Impact of feeding, eating, and swallowing impairment on the quality of life for adults from acute care to the community

Shari Bernard, OTD, OTR/L, SCFES
Bernard.shari@mayo.edu
Mayo Clinic, Rochester, MN

Marcia Cox, MHS, OTR/L, SCFES
Marcia.cox@khnetwork.org
Kettering Health Network, Kettering, OH
Objectives:

• Participate in a discussion regarding how patients with dysphagia perceive the impact of this disorder on their quality of life.

• Gain skills in the development of occupational therapy treatment programs with exercises and education to improve the quality of life for patients with feeding, eating, and swallowing disorders.

• Engage in review of three quality of life measures used with patients who have impairment in feeding, eating, and swallowing.
Perspectives on Quality of Life
According to Maslow’s Theory, as seen below the foundation of the theory lies in fulfilling the basic needs, which includes nutrition.


Diagram of Maslow’s Hierarchy of Needs Theory, retrieved from Google.com 10/27/2006, J. Finkelstein
Components of Quality of Life
OT Perspective

• A person’s dynamic appraisal of his or her life satisfactions: perceptions of progress toward one’s goals

• Self-concept: the composite of beliefs and feelings about oneself

• Health and functioning: health status, self-care capabilities, role competence

• Socioeconomic factors: vocation, education, income (adapted from Radomski, 1995; Zhan, 1992).

AOTA Occupational Therapy Framework, Table 9, p 629.
Impact of Dysphagia on Quality of Life

• Changes occur in the swallowing mechanism as we age

• We need to be aware of how dysphagia affects quality of life

• End of life wishes

• Dysphagia in Geriatrics Preserving Quality of Life for Elderly Patients

• Dietary modifications, compensatory techniques
Impact of Dysphagia on Quality of Life

• The patient's ability to enjoy normal life activities. Quality of life is an important consideration in medical care. Some medical treatments can seriously impair quality of life without providing appreciable benefit, whereas others greatly enhance quality of life. MedicineNet.com

• Limited abilities in feeding, eating and swallowing can affect a person's quality of life

• Discuss with your clients what their wishes are regarding their decisions for feeding, eating and swallowing while they are being evaluated and treated for dysphagia

• Help client to know what their choices are and consequences of their choices
Dysphagia in Adults: Prevalence and Consequences

- 64-78% of patients have problems with swallowing after a stroke.
- Estimated 35% of people 50 and older have symptoms of dysphagia.
- Progressive dementia afflicts over 4 million.
- Keep in mind, even a temporary suspension of eating leads to grieve loss of eating.

Incidence of Dysphagia

• Swallowing problems affects 6.2 million Americans 60 years and older

• The Federal Interagency Forum on Aging-Related Statistics (2010) reported the older adult population, age 65 and over, in the United States to be 54.8 million individuals by the year 2010, with 6.6 million individuals 85 years and over.
Socioemotional effects of dysphagia in elderly

- Age-related swallowing inefficiencies, underlying acute or chronic disease and poor dentition are among the conditions that can result in a significant health care problem for an estimated one-third of the elderly population.

- 117 individuals from community senior centers.

- M D Anderson Dysphagia Inventory to assess the effects of swallowing dysfunction on quality of life.

Dysphagia in Older Adults: Prevalence and Consequences

- Senior center study of 117 individuals over 65
- 33% + lifetime experience of dysphagia
- 33% currently experiencing dysphagia

Symptoms:
- Taking longer time to eat
- Coughing or choking associated with eating/drinking
- Sensation of food stuck in throat

QOL:
- Limited food intake
- Embarrassment
- Social withdrawal

Conditions and Diseases That Increase Aspiration Risk\textsuperscript{3-5}

- Advanced age
- Stroke
- Brain injury
- Spinal cord injury
- Multiple sclerosis
- Muscular dystrophy
- Postpolio syndrome
- Cerebral palsy
- Parkinson's disease
- Amyotrophic lateral sclerosis
- Alzheimer's disease or other forms of dementia
- Head, neck, or esophageal cancer
- Head and neck injury or surgery
- Decayed or missing teeth or poorly fitting dentures
- Endotracheal intubation
- Tube-feeding
Dysphagia and Geriatric Clients

