



AMERICAN
SPEECH-LANGUAGE-
HEARING
ASSOCIATION

Survey Report on Telepractice Use Among Audiologists and Speech-Language Pathologists

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SURVEY OF TELEPRACTICE USE AMONG AUDIOLOGISTS AND SPEECH – LANGUAGE PATHOLOGISTS

1. INTRODUCTION

The American Speech-Language-Hearing Association (ASHA) conducted a survey of members regarding telepractice. Telepractice is the application of technology to deliver audiology and speech-language pathology services at a distance. Telepractice was defined for the survey to include any or all of the following services: treatment; screening and assessment; follow-up; counseling; professional consultation; equipment check; prevention activities; or bilingual/multicultural and other services. The goal of the survey was for ASHA to gather information to help them assess the use of this practice among members.

The sampling frame for this survey was 96,636 ASHA certificate holders in Audiology and Speech-Language Pathology. The frame was stratified by certification status: audiologists and speech-language pathologists. Among ASHA members, there are 11,209 ASHA certified audiologists, and 85,427 ASHA certified speech-language pathologists. Then, the sample was selected systematically from each stratum with a random start and a fixed interval. To ensure reasonably accurate estimates for the total and for the subpopulations, we drew an initial sample of 3,186 audiologists, and 2,709 speech-language pathologists (total = 5,895). All were clinical service providers.

To help increase the number of agreements to participate in the telephone survey, we mailed an introductory letter to each prospective respondent. Please see Appendix A for a copy of the letter. The letter explained the purpose of the study and alerted the sampled respondents that they would get a telephone call. The letter impressed on the respondents that their responses were very important to the success of the survey.

Overall, respondents were very interested in the survey; only 144 individuals refused to participate which resulted in a refusal rate of less than 3 percent (2.4%). During the field

period we found that 322 potential respondents were no longer practicing, 3 individuals were deceased, 116 were not working at the telephone number we had listed for them, 502 telephone numbers were non-working, and 139 telephone numbers were the wrong numbers. Subtracting these individuals (total = 1,226) from the initial sample, a total of 4,669 individuals remained in the sample pool.

The goal of the telephone survey was to obtain 1,600 completed questionnaires from both subpopulations. We were able to obtain 1,667 by the end of the field period (842 completed interviews with audiologists and 825 completed interviews with speech-language pathologists).

This was an exploratory study, so the data collection instrument covered a wide range of topics related to telepractice. (Please see Appendix B for a copy of the questionnaire.)

These topics included:

- Delivery of services via telepractice
- Barriers to service delivery
- Settings
- Areas of practice/diagnosis
- Ages served
- Services delivered (direct patient care, supervision, education/training)
- Research and technology
- Reimbursement
- Training on delivery of services via telepractice
- Expanding telepractice
- Demographics
- Attitudes

2. SURVEY FINDINGS

2.1 Use of Telepractice

Among the 1,667 practitioners who responded to the survey, 842 (50.5%) were audiologists and 825 (49.5%) were speech-language pathologists. Approximately one tenth (11%) of the respondents reported using telepractice to deliver services (users).

Audiologists were more likely to do so than were speech-language pathologists (12% vs. 9%).

Of those who were not currently delivering services via telepractice (non-users), 4 percent reported having done so sometime in the past, and 43 percent expressed interest in using it in the future. There was a higher level of interest among those speech-language pathologist who were non-users (47%) than among the audiology non-users (40%). The barriers to the use of telepractice include:

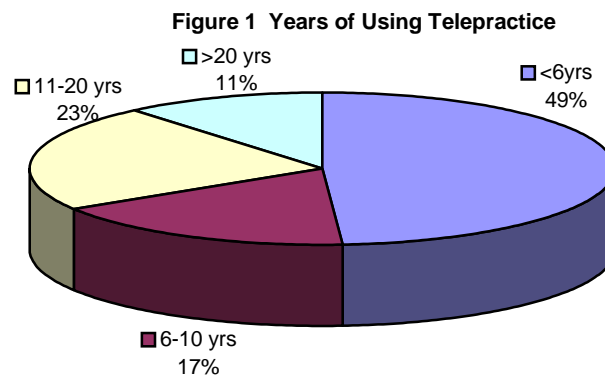
- Cost (14%)
- Lack of professional standards (13%)
- Lack of data on efficacy cost-effectiveness (11%)
- Reimbursement policies (7%)
- Concern about malpractice liability (7%)
- Concern about patient confidentiality (6%)
- Licensure laws that affect interstate practice (5%)
- Other factors (76%).

