PEG Tubes in Adults: Use, Overuse, and the SLP’s Role

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Case Study: “James"

- Frail 90-year-old African American nursing home resident with COPD and CHF
- One choking episode and within 24 hours develops fever, lethargy, and SOB
  - Hospitalized and diagnosed with aspiration pneumonia
  - Swallowing study confirms gross aspiration
  - Attending physician refers the patient to GI for PEG tube placement and his daughter consents to the procedure over the phone
    - PEG tube placed and transferred back to nursing home the following day
    - He aspirates again one month later and dies after three days in the hospital
**Case Study: “Thomas”**

- 86-year-old nursing home resident with severe dementia, CAD, HTN, and T2DM
- He has been declining slowly over the past year and has lost 10% of his weight over the past three months
- The nursing facility informs the patient’s daughter that something must be done to “keep him from starving to death.”
  - She requests feeding tube placement.
  - The patient is referred to a GI specialist, who places the PEG as an outpatient.
  - The PEG works well, allowing for adequate nutritional intake
- **Thomas dies two months later**

**Case Study: “Mary”**

- 75-year-old nursing home resident with multiple medical problems
- She told her family on several occasions that she would never want a feeding tube
- Hospitalized with an acute CVA with dense aphasia
  - A swallowing study shows marked dysphagia
  - Resident informs the family she needs a PEG tube to prevent her from “choking and dying,” and says it should be only temporary until she regains her ability to swallow.
  - After much debate, they consent.
  - A PEG tube is placed on the third hospital day, and she is transferred back to the facility the next day for skilled rehab
- **Attending compliments the resident on his efficient disposition of the case**
PEG Tubes in Adults

Conventional Wisdom, c. 1989

- Beta-blockers contraindicated in CHF
- Acute back pain requires 3d bedrest
- Digoxin effectively converts afib
- Antibiotics required in otitis media
- Aspiration or inadequate oral intake necessitates PEG tube placement

Percutaneous Endoscopic Gastrostomy Insertion

- Reported by Gauderer in 1980 as alternative to surgical gastrostomy
- Safe (<2% intraop complication rate)
- Simple (endoscopic, <15 minutes)
- Effective (allowed tube feeding)
- Beneficial (assumed better nutrition produced better outcomes)
PEG Tube Popularity

- PEG tubes placed in U.S. in patients 65 and older:
  - 1989 ~15,000
  - 1995 ~123,000

National Hospital Discharge Surveys, 1989 and 1995

PEG Tube Popularity

- In 1999, 34% of severely cognitively impaired residents of U.S. nursing homes had PEG tubes.

Concerns With Increased Use

<table>
<thead>
<tr>
<th></th>
<th>1992</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure-related mortality</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>30-day mortality</td>
<td>8%</td>
<td>22%</td>
</tr>
<tr>
<td>Non-evidence-based indications</td>
<td>16%</td>
<td>31%</td>
</tr>
</tbody>
</table>


High 6-month Mortality Associated With PEG Use in Certain Populations

<table>
<thead>
<tr>
<th>Outcome</th>
<th>CNS* (n = 44)</th>
<th>Malignancy† (n = 12)</th>
<th>ALS (n = 5)</th>
<th>Other (n = 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Died</td>
<td>12 (27%)</td>
<td>9 (75%)</td>
<td>4 (80%)</td>
<td>3 (30%)</td>
</tr>
<tr>
<td>PEG in place</td>
<td>17 (39%)</td>
<td>1 (8%)</td>
<td>1 (20%)</td>
<td>4 (40%)</td>
</tr>
<tr>
<td>PEG removed</td>
<td>15 (34%)</td>
<td>2 (17%)</td>
<td>—</td>
<td>3 (30%)</td>
</tr>
</tbody>
</table>

*Predominantly stroke and head injury.
†Predominantly those of the head and neck.
CNS indicates central nervous system.

