

A Preliminary Survey of Dysphagia Practice Patterns among Speech-Language Pathologists in India

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Abstract

Purpose: The purpose of this study was to survey and describe dysphagia practice patterns among speech-language pathologists (SLPs) in India, where no standardized practice pattern guidelines currently exist. Although the overarching goals of dysphagia rehabilitation are largely similar, population needs, clinical practice patterns, availability of resources, and dysphagia research varies around the world. Professional bodies related to swallowing disorders in countries such as the USA, the UK, Australia, and Canada have implemented preferred national practice guidelines for dysphagia clinicians, to ensure consistency in clinical practices, high standards of care, and to improve the patient outcomes. In India, consensus-driven SLP services for dysphagia management are yet to be fully established. Detailed knowledge of current practices is necessary to inform future training and infrastructure needs, to which end this pilot survey was conducted. **Methods:** A web-based questionnaire was created using Qualtrics. Twenty-five questions related to dysphagia assessment and treatment practices were included. Five dysphagia experts rated the questionnaire for content validity. Blast E-mail solicitations were requested, and forty-eight participants responded to the survey anonymously. **Results:** The results demonstrated considerable variability in practice patterns for swallowing assessment and dysphagia treatment among SLPs in India, with barriers related to funding, access to instrumental assessments, and limited clinical education and training. The findings from this survey highlight ongoing challenges to professional education and growth in dysphagia practices in India. **Conclusions:** The variability in responses indicates a need to establish the national guidelines that will enable Indian SLPs to move toward standards of practice, largely compatible with more established dysphagia services, and practices in some other countries. This will likely help improve clinical competence, in addition to patient outcomes and quality of care.

Keywords: Dysphagia, dysphagia management, Indian speech-language pathology, practice patterns, survey, swallowing

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INTRODUCTION

Health-care practices, goals, and outcomes vary greatly across countries depending on population needs, clinical education and practice patterns, and availability of resources.^[1] This is especially true with respect to dysphagia rehabilitation, as the process of “eating” could involve substantially diversified cultural and individual implications. Due to increased awareness among health-care professionals regarding the importance of appropriate dysphagia management, advances in technology, and the commencement of research in the area in the 1970s,^[2] the management of swallowing disorders has advanced tremendously in the past few decades. In particular, advancements are ongoing as a result of continued research into the basics of swallowing physiology, the evolution of

diagnostic approaches, and the growing evidence toward effective clinical interventions.^[3]

Professional and governing bodies related to communication and swallowing disorders in several countries have implemented the guidelines for dysphagia practice.^[4-7] Adherence to such guidelines ensures consistency of practice, improves patient outcomes, and potentially improves collaboration among professionals to facilitate better understanding and interpretation of clinical data. However, while the evidence

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base for speech-language pathology services in the clinical practice area of dysphagia management has been developing rapidly across a number of countries around the world (such as Australia, Canada, the UK, and the USA), the establishment of consistent practice patterns are also in the early stages of acceptance and development in several other countries.

Services related to dysphagia rehabilitation in India are developing. As such, there are no standardized dysphagia therapy guidelines in the country. Consequently, speech-language pathologists (SLPs) tend to determine their own practice protocols or extrapolate from clinical practice guidelines established in other countries.^[8,9] While the underlying physiological impairments of dysphagia and treatment exercises are similar across cultures, there is a need to understand and define practice patterns among clinicians in India, in order to develop a culture-specific standard of care. In addition, addressing gaps in practice patterns could help facilitate funding decisions, resource allocation, and improve advocacy for best patient care.

To date, the components of dysphagia management practices in India have not been studied comprehensively. Understanding current practices, followed by identifying limitations and gaps in knowledge and training, are the first critical steps to improving services and practices. To this end, the present study was conceived as a preliminary critical step to investigate and describe the practice patterns relating to evaluation and treatment of dysphagia and clinical decision-making among SLPs in India. This article does not intend to prescribe or suggest a particular method of assessment or intervention. Rather, it aims to understand the approach to dysphagia intervention in India, which could potentially inform future directions in dysphagia education, clinical training and standardizing clinical practices.

