

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"



Ontario
Stroke
System

Acknowledgements

The Heart and Stroke Foundation of Ontario is grateful to the following professionals for their work in developing this CD:

Rosemary Martino, MA, MSc, PhD
Associate Professor, University of Toronto

Donelda Moscrip, MSc
Regional Stroke Rehabilitation Coordinator
Central East Stroke Network

Alane Witt-Lajeunesse, MS, MSc
Dysphagia Educator/Coordinator
Chinook Rehabilitation Program

Patricia Knutson, MA
Speech Language Pathologist,
Huron Perth Healthcare Alliance

Becky French, MSc
Speech Language Pathologist,
Southlake Regional Health Centre

Audrey Brown, MSc
Speech Language Pathologist,
Providence Care, St. Mary's of the Lake Hospital

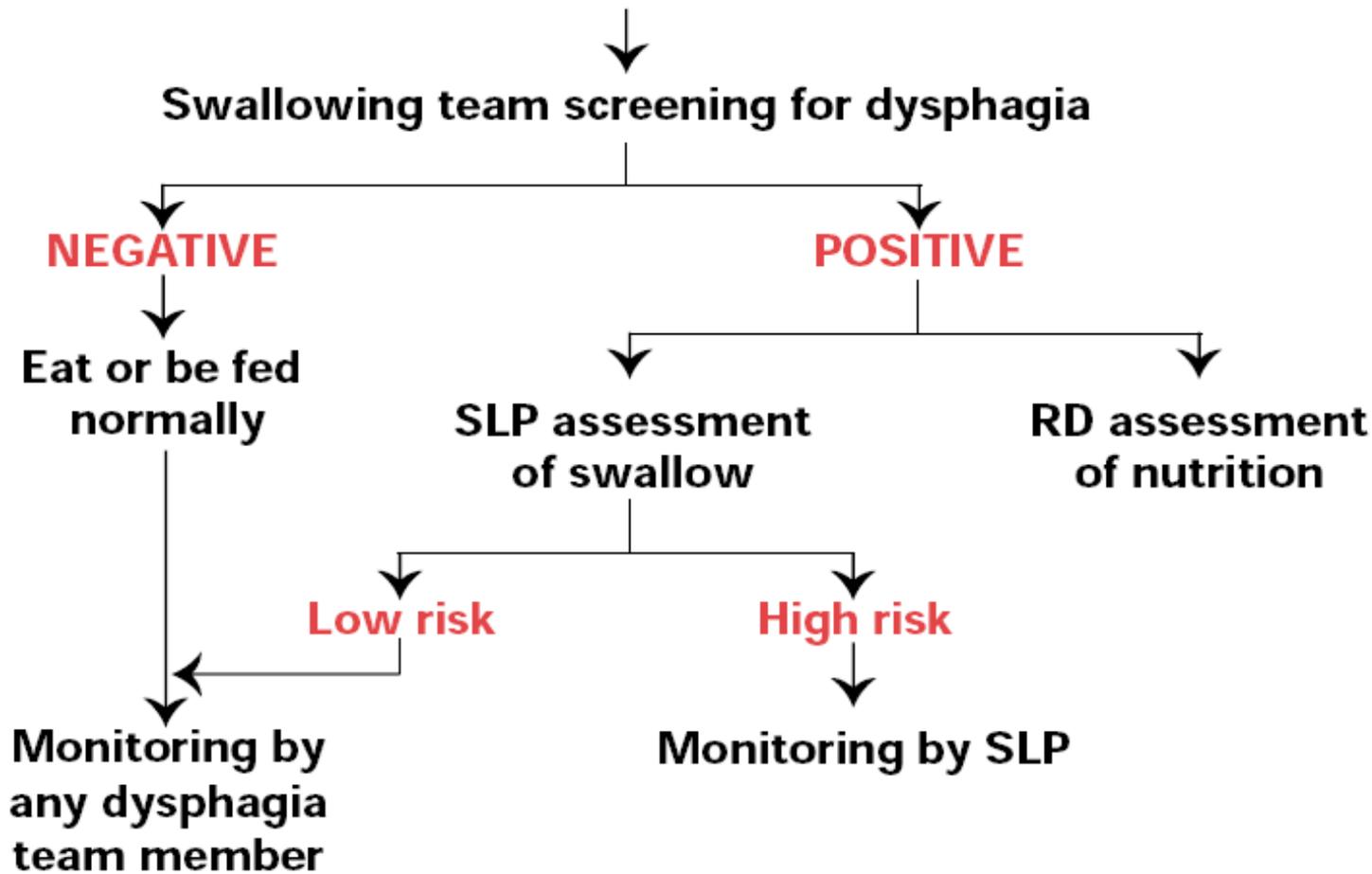
Laura MacIsaac, BScN, MSc
Stroke Specialist Case Manager
Stroke Strategy Southeastern Ontario