PEG Tubes in Adults

Gastrostomy placement rates per 1000 eligible Medicare beneficiaries in 1991 according to age, race, and sex


PEG Tube Complications and Health Care Utilization

Home PEG tube use over average follow-up of 26 months required:

- Telephone call: 69%
- Clinic visit: 45%
- ER visit: 35%
- Hospital admission: 11%

PEG Tubes in Adults

PEG Tubes Reconsidered

- Placement an invasive surgical procedure
- Like mechanical ventilation, an artificial means of life support
- While safe perioperatively, significant long-term complications exist
- Patient-oriented clinical outcomes (mortality, QOL) poorly studied
- Maintenance often requires multiple medical interventions
- Ethical and legal imperatives unclear (Cruzan, Schiavo, papal allocution)

Goals

- Review existing published evidence
- Identify patient-oriented, outcome-based indications
- Discuss briefly the ethics of withholding or withdrawing nutritional support
- Identify barriers to appropriate use
Poor Prognostic Indicators for PEG Placement

- Age > 75
- Male gender
- Diabetes mellitus
- COPD
- Advanced cancer
- Previous aspiration
- UTI
- Charlson score > 3
- Low BMI
- Albumin < 3 g/dl
- Hospitalized
- Bedridden
- Pressure sores
- Dementia


Burdens and Complications Associated With PEG Tube Use (partial list)

- Wound dehiscence
- Skin excoriation
- Tube migration
- Pain at tube site
- Gastric prolapse
- Eviseratation
- Intussusception
- Necrotizing fascitis
- Diarrhea
- Nausea
- Fluid overload
- Metabolic disturbance
- Esophageal perforation
- Local bleeding
- Hematoma
- Tube malfunction
- Aspiration
- Gastrocolic fistula
- Pneumatisis intestinalis
- Peritonitis
- Abdominal abscess
- Bowel obstruction
- Gastroesophageal reflux
- Death
- Loss of gustatory pleasure
- Loss of social interaction
- Stoma stenosis
- Bumper erosion
- Placement failure
- Gastric perforation
- Pneumoperitoneum
- Prolonged ileus
- Cellulitis
- Subphrenic abscess
- GI bleeding
- Vomiting
- Restraint use
- Pneumonia
- Loss of dignity

Elderly Have Fewer Inpatient Complications but Higher Mortality

<table>
<thead>
<tr>
<th>Table 3. Outcomes After Gastrostomy and Jejunostomy Placement</th>
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<tbody>
<tr>
<td>Outcome</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>Total complications, n (%)</td>
</tr>
<tr>
<td>Major complications</td>
</tr>
<tr>
<td>GI in place at discharge</td>
</tr>
<tr>
<td>Discharged to nursing facility</td>
</tr>
<tr>
<td>Hospital mortality</td>
</tr>
<tr>
<td>30-day mortality</td>
</tr>
<tr>
<td>1-year mortality</td>
</tr>
</tbody>
</table>
* Fisher exact test


Dementia

No evidence that tube feeding in patients with advanced dementia:

- Prolongs survival
- Prevents aspiration pneumonia
- Reduces the risk of pressure sores or infections
- Improves function
- Provides comfort

PEG Tubes in Adults

Dementia

- VA Medical Center, Washington DC.
- Of 41 patients with dementia referred for PEG, 23 received PEG, 18 did not because family declined after discussion of benefits/burdens.
- Without PEG placement, median survival was 60 days.
- With PEG placement, median survival was 59 days.


Survival of patients with dementia referred for PEG
VAMC Washington DC

Dementia

Feeding tubes in demented patients are associated with significant increases in

- Restraint use
- ER utilization
- Hospitalization


Dementia

“There is a pervasive failure—by both physicians and the public—to view advanced dementia as a terminal illness, and there is a strong conviction that technology can be used to delay death.

“The first step in changing these attitudes is for physicians to acknowledge that feeding tubes are generally ineffective in prolonging life, preventing aspiration, and even providing adequate nourishment in patients with advanced dementia.”

Use of PEG in Dementia Decreasing in VA System


Another Opinion

“When a patient with dementia cannot or will not eat and drink, how is it possible that providing nourishment via a simple, usually well-tolerated means has not been shown to provide any meaningful benefits?

