

**Training Speech-Language Pathology Students to Perform the Clinical Swallow Evaluation  
and a Multidisciplinary Approach in a Skilled Nursing Facility**

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## 2 **Introduction**

3       According to American Speech-Language-Hearing Association(ASHA) certification  
4 standards (2013), students graduating with a Master’s degree in speech-language pathology must  
5 demonstrate competency in dysphagia evaluation and treatment. The speech-language  
6 pathologist (SLP) is the primary person responsible for the assessment and management of  
7 swallowing disorders. As a new SLP in the field, one must demonstrate a number of necessary  
8 skills. One of the necessary skills is to “conduct a clinical swallow examination of the upper  
9 aerodigestive tract including identifying abnormal structures and functions, identifying  
10 significant signs, symptoms, and conduct an oral, pharyngeal, laryngeal, and respiratory function  
11 examination as it relates to functional assessment of swallowing”(ASHA, Knowledge and Skills,  
12 2002). In order to conduct the clinical swallow exam appropriately, the SLP must have a  
13 thorough understanding on how to identify an individual who is at risk for a swallowing disorder.  
14 As described in *ASHA’s Knowledge and Skills by Speech Language Pathologists Providing*  
15 *Services to Individuals With Swallowing and/or Feeding Disorders* (2002) this includes: having  
16 knowledge of normal anatomy, physiology, and pathophysiology of swallowing; knowledge of  
17 the medical diagnoses, communicative and cognitive characteristics contributing to swallowing  
18 disorders and knowledge and understanding of nutritional intake methods and understanding the  
19 signs and symptoms of swallowing disorders in the individual's behavior, medical history, and  
20 medical status. The clinician must also have knowledge of methods of communicating the results  
21 of the swallowing assessment to the individual and care providers and have knowledge of  
22 assessment strategies for use with individuals with swallowing disorders. All of these skills must

1 be developed as a student and a new clinician is expected to demonstrate proficiency in these  
2 areas upon graduation. According to ASHA's Member and Affiliate Count (2013), 38.8% of  
3 SLPs are employed in health care settings, including 15.8% in nonresidential health care  
4 facilities, 12.6% in hospitals, 9% in skilled nursing facilities, and 10.4% in residential health care  
5 facilities, which is why training students to effectively perform the CSE in skilled nursing  
6 facilities is pertinent.

7 Future SLPs must be trained to hone these skills in order to provide efficient treatment to  
8 persons with dysphagia. It is important to understand how to effectively train future SLPs at the  
9 graduate level in order to develop these important skills. In many university courses in  
10 dysphagia, the teaching focuses primarily on the acute physiology and not on the clinical  
11 decision-making process. In the age of new healthcare regulations, skilled nursing facilities  
12 (SNFs) are emphasizing the importance of productivity and the need to balance effective  
13 dysphagia evaluations and treatment with the demands of payers and the regulations in the SNF  
14 to practice ethically (Casper, 2014). Novice clinicians, with limited experience, may find the  
15 balance of service delivery and other important responsibilities, such as family education,  
16 documentation and billing of dysphagia services to be quite the juggling act. In this paper we will  
17 discuss the importance of training graduate students to perform the clinical swallow examination  
18 (CSE) in a skilled nursing facility, although it has limited evidence based support. We also  
19 advocate that speech-language pathologists keep apprised of the current guidelines and standards  
20 in dysphagia treatment in order to best advocate for their patients and the profession. In addition,

1 the importance of multidisciplinary involvement is essential and crucial for the patient's well-  
2 being.

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## 6 **The clinical swallow examination**

7 The CSE is the first step in the assessment process and is often one of the first clinical areas  
8 addressed in most graduate level dysphagia courses. There is currently no universally employed  
9 protocol for the CSE, which is why learning how to perform the CSE may be a challenge for  
10 students. There is no standardization and there is limited support for its effectiveness; however,  
11 our Clinical Fellows are using it and making judgments based on the results of the exam. This is  
12 also why standardization of training students in performing this evaluation could be beneficial.