A large number of respondents, 76 percent, provided “other” answers. We conducted a partial content analysis of all the “other” responses and found that of those who provided those responses, the most frequently mentioned barrier was the need for more knowledge about telepractice. A little over one-fifth (22%) of them felt that they needed more information about what telepractice entails before considering it in their own practice. Some of their comments were: “I don’t know anything about it,” or “I don’t understand the use of telepractice.” The second most commonly mentioned barrier was the feeling that telepractice would be detrimental to the quality of service with a preference for face-to-face contact (16%). One practitioner commented that the “human connection [is] important in providing services.” Another noted the difficulty of diagnosis with telepractice, and that it is “. . . not the same as personal care and rapport”. Several noted that “face-to-face” is preferred. The third most common barrier to the use of telepractice was that it was inappropriate for the type of services practitioners delivered (14%). Many mentioned that they worked with small children or patients with disabilities that required hands-on services, making telepractice inappropriate for the services they provided. Eight percent of those who provided “other” comments said that lack of time to

implement such a technology is a barrier for them. Another 8 percent believed that their current operations were sufficient and they did not need telepractice. Another 8 percent stated that lack of technology for the practitioner as well as the patient is a barrier. Some respondents (6%) mentioned that the school setting is a barrier to telepractice since the students are very accessible thus making telepractice unnecessary. Five percent of respondents said that the decision to use telepractice was not up to them.

2.2 Characteristics Of Users of Telepractice

Approximately half (49%) of the users of telepractice had done so for less than six years, 17 percent for 6-10 years, 23 percent for 11- 20 years, and 11 percent for more than 20 years. (Figure 1)



As indicated in Table 2.2-1, the most common setting where the practitioners are located when providing services via telepractice was non-residential health care facilities (38%), followed by hospitals (20%), schools (20%), the clinician's home (16%), colleges/universities (6%), and residential health care facilities (4%). Audiologists were more likely than speech-language pathologists to deliver telepractice services from hospitals (26% vs. 12%) or non-residential health care facilities such as private practices (46% vs. 27%), while speech-language pathologists were more likely to deliver services via telepractice in school settings (38% vs. 7%) or from residential health care facilities (8% vs. 1%).

Table 2.2-1. Locations of Telepractice Services: Practitioners and Patients/Clients						
Service Location	Audiologists		Speech-Language Pathologists		Total	
	Yes %	No %	Yes %	No %	Yes %	No %
Practitioner Location						
College/University	6	94	5	95	6	94
Clinician's Home	14	86	19	81	16	84
Hospital	26	74	12	88	20	80
Non-residential Health Care Facility	46	54	27	73	38	62
Residential Health Care Facilities	1	99	8	92	4	96
School	7	93	38	62	20	80
Other Settings	16	84	19	81	17	83
Patient/Client Location						
College/University	8	92	5	95	7	93
Hospital	8	92	4	96	6	94
Non-residential Health Care Facility	12	88	10	90	11	89
Patient's Home	78	22	84	16	81	19
Residential Health Care Facility	9	91	8	92	9	91
School	12	88	20	80	15	85
Other Settings	14	86	16	84	15	85

The most common setting where the patients/clients were located when receiving services via telepractice was their own homes (81%), followed by schools (15%), non-residential health care facilities including private practices (11%), residential health care facilities (9%), colleges/universities (7%), and hospitals (6%). No major differences were found between audiologists and speech-language pathologists in this regard.