METHODS

The study was approved by the institutional review board of the first author's institution at the time. A cross-sectional survey was developed for the purpose of the study. The initial survey questionnaire consisted of 27 questions and included questions related to clinical and instrumental assessment as well as treatment options commonly used by clinicians working with patients with oropharyngeal dysphagia across the lifespan. The questionnaire was designed to explore the skills and training of SLPs working with patients with dysphagia, in addition to current approaches to dysphagia rehabilitation. The questionnaire development was based on prior published questionnaires and guidelines used in previous studies from various countries.^[10-18] The structure, clarity, ease of administration, relevance, and content validity of each item on the questionnaire were iteratively refined through feedback cycles involving five SLPs practicing in different states of India, with at least 10 years of clinical experience in dysphagia, prior to the survey link being disseminated.

Based on the results of the initial evaluation, the questionnaire was further revised to improve understanding

and ease of responding to questions. A final set of 25 questions [Appendix 1] was administered through the web-based platform, Qualtrics (Qualtrics Labs Inc., Provo, UT). The questionnaire was divided into five parts: (1) Part A – Demographic Data, (2) Part B – Caseload Characteristics, (3) Part C – Education and Training, (4) Part D – Dysphagia Assessment, and (5) Part E – Dysphagia Treatment. The survey included forced choice and options to select multiple-choices, listing response questions, and 5-point Likert scale ratings. Participants were also provided with opportunities to expand specific responses. Questions pertaining to clinical swallow examinations and instrumental examinations were included in the dysphagia assessment section.

Blast E-mail solicitations were sent to the Indian Speech-Language and Hearing Association (ISHA) directories, as well as to several local state associations and educational institutions in India. Informed consent was obtained from all individual participants included in the study. A total of 48 participants responded to the survey anonymously between December 2016 and February 2017. The response rate for the survey invitation was 9.8%. Participants took approximately 20 min to complete the survey. Responses to the survey were automatically recorded through Qualtrics survey software.

The survey results were exported into a Microsoft Excel file and analyzed descriptively, via frequency distribution using the percentages. Not all individuals completed all questions, results are reported as a proportion of the respondents completing each question, with percentage and number of respondents provided where appropriate.

RESULTS

The results are organized into five categories: (a) Respondent demographics, (b) Caseload characteristics, (c) Education and training, (d) Dysphagia assessment, and (e) Dysphagia treatment.

Respondent demographics

Most survey participants had relatively fewer years of experience in the field of speech-language pathology of about 1–6 years (32%; $n = 14$ with 1–3 years of experience and 30%; $n = 13$ with 4–6 years of experience). A similar percentage of clinicians had substantially fewer years of experience in dysphagia management as well (30%; $n = 13$ with 1–3 years of experience and 26%; $n = 11$ with <1 year of experience). Eighty-two percent ($n = 40$) of clinicians worked full-time, whereas the remainder 18% ($n = 8$) worked part-time. A majority of the participants (51%; $n = 22$) worked in a private hospital setting, whereas 35% ($n = 15$) of the participants worked in a private outpatient clinic. Sixteen percent ($n = 7$) of participants worked in a university-affiliated clinic. Two participants (5%) were school-based SLPs. In addition, 30% ($n = 13$) of the total participants provided home-based care, this percentage included participants who were employed in other settings, as well.

Caseload characteristics

A substantial percentage of participants (31%; $n = 13$) reported that the percentage of time they see clients for dysphagia was about 11%–25% within the last year. Only seven participants (17%; $n = 7$) reported seeing patients for dysphagia assessment/treatment for more than 75% of their clinic time. Ten participants (24%) reported that their dysphagia caseload was about 51%–75% (of their total caseload) within the last year of taking the survey.

A significant majority of the participants (74%; $n = 32$) reported that they were the primary health-care providers for patients with dysphagia in their respective settings. The remaining 26% ($n = 11$) of participants who reported they were not the primary health-care provider for dysphagia indicated that the team involved in the care of dysphagia was predominantly led by an otolaryngologist (10 responses), an occupational therapist (3 responses) and in some instances, a physical therapist (4 responses). Participants also indicated that about 24% of their time is spent with adults, children, and geriatric patients each.