Anna Mascitelli, MA
Speech Language Pathologist,
Niagara Health System

Agenda

- ❑ Dysphagia and Stroke Care
- ❑ Best Practice Guidelines for Managing Dysphagia
- ❑ Swallowing: Anatomy, Physiology, Pathophysiology
- ❑ Clinical Approach to Dysphagia
- ❑ Case Studies

Stroke survivors NPO



Source: Heart & Stroke Foundation (2006)
Management of Dysphagia in Acute Stroke: An
Educational Manual for the Dysphagia Screening
Professional, 18

Best Practice Guidelines for Managing Dysphagia

1. Maintain all acute stroke survivors **NPO** until swallowing ability has been determined.
2. Screen all stroke survivors for swallowing difficulties **as soon as they are awake** and alert.
3. Screen all stroke survivors for risk factors for **poor nutritional status** within 48 hours of admission.

Best Practice Guidelines for Managing Dysphagia

4. Assess the **swallowing ability** of all stroke survivors who fail the swallowing screening.
5. Provide feeding **assistance** or mealtime **supervision** to all stroke survivors who pass the screening.
6. Assess the **nutrition** and **hydration** status of all stroke survivors who fail the screening.

Best Practice Guidelines for Managing Dysphagia

- 7. Reassess all stroke survivors** receiving modified texture diets or enteral feeding for alterations in swallowing status regularly.
- 8. Explain** the nature of the dysphagia and recommendations for management, follow-up and reassessment upon discharge to all stroke survivors, family members and care providers.

Best Practice Guidelines for Managing Dysphagia

9. Provide the stroke survivor or substitute decision maker with sufficient information to allow **informed decision making** about nutritional options.

