DEVELOPING A COMPREHENSIVE DYSPHAGIA PROGRAM FOR PATIENTS WITH COGNITIVE IMPAIRMENT

Carrie Mills, Ph.D., CCC-SLP

Ellen Hamby, Ph.D., CCC-SLP

Disclosures

- Carrie Mills and Ellen Hamby are employed by the University of Tennessee Health Science Center.
- They have no other relevant financial disclosures.

Purpose

- Creating a program to manage patients with dysphagia and cognitive impairment creates a unique set of challenges, especially when your role in their care is more indirect.
- In developing a dysphagia program in an institutional setting (nursing home/assisted living facility group home, etc.), your emphasis is upon three major groups:
  - Clients
  - Caregivers
  - Facility Staff

Purpose

- Our purpose today is to discuss special considerations in assessment and treatment of dysphagia in individuals with cognitive impairment, particularly those in a institutionalized setting.

Learner Objectives

- Identify the components of a comprehensive dysphagia assessment for patients who have cognitive impairment.
- Identify the components of a comprehensive dysphagia treatment program for patients who have cognitive impairment.
- Identify factors that should be considered when determining appropriate assessment and treatment approaches based on patient, caregiver, and facility characteristics.

Overview: Components of a Comprehensive Dysphagia Program

- Assessment: Any good program starts with a thorough assessment that includes:
  - Identification/Screening
  - Case History/Caregiver Interview
    - Medications, self feeding status, coughing/throat clearing, hx of pneumonia
  - Instrumental Assessment

Overview: Components of a Comprehensive Dysphagia Program

- Treatment: After assessment, dysphagia management/treatment targets one or more of four areas:
  - Diet Modification
  - Compensatory Strategies
  - Exercise
  - Education

Overview: Components of a Comprehensive Dysphagia Program

- Emphasis in both assessment and treatment is influenced by the characteristics of the client, his home environment, and his caregivers.

Assessment of Dysphagia

- Goals:
  - Determine the presence, nature, and cause of the swallowing impairment
  - Examine the current level of function
  - Develop strategies for dysphagia management

Assessment of Dysphagia

- Identification/Screening
- Case History/Caregiver Interview*
- Instrumental Assessment*

Identification/Screening

- In developing a dysphagia program for the cognitively impaired, the first step is to identify those with swallowing impairments.
- Best done through a bedside swallow screening (not always at bedside!).

Identification/Screening

- The incidence of dysphagia among the cognitively impaired population has been estimated to be high:
  - Approaching 80% or more among adults with developmental disabilities
  - 45% of patients with dementia who are institutionalized

Identification/Screening

- Recommendations:
  - Include the caregiver in the screening process.
  - Involve relevant team members: dietitian, PT, OT, nursing.
  - Observe client in his everyday setting.
  - Give oral trials of various foods and liquids.
  - Try various adaptive utensils.
  - Attempt compensatory strategies.

Identification/Screening

- If the client is fed by staff:
  - Observe during mealtime to assess:
    - Rate of feeding
    - Client's response to different foods and liquids
      - Textures, temperatures, flavors
    - Client's behaviors during mealtime

Caregiver Interview

- A critical component of your identification and screening process is the caregiver interview.
- These individuals are invaluable in providing information that you may have missed during your screening process.

Caregiver Interview

- Caregivers may include CNA's, facility managers, facility staff, family, and/or friends.
- A word of caution…the level of understanding with regard to dysphagia and feeding varies greatly among caregivers.

Caregiver Interview

- The goal of the caregiver interview is to determine the caregiver's understanding of dysphagia, specifically the nature of the swallowing impairment, including:
  - When the behavior occurs (time of day)
  - How often the behavior occurs (frequency)
  - Under what conditions the behavior occurs (specific food types, positioning)

Time of Day

- When does the swallowing impairment occur?
- Is the disorder tied to caregiver behavior? For example:
  - Client is tired in the morning and is “encouraged” to eat by caregiver, or
  - Client may be fed at a rate that is not conducive to his optimum feeding behavior, or
  - A specific caregiver does not provide appropriate cues or techniques that other caregivers provide at different times of day.

Frequency of Occurrence

- How often does the behavior occur?
  - Are there signs/symptoms of swallowing impairment every time the client eats or drinks? Or, are the s/s infrequent?
  - A one-time occurrence of severe choking behavior can be scary and may trigger a referral, when it really is just a one-time occurrence.

Conditions

- Are there specific foods that trigger swallowing difficulty?
  - It is essential to be aware of the foods that are allowed at the client's facility as a part of his diet plan. For example:
    - Are high risk foods such as cornbread allowed?
    - How is mechanical soft defined?
    - Do pureed foods differ in viscosity?

