DEVELOPING A COMPREHENSIVE DYSPHAGIA PROGRAM FOR PATIENTS WITH COGNITIVE IMPAIRMENT

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Disclosures

• Carrie Mills and Ellen Hamby are employed by the University of Tennessee Health Science Center.

• They have no other relevant financial disclosures.
• 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
Our purpose today is to discuss special considerations in assessment and treatment of dysphagia in individuals with cognitive impairment, particularly those in an 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 the following 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?
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)
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
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!
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