Education and training

A majority of the survey participants (84%; $n = 36$) held masters degrees, while a small percentage practiced with bachelor degrees (11%; $n = 5$) and doctoral degrees (5%; $n = 2$). Regarding classroom training in dysphagia, about 35% ($n = 15$) of the survey participants reported receiving about 6–10 h of classroom training in this area. Twenty-six percent ($n = 11$) of the participants reported they received more than 16 h of classroom training in dysphagia. A small percentage of participants (9%; $n = 4$) reported they received no classroom education in dysphagia at all.

Regarding supervision, about 30% ($n = 13$) of the total participants received no supervised clinical experience before seeing patients with dysphagia independently. About 23% ($n = 10$) of the participants reported 6–10 h of supervised clinical training, and 21% ($n = 9$) of the participants reported more than 16 h of supervised clinical training in dysphagia.

Most of the participants reported that they sought additional dysphagia-related continuing education opportunities after graduation from their academic program. Seventy-seven percent ($n = 33$) of participants received continuing education credits. About 26% of the participants reported that they accumulated more than 16 h of continuing education credits. A substantial percentage (81%; $n = 34$) of participants reported that their facility did not have mandatory continuing education requirements with respect to dysphagia management; however, about 93% ($n = 39$) of the participants reported that they would be interested in continuing education opportunities, particularly with respect to dysphagia management.

About 35% ($n = 15$) of the participants reported that they were either very confident or extremely confident about their clinical skills in dysphagia assessment/treatment. A little over 30% ($n = 13$) of participants reported slight

or no confidence, whereas 35% ($n = 15$) reported moderate confidence about their clinical skills with respect to dysphagia.

Dysphagia assessment Clinical swallow examination

As can be seen in Figure 1, about 58% of the participants reported completing a clinical swallow examination (CSE) “most of the time” or “always” during their assessment of patients. That is, nearly 48% of the participants did not complete a CSE all the time. A majority (more than 50% of the participants) reported that they include the several aspects of assessment in their CSE (e.g., assessment of oral motor strength, cranial nerve assessments, assessments of cough function, investigation of overt signs, and symptoms of laryngeal penetration/aspiration using trial swallows). More than 40% of the participants also reported that they explored potential physiological aspects such as hyolaryngeal excursion and timeliness of swallow initiation in the clinical examination. In addition, about 32% of the participants also reported that they try compensatory strategies during clinical assessment sessions. All participants reported that they administer foods of different viscosities during the trial swallows portion of the clinical examinations.

Dysphagia assessment Instrumental evaluations

With regard to objective instrumental evaluation, about 37% of the participants reported that they never completed an objective instrumental assessment before initiating therapy. Only 5% of the participants complete it “always.” About 50% of the participants complete objective assessments “sometimes,” or “about half the time.” About 53% of the participants reported they have access to fiberoptic endoscopic evaluation of swallowing (FEES) equipment in their facility, whereas 45% of the participants reported that they have access to videofluoroscopy. However, a significantly high number of participants (49%) reported they have no

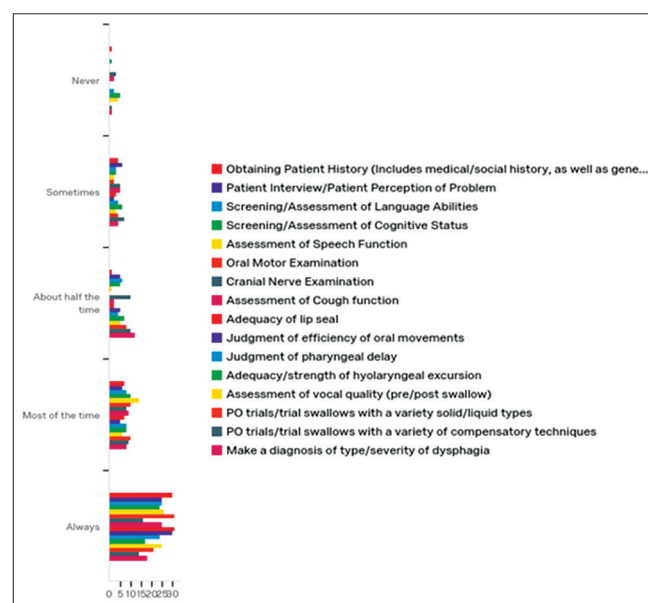


Figure 1: Aspects of a Clinical Swallowing Examination employed by the respondents