“I believe that if available data on the withholding of a basic necessity of life such as food and water are inconclusive, physicians should err on the side of providing tube feedings to dementia patients in need.”

Daniel Buff, MD FACP CNSP
AAHPM Bulletin, Spring 2006
Questions and Answers

Cancer

- Klein and Koretz systematically reviewed the published prospective randomized controlled trials of nutrition support in cancer that had clinically significant endpoints (morbidity, mortality, duration of hospitalization).
- The data “failed to demonstrate the clinical efficacy of providing nutrition support to most patients with cancer.”

PEG Tubes in Adults

Head and Neck Cancer

- PEG placement improved QOL but not mortality in head and neck cancer patients.
- Placement prior to radiotherapy or intraoperatively with resection improved morbidity but not mortality.


Complications With PEG Placement in HNC Patients

Fatal or severe complications occurred in 26% of cases over two years.
- PEG use (vs. NG) resulted in longer duration of feeding tube use and more persistent dysphagia.


PEG Tubes in Adults

Duration of use, PEG vs. NG


Percent with persistent dysphagia, NG vs. PEG

Amyotrophic Lateral Sclerosis

- PEG use improved QOL scores and weight but not mortality in ALS with bulbar dysfunction.
- However, a recent British study showed a cumulative use of only 11%, a median survival from insertion of < 5 months, and a 30-day mortality of 25%, outcomes similar to those in dementia.


Muscular Dystrophy

- No adequately controlled trials

PEG Tubes in Adults

CVA

- Two RCTs published in BMJ in 1992 and 1996 showed that, compared to NG use, PEG placement after stroke decreased mortality, treatment failures, and malnutrition.
- These trials were short (6 weeks), small (49 patients total), and poorly randomized (NG patients were both older and sicker).
- Cochrane Review: “Too few studies have been performed, and these have involved too few patients.”


CVA: Long Term Outcomes

Fig. 2: Stroke patients who had PEG tubes removed or who died with PEG tube in place during 1 year post-PEG insertion (■ = death; □ = PEG removed).

One Year Outcomes of PEG Placement After Stroke

1) Death (45%)
2) Survival with permanent PEG tube (30%)
3) Survival with PEG tube removed (25%)


CVA: FOOD Trial 2005

- Multicenter international RCT using an intention-to-treat analysis with 6 month follow-up
- Tube feed vs. avoid tube feed for 7 days (N=859)
  - No significant difference in mortality
  - No significant difference in risk of death or poor neurologic outcome
- PEG vs. NG (N=321)
  - No significant difference in mortality
  - Significantly increased risk of death or poor neurologic outcome with PEG (p=0.05)

Using NG Tubes: Nasal Loops

- "Nasal loops allow time for patients who may recover normal swallowing to do so, and avoid unnecessary PEG insertion in those with a poor prognosis who will not ultimately survive their initial stroke."

PEG Tubes in Adults

Effect of PEG Use on Stroke Rehabilitation

- Large observational study (PRSOP) showed early PEG tube use after CVA was associated with improved rehabilitation outcomes.

- Case-controlled study showed that compared to matched patients without PEG tubes, inpatient stroke rehabilitation patients with PEG tubes had significantly:
  - less efficient rehabilitation
  - more hospitalizations (31% vs. 12%, p=.001)
  - higher mortality (8% vs. 2%, p=.006)


CVA: PEG Complications

PEG complications after stroke
- 11% aspiration pneumonia
- 6% occlusion
- 6% accidental removal
- 3% wound infection
- 1% fatal GI bleed

Aspiration Pneumonia

- No data show that feeding tubes decrease the risk of aspiration pneumonia.
- Neurogenic dysphagia patients fed with PEG vs. NG have similar rates of aspiration pneumonia.


Aspiration Pneumonia

- Jejunostomy tubes and post-pyloric tubes (PEG-J’s) show no advantage over PEG tubes in the prevention of aspiration pneumonia.
- Aspiration pneumonia is the most common cause of death after PEG placement.

