

The Role of Clinical Guidelines in “Distinctive Nutritional Requirements”

Ainsley Malone, MS, RDN, LD, CNSC, FAND, FASPEN

Clinical Practice Specialist

The American Society for Parenteral and Enteral Nutrition

Nutrition Support Dietitian

Mt. Carmel Grove City Hospital

Columbus, Ohio

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Distinctive Nutritional Requirements - DNR

*“The clinical need for a **specific nutritional intake** (compared to the intake of healthy populations) which may exist by reason of **abnormal physiological manifestation** or **physical impairment*** associated with a **disease or condition**, the dietary management of which results in **clinically meaningful improvements**, including but not limited to nutritional status, health outcomes, or quality of life.”*

Clinical Practice Guidelines - History

- Institute of Medicine – 1992 provided the first formal definition and development process – *“Clinical Practice Guidelines: Directions for a New Program”*
 - Selecting the topic area and conducting an evidence search
 - Evaluating the evidence
 - Translation into practice guidelines
- In 1992 MEDLINE index included 374 practice guidelines
- Increased to 980 in 1996
- In 2012 – estimates of >7500 clinical practice guidelines

Field MJ, Lohr KN, editors. Clinical Practice Guidelines: Directions for a New Program. Washington, DC: National Academies Press (US); 1990. Institute of Medicine (US). Committee to Advise the Public Health Service on Clinical Practice Guidelines.

Clinical Practice Guidelines – Revised Definition

“ Statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options (IOM 2011)”

- May reduce inappropriate practice variation.
- May enhance translation of research into practice.
- Potential to improve healthcare quality and safety.
- Goal of IOM to have all healthcare decisions based in evidence by 2020.

<http://www.iom.edu/Reports/2011/Clinical-Practice-Guidelines-We-Can-Trust.aspx>

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Trustworthy Guidelines – Institute of Medicine

- Be based on a systematic review of the existing evidence.
- Be developed by a knowledgeable, multidisciplinary panel of experts.
- Consider important patient subgroups and patient preferences.
- Be based on an explicit and transparent process.
- Provide ratings of both the quality of evidence and the strength of recommendations.
- Be reconsidered and revised as appropriate.

<http://data.care-statement.org/wp-content/uploads/2016/12/IOMGuidelines-2013-1.pdf>

Guideline Development – Evidence Review

- The foundation is a systematic review of the research evidence bearing on a clinical question, focused on the strength of the evidence.



Clinical Practice Guidelines Rating Systems

- Variable based on selection by specific Guideline group

A: The recommendation is supported by GOOD evidence.

B: The recommendation is supported by FAIR.

C: The recommendation is supported by EXPERT opinion (published)

I: Evidence to make a recommendation is INSUFFICIENT.

Sources of Clinical Guidelines for DNR's

- Time period of relevant clinical nutrition how many guidelines ranges from 2009 to 2019.
- Populations
 - Unintended Weight Loss
 - Oncology
 - Human Immunodeficiency Virus
 - Cancer
 - Geriatrics
 - Liver disease
 - Critical Care



Academy – EAL – Unintended Weight Loss 2009

The Registered Dietitian (RD) should **recommend medical food supplements for older adults** who are undernourished or at risk of undernutrition). Studies support medical food supplementation as a method to provide energy and nutrient intake, promote weight gain and maintain or improve nutritional status or prevent undernutrition. *Rating: Strong*

- Frailty
- Impaired wound healing
- Pressure ulcers
- Hip fracture and orthopedic surgery

https://www.andean.org/template.cfm?template=guide_summary&key=2284

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Academy – EAL – Human Immunodeficiency Virus - 2010

- For people with HIV infection who have diarrhea/malabsorption, the registered dietitian (RD) should encourage the consumption of soluble fiber, electrolyte-repleting beverages and medium-chain triglycerides (MCT).
- Studies of fat malabsorption reported that consumption of MCT resulted in fewer stools, decreased stool fat and weight and increased fat absorption. *Rating: Fair*

- As many as 50% of HIV patients experience diarrhea¹
 - HIV enteropathy
- Systematic review of evidence = grade II evidence²

1Dikman A. Dig Dis Sci 2015;60:2236-2245;

2https://www.andeal.org/template.cfm?template=guide_summary&key=2816

Academy – EAL – Oncology - 2013

- “The RDN may consider use of a medical food supplement (MFS) containing EPA as a component of nutrition intervention.
- Research indicates that MFS containing fish oil () resulted in weight gain or weight stabilization and improvement or preservation of LBM in adult oncology patients with weight loss.