experience performing objective swallow assessments. About 40% reported they are “somewhat experienced” and only 12% reported they are “very experienced.” More than 75% of the participants reported that they refer their patients to other facilities that have access to objective measurements. Participants who did not traditionally complete instrumental examinations cited lack of instrumentation (55%), lack of training to perform and interpret examinations (53%), costs involved in the examinations (38%), and limited support from referring physicians (33%) as open-ended expansion to their responses for not completing instrumental examinations.

Dysphagia treatment

Data pertaining to treatment choices and decisions are represented in Figures 2 and 3. More than 80% ($n = 34$) of the study participants reported that they used compensatory strategies such as postural adjustments and diet modifications “most of the time” or “always.” About 71% of the participants indicated they employed rehabilitative strategies and exercise-based treatment “most of the time” or “always.” About 88% ($n = 36$) of the participating SLPs used oral motor exercises for oral deficits either “most of the time” or “always.” Only 15% ($n = 7$) of the participants used neuromuscular electrical stimulation as a therapy method either “most of the time” or “always.” An overwhelming 81% ($n = 34$) of the participants reported that they base their treatment decisions on the underlying physiological impairments. About 57% of the participants indicated that they use information from clinical and objective assessments for clinical decision-making regarding treatment.

A combination of several factors appeared to influence treatment decisions. About 50% ($n = 21$) of the participants reported that they rely on information in dysphagia textbooks, and about 47% ($n = 20$) of the participants relied on published

research evidence. About 43% ($n = 18$) of the respondents considered patient preferences and previous success with a specific treatment method. About 33% ($n = 14$) of the participants also interacted on social media speech-language pathology groups to seek advice regarding treatment decisions.

DISCUSSION

Speech-language pathology services are still developing and expanding in India, particularly as they relate to dysphagia management. This study aimed to explore the practice patterns employed by Indian SLPs with respect to the evaluation and treatment of dysphagia. To our knowledge, this is the first study to report dysphagia practice patterns within the context of India. A substantial amount of variability was observed in our data, which was consistent with international surveys of dysphagia practice patterns in different countries.^[10,19-21] Dysphagia practice patterns vary across the globe. For example, reports over the last decade regarding practice patterns in Ireland and the UK,^[10] Canada,^[19] the USA,^[20] and Australia^[21] demonstrate that practice patterns vary considerably across countries. These variabilities could possibly reflect cultural influences on clinical decision-making processes. On the other hand, these variabilities could also stem from differences in training, access to services, and clinicians’ knowledge of current evidence-based practice standards.

The survey presented here evaluated this variability in the Indian context of dysphagia practice and the key findings are briefly discussed in the context of the current literature. The most striking findings that emerged from this preliminary survey were with respect to limited clinical supervision for dysphagia that clinicians receive during training, lack of access and training for objective/instrumental evaluations of