Aspiration Pneumonia

Independent risk factors for AP:
- Dependent for feeding
- Dependent for oral care
- Number of decayed teeth
- Tube feeding
- More than one medical diagnosis
- Number of medications
- Smoking

Relative Risks for Community-Acquired Pneumonia by Exposure to Gastric Acid-Suppressive Therapy

<table>
<thead>
<tr>
<th>Table 1. Relative Risks for Community-Acquired Pneumonia by Exposure to Gastric Acid-Suppressive Therapy</th>
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</thead>
<tbody>
<tr>
<td>Exposed to Acid-Suppressive Drugs</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>No. of patients</td>
</tr>
<tr>
<td>Person-years</td>
</tr>
<tr>
<td>No. of cases of pneumonia</td>
</tr>
<tr>
<td>Unadjusted relative risk (95% CI)</td>
</tr>
</tbody>
</table>

Abbreviations: CI, confidence interval.
*Some patients used H2-receptor antagonists plus proton pump inhibitors.


Effect of PEG Tubes and pH on GI Microbial Flora

- Found only in patients with PEG tubes:
  - Enterococcus

- Found only in patients with gastric pH > 3:
  - Staphylococcus
  - Bifidobacteria
  - Klebsiella species

**Aspiration Pneumonia**

- Aspiration on MBS (vs. no aspiration) was not associated with the risk of pneumonia.
- Feeding tube placement (vs. no feeding tube) in patients who aspirated significantly increased the risk of pneumonia and pneumonia death. (PEG=NG)


**Natural History of Dysphagia and Aspiration After Stroke**

- About 20% of patients have dysphagia after stroke, but it resolves within one month 80% of the time.
- Only 12% of patients with aspiration on MBS following stroke will develop aspiration pneumonia.

PEG Tubes in Adults


Malignant Bowel Obstruction (Gastric Decompression)

- Gastric decompression with PEG tube effectively resolved persistent vomiting in bowel obstruction due to gynecologic malignancy in 85% of cases.

- Median survival after PEG insertion was 8 weeks.

- Octreotide (a somatostatin analogue) resolved symptoms in cases unresponsive to PEG placement.


**PEG Tubes in Adults**

### Malignant Bowel Obstruction (Gastric Decompression)

- The combination of octreotide, metaclopramide, and dexamethasone also resolved the symptoms of malignant bowel obstruction in ~85% of cases.

- A randomized trial comparing medical vs. surgical treatment is needed.


### Timing of PEG Placement

- Inpatients who underwent PEG placement had significantly higher 30-day mortality (29%) compared to outpatients (4%) and matched inpatients (13%).

- Patients who had PEG tube placed one month after hospital discharge had 88% lower 30-day mortality than those who had PEG tube placed during their hospitalization.


PEG Tubes in Adults

Survival curve since PEG insertion (by protocol analysis) (p<0.0001)
First period 1/1/97-12/31/98 PEG placed within 3 days of request
Second period 1/1/99-12/31/00 PEG placed one month after hospital discharge

Survival curve since PEG request (intention to treat analysis) (p=0.01)
First period 1/1/97-12/31/98 PEG placed within 3 days of request
Second period 1/1/99-12/31/00 PEG placed one month after hospital discharge
Questions and Answers

“If the family wants it, I can’t say no.”

- The burden of proof of benefit lies with the physician ordering the feeding tube.

- The emotional symbolism attached to feeding affects the judgment of both families and physicians.

- Without an expectation of benefit, artificial feeding can be considered a form of torture.

Laws, Sausage, and PEG Tube Decisions

- Patients or their surrogate decision-makers reported multiple discussants, incomplete information, and considerable distress in arriving at the decision to proceed with artificial feeding.

- This distress was usually in the context of an acute debilitating illness that overshadowed the decision about artificial feeding.

- The decision for PEG often was a "non-decision" in the sense that decision-makers perceived no alternatives.


Inadequacy of Informed Consent

- At one large community teaching hospital, there was documented adequate informed consent (discussion of procedure-specific benefits and burdens and of alternatives) in only 0.6% of PEG placements.

- Although 61% of patients were clearly capable of MDM, only 36% signed their own consents, and 24% of surrogate consents were obtained over the phone.