- Shari Bernard, OTD, OTR/L, SCFES
- Department of Physical Medicine and Rehabilitation Mayo Clinic, Rochester

**Background**

- How Aging Affects the Swallowing Process
  - Estimates range from 15-20% of those over the age of 69 have dysphagia (Agency for Health Care Policy and Research, 1996).
  - Estimates report 20-30% of older individuals who reside in long-term care facilities have swallowing disorders. (Casterling, C.S., & Roberts, E. 2008).
  - 15% to 35% of nursing home patients report having trouble swallowing medication (Brown, 2009).
  - Decreased muscle strength, confusion, decreased range of motion, decreased coordination, decreased speed of swallowing, swallowing reflex delayed, Carey and Gropper (2001).
  - Dysphagia is the most common fluid and electrolyte disturbance in the geriatric population. (Parson, 2000)
  - Community acquired pneumonia which can result from aspiration (Lim and Delva, 2003).
- Adverse effects of dysphagia on quality of life
- Receptive consequences of dysphagia
  - Changes in drug therapy
  - Poor nutrition can cause complications for wound healing
  - Poor nutrition can cause increase in infections in urinary tract infections
  - Confusion
  - Constipation
  - Leukopeny
  - Arterial failure
  - Malfunctioning cardiac system

**Oral Care**

- The client is an eighty-year-old male with an abdominal aortic aneurysm, who has a history of Parkinson’s Disease, pneumonia, tremors, and minor dysphagia. The client was admitted to intensive care and was intubated for three days following repair of the abdominal aortic aneurysm. Nutrition, medication, and hydration was initiated with nasogastric tube feedings. As seen during the clinical dysphagia evaluation, the client was alert and sitting up in chair and on nasal canula oxygen. The client had a weak, volitional and reflexive cough, had delay in the nocturnal and reticulated phases, and was coughing up gastric type liquids. The client was further evaluated with videofluoroscopy which revealed poor bolus formation, difficulties with initiating a swallow, and could not delay the oral and pharyngeal swallows. Residue is observed in the vallecula which causes a consistent cast. The client has a nasogastric tube and aspiration with thin liquids. A weak, reflexive cough was triggered. The client and medical team were educated regarding the dysphagia evaluation and safe options for nutrition. Once in agreement, the following recommendations were made: Oral intake with thick liquids, mechanical soft foods, medications in a pudding texture, good oral care, and aspiration precautions and use of the free water guidelines.

**Free Water Guidelines**

1. Oral care hygiene should be done upon the client awakening every morning to any oral intake. Brush teeth and floss 2 times, rinse, and spit whenever mouth is dry. Keep mouth moist.
2. If a client is on a smooth diet, that includes thickened liquids, no water and/or ice chips are allowed to be swallowed, until first bite of a meal but restricted until after 30 minutes of finishing a meal. No water and/or ice chips during meals and no other thick liquids are allowed other than water.
3. If a client requires use of compensatory techniques for safe oral intake, the client, their family and the nursing staff will be instruenced on these techniques by occupational therapy.
4. For clients following the free water guidelines, medication should never be given with water. If clients are able to take medications by mouth, they should be taken with food or the thickened liquid that was recommended during evaluation.
5. For safety of the client, if there is observed noncompliance with any portion of the free water guidelines, the client will be withdrawn from the guidelines.
6. Each client will be considered individually and programs developed regarding the free water guidelines may be modified as the client’s status requires.