Anatomy and Physiology of Swallowing

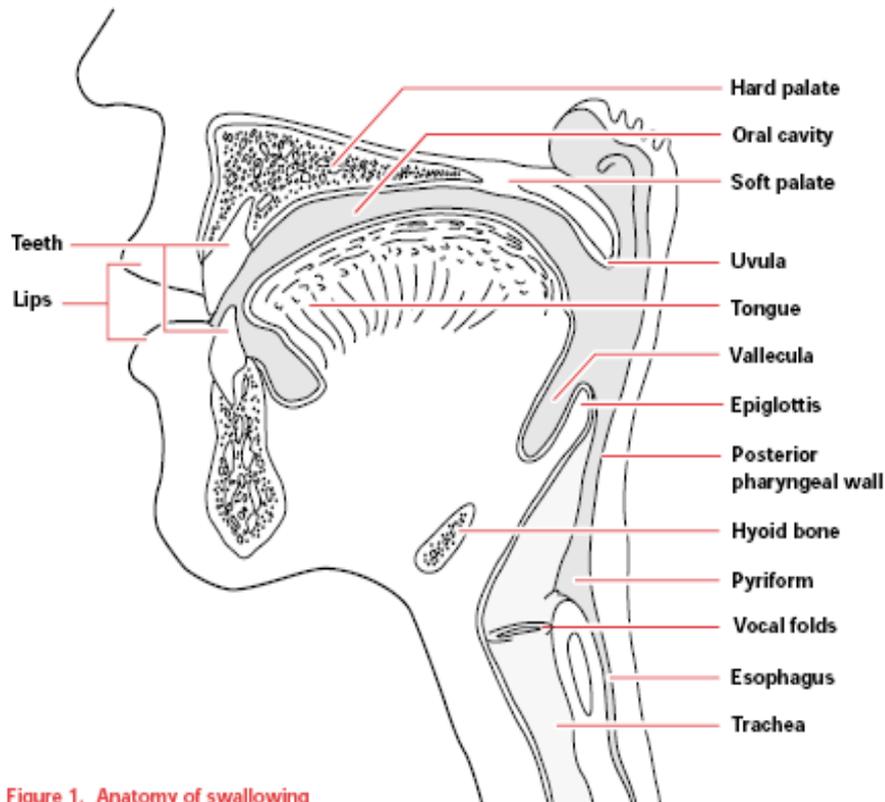


Figure 1. Anatomy of swallowing

Source: Heart & Stroke Foundation (2006) Management of dysphagia in acute stroke: an educational manual for the dysphagia screening professional, p. 8

4 Stages of Swallowing

1. Oral Preparatory Stage



Source: Heart & Stroke Foundation (2002) Improving Recognition and Management of Dysphagia in Acute Stroke: a Vision for Ontario, p. 9

10

4 Stages of Swallowing

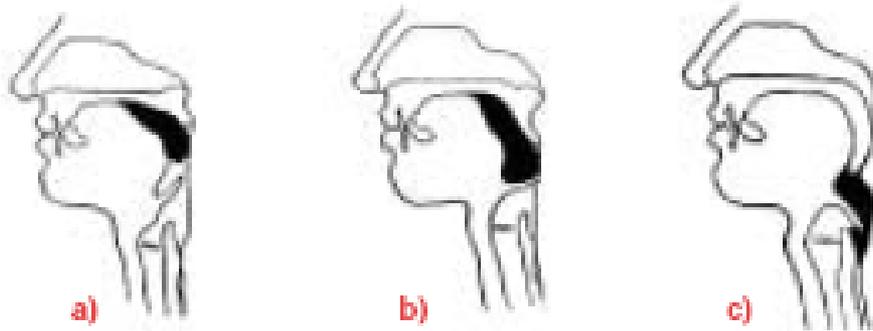
2. Oral Propulsive Stage



Source: Heart & Stroke Foundation (2002) Improving Recognition and Management of Dysphagia in Acute Stroke: a Vision for Ontario, p. 9

4 Stages of Swallowing

3. Pharyngeal Stage



Source: Heart & Stroke Foundation (2002) Improving Recognition and Management of Dysphagia in Acute Stroke: a Vision for Ontario, p. 9

4 Stages of Swallowing

4. Esophageal Stage



Source: Heart & Stroke Foundation (2002) Improving Recognition and Management of Dysphagia in Acute Stroke: a Vision for Ontario, p. 9

Normal Swallowing Changes in the Elderly

□ Normal Changes

- Reduction in muscle tone
- Loss of elasticity of connective tissue
- Decreased saliva production
- Changes in sensory function
- Decreased sensitivity of mucosa

□ Healthy elderly individuals can compensate

□ Compounded by fatigue or weakness from disease processes (e.g. stroke) leading to dysphagia

What is Dysphagia?

- ❑ Difficulty or discomfort in swallowing
- ❑ Can occur with any motor, sensory or structural changes to the swallowing mechanism
- ❑ Dysphagia affects a person's ability to eat or drink safely.