- One-third of these patients died either in the hospital or within 30 days of discharge.

- Families unsure about PEG placement commonly feel pressured into consenting and often later regret their decisions.


Withholding Artificial Nutrition

- 97% of dying patients who stopped eating experienced no hunger or hunger only initially.

- Terminal anorexia may benefit dying patients by inducing ketosis and endorphin release which artificial feeding may reverse.


Mean Scores on the Discomfort Scale-Dementia of Alzheimer Type (DS-DAT)20 According to Survival

PEG Tubes in Adults

Withholding Artificial Nutrition

- Terminal anorexia and cachexia appear to be due in part to inflammatory cytokines and other transferable humoral factors.
- Even prolonged tube feeding with adequate formula fails to improve nutritional parameters in chronically ill nursing home patients.
- Theoretically, forced nutrition may accelerate cancer progression.


Hernia Repair vs. PEG Placement in Dementia

- Both are simple, safe, and effective surgical procedures.
- Both are without evidence of benefit.
- Yet if families demand one, we tell them it’s “not indicated,” but if they demand the other, we “honor the request.”
- Saying yes avoids the difficult discussion of poor prognosis and appropriate goals of care.
Withdrawal of Artificial Nutrition

- Stopping tube feeding is ethically and legally indistinguishable from never starting it.
- Artificial nutrition is typically the last life-supporting measure withdrawn.
- 25% of demented nursing home residents die while still receiving tube feedings.


PEG Trials

- Time- or goal-limited trials of artificial nutrition are suggested by many when the benefit/burden ratio is unclear, or consensus cannot be reached.
- My experience is that families and staff have a very difficult time withdrawing tube feedings at the end of the trial period.
- It is harder emotionally to discontinue a life-supporting intervention than it is never to initiate it.
- Compassionate physicians should reconsider starting any intervention it will be unusually difficult for patients or families to stop.
## PEG Tubes in Adults

### Practice Guidelines for PEG Tube Placement

<table>
<thead>
<tr>
<th>Do not offer</th>
<th>Offer but advise against</th>
<th>Offer and recommend</th>
<th>Discuss PEG vs. no PEG</th>
<th>Discuss PEG vs. NG</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGA 1995</td>
<td>Feeding need &lt; 30 days</td>
<td>Feeding need &gt; 30 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rabenbeck 1997</td>
<td>Anorexia-cachexia syndrome</td>
<td>Permanent vegetative state</td>
<td>Uncomplicated dysphagia with no other quality of life deficits</td>
<td>Complicated dysphagia (dementia, stroke)</td>
</tr>
<tr>
<td>Angus/Burakoff 2003</td>
<td>Prognosis &lt; 2 months Cancer cachexia Advanced progressive unresponsive cancer</td>
<td>Persistent vegetative state End-stage dementia without acute neurologic deficit</td>
<td>Bowel obstruction with prognosis &gt; 2 months and unable to place stent Cancer treatment expected &gt; 4 weeks with moderate-severe malnutrition and intact GI tract Dysphagia with persistent obturation, brain stem stroke, bilateral stroke, or gross aspiration</td>
<td>Complicated dysphagia End-stage COPD Advanced dementia</td>
</tr>
<tr>
<td>Niv/Abuksis 2002</td>
<td>Aspiration Cancer with short life expectancy Dementia PVS Anorexia-cachexia syndromes</td>
<td>Head and neck cancer Acute stroke with dysphagia (delay until one month after hospital discharge) Neuromuscular dystrophy syndromes Gastric decompression</td>
<td></td>
<td>Dysphagia without gross aspiration</td>
</tr>
</tbody>
</table>

### PEG Guidelines (Niv/Abuksis 2002)

Recommend PEG for nutritional impairments associated with:

- Head and neck cancer
- Acute stroke with dysphagia persistent one month after hospital discharge
- Neuromuscular dystrophy syndromes
- Gastric decompression
PEG Guidelines
(Niv/Abuksis 2002)

Do not offer PEG for:
- Aspiration
- Cancer with short life expectancy
- Dementia
- Persistent vegetative states
- Anorexia/cachexia syndromes


Barriers to Appropriate PEG Tube Use

- Educational
- Emotional
- Financial
- Institutional
Educational Barriers

- Many physicians are unfamiliar with the evidence-based indications for PEG tubes and continue to recommend them for aspiration, advanced dementia, and late-stage cancer.

