

**Guidance for Medication Assessment in Patients with Swallowing
(Dysphagia) or Feeding Disorders
Pharmacy Benefits Management-Strategic Healthcare Group (PBM)
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The purpose of this clinical guidance is to provide pharmacists in the VA with the information needed to conduct a medication regimen assessment for a patient with dysphagia as required by VHA Directive 2006-032. Pharmacy Benefits Management (PBM) Strategic Healthcare Group has developed guidance to assist pharmacists in their review of medication regimens for patients with dysphagia (e.g., swallowing disorders). This unique patient population requires special review of the medications prescribed, dispensed and administered, to minimize the difficulty of swallowing medication, increase the adherence to medication regimens, and minimize the risk of adverse outcomes. This guidance also brings attention to the types of medications that should not be crushed. Patients with dysphagia may be referred to Pharmacy Services by other health care professionals or may be identified by a pharmacist as possibly benefiting from such an assessment.

What is Dysphagia?

Dysphagia is a clinical syndrome resulting from a biomechanical disorder defined as “an inability to swallow, or a sensation that solids or liquids do not pass easily from the mouth to the stomach.” Dysphagia is classified as oropharyngeal or esophageal dysphagia. A patient with oropharyngeal dysphagia has difficulty initiating swallowing or transferring food from the oropharynx to the upper esophagus. Patients with esophageal dysphagia cannot transfer food or other ingested materials from the hypopharynx through the esophagus into the stomach. Medications can be involved in both types of dysphagia.

An estimated six million adults have dysphagia. The prevalence of dysphagia increases with age, affecting 15% of community-dwelling elderly and 40% residing in nursing homes and assisted-living facilities.

Presentation

Dysphagia can present as a structural or functional problem. Patients with structural dysphagia may pocket food or medications in their cheeks, the hard palate, or under the tongue. The patient may have food get stuck in their throat after swallowing or experience speech abnormalities, including slurring or gurgly voice, or orofacial changes such as facial weakness or abnormal tongue movements. Functional dysphagia is characterized by an inability to swallow, an impaired ability to transfer food or medications from mouth to the esophagus, nasal regurgitation, coughing, drooling or excessive secretions, or a reluctance to take medications, eat specific foods or foods of a certain consistency, or to eat at all.

Common Causes

Dysphagia occurs in patients with neurologic or muscular disorders that affect the patient's ability to swallow (e.g., a patient with muscular dystrophy). Dysphagia also occurs in patients with upper esophageal sphincter or anatomic abnormalities. The most common etiologies of dysphagia are stroke, Parkinson's disease, oropharyngeal tumors, gastroesophageal reflux disease (GERD), cervical osteophytes, and Zenker's diverticulum. Patients with amyotrophic lateral sclerosis (ALS), Alzheimer's disease and other neurological conditions, spinal cord or other trauma, poor dentition or poor fitting dentures can also develop dysphagia.

Medication-related Dysphagia

Medications can be the cause of dysphagia or may exacerbate an existing dysphagia. Medications with CNS sedating properties that overly sedate or impair cognition may affect swallowing. Medications that cause xerostomia, such as those with anticholinergic or diuretic properties can result in a decreased ability to wet food making it uncomfortable to chew or difficult to transfer food within the oral cavity, thus making it difficult to swallow. Patients with drug-induced mouth ulcers or other oral pathologic disorders may find it difficult to chew, transfer, or swallow. Medications that can result in esophageal injury when not taken properly or when esophageal motility is impaired include NSAIDs, aspirin, bisphosphonates, potassium chloride, quinidine, tetracyclines, clindamycin and iron products. Older patients are at a greater risk for medication injuries since they take more medications, have slowed swallowing, spend more time a recumbent position, have decreased saliva production, and are more likely to have motility or anatomic disorders of the esophagus.

Consequences

Aspiration and resulting pneumonia, choking, poor or malnutrition, and dehydration are the most serious and potentially life threatening consequences of dysphagia. Other consequences include physical discomfort, anxiety about eating or drinking, social isolation, and medication-induced esophageal injury.

Management

Speech pathologists will make specific recommendations regarding the type of diet (e.g., pureed), fluid thickness, and other techniques to aid the patient in swallowing and decrease the risk of aspiration, choking or gagging. Pharmacists should note these recommendations, particularly those regarding fluid thickness and type of diet since these may affect how medications are administered.

Fluid thickness is usually described as one of the following:

- **Thin** – regular fluids, no change is required
- **Nectar-like** – thin enough to sip through a straw, but still spillable (e.g., eggnog)
- **Honey-like** – thick enough to require a spoon and too thick for a straw; will not hold its shape independently (e.g., yogurt or honey)
- **Spoon-thick** – must be eaten with a spoon; pudding-like (e.g., thickened apple sauce)

Role of the Pharmacist

Assessment

Pharmacists, from their knowledge of medications, have an important role in assessing the medication regimen of patients with dysphagia for potential problems that might impact patient safety, adherence, and therapeutic outcome. An assessment may be requested by the patient's primary care or other health provider (such as a speech and language pathologist). Ideally, an assessment will take place soon after the patient is diagnosed with dysphagia. For example, a patient who is hospitalized following a new stroke that resulted in dysphagia should have their medications reviewed so that any changes or instructions for proper medication use can be provided prior to discharge. This assessment also applies to patients whose dysphagia is so severe that a gastrostomy or jejunostomy tube (g- or j- tube) is required for fluids, nutrition, or medication administration.

In any setting, the pharmacist's assessment should include the following:

1. Review the patient's dysphagia treatment plan, specifically for food and fluid consistencies recommended for the patient.
2. Review the patient's medication profile for medications that may be difficult to swallow, are potentially dangerous if crushed or chewed, or can cause harm to others if crushed or handled incorrectly (e.g., finasteride).
 - Dosage forms that should not be crushed include the following:
 - Enteric coated (EC)
 - Extended release (ER, XR)
 - Long acting (LA, XL)
 - Controlled release/delivery (CR, CD)
 - Sustained release/action (SR, SA)
3. Ask the patient or caregiver the following:
 - How they intend to administer each medication.
 - If any medication is difficult to swallow, or causes choking or gagging, have they been chewing or holding medications ("cheeking" medications) in the oral cavity.
4. Be prepared to suggest alternative methods of administration, dosage forms, or therapeutic agents that are in a more suitable formulation if necessary.
 - Recommending a liquid dosage form may not always be appropriate as the liquid may be too thin or the suspension too thick. There is no data on the stability or bioavailability of liquid medications mixed with thickening agents.
5. Prepare instructions on the medication administration that guide the patient, family member or inpatient nurse regarding appropriate administration of specific drugs (e.g., "Open capsule and mix intact beads in pureed food"; "Mix liquid medication in pureed food").
6. Communicate findings and recommendations in the electronic medical record, to the referring provider, speech pathologist/therapist and other allied healthcare providers.

References

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