Exclusive Joint Webinar Presentation

The Academy/ A.S.P.E.N. Malnutrition Consensus Criteria: Applying Them in Your Practice

Presented by Ainsley Malone, MS, RD, CNSC, LD, FAND, FASPEN

Presented by

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Becky Dorner & Associates

Complimentary 1-Credit Continuing Education Webinar

Objectives

1. Describe the practical steps for determining a patient's/resident's malnutrition etiology.
2. List the six malnutrition criteria and outline processes for their identification in specific patients/residents.
3. Discuss inclusion of the malnutrition criteria in the nutrition care process and medical record documentation.

Malnutrition – Not a New Issue

JAMA®
The Journal of the American Medical Association

PERCENTAGE OF WEIGHT LOSS: BASIC INDICATOR OF SURGICAL RISK IN PATIENTS WITH CHRONIC PEPTIC ULCER

HIRAM O. STUDLEY

(Studley, ***JAMA***, 1936)

Malnutrition Is Common in US Hospitalized Patients

% Malnutrition* in Hospital-Admitted Patients

Hospital	Specialty	# Pts	Malnourished Pts
Boston, MA[1]	General	251	44%
Birmingham, AL[2]	General	134	48%
Multiple V.A. sites[3]	General	2,448	39%
Boston, MA[4]	Pediatric	224	25%
Syracuse, NY5	ICU	129	43%
Chicago, IL6	General	404	54%
Chicago, IL7	ICU	57	50%
Chicago, IL8	ICU >65	260	34%
Pennsylvania 9	General and ICU	274	32%/44%

(1. Blackburn et al, 1977; 2. Weinsier et al, 1979; 3. VA Study 1991; 4. Hendricks et al, 1995; 5. Giner et al, 1996; 6. Braunschweig et al, 2000; 7. Sheehan et al, 2010; 8. Sheehan et al, 2013.; 9. Nicolo et al, 2014)

Malnutrition Prevalence

- General patient population
  - Braunschweig, et al, 2000
  - Observational/retrospective
- Patients with LOS > 7 days (n=404)
- Nutrition assessment via SGA
  - Within 72 hrs of admission and at discharge

Normally Nourished (SGA-A)	Moderately Malnourished (SGA-B)	Severely Malnourished SGA-C
46% (n=185)	31% (n=125)	23% (n=94)

(Braunschweig et al, ***J Am Diet Assoc***, 2000)

Nutritional Change at Discharge

Malnutrition prevalence at discharge: 59%

Admission Nutrition Status	Normal	Moderate	Severe
Normal (n=185)	115	52	18
Moderate (n=125)	40	60	25
Severe (n=94)	11	35	48

Outcome Measurements

Variable	Did not decline (n=278)	Declined (n=126)
Charges ($)	34,336±1,812	45,762$^{(p\geq 0.004)}$±4,021
Length of stay	16±0.7	19±1.3
Complications (%)	50	62$^{p\geq 0.03}$
Infection (%)	21	21

(Braunschweig et al, ***J Am Diet Assoc***, 2000)

Impact on Patient Outcomes

- *Patient Characteristics and the Occurrence of Never Events*
- US epidemiologic analysis of 887,189 surgery cases from 1368 hospitals, using HCUP NIS data from 2002-2005
- *Malnutrition can dramatically increase the risk of severe events*
  - *4X more likely to develop pressure ulcers*
  - *2X more likely to have SSI*
  - *5X more likely to have CAUTI*

(Fry et al, ***Arch Surg***, 2010)

Table 5. Comorbid Conditions of Discharged Patients With and Without a Diagnosis of Malnutrition, United States, 2010.

Table 4. Admission and Discharge Characteristics of Discharged Patients With and Without a Diagnosis of Malnutrition, United States, 2010.

	Malnutrition Diagnosis		No Malnutrition Diagnosis		
Characteristic	Estimate	95% CI	Estimate	95% CI	*P* Value
Length of stay (mean days)	12.6	12.1-13.1	4.4	4.3-4.5	<.0001
Total costs (mean $)	26,944	25,355-28,533	9,485	9,144-9,826	<.0001
Admission type (%)					
Emergency	59.9	57.1-62.7	46.2	44.3-48.0	<.0001
Urgent	19.6	17.2-22.0	18.8	17.0-20.5	
Elective	17.4	15.3-19.5	24.5	23.3-25.7	
Newborn	2.2	1.9-2.5	9.9	9.4-10.5	
Trauma center	0.9	0.6-1.2	0.6	0.5-0.8	
Other	0.0*	0.0-0.0	0.0*	0.0-0.0	
Discharge disposition (%)					
Routine	28.8	27.7-29.9	72.6	71.7-73.4	<.0001
Transfer to short-term hospital	3.6	3.3-3.9	2.1	2.0-2.2	
Other transfers	38.1	37.2-39.0	12.2	11.8-12.6	
Home health care	19.8	19.0-20.6	10.4	9.8-11.0	
Against medical advice	0.6	0.5-0.7	1.0	0.9-1.1	
Died	8.8	8.5-9.1	1.7	1.6-1.7	
Discharged alive, destination unknown	0.3*	0.1-0.5	0.0	0.0-0.1	

(Corkins et al, ***JPEN J Parenter Enteral Nutr,*** 2014)

JPEN
JOURNAL OF PARENTERAL AND ENTERAL NUTRITION

Malnutrition in the Surgical Patient

TABLE 1: Patients characteristics, hospitalization, and outcome.

