Nutritional Issues in Long-Term Care: Overview of Research Findings & Practice Implications

Sandra F. Simmons, PhD
Vanderbilt University, School of Medicine, Center for Quality Aging and the VA Medical Center, GRECC

Nutritional Issues in LTC

- Weight loss prevalence: Quality Indicator
- Major questions:
  1. How do you monitor care quality?
  2. What are the effective interventions?
  3. How much staff do you need?
Training Activities: Nutrition

- Access to assessment tools (Center Web-Site, Weight Loss Module)
- Overview of research findings
- How to conduct quality improvement
- How to individualize interventions

Pre-Test: Question #1

The medical record is inaccurate about which information?

a. Feeding assistance care delivery
b. Residents’ daily intake
c. Supplement delivery
d. a, b, and c
e. Weight loss episodes
Medical Record Documentation

- Over-estimates nutrition care quality
  - Feeding assistance (100% vs 40%)
  - Oral intake of meals (+20%)
  - Supplement delivery (3/day vs ≤1)

Medical Record Documentation

- Weight loss episodes
  - MDS prevalence rates (5% and 10%) accurate at any one point in time
  - Monthly weight data significantly higher rate (5%) over time
Practice Implications

- Weight loss common
- Significant care delivery problems
- More accurate information is essential

Pre-Test: Question #2

- Rank family preferences for interventions
  - Supplements
  - Snacks between meals
  - Quality staff assistance during meals
  - Appetite stimulant medication
  - Attractive food choices
  - Dining environment matches preference
Family Treatment Preferences

1. Attractive food choices
2. Quality staff assistance
3. Snacks between meals
4. Dining environment = preference
5. Supplements
6. Appetite stimulant medication

Practice Implications

- Supplements and medications most common approaches
- BUT
- Families prefer behavioral approaches
Pre-Test: Question #3

Most residents receive inadequate assistance during meals

TRUE    FALSE

Adequate Feeding Assistance?

- Residents receive < 10 minutes/meal
- 70% to 80% meet MDS criteria low intake
- Mostly physical assistance
- Little to no verbal cueing or social stimulation to enhance independence
Residents are likely to receive the least amount of assistance during which meal?

- Breakfast
- Lunch
- Dinner

Residents are likely to receive the least amount of assistance during which meal?

- Breakfast & Lunch (<10 min/meal)
- Dinner (< 5 min/meal)
Pre-Test: Question #5

Which residents are at higher risk for poor oral intake and weight loss?

a) MDS physically dependent (extensive to full assist, 3-4)

b) MDS independent or semi-dependent (supervision to limited assist, 0-2)

Higher Risk Group

- Semi-Dependent (MDS 0-2)
  - physically capable of feeding
  - receive little to no staff attention
  - eat < 50% of most meals
Practice Implications

- Adequacy and quality of feeding assistance should be monitored by observation
- Poor across all meals but most problematic at dinner
- Oral intake should be considered when determining need for staff attention

Pre-Test: Question #6

- What resident : staff ratio is necessary to provide quality feeding assistance during meals?
  
a) 5:1  
b) 7:1  
c) 9:1  
d) 10:1
Determining Staffing Needs

- Expert Consensus Panels
- Computerized Simulation Models
- Research studies
- Practice

Expert Consensus* on Mealtime Staffing Resident : Nurse Aide

- 2:1 for physically dependent residents
- 3-4:1 for semi-dependent residents
- Overall ratio of 5:1

*Testimony of the American Nurses' Association, IOM
Computerized Simulation Models

- Computerized projections based on time per care episode and estimates of number of residents in need
- 5 daily care processes, including feeding assistance
- 5:1 necessary to consistently provide care to all residents in need

Validation Research Study

- Staffing significant predictor of quality
- Homes staffed above 4.1 hprd (5-7:1) provided better care on 13 of 16 quality measures
- Dependent residents: 80% vs 55% received > 5 minutes of assistance
Practice Implications

- 5-7:1 ratio supported
- Staffing below this level may require
  - targeting of residents most in need
  - use of non-traditional staff

Pre-Test: Question #7

Almost all residents will eat more of their meals if nursing staff spends enough time providing help.