**Conditions Associated with Dysphagia**

- Advanced age
- Stroke
- Brain injury
- Spinal cord injury
- Multiple sclerosis
- Muscular dystrophy
- Toxoplasmosis
- Congenital parish
- Parkinson’s disease
- Amyotrophic lateral sclerosis
- Alzheimer’s disease or other forms of dementia
- Head, neck, or esophageal cancer
- Head and neck injury or surgery
- Decayed or missing teeth or poor fitting dentures
- Endobronchial intubation
- Tube feeding

**Diagnoses Associated with Dysphagia**

**Conditions and Diseases That Increase Aspiration Risk**

- Advanced age
- Stroke
- Brain injury
- Spinal cord injury
- Multiple sclerosis
- Muscular dystrophy
- Toxoplasmosis
- Congenital parish
- Parkinson’s disease
- Amyotrophic lateral sclerosis
- Alzheimer’s disease or other forms of dementia
- Head, neck, or esophageal cancer
- Head and neck injury or surgery
- Decayed or missing teeth or poor fitting dentures
- Endobronchial intubation
- Tube feeding

**Conclusions**

- Aspiration pneumonia in nursing homes residents occur 10 times more frequently than in elderly community dwellers. (Campion, 2002)
- Education is vital for the geriatric client for good oral care, ways to modify a diet and options for artificial nutrition and hydration (Moshel, 2000).
- Dysphagia
- Defecation
- Good oral hygiene, always keep mouth moist
- Ability to take medications without medication compliance
- Placement in a long-term care facility
- Dependency in feeding
- Quality of life
- Free water guidelines
- Effects of neurogenic

**References**

Social and Psychological Burden of Dysphagia: Impact on Diagnosis and Treatment

- 360 Patients in 5 European countries, clinics, hospitals, and nursing homes with subjective complaints of dysphagia
- 36% confirmed diagnosis of dysphagia
- Food sticking in throat and/or choking on food
- Persistent cough or sore throat
- Inability to swallow liquids
- Loss of appetite
- Mild throat discomfort
- Pain when swallowing
- Heartburn and/or acid regurgitation

Martino, et al. 2010
Social and Psychological Burden of Dysphagia: QOL

• Dysphagia is under diagnosed in European hospitals, nursing homes and clinics
• Social and psychological impact of dysphagia is severe
• Understand the treatment options in context of comorbidities to relieve suffering and improve quality of life.

Martino, et al. 2010
Social and Psychological Burden of Dysphagia: QOL

Self-reported Dysphagia Symptoms

- 50% reported eating less; 44% weight loss over 12 months
- 32% receiving treatment
- 39% believed dysphagia to be treatable

Martino, et al. 2010

Social and Psychological Burden of Dysphagia: QOL

- 84% felt eating should be enjoyable
- 45% found eating enjoyable
- 41% experienced anxiety or panic during mealtimes
- 36% avoided eating with others
Psychological Perceptions

Acute Patients

- Fear of choking suffocating
- Vulnerability due to inability to eat or drink
- Depression
- Frustration

Chronic Patients

- Depression, feeling loss, nostalgia for limitations
- Frustration due to obligation to eat alone
- Worry about choking
- Embarrassment regarding choking in front of others
- Vulnerability when taking calculated risks

Socioemotional effects of dysphagia in elderly

- Embarrassment
- Swallowing more difficult at the end of the day
- Self conscious when eating
- Upset by swallowing problem
- Takes greater effort
- Coughing when eating
- Longer time to eat
- Limit food intake
- Low self-esteem
- Feels like swallowing huge amount of food
- Feel exclude
Patients with dysphagia: experience of taking medication in a community.

- A sample from one community in the U.K. consisted of eleven adults over the age of sixty, who reported dysphagia for medications.

- The purpose of this qualitative study was to improve healthcare professionals’ awareness of the problem in order to help patients comply with taking their prescription medications, and avoid potential risks to health and related costs.