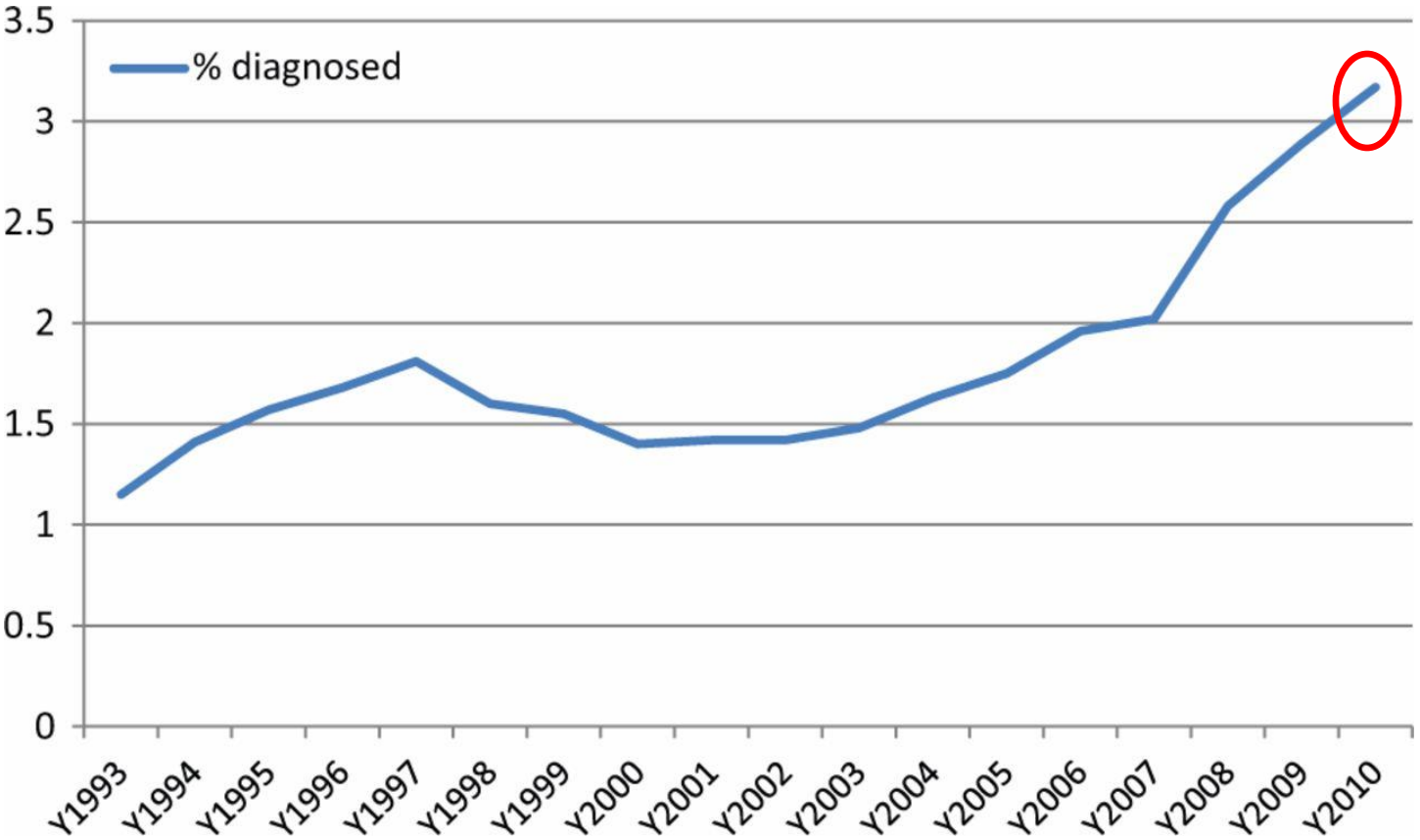
	High risk group	No risk group	*P*
Patients	32 (33.33%)	64 (66.67%)	
Median Age (y)	57 (24–94)	54 (19–90)	NS
Gender (male)	17 (53.12%)	35 (54.68%)	NS
Admission- emergency (versus elective)	22 (68.8%)	34 (53.1%)	.3
Malignancy (versus benign)	14 (43.72%)	12 (18.75%)	.02
Surgery performed	19 (59.37%)	38 (59.37%)	.8
LOS (d)*	18.8 ± 11.5	7 ± 5.3	.003
Nutritional therapy	15.6%	7.9%	.3
Mortality			
In hospital	3 (9.4%)	0 (0%)	.017
Cumulative 6 months	6 (18.8%)	1 (1.6%)	.006
Cumulative 12 months	7 (21.9%)	1 (1.6%)	.002

*Mean ± SD.

(Ben-Ishay et al, ***Gastroenterol Res Pract***, 2011)

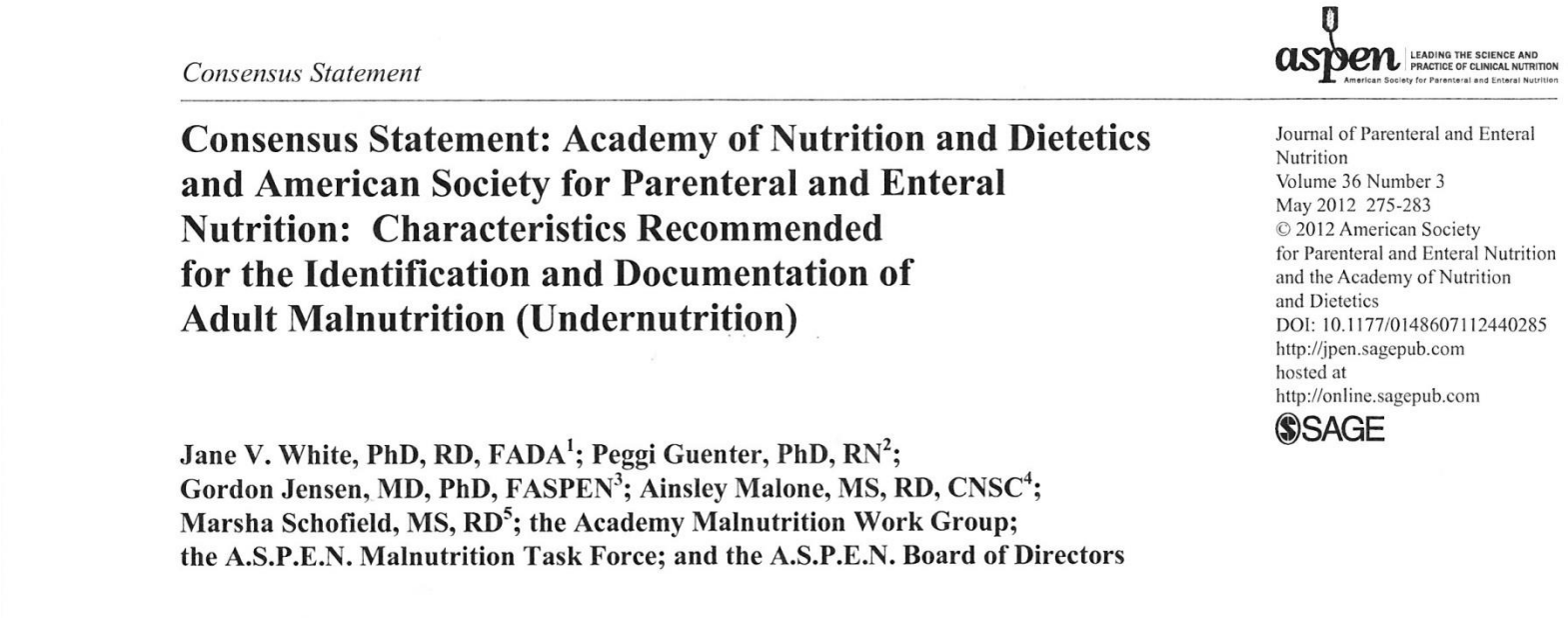
Clinical Practice – Coding for Malnutrition

Percentage Of Hospital Discharges With Malnutrition Diagnoses, By Year, United States.



