

**A Guide for  
Speech-Language Pathologist  
Facilitators**

for

**A Conversation on  
Management of Dysphagia**

**A Supplementary Training Module for  
Swallowing Screening Teams, based on  
the booklet titled *Management of  
Dysphagia in Acute Stroke: An  
Educational Manual for the Dysphagia  
Screening Professional***

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## Introduction

The learning module “A Conversation on Management of Dysphagia” was developed as an adjunct to TOR-BSST© training modules 1 and 2 (Martino, 2007). It will also be useful to supplement training programs for other validated evidence-based dysphagia screening tools. It is provided to assist Speech-Language Pathologists as they facilitate a learning session based upon “A Conversation on Management of Dysphagia”.

This guide was developed based upon the principles of adult learning, knowledge translation and interprofessional education. As such this learning module was developed with the following principles in mind:

- to respect learners as adults<sup>1</sup>
- to minimize the use of lecture<sup>1</sup>
- to use the participants’ experiences<sup>1</sup>
- to be interactive<sup>2</sup>
- to provide interprofessional education where “two or more professions learn with, from and about each other to improve collaboration and the quality of care”<sup>3</sup>

## Goals

The goals of this workshop are:

- To learn the major points from the manual “Management of Dysphagia in Acute Stroke: Educational Manual for the Dysphagia Screening Professional” in an experiential way through discussion.
- To ensure that dysphagia screeners have a comprehensive understanding of dysphagia and their role in the management thereof.

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<sup>1</sup> LaLonde, TL (2004) Using adult learning principles to increase training effectiveness. NALP Bulletin, October 2004. Retrieved from [http://www.akina.biz/perspectives/pdf/using\\_adult\\_learning\\_principles.pdf](http://www.akina.biz/perspectives/pdf/using_adult_learning_principles.pdf) on April 8, 2008.

<sup>2</sup> Grimshaw J, Thomas R, MacLennan G, Fraser C, Ramsay CR, Vale L, Whitty P, Eccles MP, Matowe L, Shirran L, Wensing M, Dijkstra R & Donaldson CI (2004). Effectiveness and efficiency of guideline dissemination and implementation strategies. Health Technology Assessment 8(6).

<sup>3</sup> CAIPE (2002) as cited by Canadian Interprofessional Health Collaborative (2007). CIHC Statement on the definition and principles of interprofessional education. Retrieved from [http://www.cihc.ca/resources-files/CIHCStatement\\_IPE\\_Final.pdf](http://www.cihc.ca/resources-files/CIHCStatement_IPE_Final.pdf) on April 8, 2008.

# Training Session Outline

<u>Slide #</u>	<u>Topic</u>
1	<b>INTRODUCTION</b>
2	<b>Acknowledgements</b>
3	<b>AGENDA</b>
4 – 8	<b>HEART &amp; STROKE BEST PRACTICE GUIDELINES FOR DYSPHAGIA IN ACUTE STROKE</b>
9 – 13	<b>ANATOMY &amp; PHYSIOLOGY OF SWALLOWING</b>
	10 Oral Preparatory Stage
	11 Oral Propulsive Stage
	12 Pharyngeal Stage
	13 Esophageal Stage
14	<b>NORMAL SWALLOWING CHANGES IN THE ELDERLY</b>
15 – 24	<b>DYSPHAGIA</b>
	15 What is dysphagia?
	16 Types of dysphagia
	17 Complications of dysphagia
	18 Dysphagia risk factors
	19 Interdisciplinary team
	20 Dysphagia screening tool
	21 Dysphagia assessment
	22 Nutrition screening and assessment
	23 Ongoing monitoring
	24 Dysphagia management
25 – 51	<b>CASE STUDIES</b>
	26 – 32 Case Study # 1
	33 – 38 Case Study # 2
	39 – 50 Case Study #3
52	<b>QUESTIONS</b>

## Training Session Script

Time Estimate	Slide	
	1	<p>Welcome to this dysphagia management training session. As the title of the in-service implies, we will be having a conversation on the management of dysphagia for acute stroke patients. We will be learning from a multidisciplinary perspective, how best to approach managing stroke survivors who have swallowing difficulty.</p> <p>As preparation for this half day workshop we have asked that each of you become familiar with the content in the Education Manual for the Dysphagia Screening Professional. The purpose of this workshop will be to review this content briefly. Today we will focus on applying this new knowledge to three case based scenarios. These scenarios and how to potentially handle them were developed with the help of many, including SLPs and RNs. We do not assume to have all the answers – or even the right answers for that matter – but hopefully we will have put together situations that will allow us to have an interesting discussion regarding some of the decisions you will have to make as screeners. Together, I hope we can come up with possible solutions to overcome some of the barriers and restrictions natural to an acute setting and to our setting in particular. By the end of today, I hope we will have made one more step toward multidisciplinary management for stroke survivors with dysphagia.</p>
	3	<p>This is the agenda for our session today:</p> <ul style="list-style-type: none"> <li>• First we will review dysphagia and stroke care.</li> <li>• Next we will outline Heart and Stroke Foundation of Ontario’s best practice guidelines for managing dysphagia in acute stroke.</li> <li>• Next we will review swallowing anatomy, physiology and pathophysiology.</li> <li>• Next we will review a clinical approach to dysphagia.</li> <li>• That will prepare us all to participate in the main part of this session which involves reviewing three case studies and using them as a basis for our conversation on management of dysphagia in acute stroke.</li> </ul>