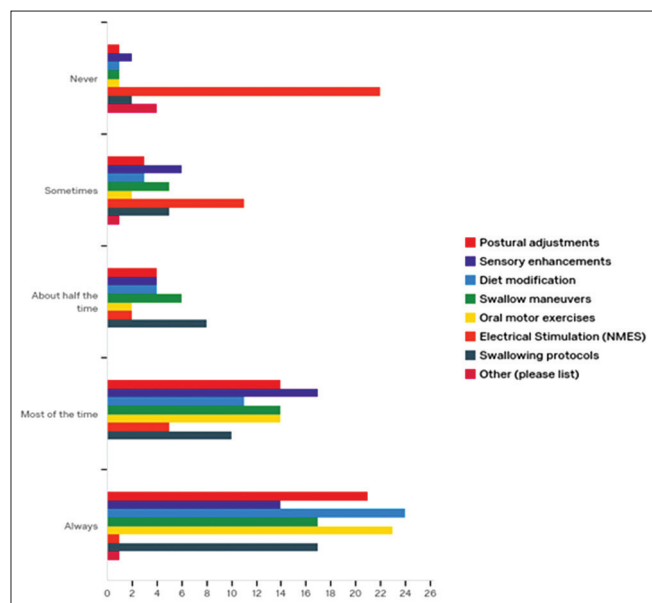


Figure 2: Treatment methods employed by the respondents

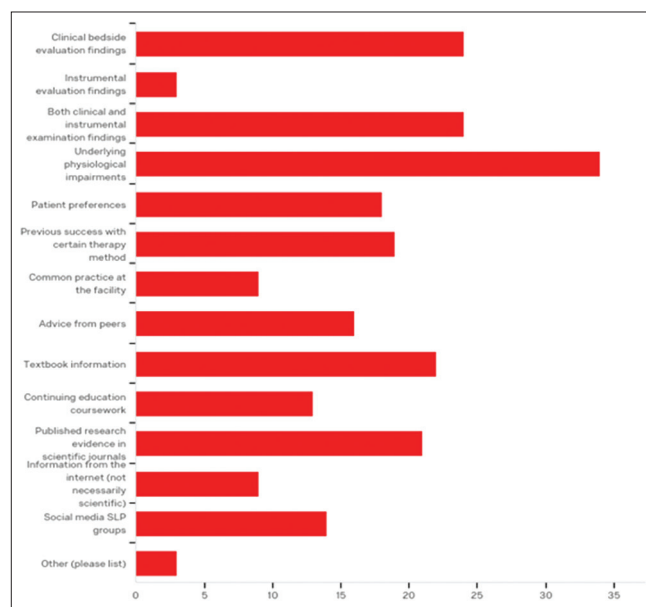


Figure 3: Decision-making for the choice of treatment methods employed by the respondents

swallowing, and limited funding support to SLPs for dysphagia care in terms of instrumentation. The data also demonstrated some positive findings, including a strong interest among clinicians for continuing education in the area of dysphagia management and a thorough pattern of CSEs.

Clinical training

The most conspicuous finding from the study was the limited clinical training offered to young SLPs and students. Although exposure has been increasing, overall experience with dysphagia among Indian SLPs is still limited. In fact, introduction of dysphagia assessment and management in undergraduate and graduate education in India began in the late 1990s and early 2000s. Because the total lifespan of dysphagia expertise in India is still in its adolescence, it is not surprising to see responses alluding to limited clinical supervision in the area. A more thorough evidence-based clinical training will likely result in a stronger and more skilled clinician population,^[22] and consequently, better patient outcomes.

Clinical and instrumental assessment considerations

The data from this study indicate that most clinicians used a thorough clinical swallowing examination. This is perhaps in part due to the lack of access to objective examinations, so clinicians resort to obtaining as much information as possible through clinical examinations. Clinical decision-making was reportedly influenced by a combination of clinical examinations and objective exams, when they were available. This finding is consistent with previous reports.^[21] Interestingly, treatment planning was also predominantly influenced by clinical examinations.

A majority of participants reported that they include several aspects of assessment in their CSE (e.g., assessment of oral motor strength, cranial nerve assessments, assessment of cough function, and investigation of overt signs and symptoms of laryngeal penetration/aspiration using trial swallows). It appears that many respondents explored potential physiological aspects such as hyolaryngeal excursion and timeliness of swallow initiation in the clinical examination and assess the use of compensatory strategies during clinical assessment sessions. Many of these components are considered the basis of best clinical practice.^[23]