13 The components of the CSE include: obtaining the patient's case history, review of the patient's  
14 cognitive, motor and visual abilities, examination of the structures and functions of the oral  
15 mechanism, evaluation of the laryngeal function for phonation, observation of respiratory  
16 function, and possible observation of trial swallows (if the patient is deemed to be a candidate for  
17 per os/PO trials) (Swigert, 2012). All of these areas must be specifically targeted in training  
18 graduate level students.

## 19 **Training in Performing the CSE**

1           There are many published clinical assessments in dysphagia (See Table 1), which may  
2 prove useful in training clinicians on what to look for during the CSE as well as to improve focus  
3 and organization for completing the assessment. Students and novice SLPs should be encouraged  
4 to review the existing published assessments and create their own evaluation protocol to be used  
5 as a guide in the clinical decision-making process. Students may also obtain guidance and  
6 instruction from books, websites, and e-courses to further their understanding of the process  
7 (McCullough & Martino, 2013).

8           **Table 1: Published Clinical Swallow Assessments**

<b>Name of the Measure/Year</b>	<b>Author(s)</b>	<b>Publisher</b>	<b>Website</b>
Clinical Observational Dysphagia Assessment (CODA), 2005	Irene Campbell-Taylor	Dysphagia Plus	<a href="http://www.dysphagiaplus.com/clinical-observational-dysphagia-assessment-coda-p-605.html">http://www.dysphagiaplus.com/clinical-observational-dysphagia-assessment-coda-p-605.html</a>
Swallowing Ability and Function Evaluation (SAFE), 2003	Deborah Ross-Swain, Peggy Kipping, and Patricia Yee.	Alimed	<a href="http://www.alimed.com/swallowing-ability-and-function-evaluation-safe-.html">http://www.alimed.com/swallowing-ability-and-function-evaluation-safe-.html</a>

Mann Assessment of Swallowing Ability, 2002	Giselle Mann	Thomas Delmar Learning	<a href="http://www.delmarlearning.com/browse_product_detail.aspx?catid=10740&amp;isbn=0769302696&amp;cat1ID=HCR&amp;cat2ID=SLP">http://www.delmarlearning.com/browse_product_detail.aspx?catid=10740&amp;isbn=0769302696&amp;cat1ID=HCR&amp;cat2ID=SLP</a>
Bedside Evaluation of Dysphagia (BED) Revised, 1999	Edward Hardy	Pro-ed	<a href="http://www.proedinc.com/customer/productView.aspx?ID=3571">http://www.proedinc.com/customer/productView.aspx?ID=3571</a>
Quick Assessment for Dysphagia, 1999	Dennis Tanner & William Culbertson	Academic Communicat ion Associates	<a href="http://www.acadcom.com/ACAwebsite/prodView.asp?idproduct=536">http://www.acadcom.com/ACAwebsite/prodView.asp?idproduct=536</a>
<b>Name of the Measure/Year</b>	<b>Author(s)</b>	<b>Publisher</b>	<b>Website</b>
Dysphagia Evaluation Protocol, 1997	Wendy Avery- Smith, Abbey Brod Rosen & Donna Dellarosa,	Pearson	<a href="http://www.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=076-1643-583&amp;Mode=summary">http://www.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=076-1643-583&amp;Mode=summary</a>

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2 **Training in Performing the CSE: A Hands on Experience**

3 Training students to perform CSEs may include in class experiences with fellow students,

4 role-playing situations, clinical scenarios, and problem-based learning exercises. Students can