Time Estimate	Slide	
	4	<p>Let's begin with dysphagia and stroke care. You can find this information on page 5 of your manual.</p> <p>Approximately half of all stroke survivors will have dysphagia in the first 72 hours after stroke. If their swallowing problem is not detected, or if it is not managed appropriately, then it may lead to potentially serious medical complications. However, if we can identify swallowing difficulties early and properly manage them, we can reduce these potential complications.</p> <p>Heart &amp; Stroke Foundation of Ontario developed a vision for early identification of swallowing problems and managing dysphagia in acute stroke survivors. Their vision is illustrated by this flowchart. It states that all stroke survivors are to be screened for dysphagia as soon as they are admitted to hospital or at least as soon as they are awake and alert. Screening should be conducted with a validated tool. Until their swallowing risk is determined patients should remain NPO. Those patients that fail the screen will need to have a full swallowing assessment by an SLP and those who pass the screen are to be started on an oral diet and monitored for any change in status. I will go into more detail on the best practice guidelines over the next few slides.</p>
	5	<p>There are 9 best practice guidelines for managing dysphagia and these can be found on page 6 and 7 of your manual.</p> <p><b><u>Best Practice Guideline 1</u></b>  “Maintain all stroke survivors <b>NPO</b> until swallowing ability has been determined”.</p> <p>NPO means nothing by mouth. In other words, we are talking about no food, water, ice chips or oral medications. Therefore, intravenous fluids may be required. Required medications such as aspirin, may need to be administered in another manner. As well, oral care should be completed regularly to help reduce oral bacteria that may be aspirated.</p> <p><b><u>Best Practice Guideline 2</u></b>  “Screen all stroke survivors for swallowing difficulties <b>as soon as they are awake</b> and alert”.</p> <p>A screen that is evidence-based and validated should be used, and only those people who have undergone the appropriate training should perform the screening.</p>

Time Estimate	Slide	
		<p><b><u>Best Practice Guideline 3</u></b>  “Screen all stroke survivors for risk factors for <b>poor nutritional status</b> within 48 hours of admission”</p>
	6	<p><b><u>Best Practice Guideline 4</u></b>  “Assess the <b>swallowing ability</b> of all stroke survivors who fail the swallowing screening”.</p> <p>A swallowing assessment is very different from a swallowing screen. The screen tells us whether or not the stroke survivor is likely to have a swallowing problem. The assessment looks more in depth at the stroke survivor’s ability to swallow food, liquid and medications. The swallowing assessment determines the severity and type of swallowing problem and how to best treat it. This assessment will indentify the increased risk for other complications, such as pneumonia. The swallowing assessment identifies how factors such as motor skills, cognition or perception might also interfere with adequate oral nutrition and hydration or lead to aspiration-related complications.</p> <p>Based on the assessment, the speech-language pathologist will make recommendations on how to manage the stroke survivor. This may include changes in food or fluid consistency, feeding strategies, swallowing therapy, oral care regimens and possibly referral to other health care professionals.</p> <p><b><u>Best Practice Guideline 5</u></b>  “Provide feeding <b>assistance</b> or mealtime <b>supervision</b> to all stroke survivors who pass the screening”.</p> <p>It is important that the person observing or supervising at mealtimes be aware of the signs and symptoms of swallowing difficulty.</p> <p><b><u>Best Practice Guideline 6</u></b>  “Assess the <b>nutrition</b> and <b>hydration</b> status of all stroke survivors who fail the screening”.</p> <p>Therefore if someone fails a swallow screen they should be referred to a Registered Dietitian who will assess their energy, protein and fluid needs and make recommendations in diet to meet those needs.</p>
	7	<p><b><u>Best Practice Guideline 7</u></b>  “<b>Reassess all stroke survivors</b> receiving modified texture diets</p>



Time Estimate	Slide	
		<p>or enteral feeding for alterations in swallowing status regularly”.  Their swallowing status may change particularly during the first year after their stroke. Therefore, swallowing should be monitored regularly.</p> <p><b><u>Best Practice Guideline 8</u></b>  “<b>Explain</b> the nature of the dysphagia and recommendations for management, follow-up and reassessment upon discharge to all stroke survivors, family members and care providers”.  It is important that they fully understand so that they continue to follow the dysphagia management plan after discharge.</p>
	8	<p><b><u>Best Practice Guideline 9</u></b>  “Provide the stroke survivor or substitute decision maker with sufficient information to allow <b>informed decision making</b> about nutritional options.”  We must consider the wishes and values of the stroke survivor and his/her family with regard to feeding tubes and quality of life.</p>
	9	<p><b><u>Anatomy and Physiology of Swallowing</u></b>  Now that we know what best practice is for managing dysphagia, let’s look closer at the act of swallowing.  This slide, which is also on page 8 of your manual, shows the basic anatomy of swallowing. Swallowing is a complicated process that involves the oral cavity, pharynx, larynx and esophagus.</p>
	10	<p>Swallowing physiology is talked about in detail on pages 9, 10 and 11. Swallowing can be divided into 4 stages:  <b><u>Oral preparatory stage</u></b>  Involves the muscles of the lips, cheeks, and mandible, the teeth and the tongue. The teeth and muscles of the mouth masticate the food and form it into a bolus.</p>
	11	<p><b><u>Oral propulsive stage</u></b>  This stage of swallowing begins when the tongue begins moving the bolus from the oral cavity, through the pharynx, to the esophagus.</p>
	12	<p><b><u>Pharyngeal Stage</u></b></p>

