B.C. INTER-PROFESSIONAL PALLIATIVE SYMPTOM MANAGEMENT GUIDELINES

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DYSPHAGIA

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DEFINITION

Dysphagia is defined as difficult swallowing and is typically classified as **oropharyngeal** or **esophageal**[1-3]; both may result in coughing, choking, or a sensation of choking, regurgitation and aspiration.

Oropharyngeal or transfer dysphagia is characterized by difficulty initiating a swallow. This may be accompanied by a sensation of residual food remaining in the pharynx.[2]

Esophageal dysphagia is difficulty swallowing several seconds after initiating a swallow followed by a sensation of food getting stuck in the esophagus when the food bolus fails to easily transverse the esophagus.[2, 3]

PREVALENCE

Swallowing disorders are part of the natural process at the end of life, irrespective of the etiology.[4] Dysphagia in the geriatric population is estimated at 10-15%.[1] Oropharyngeal dysphagia in patients with dementia may be as high as 93%.[5] High-risk groups include: persons who have suffered a cardiovascular accident (25-40%); persons with Parkinson's disease (50-80%),[3] and advanced multiple sclerosis (34%).[5] More than 70% of esophageal cancer patients have experienced dysphagia at time of diagnosis.[3]

IMPACT

Dysphagia carries a high risk of aspiration and respiratory complications, malnourishment and dehydration and, as a result, poorer survival than people without dysphagia.[3, 6] Chronic dysphagia can be both frustrating and frightening for patients. Aspiration may cause pneumonia, fevers, malaise, shortness of breath and, in rare cases, death[2, 5]; choking causes distress for both patient and care providers alike. Dysphagia may lead to social isolation and fear of choking to death in public. Dysphagia is a pivotal symptom that can prompt goals of care to become more focused on palliation.[5]

STANDARD OF CARE

Step 1 | Goals of care conversation

Determine goals of care in conversation with the patient, family and inter-disciplinary team. Refer to additional resources (Additional resources for management of dysphagia) for tools to guide conversations and required documentation. Goals of care may change over time and need to be reconsidered at times of transition, e.g., disease progression or transfer to another care setting.

Step 2 | Assessment

Dysphagia Assessment: Using Mnemonic O, P, Q, R, S, T, U and V[35]

Mnemonic Letter	**Assessment Questions** *Whenever possible, ask the patient directly. Involve family as appropriate and desired by the patient.*
Onset	When did it begin? How long does it last? How often does it occur?
Provoking /Palliating	What foods or fluids are more difficult to swallow? Which ones are easier? What brings it on? What makes it better? What makes it worse? Does changing position help?
Quality	What does it feel like? Can you describe it?
Region/Radiation	Not applicable
Severity	How severe is this symptom? What would you rate it on a scale of 0-10 (0 being none and 10 being the worst possible)? Right now? At worst? On average? How bothered are you by this symptom? Are there any other symptom(s) that accompany this symptom (e.g. nausea, cough, dyspnea)?

Dysphagia assessment: using mnemonic O, P, Q, R, S, T, U and V continued on next page

Dysphagia Assessment: Using Mnemonic O, P, Q, R, S, T, U and V *continued*

Treatment	What medications and treatments are you currently using? Are you using any non-prescription treatments, herbal remedies, or traditional healing practices? How effective are these? Do you have any side effects from the medications and treatments? What have you tried in the past? Do you have concerns about side effects or cost of treatments?
Understanding	What do you believe is causing this symptom? How is it affecting you and/or your family? What is most concerning to you? How is this affecting your intake of food and fluid?
Values	What overall goals do we need to keep in mind as we manage this symptom? What is your acceptable level for this symptom (0-10)? Are there any beliefs, views or feelings about this symptom that are important to you and your family? What is the cultural or spiritual significance of food in your family?