1 practice performing CSE exams on typical adults or with their colleagues in order to obtain more  
2 experience in performing each step of the examination. The educator may wish to have students  
3 perform an oral motor examination on different students in the class in order to understand how  
4 structures and function may even vary from individuals without a swallowing disorder. The  
5 educator may consider creating a mock-chart for students to go through and obtain pertinent  
6 information regarding the patient's medical status and swallow function. As educators we may  
7 even have students administer PO trials to classmates to role-play what a real life situation may  
8 be like during the CSE. This hands-on training is likely to increase a clinician's comfort in  
9 assessing swallow function and improve preparedness for the real life clinical setting. According  
10 to the ASHA's Clinical Indicators for Instrumental Assessment of Dysphagia (2000), during the  
11 clinical exam the clinician must identify the presence of dysphagia and observe the  
12 characteristics. A student or novice clinician requires experience in observing both patients with  
13 and without dysphagia with different etiologies and comorbidities in order to be able to do so.  
14 With limited experience, it is difficult for the clinician to make appropriate  
15 recommendations. The more experience the clinician obtains conducting the exam, the more  
16 comfortable and knowledgeable he/she will become in making decisions regarding an  
17 individual's swallow status. The student should be educated about how to discuss the results and  
18 implications with other disciplines including nursing, dieticians and physicians.

19 In order to increase the amount of experience provided, instructors can offer weekly case  
20 studies or possible ethical dilemmas in order to provide real-life scenarios. Instructors should  
21 incorporate case studies focusing on patients with varying etiologies of dysphagia (e.g.,  
22 progressive neurological diseases, head and neck cancer, traumatic brain injury, patients with

1 respiratory dysfunction requiring tracheostomy tubes/ventilator dependence, etc.) as well as  
2 instances when alternate means of nutrition and hydration may be recommended. A good  
3 example of the importance of this type of training is evident in a study by Corbin-Lewis,  
4 Sullivan, Murray, Leslie, and Morrey(2010),which investigated student and SLP views about  
5 tube feeding in advanced dementia. Students in this study were under the impression that patients  
6 do not aspirate with tube-feedings. In addition, students felt that tube feeding increased the  
7 patient's quality of life and survival rate, although this is not necessarily the case. Discussing  
8 difficult cases such as this will make a student more prepared for when instances like this occur.  
9 Including case studies that involve a multidisciplinary approach to dysphagia management is also  
10 suggested. The student must be instructed about the roles and responsibilities of all the dysphagia  
11 team members. The SLP will often collaborate with dietitians, occupational therapists, nursing,  
12 nursing aids, physicians and psychologists as well as caregivers and family members to provide  
13 effective assessment and treatment of dysphagia (Farneti&Consolmagno, 2007).The student  
14 must be educated about the importance of discussing possible signs of aspiration and how each  
15 member of the team could assist in the patient's crucial care. Many of these examples and case  
16 studies can be found through the American Speech and Hearing Association's (ASHA) Special  
17 Interest Group-13, Swallowing and Swallowing Disorders (SIG-13) List serve  
18 (<http://www.asha.org/SIG/13/>) and GI Motility Online  
19 (<http://www.nature.com/gimo/index.html>).Introducing students to a multitude of cases, possible  
20 situations, and involvement of different professionals will only better prepare them for their  
21 future in the clinical world.



## 1 **Specific Aspects of the CSE**

2           The student's training and experience will impact the way in which they conduct the CSE.

3   There are several common procedures that may be included when training students, although  
4   there is limited evidence base for their use. Some of the methods when used in conjunction with  
5   the CSE have increased sensitivity and specificity; however, the CSE and its components are  
6   limited and will not detect patients who are silently aspirating. This is a common occurrence and  
7   the importance of educating nursing about the possibility of silent aspiration is of the utmost  
8   importance. Some of these additional components/procedures include: cervical auscultation  
9   (Zenner, Losinski, & Mills, 1995), the 3-ounce water test (Suiter, Leder, & Karas, 2009),  
10   Modified Evans Blue Dye test (if patient has a tracheostomy tube) (Belafsky, Blumenfeld,  
11   LePage & Nahrstedt, 2003), or pulse oximetry (Sherman, Nisenbourn, Jesberger,  
12   Morrow, & Jesberger, 1999), to name a few. It should be noted that despite their use, some of the  
13   above procedures have limited support for their effectiveness. For example, Cervical  
14   Auscultation has been found to have reduced sensitivity and specificity in two recent studies  
15   when used as a tool to identify patients with a high risk of aspiration/penetration (Borr,  
16   Hielscher-Fastabend, Phil, & Lucking, 2007; Leslie, Drinnan, Finn, Ford, & Wilson, 2004). In  
17   one specific study, The Modified Evans Blue Dye procedure showed an overall 50% false-  
18   negative error rate for detecting aspiration as compared to instrumental assessment (Donzelli,  
19   Brady, Wesling, & Craney, 2001). However, when these adjunct measures are combined,  
20   sensitivity and specificity increases. While we cannot depend on them individually, adding them  
21   to our examination may increase the information obtained for making adequate clinical  
22   judgments. Steele & Cichero (2014) conducted a systematic review of studies and noted that a