Time Estimate	Slide	
		As the bolus moves to the oropharynx the <b>pharyngeal stage</b> of swallowing is triggered. This stage of swallowing is reflexive, and it occurs quickly, typically within 1–1.5 seconds. Food is moved quickly and smoothly into the esophagus.
	13	<p><b><u>Esophageal Stage</u></b>  The final stage is the <b>esophageal stage</b>. During the esophageal stage of swallowing, the bolus is propelled down the esophagus by waves of peristaltic contractions. It takes 8–20 seconds for the bolus to travel through the esophagus to the stomach.</p> <p>So overall, there is a finely coordinated pattern with swallowing, breathing, and speaking. The pharynx is a shared passage for the movement of air, food and liquid The larynx protects the airway from food and liquid during swallowing and provides us the ability to make sounds.</p>
	14	<p><b><u>Normal Swallowing Changes in the Elderly</u></b>  Age-related changes can affect swallowing as a result of reduction in muscle tone, loss of elasticity of connective tissue, decreased saliva production, changes in sensory function, and decreased sensitivity of mucosa.</p> <p>These age-related changes can reduce motility of pharyngeal and esophageal muscles. Age-related changes in swallowing are known as <b>presbyphagia</b>.</p> <p>Healthy elderly people generally can compensate for these changes resulting from aging, but when compounded by fatigue or weakness because of a disease such a stroke, dysphagia can result.</p>
	15	<p>Now that you have seen a brief review of a normal swallow, and normal age-related changes in swallowing, let's talk about dysphagia.</p> <p>When there is difficulty or discomfort in swallowing we refer to it as dysphagia. The term dysphagia actually describes a set of symptoms or signs related to changes in swallowing.</p> <p>Any motor, sensory or structural changes to the swallowing mechanism can result in impaired swallowing. By swallowing mechanism, we are talking about anything from the mouth to the stomach.</p> <p>Stroke can affect any or all of the stages of swallowing, thus</p>

Time Estimate	Slide	
		affecting an individual's ability to eat and drink safely.
	16	<p>We can see oral, pharyngeal, or esophageal dysphagia depending on where the motor, sensory, or structural changes have occurred.</p> <p><b><u>Oral Dysphagia</u></b>  Examples:</p> <ul style="list-style-type: none"> <li>• Inability to close lips to maintain a lip seal  <i>(Suggestion: You may want to ask participants to take a sip of liquid and try to swallow with their mouth open).</i></li> <li>• Poor tongue control or abnormal tongue movements</li> <li>• Weakness in cheek muscles</li> <li>• Loose dentures</li> <li>• Pocketing of food in cheeks</li> </ul> <p><b><u>Pharyngeal Dysphagia</u></b>  Examples:</p> <ul style="list-style-type: none"> <li>• Slowness or delay in triggering the swallow</li> <li>• Throat clearing, coughing, or choking</li> <li>• Changes in vocal quality like a wet, gurgly voice</li> <li>• Breathing difficulties during meals</li> <li>• Poor coordination of breathing and swallowing, resulting in inhaling food or liquid</li> <li>• Silent aspiration where there is not an overt sign of food or liquid going into the airway</li> </ul> <p><b><u>Esophageal Dysphagia</u></b>  Examples:</p> <ul style="list-style-type: none"> <li>• Feeling of food getting stuck in throat or chest</li> <li>• Reflux of food into the throat or mouth</li> </ul>
	17	<p><b><u>Complications of Dysphagia</u></b></p> <p><b><u>Aspiration pneumonia</u></b>  An infection caused by the entry of food, liquid, and/or bacteria into the lungs. Aspiration pneumonia is associated with repeated entry of food or liquid into the lungs due to the</p>

Time Estimate	Slide	
		<p>abnormal swallowing physiology.</p> <p><b>Not everyone who aspirates develops aspiration pneumonia.</b></p> <p>Factors affecting the likelihood of developing aspiration pneumonia include stroke severity, level of consciousness, premorbid pulmonary function, ability to cough, mobility, posture, cognition, acidity of the aspirate, immune competence, oral hygiene and amount and frequency of aspiration.</p> <p><b><u>Malnutrition</u></b></p> <p>Malnutrition is common among the elderly, and 16% of individuals with acute stroke are malnourished on admission to hospital.</p> <p>Estimates indicate that malnutrition either develops or worsens in 25% to 40% of stroke survivors. This can be caused by the development of a hyper-metabolic state, feeding difficulties, dysphagia, NPO status, modified diets or an inability to eat sufficient quantities to meet nutritional needs.</p> <p><b><u>Dehydration</u></b></p> <p>Results from either water loss or depletion of sodium with accompanying water loss. Dehydration can develop when metabolic water needs and losses exceed intake, such as occur with vomiting and diarrhea.</p> <p>As elderly individuals may have a decreased sense of thirst, dehydration becomes more common with age. Almost 25% of individuals over 70 years of age are dehydrated on admission to hospital, and more than 33% of nursing home residents admitted to hospital are dehydrated.</p> <p>Dysphagia is a risk factor for dehydration because it is associated with an inability to manage liquids safely, impaired cognition, dependency on others for oral intake and intolerance of thickened fluids with consequent voluntary restriction of fluid.</p> <p><b>Dehydration is an important predisposing factor in stroke reoccurrence.</b></p> <p>Signs of dehydration include:</p> <ul style="list-style-type: none"> <li>• Confusion</li> <li>• Dry mouth and tongue</li> <li>• Sunken eyes</li> </ul>