- Literature from study found general population takes less than 50% of prescribed doses

- Population w/o dysphagia also reported difficulty swallowing medication

- Variability of dysphagia

- Medication formulation

- Information exchange between patients and healthcare professionals

- Knowledge of strategies used to improve swallowing medications

Medication Administration and Dysphagia

Findings:

• Wide variety of dysphagia from discomfort to inability to take any food/fluid orally
• Lack of participant’s knowledge of the purpose, side effects and formulation of prescribed medications
• Patients may not inform healthcare workers of problems taking medicines.
• Formulation of a medicine is as important as active ingredients for patients with swallowing difficulties.
• Professionals need to work as team to ensure that patients with dysphagia receive their medicines in a form that they can take safely.

Possible Interventions to Improve QOL

• Diet Modifications
• Positional Strategies
• Compensatory Techniques
• Rehabilitation protocols based on dysfunction
• Use of a Free Water Protocol/Guidelines
• Discussion with client/caregivers medication administration strategies
Quality of Life Concerns

• Inform client of options
• Consequences of choice
• Increase eating satisfaction
• Promote positive feeding interactions
• Know your clients wishes, values and beliefs
Swallowing Disorders - Dysphagia

Problems may be wide ranging and may include areas of:

- Physical access to eating - inability to be in a safe position for eating, inability to bring food to the mouth

- Processing food in the mouth - motor or sensory deficits resulting in loss of food or fluid within or out of mouth

- Initiating a swallow response – weakness or impairment in transferring food or fluid to and through the throat

- Psychosocially based eating disorders - food obsessions, maladaptive eating habits

AOTA 2007; Cox et al., 2006
Physiology

Phases of Swallowing

- Oral Preparatory
- Oral
- Pharyngeal
- Esophageal
  (Pharyngo-esophageal)
Oral phase

Pharyngeal Phase

Esophageal Phase

AOTA Annual Conference       Baltimore, MD        April 4, 2014
Measures of Quality of Life in Patients who have Dysphagia

- Eating Assessment Tool (EAT-10)
- The SWAL-QOL Survey
- M.D. Anderson Dysphagia Inventory (MDADI)
**Eating Assessment Tool: EAT-10**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>My swallowing problem has caused me to lose weight.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>My swallowing problem interferes with my ability to go out for meals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Swallowing liquids takes extra effort.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Swallowing solids takes extra effort.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Swallowing pills takes extra effort.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Swallowing is painful.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>The pleasure of eating is affected by my swallowing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>When I swallow food sticks in my throat.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I cough when I eat.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Swallowing is stressful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total EAT - 10</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Eating Assessment Tool (EAT-10)

- Patient-centered outcome measure
- Quality of life components of swallowing
- Physical components of swallowing
- Valid and reliable
- Variety of causes: neurological, reflux, structural, head and neck cancer.
- Ease of administration

Eating Assessment Tool: EAT-10

The mean EAT-IO score

- 23.58 ± 13.18 for esophageal dysphagia
- 23.10 ± 12.22 for oropharyngeal dysphagia
- 9.19 ± 12.60 for voice disorders
- 22.42 ± 14.06 for head and neck cancer
- 11.71 ± 9.61 for reflux

Belafsky, et al. 2008
M.D. Anderson Dysphagia Inventory

- Oropharyngeal dysphagia in head and neck cancer may be structural or movement abnormalities involving oral cavity, oropharynx, velopharynx, hypopharynx, larynx and upper esophageal sphincter.

- Patients with cancer of the head and neck have signs and symptoms of swallowing problems because the primary neoplasm affects the organ of swallowing and/or because the treatment itself affects swallowing.

- Tool needed to address the impact of dysphagia on quality of life.

- 5-yr survival rates or disease-free intervals do not measure toll of treatment on ability to swallow. Patient outcome may be measured by validated and reliable questionnaire as MDADI.