1 drop in a patient's oxygen saturation level is not always associated with aspiration; however, a  
2 lowerbaseline oxygen saturation level (<94%) is associated with an increased risk of aspiration  
3 in these patients. Oxygen saturation levels can be measured as part of a multidimensional  
4 assessment for patients with respiratory complications. Students should be educated regarding  
5 using procedures that are supported by evidenced based practice and we should encourage our  
6 students to be consumers of research in order to follow best practice guidelines. In addition, they  
7 should educate all the members of the dysphagia team about the limited evidence these measures  
8 provide and that the patient could still be aspirating.

9 In order to form a more cohesive and thorough evaluation researchers have sought to  
10 determine what specific characteristics a patient may exhibit during the CSE that indicate that the  
11 patient may be aspirating. Daniels et al. (1997) found that the presence of at least 2 of the  
12 following 6 features (dysphonia, dysarthria, abnormal volitional cough, cough after swallow,  
13 abnormal gag reflex, and voice change after swallow) predicted an increased severity of  
14 dysphagia as confirmed by instrumentation. Despite the evidence, some clinicians find specific  
15 behaviors to be indicative of a swallowing problem while others may feel it is not justified. For  
16 example, research has indicated that abnormal, involuntary coughing (Horner, Massey, & Brazer,  
17 1990) or an absent gag reflex (Horner, Brazer, & Massey, 1993) is a reliable indicator of  
18 aspiration at the bedside. Other research has indicated no significant relationship between these  
19 behaviors and aspiration, specifically the gag reflex (Linden, Kuhlemeier, & Patterson, 1993).  
20 Knowledge of evidence-based clinical indicators that raise the suspicion for dysphagia and  
21 aspiration increases clinical judgment during the CSE.

1           The student must be aware of overt signs or symptoms of penetration and aspiration when  
2 providing PO trials to the patient. In addition, explain this to other members of the team. It  
3 should be emphasized that 50-60% of patients who aspirate do not cough and clinicians often do  
4 not identify the presence of aspiration during the CSE in approximately 40% of the patients  
5 (Logemann, 1998). It is crucial to teach our students about the possibility of silent aspiration and  
6 the importance of using instrumentation to assess pharyngeal swallow physiology. However, it is  
7 just as important to train SLPs on when to recommend instrumental measures as instrumentation  
8 should not only be used to determine if the patient is aspirating. It is also imperative that other  
9 team members, particularly physicians and nursing, are aware of the role and importance of  
10 instrumental assessment. Most skilled nursing facilities do not have instrumental means of  
11 assessment on the premises, including the videofluoroscopic swallow examination and/or  
12 fiberoptic evaluation of the swallow exam (FEES). The patients would have to be transferred to a  
13 facility to receive the exam. It is important for the student to learn how to advocate for using  
14 these methods and for possibly acquiring the FEES exam, which is a portable method for  
15 assessing the swallow, at their facility. In addition, the student should practice communicating  
16 results of instrumental assessments to the other members of the team, as the information is  
17 important for diagnosing dysphagia and implementing a treatment plan. This will be discussed in  
18 the next section.