Time Estimate	Slide	
		<ul style="list-style-type: none"> <li>• Dry loose skin (decreased skin turgor)</li> <li>• Decreased urine output.</li> </ul>
	18	<p><b><u>Dysphagia Risk Factors</u></b></p> <p><b><u>Stroke location</u></b></p> <p><b>Cerebral hemisphere</b> stroke can affect motor and sensory responses of the swallowing mechanism.</p> <p>With a <b>left hemisphere</b> stroke you may see the stroke survivor have a reduced ability to understand or use language, produce clear speech or effectively communicate information.</p> <p>It may affect the right side of the face, lips and tongue, resulting in weakness and slow, uncoordinated movement.</p> <p>A <b>right hemisphere</b> stroke may affect the left side of the face and reduce the ability to recognize and appreciate the extent of swallowing impairment. Sometimes people with right hemisphere strokes are impulsive and feed themselves quickly, resulting in increased risk of choking. People with right hemisphere strokes tend to have more difficulties with dysphagia and aspiration pneumonia.</p> <p><b>The brainstem</b>, the origin of most cranial nerves, is the main control for especially the pharyngeal stage of swallowing. Survivors of a brainstem stroke may or may not have any apparent weakness on either side of the face, mouth or throat, but they may have significant difficulties beginning or executing the pharyngeal stage of swallowing.</p> <p><b><u>Comorbid conditions</u></b></p> <p>Numerous conditions increase the risk of dysphagia, but not all individuals with these conditions have swallowing difficulties. When an individual with one or more relevant comorbid conditions experiences a stroke, the risk for dysphagia increases significantly. It is therefore important to obtain a full medical history to identify comorbid conditions, the date of onset and relation to swallowing history.</p> <p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>• Parkinson's</li> <li>• Multiple Sclerosis</li> <li>• Myasthenia gravis</li> </ul>

Time Estimate	Slide	
		<ul style="list-style-type: none"> <li>• COPD</li> <li>• Diabetes</li> <li>• GERD</li> </ul> <p><b><u>Medications</u></b> Medications in particular are important in relationship to stroke and dysphagia.</p> <ul style="list-style-type: none"> <li>• Stroke patients can be more susceptible to the effects of medications.</li> <li>• Medications may be slower to absorb or metabolize.</li> <li>• Some drugs, such as Haldol, may cause dysphagia in patients.</li> <li>• Others may not be able to take necessary medications because of the dysphagia.</li> <li>• Some medications cannot be crushed (see page 36 for a list)</li> </ul> <p><b><u>Tracheotomy and Ventilation</u></b> The presence of a tracheotomy may impair swallowing function. Although many individuals with a tracheotomy continue to eat, their increased risk for dysphagia necessitates an assessment of the swallow by a speech-language pathologist.</p>
	19	<p><b><u>Interdisciplinary Team</u></b> Ask participants what role each health care professional plays in the development of a dysphagia care plan</p>
	20	<p><b><u>Dysphagia Screening Tool</u></b> <i>Insert information about the screening tool used in your organization.</i></p> <p>We chose to implement the tool that has the best evidence and is well validated. A good screening needs to abide by these points.</p> <p><i>(Review how the screening tool meets each of the points as listed on the slide.)</i></p>
	21	<p><b><u>Dysphagia Assessment</u></b> A swallowing assessment is very different from a screening of dysphagia. An assessment is more comprehensive. It can determine the structure, function, and degree of impairment. For</p>

Time Estimate	Slide	
		<p>example:</p> <ul style="list-style-type: none"> <li>• For structure - Is the swallowing problem in the mouth or in the throat?</li> <li>• For function - Is the swallowing problem caused by an inability to move the tongue, or an inability to move the food in the throat, or perhaps an inability of the epiglottis to move?</li> <li>• And for degree of impairment - Is the swallowing problem mild, moderate or severe?</li> </ul> <p>Once the swallowing assessment is completed all of this information helps direct the treatment plan.</p> <p>During an assessment the Speech Language Pathologist will first see the patient for a clinical or bedside assessment. The SLP will examine the patient's history, do an oral motor examination and observe the patient as they eat and drink various food consistencies.</p> <p>Sometimes the SLP will decide that additional information is needed which would require an instrumental method of assessment. Two of the most common instrumental assessments are videofluoroscopy and endoscopy. However, these tools are not always available and they are not always necessary.</p> <p><b><u>Videofluoroscopy</u></b>  Also known as a modified barium swallow, this is the most common instrumental procedure administered to individuals with dysphagia. The videofluoroscopy is a radiologic procedure to study the anatomy and physiology of swallowing, focusing mainly on the oral and pharyngeal areas.</p> <p><i>(Suggestion: you may want to differentiate between a barium swallow and a modified barium swallow)</i></p> <p><b><u>Endoscopy</u></b>  Fiberoptic endoscopic evaluation of swallowing (FEES) uses a small fiberoptic camera placed in the nasopharynx or oral cavity to assess vocal fold function, especially closure, which protects the lungs from aspiration.</p>
	22	<p><b><u>Nutrition Screening/Assessment</u></b>  Best practice guidelines recommend that all stroke survivors be screened for risk factors of poor nutrition within 48 hours of</p>

Time Estimate	Slide	
		<p>admission. Those stroke survivors that fail the nutrition screen will be referred to a Registered Dietitian for a nutritional assessment.</p> <p>For more information on nutrition screening for stroke survivors please read your booklet entitled “Nutrition Screening for Stroke Survivors”.</p>
	23	<p><b><u>Ongoing Monitoring -</u></b></p> <p>Regular and careful monitoring of stroke survivors for dysphagia is critical. A stroke survivor’s physical status can fluctuate on an hourly basis, directly affecting the ability to manage food and drink safely. On page 24 of your manual is a list of clinical indicators of possible dysphagia. These include:</p> <p>Poor dentition</p> <ul style="list-style-type: none"> <li>• Drooling</li> <li>• Asymetric facial and lip weakness</li> <li>• Changes in voice</li> <li>• Dysarthria – slurred speech</li> <li>• Reduced tongue movement</li> <li>• Coughing or choking</li> </ul>



