DISCLAIMER:

Video will be taken at this clinic and potentially used in Project ECHO promotional materials. By attending this clinic, you consent to have your photo taken and allow Project ECHO to use this photo and/or video. If you don’t want your photo taken, please let us know. Thank you!

ECHO Nevada emphasizes patient privacy and asks participants to not share ANY Protected Health Information during ECHO clinics.
Eat Well, Be Well:
Addressing Malnutrition of the Older Adult

Shanna Marie Baltar, DO, PGY-4
Geriatric Medicine Fellow
UNRSOM
November 15, 2017
Learning Objectives

• Explain the importance of diagnosing malnutrition in the older adult
• Utilize the most recent consensus statement for the diagnosis of malnutrition
• Identify potentially modifiable causes
• Incorporate current data regarding the use of supplementation and orexigenic medication towards clinical decision making
Studies have shown...

- The economic burden of malnutrition in the US is ~ $157 billion/year [17].

- Undernutrition affects ~ 3 million older adults in the US [17].

- Malnutrition is associated with functional decline, decreased quality of life, prolonged hospital stay, frequent hospital readmission, and greater in-hospital mortality [1].
Defining Malnutrition [20]

• Adult undernutrition occurs along a continuum
  • inadequate intake and/or increased requirements
  • impaired absorption
  • altered transport
  • altered nutrient utilization

• Weight loss occurs at multiple points along this continuum
Importance of Diagnosing Malnutrition

- Development of pressure ulcers [21]
- Postoperative delirium [10]
- Structural brain changes [16]
- Physical and cognitive decline [17]
- Early institutionalization [14]
- Alzheimer’s Disease [9]
- Mortality [10]
Screening

The *simplest* screen for nutritional adequacy and change in nutritional status in older adults is serial measurements of body weight.

Clinically significant weight loss is defined by the Minimum Data Set (MDS) as:

5% *decrease of baseline body weight in 1 month or 10% in 6 months*
“Current approaches to the diagnosis of malnutrition vary widely, and there is generally poor specificity, sensitivity and interobserver reliability among the current protocols in use. This lack of standardization of diagnostic characteristics results in widespread confusion and potential misdiagnosis” [5].
Characteristics Recommended for the Diagnosis of Malnutrition [20]

Consensus statement recommended by the Academy of Nutrition and Dietetics and the American Society of Parenteral and Enteral Nutrition
Diagnosing Malnutrition [20]

To make the diagnosis, need 2 of 6:

1. Insufficient energy intake
2. Weight loss
3. Loss of muscle mass
4. Loss of subcutaneous fat
5. Localized or generalized fluid accumulation that may mask weight loss
6. Diminished functional status as measured by handgrip strength
Calculating Calorie Requirements

Estimated Energy Requirement (EER)

**Women:**
354.1 – (6.91 x age [yrs]) + PAC x (9.36 x wt [kg] + 726 x ht [m])

**Men:**
661.8 – (9.53 x age [yrs]) + PAC x (15.91 x wt [kg] + 539.6 x ht [m])
Case Discussion
68 year-old male

- Admitted for acute rehab after a right femur fracture and total hip replacement complicated by prosthesis infection

- PMH: Rheumatoid arthritis, severe osteoarthritis, DVT/PE s/p IVC filter placement, depression, obstructive sleep apnea, obesity
Outpatient medications:
Amitriptyline, Percocet, Meloxicam
Hydroxychloroquine Sulfate, Methotrexate, Methylprednisolone, Sulfasalazine
Cholecalciferol, Cyanocobalamin, Ferrous sulfate
Folic Acid, Omeprazole, Atorvastatin, Enoxaparin

Medications added after admission:
Lasix, Potassium Chloride, IV antibiotics (Vancomycin, Zosyn, Doxycycline)
Pertinent History of Present Illness:
• He complained of poor appetite since his injury along with a 35 lb unintended weight loss

Objective data:
• Height 190 cm
• Weight 9/26/17 = 112 kg (BMI 31); 10/2/17 = 102 kg (BMI 28); Target weight = 89 kg
• EER based on 102 kg ~ 2600 kcal/day
• Documented consumption = 50% of EER
Treatment/Intervention
“MEALS ON WHEELS [2]”

Medications
Emotional
Alcoholism/Abuse
Late-life paranoia/bereavement
Swallowing problems
Oral factors
Nosocomial infections
“MEALS ON WHEELS [2]”

Wandering

Hyperthyroidism
  • Hypercalcemia
  • Hypoadrenalism

Enteral problems

Eating problems

Low salt or cholesterol

Social isolation/Stones
Simple Solutions

- Avoid dietary restrictions
- Feeding
- Shopping Assistance
- Individual Preferences
- United States Department of Agriculture Website
  - https://www.choosemyplate.gov/older-adults
The Role of Nutritional Supplementation
Multivitamins (MVI)

- The use of MVI in the older adult remains controversial.
- MVI and mineral supplementation purchases were worth ~ $36.7 billion in 2014 [4].
- Women are more likely to take them than men.
- Conflicting data exists regarding MVI and the incidence of infection.
- MVI has been shown to be associated with increased risk of total death when compared with corresponding non use [4].
  - Iowa Women’s Health Study [11]
So what is the consensus on MVI use?

- No indication for the use of routine supplementation with MVI to reduce infection
- Insufficient evidence to recommend for or against it to prevent chronic disease [13].
- Little justification for general and widespread use of dietary supplements
- Recommend use for only a strong medically based case such as symptomatic nutrient deficiency [11]
Vitamin D [4]

- Half of older adults in the United States with hip fractures are considered Vitamin D deficient.
- Evidence is unclear as to whether vitamin D2 (ergocalciferol) or D3 (cholecalciferol) is better [4].
- Concentration of 30 ng/mL is the minimum goal per the American Geriatric Society guidelines.
Orexigenics

**Megestrol Acetate**

- Can increase prealbumin in recently hospitalized patients but cortisol suppression is common at higher doses and may persist [15].

- Shown to not benefit nutritional or clinical outcomes [15].

- Results in less muscle strength and functional performance gains in frail elderly patients undergoing high-intensity progressive resistance muscle training (PRMT) [18].

- Added to Beer’s Criteria list in 2015 due to adverse effects including: worsening congestive heart failure, impaired corticoadrenal axis, and an increased incidence of DVT.
Take Home Points

• A consensus statement is in place to assist clinicians in the diagnosis of malnutrition.

• Addressing modifiable causes of malnutrition in the older adult plays an important role in potentially preventing a number of geriatric syndromes.

• There is inadequate data to demonstrate the benefit of routine vitamin and mineral supplementation in the absence of a nutritional deficiency.

• Orexigenic medication has been shown to cause more harm than benefit.
Questions?
Special thanks to the EJC Foundation for their support of Sanford Center Geriatric Specialty Clinic

Sanford Center for Aging
775-784-4744
med.unr.edu/aging