### 19 **Making Decisions Regarding Instrumental Assessment**

20           It is important to understand the value of the CSE since there is limited access to  
21 instrumental assessment methods at Skilled Nursing Facilities (SNFs). According to ASHA's  
22 guidelines, Clinical Indicators for Instrumental Assessment of Dysphagia (2000): "An

1 instrumental examination is indicated for making the diagnosis and/or planning effective  
2 management and treatment in patients with suspected, or who are at high risk for, oropharyngeal  
3 dysphagia based on the clinical examination.”Instrumentation is used to perform structural and  
4 functional assessment of the muscles and structures used in swallowing; functional assessment of  
5 actual swallowing ability; assessment of adequacy of airway protection and coordination of  
6 respiration and swallowing; screening of esophageal motility and gastroesophageal reflux; and  
7 assessment of the effect of changes in bolus delivery, textural alterations/bolus characteristics, or  
8 use of therapeutic postures or maneuvers on the swallow (ASHA, 2000).It is important to discuss  
9 how to handle situations when instrumentation is not available or the individual is not judged to  
10 be appropriate for instrumentation (e.g., agitated/combatative, unable to maintain appropriate  
11 seated posture, cognitive impairment, etc.). As Casper (2014) indicated this poses an ethical  
12 matter for the SLP. The authors of this article are not stating that the CSE alone is acceptable;  
13 they are merely stating that we have a responsibility to educate our students about possible  
14 ethical dilemmas that they may face and how they should be handled according to our scope of  
15 practice. For example, physicians may choose not to order an instrumental assessment despite  
16 the SLP’s request and it is the duty of the SLP to advocate for their patient and discuss why the  
17 exam is necessary.

18 Unlike the CSE, The Modified Barium Swallow Impairment Profile (MBSImp) is a  
19 standardized protocol for administration of the Modified Barium Swallow Study for adults with  
20 swallowing disorders, which allows for more uniformity amongst SLPs in conducting the  
21 assessment (Martin-Harris, 2014). The MBSImp is an online certification course. Instructors may  
22 require students to complete some or all of the MBSImp modules, which will teach students

1 about the 17 physiological components that are assessed during the swallow (e.g., base of tongue  
2 retraction, laryngeal elevation, pharyngeal residue, etc.).

### 3 **Importance of including documentation in classroom discussion**

4 The SLP must provide accurate and appropriate documentation while treating patients with  
5 a swallowing disorder. Casper (2014) discusses that SLPs must document daily visits, provide  
6 periodic updates, weekly progress notes and discharge summaries for patients residing in a  
7 skilled nursing facility. Casper notes that the documentation should involve the  
8 SLPs' multifaceted clinical decision making skills. While discussing clinical cases, the  
9 instructors could provide exercises to train students in writing clear and concise progress notes.  
10 Students can be referred to read and discuss the ASHA statements regarding swallowing  
11 disorders in class in order to obtain an expectation as to what is necessary to provide in  
12 documentation. Students should be educated about documenting the education of other  
13 professionals in their notes, especially when SLPs are facing the dilemma of productivity  
14 consisting of only patient contact hours. As we have discussed, students should be trained on  
15 performing the CSE through a hands-on approach, but how does this approach enhance the  
16 students' critical thinking and decision-making skills?

### 17 **Clinical reasoning and critical thinking skills**

18 Do graduate students have good clinical reasoning skills? If not, can an instructor teach  
19 clinical reasoning skills? Some graduate clinicians have the knowledge to conduct a clinical  
20 swallow examination; however, they do not have the clinical experience to synthesize the

1 findings in order to make an appropriate recommendation. They also have limited exposure and  
2 clinical experience with patients exhibiting dysphagia due to different etiologies. They do not  
3 have experience with what is typical, let alone disordered. Critical thinking in clinical decision-  
4 making has been identified as a vital skill for a clinician to obtain (Mok, Whitehill& Dodd,  
5 2008).