	24	<p><b><u>Dysphagia Management</u></b></p> <p><b><u>Oral Hygiene</u></b> Nurses are trained to do mouth care and they can be asked what their protocol is. See how it may differ from what the guidelines say. Each province may have it's own guidelines for oral care in relationship to stroke.</p> <p><b><u>Diet textures</u></b> Review what the diet textures are at your facility.</p> <p><b><u>Feeding Strategies</u></b> Key strategies:</p> <ul style="list-style-type: none"> <li>• Have the patient sitting as close to 90° as possible</li> <li>• If they are being fed, approach and feed on their strong side</li> <li>• Time medications so that they are pain-free at mealtimes</li> <li>• Check for pocketing after meals</li> <li>• Good mouth care after meals</li> <li>• Use teaspoon</li> </ul> <p><b><u>Therapeutic and Postural Interventions</u></b> PT and OT involvement can assist in position modifications and special utensils to aid in eating.</p> <p><b><u>Ongoing education and counselling</u></b> Can be done by all members of the dysphagia team. See brochure on dysphagia for the caregiver.</p>
	25	<p>Next, we will discuss 3 case scenarios and try to incorporate the information we have learned from the manual as best as we can. Remember there is no absolutely right or wrong answer – so please speak freely – we will all learn from each other. Following every scenario I will ask you some questions and together we will work through the best answers. I will share with you what the authors of this presentation considered to be the best approach.</p>

## Case Study #1 RS

The objective for Case 1 is to highlight:

- risk factors in dysphagia
- the necessity of having a team approach when it comes to dysphagia management
- and the importance of addressing specific swallowing needs.

RS is a 71-year old male who was admitted to hospital with a right-sided weakness and garbled speech. RS was accompanied to hospital by his wife of 50 years, and she provided medical and social histories. His medical history includes Parkinson's disease (1998), transurethral radical prostatectomy (1996) and appendectomy (remote). Mr. and Mrs. S have six children and 23 grandchildren, mostly living nearby. RS worked as an electrician for 40 years and recently worked as a clerk in the local farmers' supply store for 3 years until his Parkinson's symptoms became pronounced.

On admission, blood pressure was 166/78 mmHg, pulse was 82 bpm and SaO<sub>2</sub> was 92%. Right visual field neglect was identified, and right facial asymmetry and dense right-sided paresis in the arm and leg were present. Tremors were present on the left side. Unintelligible speech and drooling were noted. Mr. S was wearing glasses, a hearing aid in the right ear and dentures when he was admitted. A computed tomography (CT) scan performed in the emergency department demonstrated a lacunar infarct in the left periventricular white matter. Electrocardiography (ECG) showed atrial fibrillation. Chest radiography is pending.

Slide #	Questions	Possible Responses
30	1. <b>What are the most immediate concerns for this individual?</b>	<ul style="list-style-type: none"><li>• Acute ischemic stroke</li><li>• Risk for dysphagia</li><li>• Parkinson medications needed</li><li>• Uncertain pulmonary status</li><li>• Atrial fibrillation</li></ul>

Slide #	Questions	Possible Responses
30	<b>1a What are the swallowing-specific concerns?</b>	<ul style="list-style-type: none"> <li>• Needs swallow screened</li> <li>• NPO until swallow ability determined</li> <li>• Awake/alert?</li> <li>• May need medication to be given in an alternate form</li> </ul>
30	<b>1b Why does he need his swallowing screened?</b>	<ul style="list-style-type: none"> <li>• 55% of acute strokes have dysphagia in the first few days after a stroke.</li> <li>• Complications include aspiration, malnutrition, dehydration, death.</li> </ul>
30	<b>1c What are some risk factors that may impact swallowing?</b>  <b>(Discuss each risk factor and how it impacts swallowing from a multi-disciplinary perspective.)</b>	<ul style="list-style-type: none"> <li>• Right-side weakness in arm, leg, and face</li> <li>• Left side tremors</li> <li>• Right visual neglect</li> <li>• Garbled speech</li> <li>• Drooling</li> <li>• Parkinson's disease</li> <li>• Age</li> <li>• O2 saturations borderline</li> <li>• Sensory deficits</li> <li>• Dentures</li> <li>• CT scan results</li> <li>• Atrial fibrillation</li> <li>• CXR pending</li> <li>• Family issues</li> </ul>
31	<b>2 As a member of the interdisciplinary dysphagia team, what is your role?</b>  <b>(Probe for different staff roles and what they do in relation to the dysphagia team. If there are other disciplines in the audience, have them discuss their role. Otherwise, discuss the various roles of the team members.)</b>	<ul style="list-style-type: none"> <li>• SLP</li> <li>• RD</li> <li>• Physician</li> <li>• RN/RPN</li> <li>• OT</li> <li>• PT</li> <li>• Pharmacy</li> <li>• Stroke Survivor/Family/Caregiver</li> </ul>

<b>Slide #</b>	<b>Questions</b>	<b>Possible Responses</b>
32	<b>3</b> Briefly describe how you should respond to the swallowing needs of this individual.	Screen when awake and alert
32	<b>3a</b> What happens if he fails the screening?	Keep NPO and a referral is made to SLP
32	<b>3b</b> How would you get an order for NPO?	Consider nutrition, hydration, and medications (especially if it is weekend and no SLP is available). What is the hospital protocol for insertion of NG if a person needs to be NPO?
32	<b>3c</b> What happens if he passes the swallow screen?	Initiate order for _____ diet texture  (Clinical judgment is used regarding textures including features such as dental status.)
32	<b>3d</b> What needs to be done after screening if the patient failed the screen and was then assessed and placed on a diet by SLP?	<ul style="list-style-type: none"> <li>• Follow swallow management plan provided by SLP (may include texture recommendations, positioning, swallow strategies, oral hygiene, medication administration suggestions with assistance from pharmacy).</li> <li>• Provide strategies and information to family and other staff</li> <li>• If SLP involved, re-screen only if patient has worsened in neurological or medical status</li> </ul>