From: The Development and Validation of a Dysphagia-Specific Quality-of-Life Questionnaire for Patients With Head and Neck Cancer: The M. D. Anderson Dysphagia Inventory


Table 1. Characteristics of 100 Patients With Head and Neck Cancer

<table>
<thead>
<tr>
<th>Variable</th>
<th>No. of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>76</td>
</tr>
<tr>
<td>Female</td>
<td>24</td>
</tr>
<tr>
<td>Site</td>
<td></td>
</tr>
<tr>
<td>Oral cavity</td>
<td>12</td>
</tr>
<tr>
<td>Oropharynx</td>
<td>8</td>
</tr>
<tr>
<td>Hypopharynx</td>
<td>6</td>
</tr>
<tr>
<td>Larynx</td>
<td>64</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>25</td>
</tr>
<tr>
<td>Surgical</td>
<td>14</td>
</tr>
<tr>
<td>Nonsurgical</td>
<td>11</td>
</tr>
<tr>
<td>Combined</td>
<td>50</td>
</tr>
<tr>
<td>Pathological findings</td>
<td></td>
</tr>
<tr>
<td>Benign</td>
<td>15</td>
</tr>
<tr>
<td>Malignant (squamous cell carcinoma)</td>
<td>82</td>
</tr>
<tr>
<td>Nonsquamous cell malignancy</td>
<td>3</td>
</tr>
<tr>
<td>Stage (of 82 squamous cell carcinomas)</td>
<td></td>
</tr>
<tr>
<td>I and II</td>
<td>12</td>
</tr>
<tr>
<td>III</td>
<td>15</td>
</tr>
<tr>
<td>IV</td>
<td>19</td>
</tr>
<tr>
<td>Recurrent</td>
<td>36</td>
</tr>
</tbody>
</table>

Characteristics of 100 Patients With Head and Neck Cancer
SF-36 comparison

- **Functional Status** – ability to perform daily activities

- **Physical Components** – measures physical health status from: physical functioning, role-physical, and bodily pain domains

- **Mental components** – summary of social functioning, role-emotional, and mental health domains
The M. D. Anderson Dysphagia Inventory.

- E – Emotional subscale
- F – Functional Subscale
- P – Physical Subscale
- Global subscale for the first item: My swallowing limits my day-to-day activities
**Table 2. Distribution of MDADI Subscale Scores**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Minimum</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>20</td>
<td>40</td>
<td>80</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>Emotional</td>
<td>20</td>
<td>63</td>
<td>77</td>
<td>87</td>
<td>100</td>
</tr>
<tr>
<td>Functional</td>
<td>10</td>
<td>64</td>
<td>80</td>
<td>84</td>
<td>100</td>
</tr>
<tr>
<td>Physical</td>
<td>20</td>
<td>53</td>
<td>68</td>
<td>81.5</td>
<td>100</td>
</tr>
</tbody>
</table>

*MDADI indicates M. D. Anderson Dysphagia Inventory. N = 100.*

**Figure Legend:**

Distribution of MDADI Subscale Scores*
MDADI:

• This questionnaire asks for your views about your swallowing ability. This information will help us understand how you feel about swallowing.

• The following statements have been made by people who have problems with their swallowing. Some of the statements may apply to you.

• Please read each statement and circle the response which best reflects your experience in the past week

• http://www.baylorhealth.com/SiteCollectionDocuments/Documents_All%20Saints/BIR%20pages/The%20MD%20Anderson%20Dysphagia%20Inventory.pdf
My swallowing ability limits my day-to-day activities

- Strongly Agree    Agree    No Opinion    Disagree    Strongly Disagree
- E2. I am embarrassed by my eating habits.
- F1. People have difficulty cooking for me.
- P2. Swallowing is more difficult at the end of the day.
- E4. I am upset by my swallowing problem.
- P6. Swallowing takes great effort.
- E5. I do not go out because of my swallowing problem.
- F5. My swallowing difficulty has caused me to lose income.
- P7. It takes me longer to eat because of my swallowing problem.
- P3. People ask me, “Why can’t you eat that?”
My swallowing ability limits my day-to-day activities