Symptom Assessment: Physical assessment as appropriate for symptom

- Investigations include taking a history and examining the oral cavity, head, neck, and supraclavicular region.
- Check for oropharyngeal thrush which can predispose to candida esophagitis.
- Neurologic examination includes testing of all cranial nerves involved in swallowing (V, VII, IX, XI, and XII).[9]

Diagnostics: consider goals of care before ordering diagnostic testing

- Investigations are conducted in alignment with prognosis, patient condition and goals of care conversations[2, 7, 8] . Focused instrumental evaluation can involve videofluoroscopic or endoscopic evaluation of swallowing or barium swallow conducted by a qualified professional.

Step 3 | Determine possible causes and reverse as possible if in keeping with goals of care (For more details, see Possible pharmacological causes or contributors to dysphagia in palliative care)

Dysphagia etiologies are multifactorial. Many progressive diseases lead to unsafe and inefficient swallowing: see below. Further, there are 160 known medications with dysphagia specified as a potential adverse effect.[5] **(See** Possible pharmacological causes or contributors to dysphagia in palliative care **for a list of medication causes.)**

Other causes of dysphagia[3]

Oropharyngeal

- **Structural:** malignancy, enlarged thyroid, Zenker's diverticulum
- **Neurological:** CVA, amyotrophic lateral sclerosis, brainstem tumours, bulbar poliomyelitis, multiple sclerosis, Parkinsonism, neuropathy (diabetes, alcohol, cachexia), dementias
- **Myopathic:** dermatophytosis, muscular dystrophy, polymyositis, myasthenia gravis, thyroid disease,
- **Iatrogenic:** medications that result in a myopathy or that inhibit saliva (**See** Possible pharmacological causes or contributors to dysphagia in palliative care **for examples**), radiotherapy to the head and neck, surgical procedures of the head and neck
- Poor dentition
- Anxiety

Esophageal

- **Neuromuscular:** achalasia, oesophageal spasm, scleroderma, systemic lupus erythematosus, rheumatoid arthritis, inflammatory bowel diseases
- **Vascular:** ischaemic esophagus
- **Structural:** stricture secondary to reflux, diverticula, malignancy (esophageal, gastric), benign tumours, external vascular compression, mediastinal masses, foreign body, mucosal injury secondary to infections, allergic disorders (eosinophilic oesophagitis), mucosal injury secondary to skin disorders (pemphigus vulgaris, pemphigoid, epidermolysis bullosa dystrophica)

PRINCIPLES OF MANAGEMENT

When considering a management approach, always balance burden of a possible intervention against the likely benefit (e.g., does the intervention require transfer to another care setting?)

- Management strategies differ depending upon whether the problem is localized to the oropharynx or the esophagus, the chronicity of the underlying disease, and the overall prognosis.[3]
- The goals of therapy are to mitigate risk and discomfort, and to maximize quality of life, for the patient.[1]
- Anticipate swallowing difficulty with approaching end of life. Lessen the swallowing burden by stopping medications where possible, temporarily or permanently
- Review medication profile for those drugs that may cause or contribute to impaired swallowing; eliminate any that are unnecessary. See (Possible pharmacological causes or contributors to dysphagia)
- Ensure alternate administration routes available to maintain symptom control
- Minimize dysphagia difficulties using medication administration strategies
- Optimize care by involvement of an interdisciplinary team:
    - A qualified dysphagia professional which may be an SLP, OT, RD to provide expert assessment and management of communication and swallowing disorders [10]
    - A dietician to provide expert food and fluids selection and consistency modification. [4, 11]

Step 4 | **Interventions**

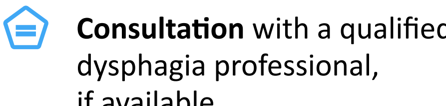
LEGEND FOR USE OF BULLETS

Bullets are used to identify the type or strength of recommendation that is being made, based on a review of available evidence, using a modified GRADE process.