<b>Slide #</b>	<b>Questions</b>	<b>Possible Responses</b>
32	<p><b>3e What needs to be done after screening if the patient passed the swallow screen and was then placed on a diet?</b></p> <p><b>(Here is a good opportunity to discuss low-risk feeding strategies and signs and symptoms of dysphagia.)</b></p>	<ul style="list-style-type: none"> <li>• Monitor patient for signs of dysphagia during meals for up to 24 hours, 3 meals, or_____.</li> <li>• If no problems are noted within_____, then initiate a DAT order.</li> </ul>
32	<p><b>3f Why is oral care important for this person?</b></p> <p><b>(Here is a good opportunity to discuss best practice in oral care for stroke-survivors with dysphagia.)</b></p>	<ul style="list-style-type: none"> <li>• Increased oral bacteria, especially if NPO.</li> <li>• Reduced control of saliva may pool, thicken, dry, and adhere to oral mucosa.</li> </ul>
32	<p><b>3g What should we consider about his medication administration if he fails the swallow screen and swallow assessment?</b></p>	<ul style="list-style-type: none"> <li>• Talk to pharmacy about medications that cannot be crushed and ask about an alternative form.</li> <li>• Parkinson’s may worsen if he is not on his meds.</li> </ul>
32	<p><b>3h Do we need to consider sensory deficits when managing his swallowing?</b></p>	<ul style="list-style-type: none"> <li>• Dentures in place at meals if they fit and if patient is on diet texture other than puree. Need to be cleaned as part of oral hygiene.</li> <li>• Glasses on at meals</li> <li>• Hearing aid in at meals</li> <li>• Because of right neglect, feed on his left side within his visual field</li> </ul>

## Case Study #2 - DL

### The objective for Case 2 is to highlight:

- the specific dysphagia screening process
- family issues

DL is a 66-year-old male who presented in the emergency department after collapsing at home while digging in the garden. His wife found him unable to move his right arm or leg and unable to speak. A CT-scan performed in the emergency department detected an early left middle cerebral artery (MCA) infarct. Echocardiography found a moderately enlarged left ventricle with grade II left ventricular systolic function but no clots and an elevated right ventricular systolic pressure of 88 mmHg. DL was obtunded, with no gag reflex, left deviation of the eyes, and intermittent consciousness.

DL had not seen a doctor in 15 years. Previously, he had been independent and in good health, with no history of hypertension, diabetes, hypercholesterolemia or hospitalization. He did not take any medications and had stopped smoking 18 years ago. DL lives with his wife and three children. Family members accompanied him to the hospital, and they are very anxious. DL has now been in the emergency department for two hours. His family members want him to be fed and given medication for pain, as they believe he is in pain.

<b>Slide #</b>	<b>Questions</b>	<b>Possible Responses</b>
37	<b>1a Based on the best practice guidelines for dysphagia, how will the dysphagia screening process take place for this individual? That is:  Who will start the process?</b>	<ul style="list-style-type: none"><li>• Physician will make diagnosis of stroke and will sign routine orders and/or place on stroke care map.</li><li>• Nursing will start the process by keeping the patient NPO and will find a trained swallow screening team member.</li></ul>

Slide #	Questions	Possible Responses
37	<b>1b What will or will not be done?</b>	<ul style="list-style-type: none"> <li>• NPO until swallowing screen completed.</li> <li>• As patient is obtunded (<i>mentally dulled</i>), he is not able to have a screening yet (<i>i.e. not awake and alert</i>).</li> <li>• Monitor for change in neurological status. When level of consciousness improves, then screening should take place.</li> <li>• Ensure that when talking to patient to assess alertness you stand on his left side (his eyes are deviated left).</li> <li>• Oral care should be completed.</li> <li>• This patient will likely be started on IV fluids.</li> <li>• Education should be provided to the family.</li> <li>• This patient will not get his medications by mouth. Patient should be assessed for need of medications by physician. We want to see how he is functioning optimally, so pain medication may not be warranted. If needed, consideration of IV medications for pain should be done. If IV medications are not available consider NG. If medications are not needed, rationale and support should be given to patient/ family.</li> </ul>
37	<b>1c When will it (screening) occur?</b>	<ul style="list-style-type: none"> <li>• When patient is awake and alert, and when he can be properly positioned.</li> <li>• Oral care should begin immediately and continue as per protocol.</li> <li>• IV for hydration should be considered immediately if patient NPO</li> <li>• NG for alternative nutrition should be considered if patient remains NPO more than 48 hours.</li> </ul>
37	<b>1d Where will it (screening) happen?</b>	<ul style="list-style-type: none"> <li>• In ER if awake and alert or wherever he is transferred.</li> </ul>

Slide #	Questions	Possible Responses
37	<p><b>1e The patient does not have a gag reflex. Why do you think that we don't just use a gag reflex to check for swallowing ability?</b></p>	<p>The purpose of a gag reflex is to eject foreign objects. There are a lot of people that have normal swallows that do not have a gag reflex. There are also people who have pronounced gag reflexes but they cannot swallow. So testing the gag reflex for swallowing is not a good indicator of swallowing ability.</p>
38	<p><b>2 Think of the best way to address the family's concerns.</b></p>	<ul style="list-style-type: none"> <li>• DL was previously healthy &amp; independent and hadn't seen a doctor in 15 years. He and his family may not be familiar with hospitals and their procedures. Hospitals may be very intimidating for them along with the difficulty in accepting this new illness. Therefore, it may be helpful to facilitate supportive care (i.e. RN, SW, pastoral care) to deal with family's stress.</li> <li>• Certain cultures may value feeding more and may view providing food and water as one of the only ways that they can help their family member. Be sensitive to culture.</li> <li>• The patient and family will need education re: potential for change in swallowing post stroke &amp; the need for swallowing screening and possibly swallowing assessment.</li> </ul> <p>Explain:</p> <ul style="list-style-type: none"> <li>• If necessary, pain meds can be given via IV, subcutaneously, etc.</li> <li>• Reasons for NPO (e.g. cannot eat if not awake).</li> <li>• Provide swallow brochure</li> <li>• Nutrition and hydration can be sustained using IV, NG tubes.</li> <li>• Detail process that will unfold when patient is ready (i.e. swallowing screen by trained screener.</li> <li>• Introduction of team roles (e.g.: RN, SLP, RD, ...) and their possibility of involvement</li> </ul>



## Case Study #3 HN

The objective for Case 3 is to highlight:

- the specific dysphagia screening process
- issues around medical management and dysphagia

HN is an 85-year-old female who presented in the emergency department after a fall at home. She presents with left-sided weakness, decreased pain and temperature sensation, facial droop, slurred speech, dry mucous membranes, an intact gag reflex, cuts and abrasions and confusion.