6 Gigante (2013) discusses the importance of teaching clinical reasoning skills to medical  
7 students. In the medical profession physicians instruct students to develop “illness scripts,  
8 problem representations, and semantic qualifiers”(p. 3). Illness scripts are what we store in our  
9 memory after we determine a patient’s complaint and physiological condition. After hearing a  
10 patient’s complaint physicians subconsciously search their memory for previous patient scripts  
11 with similar complaints and conditions. The physician then retrieves all conditions that may be  
12 similar based upon past clinical experiences. Although this study was performed with medical  
13 students, this type of learning can easily be applied to the training of SLP students. Any seasoned  
14 SLP would likely report that they refer to particular past experiences that are stored in their  
15 memory to actively problem solve during the CSE. The number of illness scripts increases and is  
16 further refined as their clinical expertise develops. If we need experience prior to making clinical  
17 decisions, how does a new clinician obtain this experience? It is important to bring these  
18 experiences to the classroom to prepare future clinicians in making these decisions.

19 Fleming, Cutrer, Reimschisel&Gigante (2012) concur that illness scripts are important in  
20 guiding students to formulate an appropriate diagnosis and recommendation for a patient. The  
21 students are also encouraged to think about differential diagnosis when they access illness  
22 scripts. It should be noted that using illness scripts alone could lead to errors such as “fixating on

1 a specific clinical feature too soon in the clinical encounter (anchoring bias), settling on a given  
2 diagnosis before fully examining other options (premature closure), and interpreting information  
3 so that it supports a previous conclusion (confirmation bias)”(p 3). Using illness scripts presents  
4 a preliminary way for clinicians to synthesize the information obtained during the CSE.

5       Instructors teaching dysphagia may decide to include print and video case study scenarios  
6 in which the graduate clinician has to formulate illness scripts and problem representation with  
7 semantic qualifiers. The case scenarios should cover a multitude of disorders, which will  
8 increase the student’s exposure to a variety of etiologies. Afterwards, the clinician can compare  
9 their illness script and representation with the patient’s actual diagnosis and clinician’s  
10 recommendation.

11       Mok, Whitehill& Dodd (2008) posited that problem-based learning (PBL) helps students  
12 improve their critical thinking and decision-making skills. Mok et al. further indicated that  
13 graduate students are overwhelmed with facts and they are not able to effectively bridge the gap  
14 from the classroom to the clinical setting. It is suggested that using PBL in the context of clinical  
15 practice may provide a better educational foundation than traditional didactic teaching. PBL  
16 enables students to become independent learners, rather than memorizing information. This type  
17 of learning is designed to promote active and independent learning. In PBL, students are divided  
18 into groups with a tutor where the students are provided with real-life scenarios, engage in  
19 discussions about these scenarios and evaluate their own learning progress. The tutor facilitates  
20 discussion rather than providing facts. Studies that looked at the impact of PBL revealed that  
21 following PBL students were found to ask more questions, demonstrate more integration of  
22 knowledge and were able to recall more detailed information about specific topics (Day &

1 Williams, 2000; Dochy et al., 2003). PBL increases student motivation for acquiring knowledge  
2 while enhancing critical thinking skills (Mok et al., 2008).

### 3 **Externships-Graduate Student Training at Skilled Nursing Facilities**

4 Partaking in the everyday routine of an SLP is likely the most beneficial way for students  
5 to develop their critical thinking skills. Throughout the externship process, students are put into  
6 real-life situations with actual patients where they are able to formulate illness scripts and begin  
7 to build their memory bank of stored examples to use when problem solving. McAllister (2005)  
8 discusses some of the challenges in the clinical education of SLP students such as: changes in the  
9 workplace of SLPs, changes in education and standards required by schools and associations, use  
10 of outdated approaches to clinical education, limited exposure to adult populations due to  
11 changes in healthcare, and lack of preparation and support for clinical educators. One important  
12 factor in the training process is the level of supervision provided during an externship. Some  
13 universities are using a mix of on-site and off-site supervision, which may limit the amount of  
14 guidance provided to the student clinician. Another issue is obtaining clinical experience within  
15 different etiologies of dysphagia; one externship may not cover the entire gamut of disorders in  
16 which dysphagia is a sequela. Researchers and educators are seeking to determine what types of  
17 clinical education modes are most effective in training graduate level students. McAllister (2005)  
18 suggests a “mix of pre-clinical preparation, direct client contact and other modes of learning  
19 (e.g., simulations, case-based learning, role-playing, micro-skills teaching), on-campus clinical  
20 experience as well as off-campus experience in different settings is needed” (p. 139).