- E3. Other people are irritated by my eating problem.
- P8. I cough when I try to drink liquids.
- F3. My swallowing problems limit my social and personal life.
- *F2. I feel free to go out to eat with my friends, neighbors, and relatives.
- P5. I limit my food intake because of my swallowing difficulty.
- P1. I cannot maintain my weight because of my swallowing problem.
- E6. I have low self-esteem because of my swallowing problem.
- P4. I feel that I am swallowing a huge amount of food.
- F4. I feel excluded because of my eating habits.
SWAL-QOL Survey

- Designed to find out how your swallowing problem has affected your day to day quality of life
SWAL-QOL Survey

• Originally a 93-item quality-of-life and quality-of-care outcomes tool for dysphagia researchers and clinicians

• This was considered too long for practical and routine use in clinical research and practice

• Reduce into two patient-centered outcomes tools: (1) the SWAL-QOL, a 44-item tool that assesses ten quality-of-life concepts, and (2) the SWAL-CARE, a 15-item tool that assesses quality of care and patient satisfaction
SWAL-CARE

• Quality of Care and patient satisfaction
SWAL-QOL Survey

- Objectively measures a patient’s perspective of swallowing
- McHorney, C.

**Descriptions/characteristics:**

- The SWAL-QOL is a 44 item tool that asks patients to rate several factors about 10 quality-of-life concepts related to swallowing on a 5 point scale.
- The SWAL-CARE is a 15 item tool that asks patients to rate quality of care and patient satisfaction.
SWAL-QOL Survey

- 44 questions, which evaluate 11 domains: burden, eating desire, eating duration, symptoms, food selection, communication, fear, mental health, social functioning, sleep and fatigue

- Likert Scale

- The total score of each domain can vary from 0 to 100: the lower the score, the worst quality of life related to swallowing
SWAL-QOL Survey

• The scores of each answer in each domain were summed and the results were divided by the number of questions of the domain analyzed. The SWAL-QOL protocol has also four additional questions, related to possible modifications or adaptation needs of the elderly during the eating process. Therefore, this is a study self-reported evaluation of quality of life.
SWAL-QOL Survey

- **Considerations:**
  - **Training:** No formal training is required. Tool can be obtained from author.
  - **Time to complete:** It reportedly takes respondents an average of 14 minutes to complete the SWAL-QOL and 5 minutes to complete the SWAL-CARE.
  - Scales demonstrate internal-consistency reliability and short term reproducibility.
  - Validated to discriminate between patients with and without dysphagia and sensitivity to disease severity.
  - Use of the SWAL-QOL or the SWAL-CARE may be more or less appropriate depending on the application and population—either one or both tools may be used.
  - Patients must be able to communicate to use this tool.
  - No MBS is required to use this tool.
Case Study:
80 y.o. male with Parkinson’s Disease
Discussion QOL Considerations
Recommendations

• The client and medical team were educated regarding results of the dysphagia evaluation and safe options for nutrition

• Oral intake with nectar thick liquids and mechanical soft foods

• Medications in a pudding texture

• Good oral care

• Strict aspiration precautions

• Use of the free water guidelines
Group Case Study QOL
Things to Consider for Geriatric Dysphagia Clients

- Dehydration
- Good oral hygiene, always keep mouth moist.
- Ability to take medications affect medication compliance
- Placement in a long term care facility
- Dependency in feeding
- Quality of life
Free Water Guidelines

• Oral care/hygiene should be done upon the client awakening every morning, prior to any oral intake. Brush teeth and/or dentures 3-5x/day. Rinse and spit whenever mouth is dry. Keep mouth moist.

• If a client is on a modified diet, that includes thickened liquids, free water and/or ice chips are allowed between meals, up until first bite of a meal but restricted until after 30 minutes of finishing a meal. No water and/or ice chips during meals and no other thin liquids are allowed other than water.