Types of Dysphagia

- ❑ Oral Dysphagia
- ❑ Pharyngeal Dysphagia
- ❑ Esophageal Dysphagia

Complications of Dysphagia

Health Issues:

- Aspiration pneumonia
- Malnutrition
- Dehydration
- Mortality

Health Care Costs:

- Length of Stay
- Increased workload for staff

Dysphagia Risk Factors

❑ Stroke location

- Cerebral hemisphere
- Brainstem

❑ Comorbid conditions

- Progressive Neurologic
- Neuromuscular disorder
- Respiratory disorder
- Systemic disorder...

❑ Medications

- Side effects
 - Tardive dyskinesia
 - Xerostomia

❑ Tracheotomy and Ventilation

18

Interdisciplinary Team

- ❑ Speech-Language Pathologist
- ❑ Registered Dietitian
- ❑ Physician
- ❑ Registered Nurse / Registered Practical Nurse
- ❑ Occupational Therapist
- ❑ Physiotherapist
- ❑ Pharmacist
- ❑ Stroke Survivor, Family and Care Providers

Dysphagia Screening Tool

- ❑ Identifies patients at risk for dysphagia
- ❑ Pass / Fail measure
- ❑ Must be proven reliable and valid
- ❑ Initiates early referral for assessment, management or treatment for those at higher risk

Dysphagia Assessment

- ❑ Completed by SLP dysphagia expert
- ❑ Determines the structure, function, and degree of impairment
- ❑ Various types of assessment:
 - Clinical Bedside
 - Instrumental
- ❑ Directs treatment plan

Nutrition Screening and Assessment

- ❑ Best Practice Guidelines recommend:
 - Nutrition screening within 48 hours of admission
 - Those who fail are referred to an RD
 - See booklet from Heart & Stroke Foundation of Ontario (2005) "Management of Dysphagia in Acute Stroke: Nutrition Screening for Stroke Survivors"

Ongoing Monitoring

- ❑ Clinical indicators of possible dysphagia
 - Poor dentition
 - Drooling
 - Asymmetric facial and lip weakness
 - Changes in voice
 - Dysarthria - slurred speech
 - Reduced tongue movement
 - Coughing or choking

Please see page 24 of manual for complete list

Dysphagia Management

- ❑ Oral hygiene
- ❑ Restriction of diet textures
- ❑ Feeding strategies
- ❑ Therapeutic and postural interventions
- ❑ Ongoing education and counseling

Case Studies

25

Case Study #1

RS is a 71-year-old male who was admitted to hospital with 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.

Case Study #1 (cont'd)

On admission, blood pressure was 166/78 mmHg, pulse was 82 bpm and SaO₂ 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.

27

Case Study #1 - RS

Social History

- ❑ 71 year old male
- ❑ Married 50 years
- ❑ 6 children, 23 grandchildren
- ❑ Electrician 40 years
- ❑ Clerk in local farmer's supply store

Medical History

- ❑ Parkinson's disease
- ❑ TURP
- ❑ Appendectomy

Medical History (continued)

- ❑ Glasses
- ❑ Right hearing aid
- ❑ Dentures

Hx of Presenting Illness

- ❑ Hospital arrival with wife
- ❑ Right-sided weakness
- ❑ Garbled speech

Case Study #1 - RS

Assessment Results

- ❑ On admission
 - blood pressure 166/78 mmHg
 - pulse was 82 bpm
 - SaO2 was 92%
- ❑ Right visual neglect
- ❑ Right facial asymmetry
- ❑ Dense right-side paresis in arm and leg
- ❑ Tremors on left side
- ❑ Unintelligible speech and drooling
- ❑ CT scan showed lacunar infarct in left periventricular white matter
- ❑ ECG showed A-fib
- ❑ Chest radiography pending

Case #1 - DISCUSSION

What are the most immediate concerns for this individual?

30

Case#1 - DISCUSSION

As a member of the interdisciplinary dysphagia team, what is your role?

Case #1 - DISCUSSION

Briefly describe how you should respond to the swallowing needs of this individual.

Case Study #2

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.

Case Study #2 (cont'd)

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.