### 21 **Understanding the Aging Population: Incorporating PBL**



1           In working in a SNF, it is important for students to have knowledge of the aging population  
2 before they can fully understand how a swallowing disorder impacts one's lifestyle and  
3 functioning in society. Barczy, Sullivan, & Robbins (2000) stated that there is a diversity of  
4 functional skills and social supports among all adult patients. Students may have limited  
5 knowledge of how to make quality of life decisions (specifically regarding end of life)and how to  
6 incorporate the patient's choice within the intervention plan. The patient's ability to communicate  
7 their wants is very important in managing dysphagia and should be emphasized in our teachings.  
8 Hemsley&Baladin (2003) discuss the importance of the person with dysphagia having good oral  
9 communication skills so that they could participate in the development and implementation of  
10 their management plan. In terms of family education, students often do not have experience  
11 speaking with patients about their evaluation findings and rationales for decision-making.  
12 Practicing communication of evaluation results and treatment plan in a role-playing situation  
13 may help to develop this skill. In following the practice of PBL, using real-life case scenarios  
14 will be beneficial. Students must be aware that patients may often not agree with the  
15 recommendation,as they are not satisfied with the PO diet recommendation (King &Ligman,  
16 2011). Students should be trained using PBL to counsel and educate patients and families  
17 regarding dysphagiaand including patient choice in the decision making process.

18

## 19 **Conclusion**

20           Training graduate level students and novice clinicians on the CSE involves more than  
21 simply teaching the steps to completing the examination. Instead of lists of facts or checklists,

1 the focus should be on the importance of gathering all the pertinent information and then using  
2 problem solving and clinical decision-making skills to come to conclusions regarding the next  
3 step in the patient's care. It is important for the future of our profession to work towards creating  
4 a more standardized way of teaching and executing the CSE.

5       McCullough (1999) discussed the rationale and importance for standardization of  
6 dysphagia evaluations. The author draws parallels with his study evaluating voice outcomes and  
7 touches on four points. First, he notes that standards help to educate. When novice clinicians are  
8 provided with details and proper definitions, they become better equipped with the knowledge to  
9 make appropriate recommendations. Second, standards simplify. If the process of evaluating is  
10 simplified the overall quality of the evaluation will improve. Third, standards conserve by saving  
11 time, money, and effort as they are easily replicated. Finally, standards help to guarantee a  
12 certain level of practice. When individuals, companies, and health-care reimbursement agencies  
13 are certified that means they provide a specific standard to support what is being practiced  
14 (McCullough, 1999). Standardization of this type of assessment procedure may be challenging  
15 but beneficial for the training clinician. McCullough discusses that swallowing examinations  
16 cannot be completely standardized; however, there are certain areas of the assessment where this  
17 can be achieved. Research should continue to target validation of methods and measurements  
18 used during the CSE, specifically the reliability, sensitivity and specificity of these methods, to  
19 form a more cohesive set of criteria, thus improving patient care.

20       Training graduate students and novice clinicians on the CSE as a pertinent part of the  
21 overall evaluation of swallow function is beneficial not only to the growth of future clinicians

1 but also to the well-being of our patients with dysphagia. Teaching clinical decision making  
2 through role-playing, using real-life case studies and dilemmas that are occurring in different  
3 types of facilities, forming illness scripts and using PBL may be a few ways to increase the  
4 hands-on clinical experience of students. Through this type of education and training, novice  
5 clinicians will be more prepared for their path as SLPs in evaluating and treating individuals with  
6 dysphagia, especially in skilled nursing facilities.

7

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