Until the event, HN had been independent and lived alone. Previous medical history includes steroid-dependent rheumatoid arthritis, primarily affecting hands, knees and hips, atrial fibrillation and type 2 diabetes mellitus. Her family reports she has lost weight over the past six months, although she had not been dieting. In the emergency department, her daughter gave HN orange juice, as she thought her blood sugar may have been getting low. Her daughter reported that she began to sputter and choke when she attempted to swallow the juice.

A CT Scan shows a right-hemisphere infarct. Chest radiography shows pneumonia in the right upper lobe. HN has been in the emergency department now for two hours.

Slide #	Questions	Possible Responses
43	<p><b>1a Based on the best practice guidelines for dysphagia, how will the dysphagia screening process take place for this individual? That is:</b></p> <p><b>Who will start the process?</b></p>	<ul style="list-style-type: none"> <li>• Physician will make diagnosis of stroke and will sign routine orders and/or place on stroke care map.</li> <li>• Nursing will start the process by keeping the patient NPO and will find a trained TOR-BSST screener</li> <li>• Coughing &amp; sputtering observed by daughter is important information for the screener and should be documented in the chart. However it does not constitute a valid screen.</li> <li>• Family education and oral hygiene need to start in the ER.</li> </ul>

<b>Slide #</b>	<b>Questions</b>	<b>Possible Responses</b>
43	<b>1b What will or will not be done?</b>	<ul style="list-style-type: none"> <li>• This patient will be kept NPO, including medications, until swallow screening is completed. Consideration to be made re: safe route for medication administration.</li> <li>• Patient is awake and alert; therefore, screening should be completed immediately.</li> <li>• Note that coughing and sputtering on orange juice given by daughter do not constitute a valid screen.</li> <li>• Monitor for any change in neurological status.</li> </ul>
43	<b>1c When will it (screening) occur?</b>	<ul style="list-style-type: none"> <li>• Screening should occur within 24 hours or as soon as awake and alert. Because of her previous medical history which includes diabetes, it is recommended that the patient be screened ASAP. She is awake and alert so this can occur immediately.</li> </ul>
43	<b>1d Where will it (screening) happen?</b>	<ul style="list-style-type: none"> <li>• In ER. She has been there 2 hours already</li> </ul>

**2 Think of the best way to address HN's diabetic medical status in light of current swallowing difficulties.**

- Emphasize team roles.
- Refer to RD to assess and manage of diabetic needs, dehydration, and malnourishment
- If HN fails swallowing screen, refer to SLP with information that patient is a diabetic, and therefore needs to be assessed ASAP so that medication administration can be determined.
- Differentiate between screening vs. assessment:  
**Screen** = is rapid, is completed by a trained screener, identifies if there is a possible problem; is a pass/fail measure  
**Assessment** = is a longer, more comprehensive assessment; confirms if a problem exists; gives information regarding severity, nature of problem & provides recommendations for management
- Provide information to the physician regarding signs of dehydration (i.e. dry mucous membrane, confusion, falls, etc.) and malnourishment (i.e. unintentional weight loss) for possible IV, NG.
- Think of the best way to address the daughter's actions of giving the patient orange juice.  
Acknowledge that daughter was trying to help her mother; Educate her about the possibility of dysphagia, and the increased risk for pneumonia; Reassure the family that the RN will closely monitor the glucose
- Liaise with doctor re: need for insulin sliding scale
- This is a good example of an acute stroke survivor that may continue to have dysphagia beyond 72 hours.
- This is a good example of a patient with possible complications associated with dysphagia (dehydration, malnutrition, pneumonia, possible death).

### Additional Scenario 1

When screened in the emergency department by the TOR-BSST screener NH failed the TOR-BSST swallowing screen. She was kept NPO and referred to the SLP for a swallowing assessment. The SLP saw HN for a bedside/clinical swallowing assessment. The SLP's recommendations after the assessment were: Dysphagia pureed and honey thick fluid diet consistency, no thin fluids, PO meds crushed with applesauce (check with pharmacist before crushing any meds). VFSS also recommended. You are the RN/RPN on shift when NH is transferred to medicine

Slide #	Questions	Possible Responses
46	<b>3a What information regarding HN's dysphagia could you provide to the receiving RN?</b>	<ul style="list-style-type: none"><li>• SLP has completed the swallowing assessment, recommending a modified diet texture consistency for both liquids and solids.</li><li>• Videofluoroscopic assessment of swallowing is pending.</li><li>• She has right upper lobe pneumonia.</li><li>• There is an aspiration risk as per the SLP.</li><li>• RD is following the patient regarding her diabetic diet, nutrition/hydration status and need for modified texture</li><li>• Current neurological status and need to continue to monitor for change.</li><li>• Diabetes Mellitus status – sliding scale</li><li>• Education has been started with the family and patient regarding stroke, dysphagia, and care process, etc. and that further support will be needed.</li><li>• level of assistance needed with feeding as per the SLP assessment</li></ul>
47	<b>3b What can be given to her if she has low blood sugar as per the RD/SLP?</b>	<ul style="list-style-type: none"><li>• IV insulin</li></ul>

<b>Slide #</b>	<b>Questions</b>	<b>Possible Responses</b>
48	<b>3c What are the pros and cons for giving thickened liquids for this patient?</b>	<ul style="list-style-type: none"> <li>• Dehydration - con</li> <li>• Patient refusal – con</li> <li>• Reduced aspiration risk – pro</li> <li>• May need IV right away!</li> </ul>

**Additional Scenario 2**

NH becomes agitated and demands water.  
(Diabetics often have an increased desire for water.)