Conditions

- Are there specific positions that trigger the swallowing difficulty? For example:
  - Does the client eat better at the table or in his wheelchair?
  - Does adaptive equipment affect eating behaviors?

Instrumental Assessment

- If indicated from the screening process, an instrumental assessment may be warranted.
- Caregivers are often in a position to indicate which type of assessment would be best tolerated by the client…FEES or MBS.

Instrumental Assessment

- Bedside screens do not identify the nature of the swallowing impairment, and silent aspiration is missed.
- Can improve the accuracy of your bedside screening by including assessment of: dysphonia, dysarthria, abnormal volitional cough, abnormal gag reflex, cough after swallow, and voice change after swallow (Daniels et al, 1997)

Instrumental Assessment

- In an instrumental assessment, the facility's diet plans and the client's specific diet preferences must be communicated to the assessing SLP so that he/she can:
  - Test specific consistencies and food preferences (that you send with the patient)
  - Make appropriate dietary recommendations (based on the facility)
  - Use any client-specific utensils (cups, spoons, straws, etc).

Instrumental Assessment

- Proposed assessment components for liquids:
  - Present thin, nectar-thickened, and honey-thickened as per usual in this type of assessment.
  - In addition, assess:
    - Optimum “sip” size and presentation
    - Safety in isolation vs. with meal (as a liquid wash)
      - Safety may differ when used as a liquid wash based on size of sip and amount of residue

Instrumental Assessment

- Proposed assessment components for solids:
  - Pureed (thinner and thicker viscosity): applesauce and pudding
  - Mechanical soft (mixed and binding agent): peach cocktail and graham cracker with pudding vs. applesauce
  - Regular: graham cracker- bite size matters!

Instrumental Assessment

- Other considerations:
  - Compensatory strategies: Which can the client do and which will be most effective?
  - Liquid wash vs. dry swallow:
    - The amount and location of residue. The strategy must work for all consistencies.
    - The difficulty in performing a dry swallow. Liquid wash may be more effective for clients who consistently tongue pump before the swallow.
    - Other factors such as fluid restriction, fatigue, caloric intake

Instrumental Assessment

- Other considerations:
  - Timing of the oral and pharyngeal phases
    - Does the specific consistency require more time and effort than a less complex consistency? Consider in regards to fatigue, expending of more calories than is consumed
  - Piecemeal deglutition: Yes, it is a normal part of swallowing function, but how does it change how we feed patients?
    - Time for additional swallows, bite size

Treatment/Management of Dysphagia

- Following the outcome of the assessment, an individualized management plan should be developed.
- This plan should be clear and caregiver-friendly.

Treatment/Management of Dysphagia

- The major goal of intervention is to insure safe, adequate, nutrition and hydration.

Treatment/Management of Dysphagia

- Treatment targets four main areas:
  - Diet Modification*
  - Education*
  - Compensatory Strategies
  - Exercise
- The weight assigned to any of these areas differs based on the client, the caregiver, and the facility.

Diet Modifications

- Diet modifications are the easiest changes to make, but they may influence the quality of life more than other changes. For example:
  - Caregivers may prefer to have a more restrictive diet with fewer compensatory strategies.
  - Facilities may push for a less restrictive diet due to cost associated with thickeners and preparation.
  - Family members may care more than the client.

Diet Modifications

- In this population, the goal is to help continue an oral diet for as long as possible.
- Your goal is to not only establish the safest and least restrictive diet, but to also train staff/caregivers to know when it is time to re-consult (more about this under education).
- Generally speaking, when a diet has been established to be safe, your role is to verify (briefly), then turn client care over to the caregivers.

Education

- Education is one of the most critical aspects of a successful dysphagia program.
- The client, the caregiver, and the facility all must be educated for the program to run effectively.
- It is necessary to have an on-going in service program for staff and caregivers.

Education

- Areas to cover:
  - Dysphagia: general and client specific
  - Aspiration pneumonia: causes and prevention
  - Modifying diets: solids and liquids
  - Feeding tubes: what they are and ARE NOT
  - Feeding strategies
  - Modifying mealtimes

Education: Dysphagia

- Discuss the process/phases of swallowing in laymen's terms and explain the nature of the client's impairment
  - Pre-oral phase
  - Oral
  - Pharyngeal
  - Esophageal

Education: Aspiration Pneumonia

- Definition
- Conditions that need to be present for aspiration pneumonia to develop
- Ways to prevent aspiration pneumonia

Education: Aspiration Pneumonia

- Factors that contribute: Smoking, dependence for feeding and oral care, more than one medical diagnosis, number of decayed teeth, presence of tube feeding, number of medications (Langmore, et al, 1998)
- Dysphagia alone does not predict aspiration pneumonia

Education: Diet Modification

- Modifying diets: solids
- Define each consistency based on the characteristics.
- Discuss materials necessary to alter consistencies: kitchen shears, blender/food processor.
- Discuss ways to preserve food flavor while altering consistencies.
- Discuss the impact of food temperature (stimulate receptors).
- Instruct on use of binding agents.
- Illustrate/give tips on preparing each consistency.