• If a client requires use of compensatory techniques for safe oral intake, the client, their family and the nursing staff will be instructed on these techniques by occupational therapy.
Free Water Guidelines

• For clients following the free water guidelines, medication should never be given with water. If clients are able to take medications by mouth, they should be taken with food or the thickened liquid that was recommended during evaluation.

• For the safety of the client, if there is observed noncompliance with any portion of the free water guidelines, the client will be withdrawn from the guidelines.

• Each client will be considered individually and programs developed regarding the free water guidelines may be modified as the client’s status requires.
The Frazier Water Protocol (FWP) is a part of dysphagia rehabilitation designed to allow patients whose diet restriction include thickened liquids (nectar, honey, or pudding consistency) to also have water and ice chips. Use of the FWP remains controversial due to the concern for pneumonia. There is limited information regarding use of the FWP for hospitalized patients with pulmonary diagnoses and the FWP is commonly discouraged due to risk of aspiration.

**Abstract**

The purpose of this study was to evaluate the FWP in those patients with a compromised pulmonary status.

**Methods**

Inclusion criteria:
- Patient > 18 years of age
- Inpatient admission to the RCU
- Dysphagia evaluation indicating need for thickened liquids

The FWP used for this study was modified from its original version and was referred to as the free water guidelines (FWG). The FWG allowed for small sips of water and ice chips between meals with oral cares 3-5 times daily. Repeat dysphagia evaluations were conducted at approximate 2 weeks intervals. All patients remained on the FWG until their diet was advanced to include thin liquids.

**Table 1: Study Characteristics**

- Median age: 65 (41-84) years
- Gender (Male/Female): 9/5
- Race/ethnicity: White 13 (88%)
- Additional race/ethnicity: Asian 1 (6%) Indian 1 (6%)
- Tracheotomy: 14 (93%)
- Nasogastric tube: 10 (69%)
- Percutaneous feeding tube: 5 (33%)
- Pneumonia prior to enrollment: 9 (60%)
- Neurologic diagnosis: 3 (20%)
- Head / neck cancer: 1 (7%)
- Median length of hospital stay prior to swallowing evaluation: 28 (12-124) days

**Results**

- 14/15 patients (93%) had diet advanced with repeat dysphagia evaluations
- 1/15 patient (7%) had diet regression with repeat dysphagia evaluations
- 1/15 patient (7%) was diagnosed with pneumonia after initiation of FWG.

**Discussion**

- The original version of the FWP was modified to meet the needs of the patients
- Small sample size
- Use of the FWG with patients had a low incidence of development of aspiration pneumonia, therefore, may play a crucial role for increasing quality of life for patients with dysphagia

**Conclusions**

- Use of ice chips and free water per the FWG in patients with a compromised pulmonary status showed a low incidence of aspiration pneumonia

**References**

Results with Implementation of FWP

- When free water protocols have been implemented, it was noticed that there were fewer complaints about thirst and improved patient compliance with a thickened liquid diet. (Panther, 2005)

- Dehydration in the elderly is one of the leading problems in long term care facilities. It was concluded that if a patient is on a thickened liquid diet that does not include water, compliance with these modified liquids is usually reduced. If compliance to a modified diet is not followed and the FWP has not been recommended, the risk for aspiration can increase as the specific diet recommendations are not followed (Marik & Kaplan, 2003).
Results with Implementation of FWP

• At this time, as Panther (2005) reports, there is a possibility of decreased compliance of a modified diet with increased medical complexity of a patient.
Possible Interventions to Improve QOL

- Diet Modifications
- Positional Strategies
- Compensatory Techniques
- Rehabilitation protocols based on dysfunction
- Use of the Frasier Free Water Protocol
- Use of Modified Free Water Guidelines
- Discussion with client/caregivers medication administration strategies
Public Policy Challenge: Holistic model advocated

• Holistic model consider a person’s family, social, and political context.