Telepractice services were provided to clients across a wide range of age groups. Over one third (37%) of the practitioners served clients who were 2 years of age or younger, 54 percent served clients who were 3-5 years old, 51 percent served clients who were 6-11 years old, 49 percent served clients who were 12-17 years old, 61 percent served clients who were 18-21 years old, 68 percent served clients who were 22-64 years old, 62 percent served clients who were 65-84 years old, and 60 percent served clients who were 85 years old or older. Audiologists were more likely to serve clients who were infants/toddlers (birth-2 years) and adults (18 and older) than speech-language pathologists.

Clients who received telepractice services were more likely to live in suburban areas (reported by 58% of the practitioners) than in urban or rural areas (47% and 50% respectively).

2.3 Delivery Of Telepractice Services

As shown in Table 2.3-1, the most common types of patient care delivered via telepractice were counseling (76%) and follow-up (71%), followed by equipment check (34%), followed by prevention (27%), treatment (23%), screening (18%), bilingual/multicultural services, e.g., interpreter online (13%), and assessment (11%).

Service	Audiologists		Speech-Language Pathologists		Total	
	Yes %	No %	Yes %	No %	Yes %	No %
Screening	15	85	23	77	18	82
Assessment	11	89	12	88	11	89
Treatment	14	86	37	63	23	77
Counseling	83	17	66	34	76	24
Follow-up	68	32	76	24	71	29
Equipment check	47	53	16	84	34	66
Prevention	26	74	28	72	27	73
Bilingual/Multicultural Services	13	87	12	88	13	87
Other Services	17	83	23	77	19	81

Audiologists were more likely than speech-language pathologists to provide counseling (83% vs. 66%) and to carry out equipment check (47% vs. 16%) via telepractice. Meanwhile, speech-language pathologists were more likely than audiologists to provide treatment via telepractice (37% vs. 14%).

A large majority of telepractice users (72%) provided professional consultation services to other audiologists, speech-language pathologists, or other professionals via telepractice. These services were most often provided without the patients being present. Over two fifths (42%) of the telepractice users reported that they had never provided professional consultation services via telepractice while the patient was present, and nearly another half (49%) reported having done so occasionally (“some of the time”).

Table 2.3-2 indicates that telepractice was also used as a vehicle to provide individual supervision and education/training services. A considerable proportion of the telepractice users provided individual supervision or education/training services via telepractice to other professionals (50% and 58% respectively), to students (38% and 48% respectively), to paraprofessionals (38% and 36% respectively), and to clinical fellows (33% and 34% respectively).

Table 2.3-2 Supervision and Education/Training via Telepractice*						
Service Recipients	Audiologists		Speech-Language Pathologists		Total	
	Supervision %	Education/Training %	Supervision %	Education/Training %	Supervision %	Education/Training %
Students	38	56	38	40	38	48
Clinical Fellows	32	29	35	40	33	34
Paraprofessionals	32	32	46	40	38	36
Other Professionals	47	47	54	70	50	58

*Numbers represent the percent of practitioners who responded “yes”

On average, 45 percent of the telepractice services were in direct patient care, 38 percent in professional consultation, 12 percent in education or training of others such as other professionals, students, clinical fellows, and paraprofessionals, and 6 percent in supervision (of other professionals, students, clinical fellows, and paraprofessionals). (See Table 2.3-3.) Audiologists were more likely than speech-language pathologists to provide direct patient care via telepractice (50% vs. 38%), while speech-language pathologists were more likely than audiologists to use telepractice for professional consultation (42% vs. 35%) and for education/training (15% vs. 10%).

Table 2.3-3 Distribution of Telepractice Services						
Service	Audiologists		Speech-Language Pathologists		Total	
	Yes %	No %	Yes %	No %	Yes %	No %
Direct patient care	50	50	38	62	45	55
Professional consultation	35	75	42	58	38	62
Education or training	10	90	15	85	12	88
Supervision	5	95	6	94	6	94

* Percentages may not add up to 100 due to rounding.

Table 2.3-4 presents a summary of the areas in which telepractice services were provided. Audiologists were most likely to provide telepractice services in the areas of hearing aid/assistive technology (89%), hearing disorders (79%), aural rehabilitation (50%), and auditory processing disorders (16%). Meanwhile, telepractice was most frequently used by speech-language pathologists in a wide range of areas, including motor speech disorders (57%), articulation/phonological disorders (55%), autism/pervasive development disorder (49%), cognitive communication disorders (49%), mental retardation/developmental disability (49%), fluency disorders (46%), learning disabilities (44%), dysphagia (42%), and specific language impairment (42%).