(Corkins et al, ***JPEN J Parenter Enteral Nutr***, 2014)

A New Approach to Defining Malnutrition



Consensus Statement

aspen LEADING THE SCIENCE AND PRACTICE OF CLINICAL NUTRITION
American Society for Parenteral and Enteral Nutrition

Consensus Statement: Academy of Nutrition and Dietetics and American Society for Parenteral and Enteral Nutrition: Characteristics Recommended for the Identification and Documentation of Adult Malnutrition (Undernutrition)

Jane V. White, PhD, RD, FADA[1]; Peggi Guenter, PhD, RN[2]; Gordon Jensen, MD, PhD, FASPEN[3]; Ainsley Malone, MS, RD, CNSC[4]; Marsha Schofield, MS, RD[5]; the Academy Malnutrition Work Group; the A.S.P.E.N. Malnutrition Task Force; and the A.S.P.E.N. Board of Directors

Journal of Parenteral and Enteral Nutrition
Volume 36 Number 3
May 2012 275-283

DOI: 10.1177/0148607112440285
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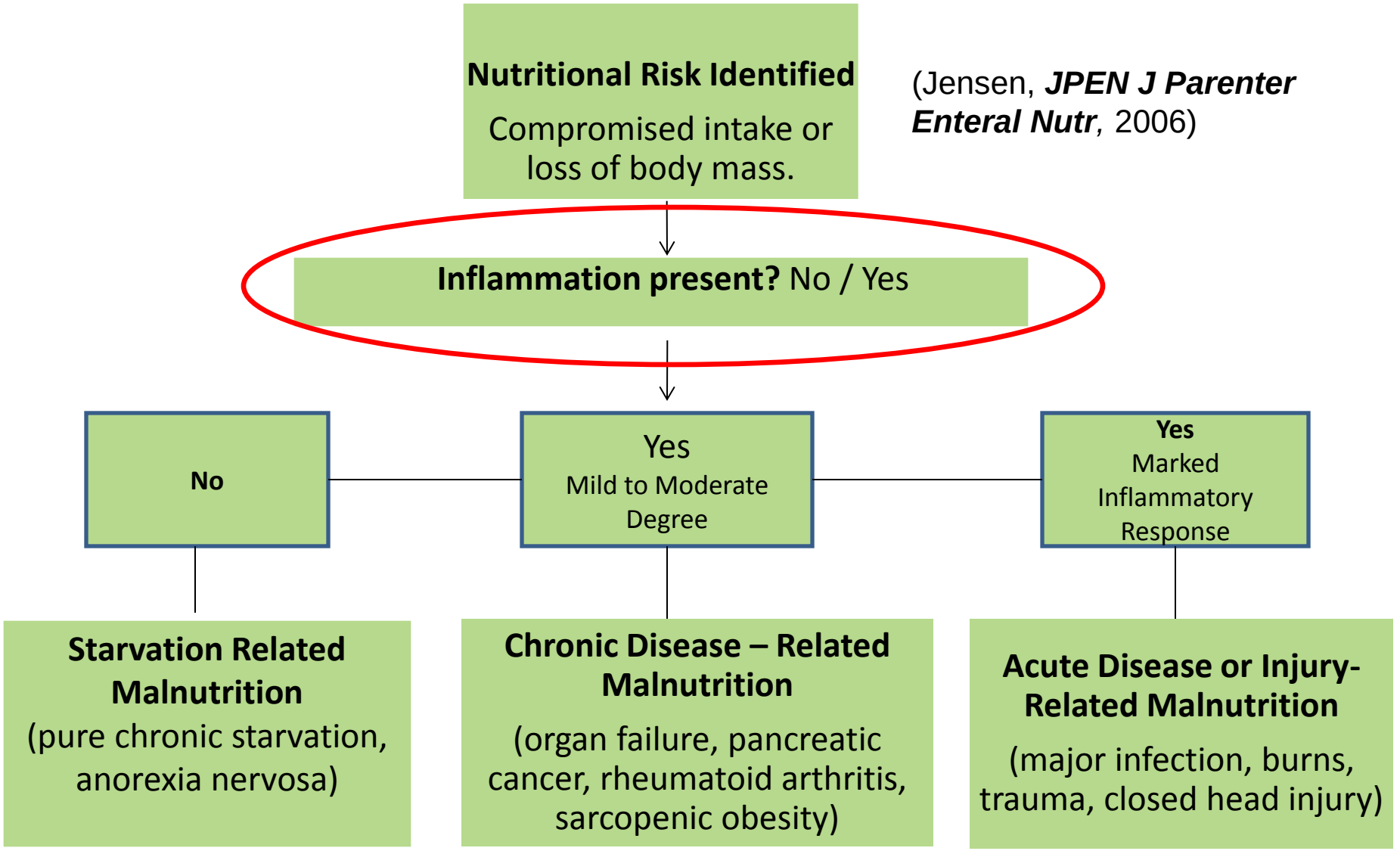
(White et al, ***JPEN J Parenter Enteral Nutr***, 2012)