Despite a thorough CSE, instrumental assessments are indisputably critical to understand physiological bases of aspiration and timing of the occurrence of aspiration. However, about 37% of the participants reported that they never complete an objective assessment before initiating therapy. In addition, a significantly high number of participants reported they have no experience performing objective swallow assessments, even if they had access to it. Limited use of FEES and Videofluoroscopic Swallowing Study appeared to be influenced by factors such as limited access, limited experience and training to perform and interpret examinations, costs involved in the examinations, and limited support from referring physicians. Whereas a substantial number of participants (>80%) reported that they consider physiological

abnormalities in treatment planning, the utility of a clinical examinations to provide insights about swallowing physiology is still limited.^[24,25]

Treatment considerations

Inarguably, dysphagia rehabilitation exercises should be guided by physiological swallowing impairments (rather than bolus flow considerations alone). Even though compensatory mechanisms could be utilized for short-term changes and outcomes, exercise-based rehabilitation for long-term changes can only be guided by a profile of the physiological swallowing impairments. Interestingly, the practice patterns described by respondents to this survey reflect a stronger focus of dysphagia management on compensatory techniques such as diet modifications, sensory enhancements and postural changes, rather than strength and skill-based rehabilitation and retraining.

Based on these findings, it appears that clinical dysphagia management in India continues to be geared towards “risk minimization.” The use of electrical stimulation and the evidence for the use of these adjunctive modalities are also growing for specific patient populations. As the focus on positive patient outcomes and evidence for the use of exercise-based dysphagia rehabilitation increases, it is likely that the understanding and use of swallowing rehabilitation methods based on the principles of motor learning and plasticity would further improve patient outcomes without significant increases in health-care expenditures, will be adopted by Indian SLPs.

A majority of participating clinicians reportedly used evidence-based practices and information provided in the textbooks for treatment planning decisions. However, this self-report needs to be interpreted with caution, since information in textbooks tend to become “out-of-date” within a shorter duration after their publication. With about 93% ($n = 39$) of the participants reporting that they would be interested in continuing education opportunities in the area of dysphagia management, additional educational opportunities and courses should be provided to clinicians to further enhance their knowledge and improve the use of evidence-based treatment practices in the area of dysphagia management. Perhaps, having a set of national guidelines and resources to guide dysphagia assessment and treatment practices, as seen in other countries, would be the best way to move forward, to ensure more consistent and efficacious practices among clinicians.

CONCLUSIONS

Based on these survey results, there are some apparent limiting factors for effective dysphagia service delivery in India. The most significant limiting factor for a more thorough standard of practice appears to be funding, particularly for objective examinations. Whereas, this is probably not atypical of many developing countries, several clinicians also reported lack of physician support for dysphagia care.

This may be due to reduced awareness and knowledge among healthcare professionals in India about SLPs' roles in dysphagia management. Advocating for the profession and for patients more strongly by governing bodies such as the ISHA, the Rehabilitation Council of India or perhaps the establishment of a dedicated dysphagia-focused group or national society could potentially lead to better support from practicing physicians. A second significant limiting factor appears to be limited expertise, which translates to reduced clinical training opportunities. Even though several clinicians reportedly sought additional dysphagia training after graduating from an educational program, the training program itself will have to incorporate a more thorough standard with specific utilization of evidence-based research and practices. Addressing the barriers that currently exist will ultimately lead to enhanced service provision for patients with dysphagia in India.

While this study captured important information regarding current Indian SLP practice patterns for the assessment and management of dysphagia, some limitations regarding the distribution and design of the survey should be acknowledged. First, the number of respondents is relatively small ($n = 48$), although it is representative of the relatively few SLPs engaged in dysphagia practice in India. Some participants chose not to respond to all questions. In addition, coding and presenting responses to open-ended questions were challenging. As the reader would notice in the demographic information, the survey participants represented a younger pool with limited clinical experience. It is possible that these practices are different for more experienced clinicians. Another final consideration relates to the fact that the practice patterns reported are based solely on the clinician report and clinician perceptions, and thus may not be a true reflection of actual practice employed by a majority of SLPs in India. It is, therefore, recommended that future studies include direct observational methods to examine practical skills and clinical decision-making to obtain more in-depth exploration of practice patterns and the factors that influence them. This study was preliminary in its design. As such, further longitudinal follow-up studies with a larger number of respondents are also recommended to gain additional insights.