Table 2.3-4 Areas of Telepractice Services						
Areas of Service	Audiologists		Speech-Language Pathologists		Total	
	Yes %	No %	Yes %	No %	Yes %	No %
Accent Modification	0	100	3	97	1	99
Aphasia	0	100	28	72	11	89
Articulation/phonological disorders	0	100	55	45	23	77
Auditory processing disorders	16	84	41	59	26	74
Aural rehabilitation	50	50	9	91	33	67
Autism/pervasive development disorder	1	99	49	51	21	79
Cognitive communication disorders	1	99	49	51	21	79
Dysphagia	0	100	42	58	17	83
Fluency disorders	0	100	46	54	19	81
Hearing aid/assistive technology	89	11	9	91	56	44
Hearing disorders	79	21	6	94	49	51
Learning disabilities	8	92	44	56	23	77
Literacy	1	99	28	72	12	88
Mental retardation/developmental disability	3	97	49	51	22	78
Motor speech disorders	1	99	57	43	24	76
Myofunctional disorders		100	22	78	9	91
Nonverbal, Augmentative/Alternative Communication	3	97	38	62	17	83
Specific language impairment	1	99	42	58	18	82
Voice		100	38	62	16	84
Other practice areas	8	92	13	87	10	90

The areas identified by telepractice users as not appropriate for telepractice were overall low. They were:

- Articulation/phonological disorders, dysphagia, and motor speech disorders (4.1% each)
- Hearing aid/assistive technology (3.6%)
- Autism/Pervasive Developmental Disorder, fluency disorder, and myofunctional disorders (3% each).
- Among “other” responses, assessment and diagnosis were most frequently noted as inappropriate.

2.4 Research And Technology In Telepractice

Very few (2%) telepractice users reported conducting research about telepractice. The most frequently used technology for telepractice was telephone (93%), followed by e-mail (74%); web-based information/resources (40%); web-based conferencing such as streaming video, bulletin board, or chat room (13%); and video teleconferencing (8%).

2.5 Reimbursement And Training For Telepractice

The most common means of reimbursement for telepractice services was private pay, reported by 15 percent of telepractice users. This was followed by private insurance (11%), Medicare/Medicaid (5%), and grants/foundations (2%) as sources of payment. Most of the telepractice services were not reimbursed or funded (71%).

Approximately one fifth (21%) of telepractice users had received education or training on the delivery of services via telepractice. Among them, 19 percent received training in graduate schools, 47 percent on the job, 44 percent through continuing education, and 17 percent through other channels.

Nearly all (97%) of the telepractice users felt that telepractice was a useful tool in their practice, 46 percent feeling strongly while another 51 percent moderately.