Consensus Malnutrition Characteristics

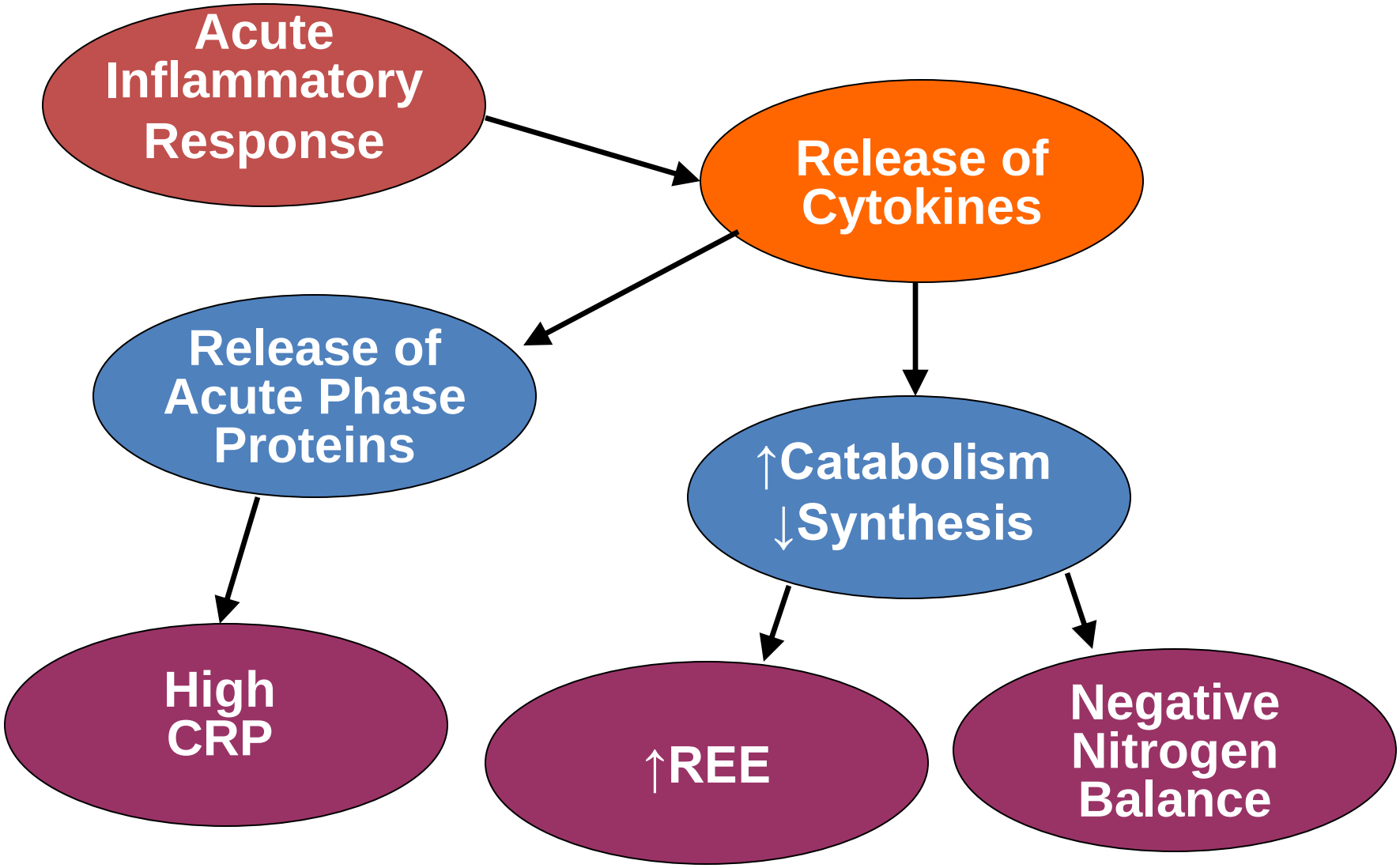
- Unintentional weight loss
- Evidence of inadequate intake
- Loss of muscle mass
- Loss of subcutaneous fat
- Fluid accumulation
- Reduced hand grip strength

The presence of two or more necessary for the diagnosis of malnutrition

Etiology Based Malnutrition Definitions



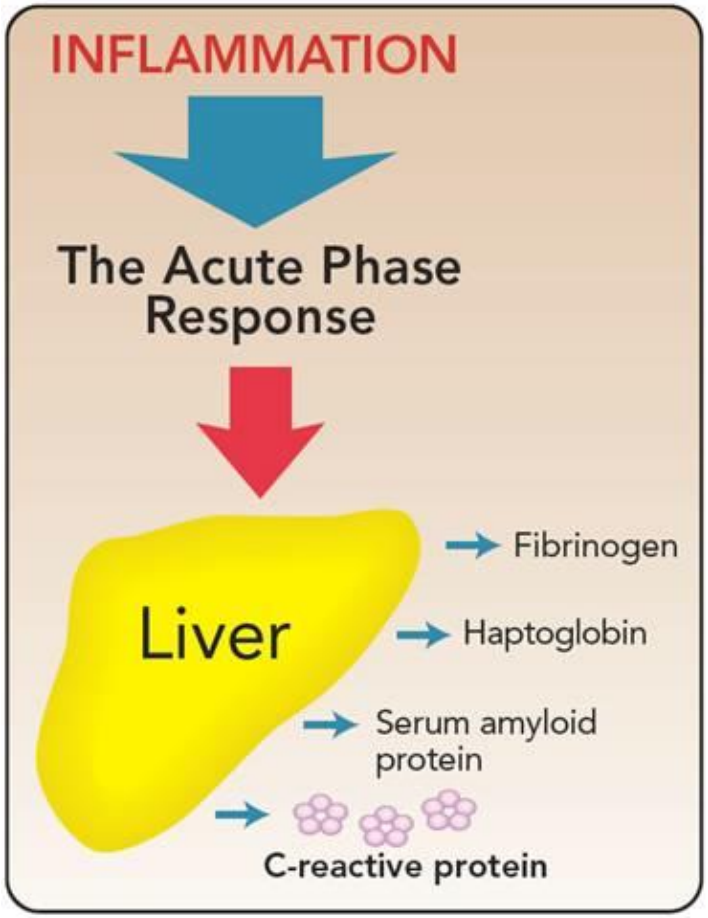
The Inflammatory Response - Acute



Laboratory Parameters-Inflammation

- ↓'d serum albumin
- ↓'d serum transferrin
- ↓'d serum prealbumin
- Elevated C-reactive protein (↓'d in liver failure)
- Elevated blood glucose
- ↓'d or increased white blood cell count
- ↑'d percentage of neutrophils in the CBC
- ↓'d platelet count
- Marked negative nitrogen balance

Inflammation and Protein Levels



(Fayyad, 2014)

C-Reactive Protein

- Major acute phase protein
- Effective measure of general inflammation
  - ✧ severity and duration

Inflammatory Markers in Organ Failure

- ↑'d TNF, CRP, fibrinogin[1] and neutrophil/leukocyte ratio in COPD[2]
- ↑'d TNF, CRP and interleukin-6 in those with CHF[3]

(1. Thomsen, ***JAMA***, 2013; 2. ***Inflammation***, 2013; 3. Kalogeropoulos et al, ***J Am Coll Cardiol***, 2010)

Clinical Parameters -Inflammation

- Fever
- Hypothermia
- Presence of infection
- Urinary tract infection
- Pneumonia
- Blood stream infection
- Wound or incisional infection
- Abscess

Chronic Disease – Mild to Moderate Inflammatory Response

- Cardiovascular disease
- Celiac disease
- Chronic pancreatitis
- Chronic obstructive pulmonary disease
- Congestive heart failure
- Cystic fibrosis
- Dementia
- Diabetes mellitus
- Inflammatory bowel disease
- Hematologic malignancies
- Metabolic syndrome
- Neuromuscular disease
- Obesity
- Organ failure/transplant (kidney, liver, heart, lung or gut)
- Pressure wounds
- Rheumatoid arthritis
- Solid tumors

(Jensen G. A.S.P.E.N. Adult Core Curriculum, 3rd ed 2012)

Acute Disease/Injury – Severe Inflammatory Response

- Adult respiratory distress syndrome
- Closed head injury
- Critical illness
- Major abdominal surgery
- Major infection/sepsis
- Multi-trauma
- Systemic inflammatory response syndrome
- Severe burns
- Severe acute pancreatitis

(Jensen G. A.S.P.E.N. Adult Core Curriculum, 3rd ed 2012)