• Supports clinicians’ engagement with the unique challenges that every patient faces in getting on with life despite chronic illness

• Advocates for whole systems programs of change, especially where social determinants of health inequalities loom large

• Works to understand the place of activism and critical consciousness in settings where poor health outcomes for oppressed groups are politically rooted.

Occupational Therapy Outcomes

- Occupational performance
- Client satisfaction
- Role competence
- Adaptation
- Health and wellness
- Prevention

AOTA Occupational Therapy Framework, p 629
TYPES OF OUTCOMES
Table 9, p. 629

- **Occupational performance** The ability to carry out activities of daily life (areas of occupation) through improvement, if a deficit is present; or enhancement of a newly developed performance skill.

- **Client satisfaction** The client’s affective response to his or her perceptions of the process and benefits of receiving occupational therapy services.

- **Role competence** The ability to effectively meet the demand of roles in which the client engages.

TYPES OF OUTCOMES.

- **Adaptation** “A change a person makes in his or her response approach to an occupational challenge when the individual’s customary response approaches are found inadequate for producing some degree of mastery over the challenge” (Schultz & Schkade, 1997, p. 474).

AOTA Occupational Therapy Framework, p 629.
TYPES OF OUTCOMES.

Health and wellness

• *Health*—“A complete state of physical, mental, and social well-being and not just the absence of disease or infirmity” (WHO, 1947, p. 29).

• *Wellness*—The condition of being in good health, including the appreciation and the enjoyment of health. Wellness is more than a lack of disease symptoms; it is a state of mental and physical balance and fitness (adapted from *Taber’s Cyclopedic Medical Dictionary*, 1997, p. 2110).

AOTA Occupational Therapy Framework, p 629.
Types of Outcomes

• **Prevention** Promoting a healthy lifestyle at the individual, group, organizational, community (societal), and governmental or policy level (adapted from Brownson & Scaffa, 2001).

AOTA Occupational Therapy Framework, p 629.
TYPES OF OCCUPATIONAL THERAPY INTERVENTIONS
Occupational Therapy Framework: Table 8, p 628.

• THERAPEUTIC USE OF SELF—A practitioner’s planned use of his or her personality, insights, perceptions, and judgments as part of the therapeutic process (adapted from Punwar & Peloquin, 2000, p. 285).

• THERAPEUTIC USE OF OCCUPATIONS AND ACTIVITIES—Occupations and activities selected for specific clients that meet therapeutic goals. To use occupations/activities therapeutically, context or contexts, activity demands, and client factors all should be considered in relation to the client’s therapeutic goals.

THERAPEUTIC USE OF OCCUPATIONS AND ACTIVITIES

• **Occupation-based activity** *Purpose:* Allows clients to engage in actual occupations that are part of their own context and that match their goals.

• **Purposeful activity** *Purpose:* Allows the client to engage in goal-directed behaviors or activities within a therapeutically designed context that lead to an occupation or occupations.

• **Preparatory methods** *Purpose:* Prepares the client for occupational performance. Used in preparation for purposeful and occupation-based activities.

AOTA Occupational Therapy Framework: Table 8, p 628.
• **CONSULTATION PROCESS**—A type of intervention in which practitioners use their knowledge and expertise to collaborate with the client.

• The collaborative process involves identifying the problem, creating possible solutions, trying solutions, and altering them as necessary for greater effectiveness.

• When providing consultation, the practitioner is not directly responsible for the outcome of the intervention (Dunn, 2000, p. 113).

AOTA Occupational Therapy Framework: Table 8, p 628.
• **EDUCATION PROCESS**—An intervention process that involves the imparting of knowledge and information about occupation and activity and that does not result in the actual performance of the occupation/activity.


AOTA Occupational Therapy Framework: Table 8, p 628
References


References


References


REFERENCES


References

• Diagram of Maslow’s Hierarchy of Needs Theory, retrieved from Google.com 10/27/2006, J. Finkelstein

• Dysphagia in elderly, Abigail Shoemaker, www.advanceweb.com