Rating: Strong

- Actual consumption of 1.2g to 2.2g of EPA per day
- In those experiencing weight loss despite symptom control.
- Systematic review of evidence = grade I evidence¹

https://www.andean.org/template.cfm?template=guide_summary&key=4162

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ESPEN Guideline: Nutrition in Cancer Patients 2016

B3 – 1	Efficacy of nutritional intervention
Strength of recommendation STRONG	<i>We recommend nutritional intervention to increase oral intake in cancer patients who are able to eat but are malnourished or at risk of malnutrition. This includes dietary advice, the treatment of symptoms and derangements impairing food intake (nutrition impact symptoms), and offering oral nutritional supplements.</i>
Level of evidence Questions for research	Moderate effect of dietary advice and ONS on clinical outcome

- Malnutrition is associated with poorer prognosis.
- Use of oral nutrition supplements is advised when an “enriched” diet does not achieve nutrition goals.

ESPEN Guideline on Clinical Nutrition and Hydration in Geriatrics - 2018

After discharge from the hospital, older persons with malnutrition or at risk of malnutrition shall be offered **oral nutrition supplement (ONS)** in order to improve dietary intake and body weight, and to lower the risk of functional decline.

Grade A - (100% agreement)

Older persons with malnutrition or at risk of malnutrition with **chronic conditions** shall be offered **ONS** when dietary counseling and food fortification are not sufficient to increase dietary intake and reach nutritional goals.

Grade GPP - (100% agreement)

Grades of recommendation [18].

A	At least one meta-analysis, systematic review, or RCT rated as 1++, and directly applicable to the target population; or a body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results
B	A body of evidence including studies rated as 2++, directly applicable to the target population; or A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results; or and demonstrating overall consistency of results; or Extrapolated evidence from studies rated as 1++ or 1+
0	Evidence level 3 or 4; or Extrapolated evidence from studies rated as 2++ or 2+
GPP	Good practice points/expert consensus: Recommended best practice based on the clinical experience of the guideline development group

Volkert D. Clin Nutr 2019;38:10-47

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ESPEN Guideline on Clinical Nutrition in Liver Disease- 2019

ONS should be used when patients with **severe alcoholic steatohepatitis** cannot meet their caloric requirements through normal food in order to improve survival.

Grade B - (100% agreement)

- Oral intake is often reduced.
- Supplemental nutrition may improve infection and acute mortality

ASPEN/SCCM – Critical Care Nutrition Guidelines 2016 – Specialized Enteral Formulas

- Immune-modulating formulations containing arginine and fish oil be considered in patients with **severe trauma**.

Evidence quality: very low

- Suggest the routine use of an immune-modulating formula (containing both arginine and fish oils) in the surgical ICU for the **postoperative patient** who requires enteral nutrition.

Evidence quality: moderate to low

- Outcome benefit in the trauma population is lacking.
- Multiple meta-analysis in the surgical population confirm reduced infections and shorter hospital length of stay with immune formula.

ASPEN/SCCM – Critical Care Nutrition Guidelines 2016 – Specialized Enteral Formulas

Based on **expert consensus**, we suggest that high- protein hypocaloric feeding be implemented in the care of **obese** ICU patients to preserve lean body mass, mobilize adipose stores, and minimize the metabolic complications of overfeeding.

- Use may be associated with improved outcomes (lower ICU stay, reduced antibiotic use).
- This type of formula provides approximately 75% – 100% more protein compared to standard enteral formulas.

In Summary

- Clinical practice guidelines permit evidence based decision making
 - Supports quality patient care
 - Focused on positive health care outcomes
- Clinical practice guidelines have increased rapidly since 1991 following the IOM's initial report.
- Several key nutrition societies have developed guidelines for specific populations.
- Key guideline recommendations support the use of enteral "formulas" and "oral nutrition supplements" that may lead to improved clinical outcomes.
- Support key tenets in the definition of "DNRs".

THANK YOU!

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