Malnutrition Criteria

Insufficient Energy Intake

- Review of food / nutrition intakes
- Obtain calculated / measured energy requirements
- Compare actual vs. requirements
- Report inadequacies as percent consumed over a period of time

(Kondrup, ***Clin Nutr***, 2001)

Tools to Determine Intake Compared with Requirement

- Diet Intake
  - Directly from patient and/or family
  - Diet history/24 hour recall/3 day recall, etc.
    - Less than half of your meals
    - Less than 75% of your meals
- Meal assessment – during hospitalization
  - Categorizes by %
    - 100, 75, 50, 25, 0
- Nutrition intervention during hospital course
- Estimating requirements
  - Indirect calorimetry
  - Energy equations (Mifflin St Jeor, Penn State, etc)

Unintentional Weight Loss

- Unintended weight loss is a well-validated indicator of malnutrition
- Frequent weighing is preferred standard
- Factors that interfere with weight accuracy
  - Underlying disease state
  - Fluid status
  - Equipment malfunction / human error
  - Errors in recall

(Jensen, ***JPEN J Parenter Enteral Nutr***, 2012)

Weight Loss

- Usual weight should be used to determine percent of weight loss over time
- Bed scale vs. standing measurement
- Follow weight patterns
- Estimate dry weight (consider height, previous history, intake status)

(1. Blackburn et al, ***JPEN J Parenter Enteral Nutr***, 1977; 2. Klein et al, ***JPEN J Parenter Enteral Nutr***, 1977; 3. Rosenbaum et al, ***JPEN J Parenter Enteral Nutr***, 2000; 3. Keys, ***JAMA***, 1948)

Loss of Subcutaneous Fat and Muscle

Tools to Determine Body Composition

- Anthropometric Measurements-skinfolds, circumference
- Bioelectrical Impedance
- BodPod
- Body Mass Index (low)
- Physical Exam

Nutrition-Focused Physical Exam

- Exam which uses physical assessment and physical function findings to help determine nutritional status and diagnose malnutrition
- Systematic approach (head-to-toe)
- Components
  - Use observation and palpation techniques
  - Confer findings with patient
- An expected competency for all RDN's
- Multiple educational workshops
- Abbott Nutrition Health Institute Simulation module https://anhi.org/login

Physical Assessment - Fat

Exam Area	Tips	Severe Malnutrition	Mild-Moderate Malnutrition	Well Nourished
Subcutaneous Fat Loss				
Orbital Region	View patient when standing directly in front of them; touch above cheekbone	Hollow look, depressions, dark circles, loose skin	Slightly dark circles, somewhat hollow look	Slightly bulged fat pads. Fluid retention may mask loss
Upper Arm Region Triceps/Biceps	Arme bent, roll skin between fingers, do not include muscle in pinch	Very little space between folds, fingers touch	Some depth pinch but no ample	Ample fat tissue, obvious between folds of skin
Thoracic and Lumbar Region – Ribs, Lower Back, Midaxillary Line	Have patient press handshard against a solid object	Depression between ribs very apparent Iliac crest very prominent	Ribs apparent, depressions between them less pronounced Iliac crest somewhat prominent	Chest is full; ribs do not show Slight to no protrusion of the iliac crest

The Academy of Nutrition and Dietetics, 2015, Nutrition Care Manual

Physical Assessment - Muscle

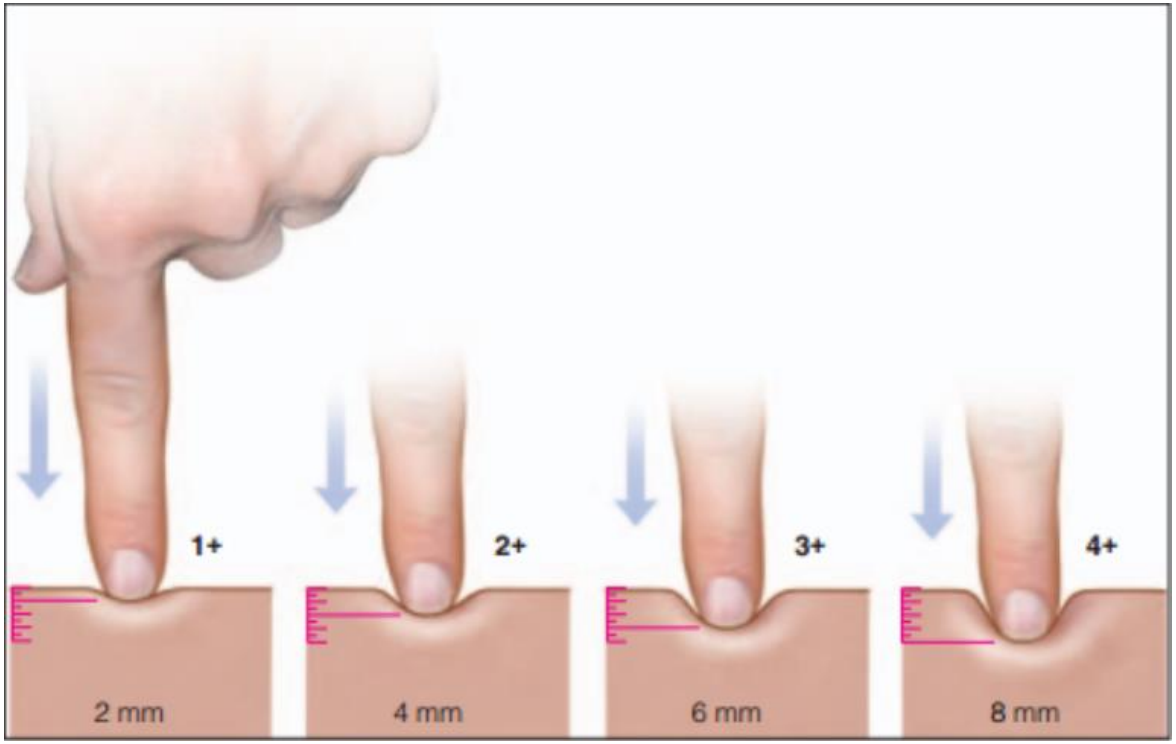
Loss of Muscle Mass				
Exam Area	**Tips**	**Severe Malnutrition**	**Mild-Moderate Malnutrition**	**Well Nourished**
Temple - Temporalis Muscle	View patient when standing directly in front of them, ask patient to turn head side to side	Hollowing, scooping, depression	Slight depression	Can see/feel well defined muscle
Clavicle Bone Region – Pectoralis Major, Deltoid, Trapezius Muscles	Look for prominent bone. Make sure patient is not hunched forward	Protruding, prominent bone	Visible in male, some protrusion in female	Not visible in male, visible but not prominent in female
Clavicle and Acromion Process – Deltoid Muscle	Patient arms at side; observe shape	Shoulder to arm joint looks square. Bones prominent. Acromion protrusion very prominent	Acromion process may slightly protrude	Rounded, curves at arm/shoulder/ neck