In spite of these limitations, the results do open some opportunities for: (1) Refining clinical training programs offered in India with respect to dysphagia, (2) Initiating dialog regarding patient advocacy and the need for additional SLP funding for dysphagia care, and (3) Future research to establish the national guidelines for dysphagia practice in India. Collaborative efforts from educational institutes, professional and regulatory bodies, nongovernment organizations, and the government are necessary in developing, implementing, and monitoring clinical guidelines related to dysphagia management in India. This could potentially improve SLP knowledge and clinical practices related to dysphagia and thereby improve patient outcomes.

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Conflicts of interest

There are no conflicts of interest.

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APPENDIX 1

A PRELIMINARY SURVEY OF DYSPHAGIA PRACTICE PATTERNS AMONG SPEECH-LANGUAGE PATHOLOGISTS IN INDIA

Questionnaire

Part A: Demographic Data

1. What is your highest degree in Speech-Language Pathology?
 - Bachelor
 - Master
 - Doctorate (PhD)

2. How many years have you been practicing as a Speech-Language Pathologist?
 - Less than 1 year
 - 1–3 years
 - 4–6 years
 - 7–9 years
 - 10 years and above

3. How many years of experience do you have in the assessment and treatment of dysphagia?
 - Less than 1 year
 - 1–3 years
 - 4–6 years
 - 7–9 years
 - 10 years and above

4. What type of setting do you primarily work in? (Check all that apply)
 - Private Hospital
 - Government Hospital
 - University Clinic/Hospital
 - Outpatient Setting
 - Private Clinic
 - Home-based therapy
 - Other (please list)

5. How many hours per week do you currently work as a Speech-Language Pathologist?
 - Less than 25 hours
 - 25 – 40 hours
 - More than 40 hours

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Part B: Caseload Characteristics

6. Within the last year, approximately what percentage of your total patient caseload comprised of dysphagia assessment/treatment?

- 1-10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%

7. What percentage of your total daily time is spent working with each of the following patient populations? (Check all that apply)

a) Children and Adolescents (0-17 years)

- 1-10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%

b) Adults (18-64 years)

- 1-10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%

c) Seniors (65+ years)

- 1-10%
- 11-25%
- 26-50%
- 51-75%
- 76-100%

8. a) Are you the primary provider of dysphagia services in your current work setting?

- Yes
- No

b) If NO - In your current work place, which other medical/health professionals evaluate/treat patients with dysphagia?

- Physician
- Nursing staff
- Dietician
- Occupational Therapist
- ENT

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- Oncologist
- Surgeon
- Other (please list)

PART C: Education and Training

9. Prior to treating patients independently, how many hours of classroom training (lecture-format) did you receive in dysphagia evaluation and management?

- None
- 1-5 hours
- 6-10 hours
- 11-15 hours
- 16+ hours

10. Prior to treating patients independently, how many hours of supervised clinical experience did you receive in dysphagia evaluation and management?

- None
- 1-5 hours
- 6-10 hours
- 11-15 hours
- 16+ hours

11. How many hours of dysphagia-related continuing education opportunities have you completed after earning your highest degree?

- None
- 1-5 hours
- 6-10 hours
- 11-15 hours
- 16+ hours

12. Would you like more continuing education opportunities to be offered in dysphagia evaluation and management?

- Yes
 - No
- If Yes, please list one topic you would like to learn more about (optional)

13. Does your current facility require you to have any mandatory training in dysphagia evaluation/management before you start working independently with patients with dysphagia?

- Yes
 - No
- If Yes, please list the mandatory requirements of your facility (optional)

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14. On a scale of 1 -5, how would you rate your level of confidence with assessment and treatment of dysphagia?

- 1 - Not at all confident
- 2 - Slightly confident
- 3 - Moderately confident
- 4 - Very confident
- 5 - Extremely confident

PART D: DYSPHAGIA ASSESSMENT

Clinical Bedside Swallow Examination

15. When a patient is referred to you for a swallowing evaluation, how frequently do you complete a clinical bedside swallow examination for dysphagia?