- Published practice guidelines are conflicting and often unsupported by the literature.

- Physicians in training often are taught not to question PEG placement decisions and to insert them even for inappropriate indications.


Emotional Barriers

- In part due to the cultural association of feeding with caring, families are often reluctant to withhold or withdraw artificial nutrition from loved ones.

- Physicians often find it easier to recommend or perform a non-beneficial procedure than to confront difficult and time-consuming end-of-life issues.

PEG Tubes in Adults

**Financial Barriers**

- PEG placements may be a valued source of physician income and referrals.
- Hospitals may encourage PEG placements to generate revenue, though data suggest they actually lose money on inpatient insertions.
- It costs nursing facilities significantly less (and they are reimbursed more) to feed severely demented patients by PEG tube than by hand.


**Institutional Barriers**

- Hospitals may encourage PEG placements to expedite patient discharges, support specialist incomes, or provide fellow training.
- Ethics, geriatric, or palliative care consultations are rarely called in PEG placement cases, and usually only after the tube has failed to provide clinical improvement.
- Nursing homes may “require” PEG placement for facility admission due to staffing, regulatory, or legal concerns, and nurses or speech therapists may promote PEG insertions in this setting.


PEG Tubes in Adults

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Odds Ratio (95% Confidence Interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech therapist on staff</td>
<td>2.05 (1.51-2.82)</td>
</tr>
<tr>
<td>Percentage of Medicare beds &gt; median</td>
<td>1.68 (1.29-2.19)</td>
</tr>
<tr>
<td>Number of residents aged 65 or older</td>
<td>1.81 (1.27-2.51)</td>
</tr>
<tr>
<td>FTE nurse/100 beds &gt; median</td>
<td>1.67 (1.29-2.19)</td>
</tr>
<tr>
<td>Percentage of residents with advance directives &lt; median</td>
<td>1.05 (1.07-1.03)</td>
</tr>
<tr>
<td>&gt;10% of residents have pressure ulcers</td>
<td>1.05 (1.15-2.48)</td>
</tr>
<tr>
<td>Facility does not have an Alzheimer’s unit</td>
<td>1.45 (1.01-2.08)</td>
</tr>
<tr>
<td>FTE nursing assistants/100 beds &lt; median</td>
<td>1.39 (1.02-1.91)</td>
</tr>
<tr>
<td>Percentage of residents with total functional dependency &gt; median</td>
<td>1.66 (1.23-2.21)</td>
</tr>
</tbody>
</table>

*FTE = full time equivalent (FLH per resident)


One physician’s perception:

“We all aspirate; just don’t do it in front of a speech therapist.”

Tom Finucane MD

11/7/05
NH physician comments
AMDA conference 3/06

“When the speech therapist writes NPO, I have no choice but to order a PEG.”

“If the speech therapist gives me no alternatives, what am I supposed to do?”

“Someone needs to tell the speech therapists how much influence they have.”

Ethical Barriers

- Some political and religious groups feel artificial hydration and nutrition constitute ordinary medical care it is unethical or immoral to withhold or withdraw.
- PEG tubes clearly can reduce mortality in persistent vegetative states, but that outcome is of questionable benefit in patients with no demonstrable quality of life.
- Physicians who place PEG tubes often consider themselves technicians, not clinicians, thus distancing them from ethical responsibility.