Exam Area	Tips	Severe Malnutrition	Mild-Moderate Malnutrition	Well Nourished
Scapular Bone Region – Trapezius,Suprasp inus,Infraspinus Muscles	Ask patient to extend hands straight out, push against solid object	Prominent, visible bones, depression between ribs/scapula or shoulder/spine	Mild depression or bone may show slightly	Bones not prominent, no significant depressions
Dorsal Hand - Interosseous Muscle	Look at thumb side of hand; look at pads of thumb when tip of forefinger touching tip of thumb	Depressed area between thumb-forefinger	Slightly depressed	Muscle bulges, could be flat in some well nourished people
Patellar Region – Quadricep Muscle	Ask patient to sit with leg propped up bent at knee	Bones prominent, little sign of muscle around knee	Knee cap less prominent, more rounded	Muscles protrude, bones not prominent
Anterior Thigh Region - Quadriceps Muscles	Ask patient to sit, prop leg up. Grasp quads to differentiate muscle tissue from fat tissue	Depression/line on thigh, obviously thin	Mild depression on inner thigh	Well rounded, well developed
Post Calf Region – Gastrocnemius Muscle	Grasp the calf muscle to determine amount of tissue	Thin, minimal to no muscle definition	Not well developed	Well-developed bulb of muscle

Assessing Fluid Accumulation

- Chart review-disease process
- Intake/Output records
- Weight
- Physical exam-edema
- Ascites-check history, imaging studies
- Masks body compartment assessment (fat, muscle, weight)
- Use with caution when determining degree of malnutrition!

Assessment of Edema



http://www.med-health.net/Edema-Grading.html

ASSESSMENT OF PITTING EDEMA			
2mm or less = 1 + Edema	**2-4mm = 2 + Edema**	**4-6mm = 3 + Edema**	**6-8mm = 4 + Edema**
✓ Slight pitting ✓ No visible distortion ✓ Disappears rapidly	✓ Somewhat deeper pit ✓ No readably detectable distortion ✓ Disappears in 10-15 seconds (2-4 mm indent)	✓ Pit is noticeably deep ✓ May last more than 1 minute ✓ Dependent extremity looks fuller and swollen (4-6mm)	✓ Pit is very deep ✓ Lasts as long as 2-5 minutes ✓ Dependent extremity is grossly distorted (6-8mm)

Functional Markers

- Overall energy, strength, endurance
- Consider non-malnutrition causes
  - neuromuscular diseases, medication, age-related, trauma, activity/immobility
- Correlate with other characteristics (wt loss, intake)
- Ability to perform ADLs
- Ability to wean from mechanical ventilation
- Hand-grip strength – validated proxy for LBM[1]
- Independent predictor of poor nutrition status[2]

(1. Norman et al, ***Clin Nutr***, 2011; 2. Flood et al, ***Clin Nutr***, 2014)

Questions

Application/Patient Cases

Patient Presentation - CB

- 59 year old male admitted from the Emergency Department with acute rectal bleeding
- Colonoscopy on hospital day (HD) # 3 revealed a partially obstructing mid-rectal mass suspicious for malignancy.
- HD #6, the patient underwent a lower anterior resection (colon) with anastomosis.
- Nutrition Risk Assessment
  - Admission nutrition screen: Malnutrition Screening Tool Score: 0
  - RD monitored patient during admission and completed further assessment on HD #7 due to NPO status

Patient Presentation - CB

Nutrition Presentation

- Anthropometrics
  - Height: 66 inches
  - Current weight: 263 #
  - Admission weight: 268 #
- Weight one months ago: 280# (per patient interview by RD)

Diet History

- NPO since admission
- Anorexia and reduced oral intake over last month – patient reported eating about half of his normal meal intake during same time period

Physical Assessment

- No evidence of subcutaneous fat or muscle loss
- Bilateral lower extremities: pitting edema: 2+

Patient Presentation - CB

Clinical Data

- White blood cells: 16 K
- Temperature: 99.9 F
- Albumin: 1.8 g/dL
- Prealbumin: 7.8 mg/dL

Functional Status

- Physical Therapy evaluation: generalized weakness on admission

What is Your Nutrition Diagnosis?

- *Weight loss:*
  - One month: 6%
- *Energy Intake*
  - No nutrient intake since hospital admission (seven days) – reduced intake over past month
- *Physical Assessment*
  - Moderate edema
- *Functional Assessment*
  - Generalized weakness – not part of current criteria

- Severe malnutrition related to acute illness a/e/b weight loss, inadequate intake and fluid accumulation

Severe Malnutrition in Adults

J Acad Nutr Diet. 2012;112(5): 730-738

For Example: ICD-9 Code 262*	Acute Illness/Injury	Chronic Illness	Social/Environmental
Weight Loss	>2%/1 week >5%/1 month >7.5%/3 months	>5%/1 month >7.5%/3 months >10%/6 months > 20%/1 year	>5%/1 month >7.5%/3 months >10%/6 months > 20%/1 year
Energy Intake	≤ 50% for ≥ 5 days	≤ 75% for ≥ 1 month	≤ 50% for ≥ 1 month
Body Fat	Moderate Depletion	Severe Depletion	Severe Depletion
Muscle Mass	Moderate Depletion	Severe Depletion	Severe Depletion
Fluid Accumulation	Moderate → Severe	Severe	Severe
Grip Strength	Not Recommended in ICU	Reduced for Age/Gender	Reduced for Age/Gender

* 2012 ICD-9-CM Physician Volumes 1 and 2. American Medical Association

Patient Presentation - JS

- 60 yr male diagnosed with larygneal cancer
  - s/p radical laryngectomy with esophogeal reconstruction and grafting
  - Received enteral feeding X 6 days in hospital
  - Discharged to home health care on oral diet
  - Proceeds with adjuvant chemo and radiation therapy (6 week course)
- Ht: 5', 10", Current Wt: 140#, Usual Body Wt: 165# BMI 20
- Nutrition history
  - Reduced eating pre-op X 1 month due to dysphagia
    - Improved following surgery
  - Profound eating difficulty following chemo/radiation
    - Consuming only bites and sips of food

Patient Presentation - JS

- 25 # weight loss over past 3 months
  - 15% weight loss
- Physical Exam
  - Hollowed depression of temporal area
  - Visible clavicle
  - Very visible patella
  - No evidence of fluid accumulation
- Laboratory
  - Albumin: 2.8 g/dL

What is Your Nutrition Diagnosis?