Case Study #2 - DL

Social History

- ❑ 66-year-old male
- ❑ Lives with his wife and three children

Medical History

- ❑ Previously independent and in good health
- ❑ **NO** history of:
 - Hypertension
 - Diabetes
 - Hypercholesterolemia
 - Hospitalization (has not seen a doctor in 15 years)

Medical History (continued)

- ❑ Ex-smoker (18 yrs. ago)
- ❑ No medication

Hx of Presenting Illness

- ❑ Found by wife after collapsing at home while digging in the garden
- ❑ Family members accompanied him to the hospital

Case Study #2 - DL

Assessment Results

- ❑ CT scan - early left MCA infarct
- ❑ Echo
 - moderately enlarged left ventricle with grade II left ventricular systolic function
 - no clots
 - elevated right ventricular systolic pressure of 88 mmHg.
- ❑ Unable to move right arm or leg
- ❑ Unable to speak
- ❑ No gag reflex
- ❑ Left deviation of the eyes

Current Status

- ❑ Obtunded
- ❑ Intermittent consciousness
- ❑ Family are very anxious
- ❑ DL has been in emergency for 2 hours
- ❑ Family members want him to be fed and given medication for pain, as they believe he is in pain.

Case #2 - DISCUSSION

Based on best practice guidelines for dysphagia, how will the dysphagia screening process take place for this individual?

- ❑ Who will start the process?
- ❑ What will or will not be done?
- ❑ When will it occur?
- ❑ Where will it happen?

Case #2 - DISCUSSION

Think of the best way to address the family's concerns.

Case Study #3

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.

Case Study #3 (cont'd)

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.

Case Study # 3 - HN

Social History

- ❑ 85-year-old female
- ❑ Lived alone
- ❑ Independent

Medical History

- ❑ Steroid-dependent rheumatoid arthritis (hands, knees and hips)
- ❑ Atrial fibrillation

Medical History (continued)

- ❑ Type 2 diabetes mellitus
- ❑ Weight loss over the past six months – unintentional

Hx of Presenting Illness

- ❑ fell at home

Case Study # 3 - HN

Assessment Results

- ❑ left-sided weakness
- ❑ decreased pain & temperature sensation
- ❑ facial droop
- ❑ slurred speech
- ❑ dry mucous membranes
- ❑ intact gag reflex
- ❑ cuts, abrasions & confusion
- ❑ CT Scan - right-hemisphere infarct
- ❑ CXR - pneumonia in the right upper lobe

Current Status

- ❑ Daughter gave orange juice
 - sputtered and choked
- ❑ In emergency department now for two hours

Case #3 - DISCUSSION

Based on best practice guidelines for dysphagia, how will the dysphagia screening process take place for this individual?

- ❑ Who will start the process?
- ❑ What will or will not be done?
- ❑ When will it occur?
- ❑ Where will it happen?

Case #3 - DISCUSSION

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

Case #3 – DISCUSSION-Scenario

When screened in the emergency department by a swallowing screening team member, NH failed the swallowing screen. She was kept NPO and referred to SLP for a swallowing assessment. The SLP saw HN for a bedside/clinical swallowing assessment. SLP recommendations after the assessment were:

- 1) pureed and honey thick fluid diet consistency,
- 2) no thin fluids
- 3) PO meds crushed with applesauce (check with pharmacist before crushing any meds)
- 4) VFSS also recommended.

You are the RN/RPN on shift when NH is transferred to medicine.

Case #3 – DISCUSSION-Scenario

What information regarding HN's dysphagia could you provide to the receiving RN?

Case #3 – DISCUSSION-Scenario

What can be given to her if she has low blood sugar as per the RD/SLP?

Case #3 – DISCUSSION-Scenario

What are the pros and cons for giving thickened liquids for this patient?

Case #3 – DISCUSSION-Scenario

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

How would you address her demand and family concerns?

Case #3 – DISCUSSION-Scenario

Given NHs post-stroke deficits what might you notice when assisting her with feeding?

50

**Thank you for participating in a
Conversation on Dysphagia
Management!**

51

Questions?



52