<b>Slide #</b>	<b>Questions</b>	<b>Possible Responses</b>
49	<b>4 How would you address NH's demand and family concerns?</b>	<ul style="list-style-type: none"> <li>▪ Observe for signs of dehydration.</li> <li>▪ Discuss with physician re: order for IV hydration</li> <li>▪ Provide oral care including oral moistening agent.</li> <li>▪ Swab mouth with foam swab with minimal amount of water</li> <li>▪ If confused, attempt to distract her (e.g. hand massage)</li> <li>▪ Contact SLP</li> </ul>

Slide #	Questions	Possible Responses
50	<p><b>Given NHs post-stroke deficits what might you notice when assisting her with feeding?</b></p>	<p>Discussion can be guided by breaking down according to 4 stages of swallowing. You can then emphasize the 4 stages of swallowing, what happens in each stage &amp; point out that the oral components of swallowing are easier to visualize than pharyngeal/esophageal when feeding.</p> <ul style="list-style-type: none"> <li>• Oral bolus loss</li> <li>• Difficulty with oral bolus sensation</li> <li>• Eats foods before they cool – decreased temperature sensation</li> <li>• Slow oral transit</li> <li>• Leans to left</li> <li>• Difficulty cutting foods</li> <li>• Eats quickly</li> <li>• Difficulty holding utensils</li> <li>• Pocketing on left side of oral cavity</li> <li>• Oral residue</li> <li>• Coughing with drinking thin fluids (**can use this opportunity to reinforce cough as response to aspiration vs. SILENT aspiration)</li> <li>• Slow to finish meal</li> <li>• Confusion – may not use utensils properly, attempt to eat non-edible food</li> </ul>

## Appendix A – Ordering Handouts

Supporting handouts for this training session are available from the Heart and Stroke Foundation of Ontario. An order sheet may be found online at:

<http://profed.heartandstroke.ca/>

1. Click on Stroke → Stroke Care Resources → Order Resources
2. Enter your contact information and shipping address in the order sheet.
3. Enter the quantities of material you are requesting (see below for order numbers).
4. Click SEND at the bottom.

Applicable item numbers are:

PE-MANUAL 101-F06	Dysphagia Manual "Management of Dysphagia In Acute Stroke Patients: An Educational Manual for the Dysphagia Screening Professional" <a href="http://profed.heartandstroke.ca/ClientImages/1/Dysphagia%20Manual%20FINAL%2020060123.pdf">http://profed.heartandstroke.ca/ClientImages/1/Dysphagia%20Manual%20FINAL%2020060123.pdf</a>
PE-GUIDE 106-F06	Dysphagia Nutrition Screening Manual <a href="http://profed.heartandstroke.ca/ClientImages/1/Dysphagia%20Nutrition%20Manual%20FINAL%202005.pdf">http://profed.heartandstroke.ca/ClientImages/1/Dysphagia%20Nutrition%20Manual%20FINAL%202005.pdf</a>
PE-BOOKLET 104-F06	<b>SUGGESTED</b> Dysphagia Booklet "Improving Recognition & Management of Dysphagia in Acute Stroke Patients" <a href="http://profed.heartandstroke.ca/ClientImages/1/Dysphagia%20Booklet%20FINAL%2020050203.pdf">http://profed.heartandstroke.ca/ClientImages/1/Dysphagia%20Booklet%20FINAL%2020050203.pdf</a>
PE-BOOKLET 114-F06	<b>SUGGESTED</b> Dysphagia Overview (9 Guidelines) <a href="http://profed.heartandstroke.ca/ClientImages/1/DysphagiaOverview2002Final.pdf">http://profed.heartandstroke.ca/ClientImages/1/DysphagiaOverview2002Final.pdf</a>

## **Appendix B – Training Evaluation**

Please see Training Evaluation on the following two pages.



# “A Conversation on Management of Dysphagia”

## Supplementary Training for Swallowing Screening Teams

### TRAINING EVALUATION

1. At which hospital site do you work? \_\_\_\_\_ Date: \_\_\_\_\_
2. In which clinical discipline are you currently working?  
 RN       RPN       OT/PT       Dietitian       CDA   
 Physician       Other  (please specify) \_\_\_\_\_
3. Please check the box which best reflects your satisfaction with the following aspects of this part of the training session.

<u>Presentation Content</u>	Very Satisfied 5	4	Satisfied 3	2	Very Dissatisfied 1
Information on Heart & Stroke Foundation’s Best Practice Guidelines for Dysphagia					
Review of anatomy and physiology of swallowing					
Information on dysphagia following stroke					
Information on management of dysphagia					
Case Study #1 discussions					
Case Study #2 discussions					
Case Study #3 discussions					

<u>Presentation Style</u>	Very Satisfied 5	4	Satisfied 3	2	Very Dissatisfied 1
Organization of session					
Thoroughness of session					
Rate of presentation					
Clarity of information					
Quality of PowerPoint presentation					
Quality of handout material					
Expertise of presenter					
Opportunities for discussion					

Please complete page 2 on reverse.

3. What was of most value to you in this learning session and why?

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4. What was of least value to you in this learning session and why?

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5. What did you learn in this session that might influence how you provide dysphagia care to stroke survivors?

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

6. Other comments

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**Thank you for taking the time to complete this evaluation!**