Education: Diet Modification

- Modifying diets: liquids
- Define each consistency based on the characteristics.
- Discuss materials necessary to alter: blender/food processor, thickener.
- Discuss naturally thickened liquids.
- Discuss different types of thickeners and their pros and cons.
- Discuss more controversial consistencies: ice cream, jello, alcoholic beverages, carbonated beverages.

Education: Feeding Tubes

- What are they and what are the different types?
- Who is indicated for which type and when?
- How are they held in place?
- Types of feeding: bolus vs. continuous
- Pleasure feeds

Education: Feeding Tubes

- Do they prevent aspiration pneumonia?
  - Tube feeding is associated with a higher rate of pneumonia than patients who are eating
- Why?
  - Reflux
  - Oral bacterial that is aspirated in saliva

Education: Feeding Strategies

- Typically best to feed in a calm environment that is free from distractions.
- Know the client specific diet, strategies, adaptive equipment.
- Do not rush client, and be wary of feeding multiple clients simultaneously
- Feed from the front of patient at eye level.
- Place spoon in center of mouth and apply gentle pressure.
- Allow client's lips to scrape the food off the spoon.

Education: Feeding Strategies

- Resource for teaching feeding techniques:
  - ASHA program
  - Silver Spoons Program – Miami VAMC

Education: Modifying Mealtimes

- Techniques to maximize nutrition and hydration for patients with dysphagia and cognitive impairment (Easterling & Robbing, 2008):
  - Good oral hygiene, consistency in eating environment and seating, six small meals/hydration opportunities versus 3 large, include spicy/sweet/sour foods/liquids, maximize calories at every opportunity, encourage self-feeding, eliminate staff disruptions during mealtime, remove non-food items from table, increase “visually appealing-ness” of foods, allow touching of foods, provide food choices, don’t make patients wait for meals

Compensatory Strategies

- These include:
  - Techniques that the client completes
  - Adaptive equipment

Compensatory Strategies

- Techniques that the client completes
  - Chin tuck, head turn/tilt, super/supraglottic swallow, effortful swallow, Mendelsohn
  - Don’t assume that the patient cannot complete due to a cognitive deficit
  - Can train with spaced retrieval- there’s an APP for that!
  - Can encourage through the use of models, pictures, placement of spoon/straw

Compensatory Strategies

- Techniques that the client completes
  - Liquid wash and dry swallow
  - To prompt a dry swallow, use a dipped spoon

Compensatory Strategies

- Adaptive equipment
  - Types
    - Spoons
    - Plates
    - Cups
    - Table boxes
    - Plate grippers
    - Hand weights

Compensatory Strategies

- Adaptive equipment
  - Pros: can help patients be more independent in feeding, which can improve swallow function
  - Cons: Expensive, easily lost, issue with cleaning

Exercise

- Very rarely if ever used with this population due to:
  - Cognitive ability
  - Staff time
  - Lack of improvement

Final Considerations

- Be aware of how client, caregiver, and facility factors may interact with one another and influence decisions.
- For example: Client can safely take thin liquids if he uses a chin tuck. Without a chin tuck, client must take nectar thickened liquids.

Final Considerations

- In this case, can the client consistently perform a chin tuck independently?
- If not, are the caregivers trainable to make sure the chin tuck is completed consistently?
- Or, with the use of cognitive training, can the client be taught to use a chin tuck independently?
- Answers questions such as these can influence the program you ultimately create.

Case Study

- Client at center for individuals with intellectual disabilities
- Male, 17 year old
- Resident at center, but often visited his mother and spent the night
- Recurrent aspiration pneumonia
- Several Instrumental studies (MBSS and FEES) conducted with similar results found
- Pureed foods with nectar-thickened liquids
- Group meeting with client and mother to discuss staff concerns
- Considering feeding tube to try to eliminate aspiration pneumonia

Case Study

- Staff trained and followed diet recommendations and strategies
- Mother promised she was following diet recommendations and strategies
- Decision to continue oral feeding status, wait and watch
- As mother was leading son out of meeting, she was heard to say...”We better hurry. I have your...”
- Two years later: Client has both tube and trach