TRUE    FALSE
Feeding Assistance During Meals

- 2-day (6 meal) trial of 1:1 Assistance
- Graduated Prompting Protocol
  - Enhanced Independence
  - Promoted Social Interaction
  - Compliance with Preferences
- Change in oral intake

40% to 50% show significant intake gains

Staff time for 1:1 (6 to 36 min/meal)

Staff time for Group 1:3 (42 min/meal)

2-day trial good way to determine
- level of assistance need (MDS)
- appropriateness of assistance
Pre-Test: Question #8

If a resident does not eat enough of meals with assistance, what should be tried next?

a) Snacks between meals  
b) Supplement  
c) Medication  
d) Combination

Snacks Between Meals

Majority (80%) not responsive to mealtime assistance show significant caloric gains with snacks (2-day, 6 snack trial)

2-3 times per day between meals  
Variety of food and fluid choices  
20 minutes per group of four
Medication

- Appetite stimulants (Megace)
- Limited effectiveness
- Combination assistance + medication

Supplements

- Mixed results: effectiveness
- Costly
- Often given inconsistently (< 1x/day) and/or inappropriately (with meals)
- Residents consume more of snacks (<100 cal/day vs. 400)
Intervention Summary

- Families prefer behavioral treatments
- 90% of residents with low oral intake will improve with feeding assistance during or between meals (snacks)
- Remainder need combination
- <10% unavoidable weight loss

Practice Implications

- 2-day trial (6 meals or snacks) best method to determine appropriate intervention
- Behavioral approaches effective with most (90%) residents
- Efficient
  - assist in small groups
  - nutritional care tasks throughout day
Pre-Test: Question #9

What is the best way to determine a resident’s preference for where they like to eat?

a) Ask the family  
b) Ask the resident on 2 occasions  
c) Both a and b  
d) Encourage resident to eat in dining room for a few days, then ask

Residents’ Preferences

Differences between family and resident preferences

Residents with cognitive impairment can answer preference questions

Staff care routine shapes residents’ preferences over time
Practice Implications

 exposures resident to the “best care practice” for a trial period, then ask

Pre-Test: Question #10

A resident at risk for weight loss should not be allowed to eat most meals in their room because:

a) Inadequate assistance
b) Little to no social interaction
c) Depression
d) Respect preference, regardless
Room versus Dining Room

- Residents receive less assistance to eat and little social interaction when they eat in their rooms.
- Medical record documentation (percent intake) more erroneous for residents who eat in their rooms.
- Depression (and staff care routine) influences preference to stay in room.

Practice Implications

- At-risk residents should be encouraged to eat most meals in the dining room.
- Consider related staff care routines:
  - Morning ADL care (11-7 shift)
  - Transport to dining room (volunteers)
  - Space (2 seatings)
  - Atmosphere (dividers)
Pre-Test: Question #11

Rank measures in order of importance for quality improvement:

- Weight loss prevalence
- Feeding assistance care provision
- Percent oral intake

Pre-Test: Question #11

1. Feeding assistance care provision
2. Percent oral intake
3. Weight loss prevalence
Quality Improvement Measures

- Feeding assistance is directly under staff control
- Low oral intake more related to assistance and precedes weight loss

Practice Implications

- Continuous improvement programs focus on care process measures under control of staff
Pre-Test: Question #12

What is the major problem with observing meals?

a) Nurse aides will change behavior  
b) Residents will be bothered  
c) Requires too much time  
d) No major problems

Pre-Test: Question #13

How frequently should a supervisor observe meals to maintain quality?

a) Daily  
b) Once/week  
c) Twice/week  
d) Once/month
Practice Implications

Observations during meals are

- essential for quality improvement
- non obtrusive
- do not require a lot of time
- more accurate & specific than medical record