluations (e.g., head-thrust test, active headshake, dynamic visual acuity, MCTSIB, Stepping Fakuda)
73	Complete functional balance/handicap questionnaires
74	Evaluate falls risk potential
75	Perform vestibular tests: Electronystagmography/Videonystagmography
76	Perform vestibular tests: Video Head Impulse Test (v-HIT)
77	Perform vestibular tests: Computerized Dynamic Posturography (CDP)
78	Perform vestibular tests: Rotary Chair Test
79	Perform vestibular tests: Vestibular Evoked Myogenic Potential (VEMP)
80	Interpret vestibular tests: Electronystagmography/Videonystagmography
81	Interpret vestibular tests: Video Head Impulse Test (v-HIT)
82	Interpret vestibular tests: Computerized Dynamic Posturography (CDP)
83	Interpret vestibular tests: Rotary Chair Test
84	Interpret vestibular tests: Vestibular Evoked Myogenic Potential (VEMP)
85	Assess and diagnose vestibular disorders through: In-person delivery
86	Assess and diagnose vestibular disorders through: Telehealth delivery
87	Assess and diagnose vestibular disorders through: Remote delivery (with support staff in patient location and audiologist in the different location)

Domain 4: Treatment of Patients with Vestibular Disorders

Number	Domain 4 Activity Statements
88	Develop vestibular rehabilitation plans. (e.g., adaptation; habituation; and substitution exercises)
89	Implement vestibular rehabilitation plans. (e.g., adaptation; habituation; and substitution exercises)
90	Treat benign positional vertigo with canalith repositioning maneuvers
91	Treat vestibular disorders through: In-person delivery
92	Treat vestibular disorders through: Telehealth delivery
93	Treat vestibular disorders through: Remote delivery (with support staff in patient location and audiologist in the different location)

Domain 5: Practice Management and Administration

Number	Domain 5 Activity Statements
94	Comply with local, state, and national regulatory requirements (for example, HIPAA, OSHA, IDEA)
95	Implement and/or manage hearing screening programs (for example, newborn, school-age, adult)
96	Implement and/or manage occupational hearing conservation programs
97	Assign current procedural and diagnosis billing codes for patient encounters
98	Monitor/implement current coding practices (e.g., training staff, MIPS updates, Correct Coding Initiative, etc.)
99	Generate individual patient reports to document patient encounters and/or satisfy third-party payer requirements
100	Establish and manage internal policies, procedures, and protocols for clinical practice
101	Maintain infection control processes
102	Collect patient feedback to identify areas for quality improvement and enhance patient care/services
103	Monitor business practices through data collection and analysis (e.g., benchmarking) to inform business decisions
104	Ensure equipment is calibrated and maintained
105	Participate in research studies
106	Synthesize evidenced-based research into clinical practice
107	Provide training, education, and supervision to: Student Intern/Extern
108	Provide training, education, and supervision to: Audiology Assistant
109	Provide training, education, and supervision to: Audiologists
110	Provide training, education, and supervision to: Medical staff and other health professionals
111	Provide training, education, and supervision to: Support staff
112	Participate in continuing education and professional development opportunities
113	Participate in professional associations at local, state, national, and international levels

Domain 6: Advocacy, Public Service and Prevention

Number	Domain 6 Activity Statements
114	Educate at-risk individuals/groups for auditory and vestibular disorders (e.g., noise exposure, ototoxicity, risk for falls)
115	Provide public education regarding risks, causes, prevention, and treatment of auditory and vestibular disorders
116	Participate in local, state, national, and international humanitarian causes related to audiology (e.g., mission trips, disaster services, Special Olympics, local screenings, etc.)
117	Advocate at the local, state, and/or national level for legislative and regulatory changes needed to best serve consumers with auditory and/or vestibular disorders
118	Serve as a patient advocate to facilitate access to services/care