PEG Tubes in Adults

PEG tubes

1. Which of the following are benefits of PEG tube placement in patients with advanced dementia?

a. Improved nutritional status
b. Reduced aspiration pneumonia risk
c. Improved pressure ulcer healing
d. Improved survival
e. Improved functional status
f. None of the above

PEG tubes

2. What is the average one month mortality of all inpatients over age 65 after PEG tube placement?
   a. 5%
   b. 10%
   c. 20%
   d. 45%
   e. 60%

PEG tubes

2. What is the approximate average one month mortality of all inpatients over age 65 after PEG tube placement?
   a. 5%
   b. 10%
   c. 20%
   d. 45%
   e. 60%

PEG Tubes in Adults

Mortality After Inpatient PEG Tube Placement

<table>
<thead>
<tr>
<th></th>
<th>1 month</th>
<th>6 months</th>
<th>1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>19%</td>
<td>44%</td>
<td>62%</td>
</tr>
<tr>
<td>Japan</td>
<td>8%</td>
<td>36%</td>
<td>45%</td>
</tr>
</tbody>
</table>


Do Interventions Work?
Proactive staff education and palliative care consultations

Lenox Hill Hospital, NY, NY

<table>
<thead>
<tr>
<th></th>
<th>3/02-9/02</th>
<th>3/03-9/03</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEGs</td>
<td>71</td>
<td>27</td>
</tr>
<tr>
<td>PEGs in dementia</td>
<td>40</td>
<td>8</td>
</tr>
</tbody>
</table>

PEG Tubes in Adults

Do Interventions Work?
Hospital-specific evidence-based practice guidelines


p=0.1 (NS)

PEG Tubes in Adults

Indication for PEG
1) Head and Neck CA
2) Acute CVA with dysphagia
3) Dementia
4) Miscellaneous

Conclusions
PEG tube placement should be offered only in:
1. Early head and neck cancer
2. Stroke with dysphagia persistent one month after hospital discharge
3. ALS
4. Malignant bowel obstruction with intractable vomiting

Conclusions

Even in these four conditions, the medical literature raises significant questions concerning the benefit of PEG tube placement over NG use or medical management.

Conclusions

After a stroke, waiting one week to begin artificial nutrition is not harmful, and the use of NG rather than PEG tubes for the first month significantly decreases the risk of death or poor neurologic outcome.
What % of PEG Tubes Are Clinically Indicated?

At one academic medical center, only 22% of PEG tubes placed in inpatients over age 65 in 2004 were potentially appropriate by the Niv/Abuksis guidelines.