	Use with confidence: recommendations are supported by moderate to high levels of empirical evidence.
	Use if benefits outweigh potential harm: recommendations are supported by clinical practice experience, anecdotal, observational or case study evidence providing low level empirical evidence.
	Use with caution: Evidence for recommendations is conflicting or insufficient, requiring further study
	Not recommended: high level empirical evidence of no benefit or potential harm

Non-pharmacological interventions

Interventions which may be available in the home and residential care facilities



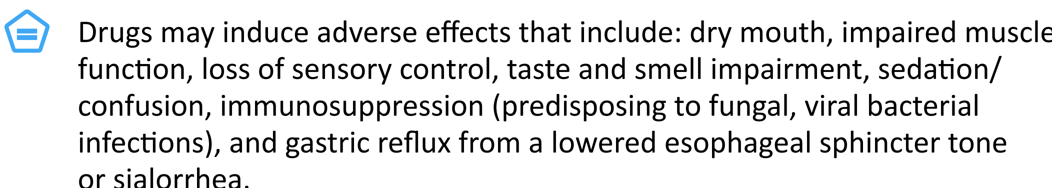
- **Consultation** with a qualified dysphagia professional, if available
- **Safe swallowing** methods
- **Environmental** adaptations
- **Medication** administration adaptations
- Positioning
- Consistent **oral care**
- Oral **feeding** modifications
- Compensatory **postural changes**

Interventions requiring additional equipment or admission to acute care

- **Malignant esophageal strictures** can be palliated with a combination of dilatation, stent placement, and adjuvant radiotherapy or brachytherapy. Patient prognosis and goals of care determines selection.[3] Consult with an oncologist.

Pharmacological interventions

No pharmacological agents have evidence to directly benefit oropharyngeal swallowing function.[4, 5, 13]
Medications can contribute to or cause dysphagia by affecting all stages of swallowing[14] and are one of the most readily corrected causes of dysphagia.[15]

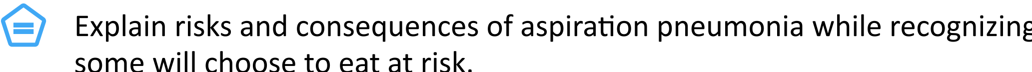


- Drugs may induce adverse effects that include: dry mouth, impaired muscle function, loss of sensory control, taste and smell impairment, sedation/ confusion, immunosuppression (predisposing to fungal, viral bacterial infections), and gastric reflux from a lowered esophageal sphincter tone or sialorrhea.

- Avoid polypharmacy.[13]
- Avoid drugs that may contribute to impaired swallowing. (Possible pharmacological causes or contributors to dysphagia in palliative care)
- Modify medication route to use alternate routes. Can be required in up to 50% of patients,[16] e.g., options include changing to:
  - Commercially available liquids, orodispersible tablets, or specialty compounded suspensions.
  - Transdermal, parenteral, sublingual, buccal, rectal and intranasal routes.
- Consult pharmacist for assistance with changes, product suitability, availability, costs.[11]
- Improve oral medication administration strategies.
- Support use of drugs for symptoms frequently occurring in dysphagia patients:
  - Gastric reflux may benefit from the use of proton pump inhibitors, antacids, prokinetics for dismotility, or barrier therapy with sulcralfate.[3, 5]
  - Use opioids or NSAIDs for temporary pain from esophageal stent insertion.[17, 18]

Patient and family education

- Describe benefits and risks of various feeding options in order to make informed decisions.[5]



- Explain risks and consequences of aspiration pneumonia while recognizing some will choose to eat at risk.
- Describe any specific diet, rationale, manner of food modification and positioning techniques that best serve the patient.[5]
- Promote slow, small bolus sizes to prevent choking.
- Emphasize the importance of allowing patients to enjoy their intake with minimal restrictions in last days of life.[12]
- Continue to include the patient in the social and spiritual aspect of gatherings around food, especially culturally significant feasts or spiritual practices.