- *Weight loss:*
  - Three months:15%
- *Energy Intake*
  - Eating approximately half of normal food items over past month
- *Physical Assessment*
  - Severe loss of muscle and fat
- *Functional Assessment*
  - Generalized weakness – not part of current criteria
- Severe malnutrition related to chronic disease
  - a/e/b weight loss, inadequate intake and muscle loss

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* 2012 ICD-9-CM Physician Volumes 1 and 2. American Medical Association

Patient Presentation - SB

- HR is a 78 year old female admitted with abdominal pain
  - 1- month history of pain, nausea and vomiting
  - Long history of gastric dysfunction with previous gastric surgeries
  - Patient underwent partial gastrectomy with revision of roux-en-y gastrojejunostomy
    - J tube placement
- Provided with TPN for 2 weeks pre-op due to severe malnutrition
- Height: 64”, Adm Weight: 98#
- Transitioned to EN 10 days post-op
- Ongoing EN intolerance issues with excessive stooling combined with nausea
  - Required 3-4 weeks to achieve goal maintenance energy requirements

Patient Presentation - SB

- Ongoing issues with abdominal abscesses
- Nutrition assessment two months after admission
- Weight: 90#
  - 8% loss
- Physical Exam
  - Evidence of moderate to severe fat and muscle loss
    - Orbital fat loss
    - Very visible clavicle and scapula
    - Very prominent knee bone
- Clinical Parameters
  - Normal WBC, afebrile, Albumin: 2.9 g/dL, Prealbumin 12 mg/dL

What is Your Nutrition Diagnosis?

- *Weight loss:*
  - 2 months: 8%
- *Energy Intake*
  - RD monitoring reports avg of 80%-90% of energy/protein requirements over past month
- *Physical Assessment*
  - Severe loss of muscle and fat
- *Functional Assessment*
  - Generalized weakness – not part of current criteria
- Severe malnutrition related to chronic disease
  - a/e/b weight loss and fat/muscle loss

Severe Malnutrition in Adults

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* 2012 ICD-9-CM Physician Volumes 1 and 2. American Medical Association

Questions

Feasibility and Usability Evaluation

- Nicolo, et al, 2013
- Goals
  - Which criteria would be available at first nutrition assessment
  - Prevalence of severe and non-severe malnutrition
  - Determine patients considered by clinicians to be “at risk” for developing malnutrition
    - not meeting diagnostic criteria
- 101 consecutive patient referrals
  - 73 non ICU
  - 28 ICU

(1. White et al, ***JPEN J Parenter Enteral Nutr,*** 2012; 2. Nicolo et al, ***JPEN J Parenter Enteral Nutr,*** epub 2013)

Feasibility and Usability Evaluation

- Nicolo, et al, 2013[1]
  - Two participating facilities (n=163)
    - Patients referred to RD for assessment
    - Patients consulted for nutrition support

Table 5. Prevalence of Malnutrition Using Academy of Nutrition and Dietetics–American Society for Parenteral and Enteral Nutrition Recommended Clinical Characteristics.[6]

Group	Not Malnourished With Acute Illness	Moderate Malnutrition With Acute Illness	Severe Malnutrition With Acute Illness	Not Malnourished With Chronic Illness	Moderate Malnutrition With Chronic Illness	Severe Malnutrition With Chronic Illness	Moderate Malnutrition With Social-Environmental Circumstances	Severe Malnutrition With Social-Environmental Circumstances
Total	73 (27.8)	17 (6.5)	20 (7.6)	79 (30.0)	32 (12.2)	29 (11.0)	2 (0.8)	1 (0.4)
HUP	21 (20.8)	4 (4.0)	3 (3.0)	42 (41.6)	13 (12.9)	16 (15.8)	1 (1.0)	1 (1.0)
GMC	52 (71.2)	13 (8.6)	17 (11.2)	37 (24.3)	19 (12.5)	13 (8.6)	1 (0.7)	0
Non-ICU	0	0	2 (1.4)	79 (55.6)	30 (21.1)	28 (19.7)	2 (1.4)	1 (0.7)
ICU	73 (67.6)	17 (15.7)	18 (16.7)	0	0	0	0	0

Data are number (percentage). GMC, Geisinger Medical Center; HUP, Hospital of the University of Pennsylvania; ICU, intensive care unit.

(1. White et al, ***JPEN J Parenter Enteral Nutr,*** 2012; 2. Nicolo et al, ***JPEN J Parenter Enteral Nutr,*** epub 2013)

Feasibility and Usability Evaluation

Malnutrition Data

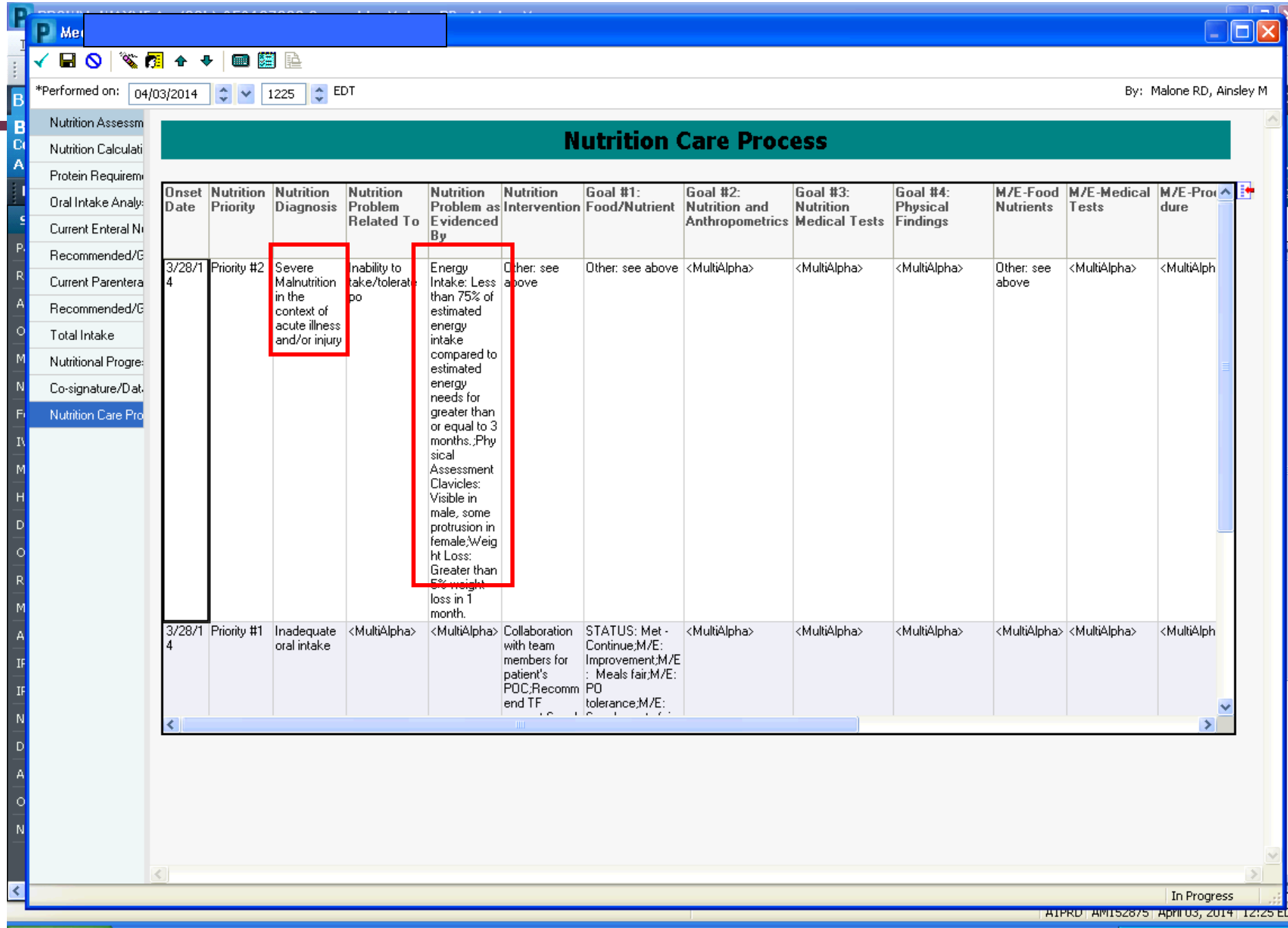
Variable	Entire Group (n=101)	Non-ICU (n=73)	ICU (n=28)
Energy Intake < 50% usual	71 (31%)	19 (33%)	3 (21%)
Energy Intake > 50% usual	49 (69%)	38 (66.7%)	11 (78.5%)
No Weight Loss	37 (46%)	29 (43%)	8 (68%)
1-5% Weight Loss	5 (6%)	3 (4%)	2 (7%)
6-10% Weight Loss	37 (46%)	28 (40%)	9 (32%)
Loss of Fat Mass	27 (25%)	19 (28%)	5 (18%)
No Loss of Fat Mass	73 (75%)	50 (72%)	23 (82%)
Loss of Muscle Mass	33 (34%)	28 (41%)	5 (18%)
No Loss of Muscle Mass	63 (66%)	40 (59%)	23 (82%)
Edema	29 (32%)	28 (41%)	12 (46%)
No Edema	62 (68%)	48 (74%)	14 (54%)