Shared Decision-Making Aids For PEG Tubes

Decisionaid.ohri.ca/decaids.html
Dhmc.org/shared_decision_making.cfm

A 93-Year-Old Man With Advanced Dementia and Eating Problems

PEG Tubes in Adults

**Table: Steps to Decision Making for Feeding Problems in Advanced Dementia**

<table>
<thead>
<tr>
<th>Step</th>
<th>Specific Factors to Consider</th>
<th>Application to Mr. P’s Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clarify clinical situation</td>
<td>Proxy should understand that nutrition is a terminal condition.</td>
<td>Daughter believed that Mr. P’s wills were not clearly stated.</td>
</tr>
<tr>
<td></td>
<td>Estate planning process within context of end-stage dementia.</td>
<td>Mr. P’s daughter was the designated executor.</td>
</tr>
<tr>
<td></td>
<td>Reviewing compounding acute medical conditions.</td>
<td>Mr. P had a history of heart failure and diabetes.</td>
</tr>
<tr>
<td></td>
<td>Addressing unstable factors.</td>
<td>Mr. P’s daughter was concerned about potential complications.</td>
</tr>
<tr>
<td>2. Establish primary goal of care</td>
<td>Is overriding goal of care life prolongation, maximizing function, or promoting comfort?</td>
<td>Mr. P’s daughter discussed goals of care with Mr. P. Mr. P wanted to return to comfortable living.</td>
</tr>
<tr>
<td></td>
<td>Where do treatment options fit in with the primary goal?</td>
<td>Mr. P’s daughter discussed Mr. P’s desire to return to comfortable living.</td>
</tr>
<tr>
<td>3. Present treatment options and provisions of each choice</td>
<td>Ensure adequate time for counseling.</td>
<td>Mr. P’s daughter believed he needed more time to understand the options.</td>
</tr>
<tr>
<td></td>
<td>Explain components of palliative care and that home feeding option does not necessarily imply cessation of all medical treatment.</td>
<td>Mr. P’s daughter was concerned about the impact of tube feeding on Mr. P’s quality of life.</td>
</tr>
<tr>
<td></td>
<td>Be knowledgeable about the need for palliative care and supportive care.</td>
<td>Mr. P would not suffer from hunger or thirst without artificial nutrition.</td>
</tr>
<tr>
<td></td>
<td>Address common misconceptions about tube feeding.</td>
<td>Mr. P’s daughter was aware of the potential for complications with tube feeding.</td>
</tr>
<tr>
<td>4. Weigh options against values and preferences</td>
<td>What would the patient want?</td>
<td>Mr. P’s daughter believed he did not want to be tube fed.</td>
</tr>
<tr>
<td></td>
<td>Discussing care, advance directives, substitute judgment, best interests.</td>
<td>Mr. P’s daughter decided to discuss end-of-life care with Mr. P.</td>
</tr>
<tr>
<td>5. Promote autonomy and effective decision making</td>
<td>Consider how Mr. P’s decision-making capacity is influenced by dementia.</td>
<td>Mr. P’s decision-making capacity was assessed.</td>
</tr>
<tr>
<td>6. Provide additional and ongoing decision support</td>
<td>Engage interprofessional team.</td>
<td>Nurses, speech therapists, and other healthcare providers were involved.</td>
</tr>
<tr>
<td></td>
<td>Encourage family to speak to other trusted advisors.</td>
<td>Mr. P’s daughter consulted with the family.</td>
</tr>
<tr>
<td></td>
<td>Consider use of decision aids.</td>
<td>Mr. P’s daughter used decision aids to assist with the decision.</td>
</tr>
</tbody>
</table>

*Adapted from Making Decisions Long Term Feeding Tube Placement in Dementia Patients: A Book and Audio Guide to Substitute Decision-Making.*


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**Two Final Thoughts...**

- “There is no evidence that nutritional support prolongs life or decreases morbidity in patients with cancer, sepsis, or advanced cardiac or respiratory disease.”
- “Unrequested nutrition [by either the enteral or parenteral route] is neither medically nor ethically justifiable in terminally ill patients and should not be considered appropriate.”


ASHA Telephone Seminar 0809 48
Two Final Thoughts...

- “Because of its simplicity and low complication rate, [PEG placement] lends itself to overutilization.”
- “Much of our effort in the future needs to be directed toward the ethical aspects associated with long-term enteral feeding.”
- “We as physicians must continuously strive to demonstrate that our interventions truly benefit the patient.”


Questions and Answers

*Note: Writing Recommendations mentioned by Carol Monteleoni, MS ,CCC-SLP can be found at the end of this handout packet.*
Thank you!
PEG Tubes in Adults: Use, Overuse, and the SLP’s Role

References


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Speech Pathology and Palliative Care

Writing dysphagia recommendations for patients with advanced dementia or other terminal conditions

General guidelines:
- Be aware of the power of an NPO or PEG recommendation
- Avoid framing recommendations only in terms of aspiration risk
- Focus on consensus re prognosis and goals of care
- Recommend feeding strategies

Some sample recommendations:

“Pt presents with eating dysfunction consistent with her diagnosis of advanced dementia. Recommend family meeting to reach consensus on a plan of feeding management consistent with patient’s prognosis and goals of care.”

“Pt presents with severe oral apraxia typical of late stage dementia. Feed patient only when fully alert and evidencing desire to eat. Do not force feed patient.” [enumerate strategies]

“Pt presents with severe oropharyngeal dysphagia and is at high risk for aspirating his secretions and food/liquid taken either p.o. or via enteral feeding. To minimize risk of development of aspiration pneumonia, ensure that patient is given scrupulous oral care and maintain strict aspiration precautions when feeding patient.” [enumerate aspiration precautions, strategies, etc.]

“Given patient’s poor prognosis and goal of comfort care, recommend attentive hand feeding, respecting patient’s food preferences and desire or lack of desire to eat. Consider hospice evaluation for care after discharge.”