ADDITIONAL RESOURCES FOR MANAGEMENT OF DYSPHAGIA

Resources specific to dysphagia

- ALS Society of Canada: A Guide to ALS patient care for primary care physicians: Dysphagia
  - ➡ https://als.ca/wp-content/uploads/2017/02/A-Guide-to-ALS-Patient-Care-For-Primary-Care-Physicians-English.pdf
- BC Cancer Agency Symptom management guidelines: Dysphagia
  - ➡ http://www.bccancer.bc.ca/nutrition-site/Documents/Symptom%20management%20guidelines/Dysphagia.pdf

General Resources

- **Provincial Palliative Care Line** – for **physician** advice or support, call **1 877 711-5757** In ongoing partnership with the Doctors of BC, the toll-free Provincial Palliative Care Consultation Phone Line is staffed by Vancouver Home Hospice Palliative Care physicians 24 hours per day, 7 days per week to assist physicians in B.C. with advice about symptom management, psychosocial issues, or difficult end-of-life decision making.

ADDITIONAL RESOURCES FOR MANAGEMENT OF DYSPHAGIA *CONTINUED*

- BC Centre for Palliative Care: Serious Illness Conversation Guide
  - ➡ http://www.bc-cpc.ca/cpc/
- BC Guidelines: Palliative Care for the Patient with Incurable Cancer or Advanced Disease
  - ➡ http://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/palliative-care
- BC Palliative Care Benefits: Information for prescribers
  - ➡ http://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/pharmacare/prescribers/plan-p-bc-palliative-care-benefits-program
- National Centre for Complementary and Alternative Medicine (NCCAM) for additional information on the use of non-pharmacological interventions
  - ➡ https://nccih.nih.gov/
- Canadian Association of Psychosocial Oncology: Pan-Canadian Practice Guideline: Screening, Assessment and Management of Psychosocial Distress, Depression and Anxiety in Adults with Cancer
  - ➡ http://www.capo.ca/wp-content/uploads/2015/11/FINAL_Distress_Guideline1.pdf
- Fraser Health psychosocial care guideline
  - ➡ https://www.fraserhealth.ca/media/psychosocial%20care.pdf

Resources specific to health organization/region

- Fraser Health
  - ➡ http://www.fraserhealth.ca/health-professionals/professional-resources/hospice-palliative-care/
- First Nations Health Authority
  - ➡ http://www.fnha.ca/
- Interior Health
  - ➡ https://www.interiorhealth.ca/YourCare/PalliativeCare/Pages/default.aspx
- Island Health
  - ➡ http://www.viha.ca/pal_eol/

Additional Resources for management of dysphagia continued on next page

ADDITIONAL RESOURCES FOR MANAGEMENT OF DYSPHAGIA *CONTINUED*

- Northern Health
  - ➡ https://www.northernhealth.ca/Professionals/PalliativeCareEndofLifeCare.aspx
- Providence Health
  - ➡ http://hpc.providencehealthcare.org/
- Vancouver Coastal Health
  - ➡ http://www.vch.ca/your-care/home-community-care/care-options/hospice-palliative-care

Resources specific to patient population

- ALS Society of Canada: A Guide to ALS patient care for primary care physicians
  - ➡ https://als.ca/wp-content/uploads/2017/02/A-Guide-to-ALS-Patient-Care-For-Primary-Care-Physicians-English.pdf
- ALS Society of British Columbia 1-800-708-3228
  - ➡ www.alsbc.ca
- BC Cancer Agency: Symptom management guidelines
  - ➡ http://www.bccancer.bc.ca/health-professionals/clinical-resources/nursing/symptom-management
- BC Renal Agency: Conservative care pathway and symptom management
  - ➡ http://www.bcrenalagency.ca/health-professionals/clinical-resources/palliative-care
- BC's Heart Failure Network: Clinical practice guidelines for heart failure symptom management
  - ➡ http://www.bcheartfailure.ca/for-bc-healthcare-providers/end-of-life-tools/
- Canuck Place Children's Hospice
  - ➡ https://www.canuckplace.org/resources/for-health-professionals/
    - 24 hr line – 1.877.882.2288
    - Page a Pediatric Palliative care physician – 1-604-875-2161 (request palliative physician on call)
- Together for short lives: Basic symptom control in pediatric palliative care
  - ➡ http://www.togetherforshortlives.org.uk/professionals/resources/2434_basic_symptom_control_in_paediatric_palliative_care_free_download