Additional Practice Points

- Requires more extensive clinical review/intervention
  - Review of medical record
  - Patient/family interview
  - Physical assessment
  - 30-60 minutes
  - Verbal communication with MD
    - Especially when EN/PN is most likely intervention

Malnutrition Nomenclature

- **Nutrition Care Process**
- **Nutrition Diagnosis** Severe Malnutrition in the context of acute illness and/injury
- **Nutrition Problem Related To** Small Bowel Obstruction
- **Nutrition Problem as Evidenced By** Energy Intake: Less than or equal to 50 % of estimated energy reqmts…, Weight Loss: Greater than 5% weight loss in 1 month.



*Performed on: 04/03/2014 1225 EDT

By: Malone RD, Ainsley M

Nutrition Assessm
Nutrition Calculati
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Oral Intake Analy
Current Enteral N
Recommended/G
Current Parentera
Recommended/G
Total Intake
Nutritional Progre
Co-signature/Dat
Nutrition Care Pro

Nutrition Care Process

Onset Date	Nutrition Priority	Nutrition Diagnosis	Nutrition Problem Related To	Nutrition Problem as Evidenced By	Nutrition Intervention	Goal #1: Food/Nutrient	Goal #2: Nutrition and Anthropometrics	Goal #3: Nutrition Medical Tests	Goal #4: Physical Findings	M/E-Food Nutrients	M/E-Medical Tests	M/E-Procedure
3/28/14	Priority #2	Severe Malnutrition in the context of acute illness and/or injury	Inability to take/tolerate po	Energy Intake: Less than 75% of estimated energy intake compared to estimated energy needs for greater than or equal to 3 months.;Physical Assessment Clavicles: Visible in male, some protrusion in female;Weight Loss: Greater than 5% weight loss in 1 month.	Other: see above	Other: see above	<MultiAlpha>	<MultiAlpha>	<MultiAlpha>	Other: see above	<MultiAlpha>	<MultiAlph
3/28/14	Priority #1	Inadequate oral intake	<MultiAlpha>	<MultiAlpha>	Collaboration with team members for patient's POC;Recommend TF	STATUS: Met - Continue;M/E: Improvement;M/E: Meals fair;M/E: PO tolerance;M/E:	<MultiAlpha>	<MultiAlpha>	<MultiAlpha>	<MultiAlpha>	<MultiAlpha>	<MultiAlph

In Progress

Recent Malnutrition Activities

Nutrition Care Pathways

- Interactive step by step pathways
  - Adults and pediatrics
- From nutrition screening to transition of care
- Resource documents provided with various steps
  - Electronic links
- Provides ability to assess and evaluate malnutrition related processes

A Call To Action to Address Malnutrition

- Addressing Disease-related Malnutrition in Hospitalized Patients: A Call for a National Goal
  - Joint Commission Journal – October 2015
  - Guenter, P, Jensen G, Patel V, Miller S, Mogensen K, Malone A, Corkins M, Hamilton C, Di-Ghalili R, and A.S.P.E.N.

"It is not that disease-related malnutrition should be a "never event", but absence of timely nutrition assessment, diagnosis, and implementation of a care plan in patients at risk for malnutrition or with preexisting malnutrition should be a "never event".

Academy– Avalere Health

Dialogue Proceedings / Launching the Malnutrition Quality Improvement Initiative

November 2014

Figure 2. Areas Prioritized for Malnutrition Quality Improvement and Measurement

- Execution of a Nutrition Care Plan
- Use of a Validated Nutrition Screening Tool
- Use of a Validated Nutrition Assessment Tool
- Muscle Wasting as an Undesirable Outcome
- Patient Satisfaction as an Outcome
- Malnutrition as a "Never Event"
- Workforce: Provision of Team-Based Care
- Use of an Electronic Health Record (EHR) Template

To Summarize

- Incorporating the Academy/A.S.P.E.N. Consensus will standardize diagnosis/documentation of malnutrition
  - Key step for determining national prevalence and designing intervention research
- Evaluating the presence and degree of inflammation is essential
- Provided key points for evaluating the 6 malnutrition characteristics
- Application via patient case discussion

Thank You!!

Questions

Credit Claiming

You must complete a brief evaluation of the program in order to download your certificate. The evaluation survey will be available on **www.CE.TodaysDietitian.com** for 1 year following the live presentation.

RDs should list CPE activity type 175 in their professional development portfolio.