2.6 Expanding The Use Of Telepractice

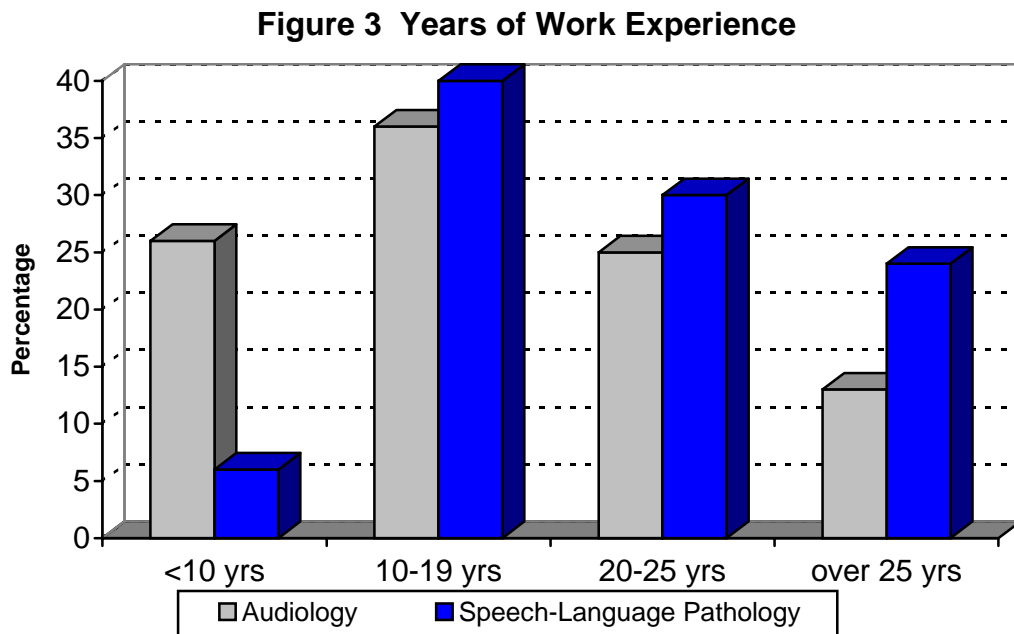
Over one half (53%) of the telepractice users expressed their desire to expand the use of telepractice as a tool to deliver services to their clients. Cost of technology was identified as the major barrier to expanding the use of telepractice (19%), followed by lack of professional standards (14%), reimbursement policy (10%), lack of data on efficacy (9%), licensure laws that prohibit interstate practice (6%), concern about patient confidentiality (6%), and concern about malpractice liability (5%).

Respondents were asked to provide “other” barriers to expanding their practice. A large number of those already using telepractice, 64 percent, provided comments. The most frequently reported barrier to expansion was the lack of time (34%). Other

respondents (13%) mentioned the various limitations of clients, whether they are due to lack of technology, or specific to the nature of their disability. The preference for face-to-face contact on some level was the third most commonly mentioned barrier to expanding telepractice (13%). A respondent said that “speech and language is a personal communication, . . .” and for this reason, providing, “. . . services other than [those that are] interpersonal are limited.” The fourth most common barrier to the expansion of telepractice was the practitioners’ lack of technological equipment and resources (12%), which was followed by the feeling of practitioners that there was no real need to expand the operations of their telepractice (7%). Six percent of the practitioners felt they would need more information about expanding their telepractice before beginning to do so.

2.7 Work Profile

All of the audiologists who responded to the survey held the ASHA CCC-A. Nearly all (99%) of the speech-language pathologists held the ASHA CCC-SLP. About one percent of the practitioners were in the process of obtaining ASHA certification.



As indicated in Figure 3, a large majority of the audiologists and speech-language pathologists surveyed were experienced practitioners. Nearly two fifths (38%) of the

respondents had been employed in the speech-language pathology or audiology profession for 10-19 years, 28 percent for 20-25 years, and 19 percent for over 25 years. Less than one fifth (16%) of the respondents had a professional history of less than 10 years. Only 13 percent of the respondents considered themselves to be researchers; 10 percent were in clinical/applied research and 3 percent were in basic research. On average, the audiologists surveyed had shorter professional tenure in their field than the speech-language pathologists (16 vs. 21 years).

3. CONCLUSIONS AND RECOMMENDATIONS

The survey found that telepractice is not currently widely used among audiologists and speech-language pathologists. Only 11 percent of them are now using telepractice in delivering services to their patients. Of those who are not using telepractice at the present, a very small percentage of them had used it in the past. However, it is striking that 43 percent of the survey respondents expressed interest in using telepractice in the future. Coupled with the expressed need for more knowledge about telepractice by almost a quarter of the respondents, ASHA should consider developing and/or providing more information to its members regarding this means of delivering services. Further, ASHA should consider providing information about the broad array of technology available, since only a small percentage of telepractice users used more advanced technologies.

The survey also found that of those who were presently using telepractice, over half of them would be interested in expanding that practice. This provides further encouragement for ASHA to go forward with imparting additional knowledge about this technology. In addition, all of them felt that telepractice is a useful tool for them.

The findings around the barriers to either using or expanding telepractice are also useful in providing direction to ASHA. These barriers included lack of knowledge, applicability of telepractice to certain groups of patients who have specific disabilities, cost, and lack of professional standards.