POSSIBLE PHARMACOLOGICAL CAUSES OR CONTRIBUTORS TO DYSPHAGIA IN PALLIATIVE CARE[1, 5, 14, 19-27]

As there is only *an association* of risk of contributing to swallowing impairment, and no evidence from randomized placebo-controlled studies, often consider stopping drugs temporarily or permanently. Consult other healthcare professionals, such as pharmacists, for review and information assistance.

Medication-Induced Esophageal Mucosa Injury	**Drug Induced Adverse Effects**	
• Alendronate	Dry Mouth	Loss of Sensory Control
• Alcohol	• Anticholinergics (e.g., atropine)	• Local anesthetics
• Aripiprazole	• Antidepressants	Peristalsis, Motility Reduction
• ASA	• Antiemetics	• Anticholinergics
• Carbamazepine	• Antihistamines	• Antihistamines
• Clindamycin	• Bronchodilators	• Antipsychotics
• Chemotherapy (e.g., vincristine)	• Diuretics	Sedation or Confusion
• Corticosteroids (e.g., prednisone)	• Supplemental oxygen	• Antiepileptics
• Dantrolene	Esophageal Sphincter Tone Lowered (increases reflux)	• Anxiolytics (e.g., lorazepam)
• Digoxin		• Benzodiazepines
• Doxycycline	• Anticholinergics	• Opioids
• Everolimus	• Benzodiazepines	• Skeletal muscle relaxants
• Iron containing products	• Calcium channel blockers	Sialorrhea (Saliva Excess)
• Macrolide antibiotics	• Isosorbide dinitrate	• Ketamine[23]
• Morphine	• Opioids	• Olanzapine (6%)
• NSAIDs e.g., ibuprofen	• Theophylline	• Risperidone (1-10%)
• Olanzapine	Immunosuppression	• Ziprasidone (4%)
• Oxybutynin	• Azathioprine	Taste or Smell Impairment

Possible pharmacological causes or contributors to dysphagia in palliative care continued on next page

POSSIBLE PHARMACOLOGICAL CAUSES OR CONTRIBUTORS TO DYSPHAGIA IN PALLIATIVE CARE

CONTINUED

• Phenobarbital	• Chemotherapy (e.g., paclitaxel)	• Oxybutynin (1-5%)
• Potassium chloride	• Corticosteroids, oral inhaled (increased risk of candidiasis)	• Phenytoin
• Selegiline		• Sunitinib (21%)
• Tetracycline (pH of 1.6-3.2)	• Cyclosporine	• Testosterone (5.8% smell)
• Trimethoprim-Sulfamethoxazole	Impaired Muscle Function	• Topiramate (2-8%)
• Vitamin C (ascorbic acid)	• Anticholinergics	• Zopiclone
	• Antipsychotics	• Phenobarbital
	• Corticosteroids (muscle wasting)	
	• Skeletal muscle relaxants	
	• Neuromuscular blocking agents	
	• Statins	

This table provides examples; up to 160 medications may contribute to swallowing disorders.[14, 20]

MEDICATIONS FOR MANAGEMENT OF DYSPHAGIA

Information on medications in included within this document.