- Never
- Sometimes
- Half the Time
- Most of the time
- Always

16. How frequently do you include each of the following components in a clinical bedside swallow examination for dysphagia?

	Never	Sometimes	Half the time	Most of the time	Always
<ul style="list-style-type: none"> ○ Obtaining Patient History (Includes medical/social history, as well as general medical respiratory, and nutritional/hydration status) ○ Patient Interview/Patient Perception of Problem ○ Screening/Assessment of Language Abilities ○ Screening/Assessment of Cognitive Status ○ Assessment of Speech Function ○ Oral Motor Examination ○ Cranial Nerve Examination ○ Assessment of Cough function ○ Adequacy of lip seal ○ Judgment of efficiency of oral movements 					

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<ul style="list-style-type: none"> ○ Judgment of pharyngeal delay ○ Adequacy/strength of hyolaryngeal excursion ○ Assessment of vocal quality (pre/post swallow) ○ PO trials/trial swallows with a variety solid/liquid types ○ PO trials/trial swallows with a variety of compensatory techniques ○ Make a diagnosis of type/severity of dysphagia 					

17. If you administer PO trials/trial swallows using food/liquid items, what are the different consistencies you administer? Select all that apply.

- Thin liquids
- Nectar thick liquids
- Honey thick liquids
- Pudding thick liquids
- Pureed food
- Soft solids
- Ground solids
- Regular solids
- Other (please list)

INSTRUMENTAL EXAMINATION

18. When a patient is referred to you for a swallowing evaluation, how frequently do you complete an instrumental examination for dysphagia, prior to initiating therapy?

- Never
- Sometimes
- Half the Time
- Most of the time
- Always

19. How experienced are you in performing and interpreting instrumental evaluations of swallow function?

- No experience
- Somewhat experienced
- Very experienced

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20. Indicate which of the following instrumental diagnostic procedures are available at your current facility, to evaluate swallow function?

	Available	Not Available	Don't know
Videofluoroscopy (MBSS/VFSS)			
Fiberoptic Endoscopic Evaluation of Swallowing (FEES)			
Pharyngeal Manometry			
Surface Electromyography (sEMG)			
Other (please list)			

21. If you do not routinely conduct instrumental exams yourself, how frequently do you refer your patients for instrumental evaluation of swallowing?

- Never
- Sometimes
- Half the Time
- Most of the time
- Always

22. What are the primary reasons limiting you from routinely completing instrumental swallow examinations for all your patients with dysphagia? (Check all that apply)

- No available instrumentation
- Lack of training to perform/interpret exams
- Do not think it is needed / personal choice
- Confidence in clinical bedside findings
- No physician support
- High costs of instrumental exams
- Patient refusal
- Time consuming
- Long wait times
- Other (please list)

23. What type of assessment tool/tests do you routinely utilize?

- Self-developed
- Facility-developed
- Standardized test/protocol (please list)
- Published peer-reviewed tool (please list)
- Other (please list)

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PART D: DYSPHAGIA TREATMENT

24. How frequently do you use the following dysphagia treatment procedures you're your patients?

	Never	Sometimes	Half the time	Most of the time	Always
<ul style="list-style-type: none"> ○ Postural adjustments ○ Sensory enhancements ○ Diet modification ○ Swallow Maneuvers ○ Oral motor exercises ○ Electrical stimulation ○ Swallowing protocols ○ Other (please list) 					

25. What are the primary influences on your dysphagia treatment decisions?
Check all that apply.

- Clinical bedside evaluation findings
- Instrumental evaluation findings
- Both clinical and instrumental examination findings
- Underlying physiological impairments
- Patient preferences
- Previous success with a certain technique
- Common practice at the facility
- Advice from peers
- Textbook information
- Continuing education coursework
- Published research evidence in scientific journals
- Information from the internet (not necessarily scientific)
- Social media SLP groups
- Other (please list)