Prices for prescription drugs may be obtained from BC PharmaCare. The British Columbia Palliative Care Benefits Plan http://www2.gov.bc.ca/assets/gov/health/health-drug-coverage/pharmacare/palliative-formulary.pdf provides province wide drug coverage for many of the recommended medications– check website to confirm coverage. **Consider price when choosing similarly beneficial medications, especially when the patient / family is covering the cost.**

DYSPHAGIA MANAGEMENT ALGORITHM

No management algorithm included in this document.

DYSPHAGIA EXTRA RESOURCES OR ASSESSMENT TOOLS

Oral Medication Administration Strategies for Dysphagia Patients

Strategy	Comment
Formulation Assessment	
Switch from an oral capsule formulation to a tablet.	Gelatin capsules are more likely to stick to esophageal mucosa causing ulcerogenic harm (e.g., doxycycline).[27]
Pick a suitable tablet size.	7 to 9 mm reported as the easiest size of tablet to swallow.[28]
Switch to multiple, smaller doses of tablets or capsules.	Change from a larger bulky strength to an equal multiple of smaller doses.
Switch to a lighter oral formulation (e.g., immediate release).	Sustained release formulations tend to be bulky and prone to harmful lodging in the esophagus.[27]
Consider shape of tablet or capsule.	Oval (versus round) may help. Not certain; one study found no difference comparing versus oblong and capsule.[15, 29]
Faster dissolving/ disintegrating.	New formulations dissolve or disintegrate in mouth.[27]

Oral medication administration strategies for dysphagia patients continued on next page

Oral Medication Administration Strategies for Dysphagia Patients *continued*

Strategy	Comment
Timing of Administration	
Take in the morning.	When you are more likely upright than near bedtime.[15]
Take when functioning best.	Best swallowing functioning could be later in the day.[4]
Reduce dosing frequency.	Assess if can be given less frequently (e.g., once daily).[27]
At least 30 minutes before HS.	Suggested safer taking 30 minutes prior to sleeping.[15]
Avoid oral tablet and capsule doses when sleeping.	Less saliva production, esophageal motility when sleeping. Greater risk of immediately lying back down.[15, 27]
Positioning	
Sit up when taking the medication.	Sit upright, 45 to 90 degrees for intake, and head upright.[15]
Take **at least 10 minutes** before lying down (reclining).	Avoid recumbent position for at least 10 minutes, **safer still 30 minutes**. Improves esophageal medication clearance.[15, 27]
Reposition head when swallowing.	For example, chin tuck posture, head tilt. Ask SLP for assistance.[4, 5, 9]
Pre-dose Preparation	Use a preliminary lubricating swallow/sip of water pre-dose.[27]
At time of administration	
Take with sufficient water.	Give 100 mL (to 250 mL) post-dose. Wet swallows have greater amplitude and duration of contraction than dry.[19, 27]
Other Strategies	
Avoid medication errors.	Medication error rate is much higher (21.1%) in dysphagia patients than others (5.9%). Administer using great care.[30]
Switch to a liquid formulation.	To stomach quicker, spares esophagus mucosa from prolonged tablet contact. Ensure consistency not “too thin”.[27]
Change to a drug with a lower side effect risk, or lower dose.	For example, consider a trial switch to a neuroleptic with a lower anticholinergic effect. Or try lower dose.[27, 31]
Shorten length of therapy.	To minimize causation risk. [27]

Oral medication administration strategies for dysphagia patients continued on next page

Oral Medication Administration Strategies for Dysphagia Patients *continued*

Strategy	Comment
Avoid rushing to crush.	Assess if drug is classified "hazardous" or suitable to crush.[11, 32]
Thickeners.	Medication compatibility, absorption effects unknown.[11, 33]
Mixing into food (e.g., apple sauce or ice-cream).	Drug-food compatibilities are unknown so when combining with crushed medications, mix and administer immediately.[4]
Proactive medication availability planning in event of inability to swallow.	Plan for future non-oral medication options; may need suddenly. At home, palliative drugs kits are helpful, where available.[34]

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