



Body System: Patient-Based Care		
Session Topic: Nutrition Principles and Assessment		
Educational Format		Faculty Expertise Required
REQUIRED	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.
OPTIONAL	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u>
Professional Practice Gap	Learning Objective(s) that will close the gap and meet the need	Outcome Being Measured
<ul style="list-style-type: none"> Physicians often receive inadequate training in medical school with regard to nutrition & nutrition counseling. Most patients do not actively ask seek nutritional advice from their physician. Patients have many misconceptions regarding nutrition. New 2015 USDA Dietary Guidelines for Americans is due to be published. 	<ol style="list-style-type: none"> Evaluate current controversies and research regarding carbohydrates, proteins and fats. Provide patient education and resource materials regarding nutrition principles during well exam visits. Use motivational interviewing techniques to initiate fitness conversations with patients. Counsel patients regarding the benefits from dietary intervention in the treatment of common illnesses, particularly metabolic diseases. 	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.
ACGME Core Competencies Addressed (select all that apply)		
X	Medical Knowledge	Patient Care
X	Interpersonal and Communication Skills	Practice-Based Learning and Improvement
	Professionalism	Systems-Based Practice
Faculty Instructional Goals		
<p>Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.</p> <ul style="list-style-type: none"> Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations 		



- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
 - Visit <http://www.aafp.org/journals> for additional resources
 - Visit <http://familydoctor.org> for patient education and resources
- Provide recommendations regarding current controversies and research regarding carbohydrates, proteins and fats.
- Provide strategies and resources regarding patient education and resource materials regarding nutrition principles during well exam visits.
- Provide recommendations for using motivational interviewing techniques to initiate fitness conversations with patients.
- Provide strategies and resources for counseling patients regarding the benefits from dietary intervention in the treatment of common illnesses, particularly metabolic diseases.
- Provide recommendations regarding guidelines for Medicare reimbursement.
- Provide recommendations to maximize office efficiency and guideline adherence to counseling patients regarding general nutrition principles.
- Provide an overview of newly available treatments, including efficacy, safety, contraindications, and cost/benefit relative to existing treatments.

Needs Assessment

Family physicians frequently advise patients regarding diet and nutritional health. In fact, diet and nutrition health education was provided during 32 million visits, exercise education was provided during 14 million visits, and weight reduction education was provided during 8 million visits.¹ Recent reports identify dietary factors as the single most significant risk factor for disability and premature death; however, despite a wealth of knowledge that links food and health, nutrition receives little attention in medical practice.²

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment survey indicate that family physicians report a statistically significant and meaningful gap in knowledge and medical skill to competently provide guidance to their patients regarding nutrition counseling; health promotion and patient education and malnutrition management.³ More specifically, CME outcomes data from 2012 and 2013 AAFP Assembly: *Diets/Weight Loss Options*, and *Specialized Diets* sessions, and 2015 AAFP FMX (formerly Assembly) *Vitamin Deficiencies*, and *Nutritional Supplements* sessions suggest that physicians have knowledge and practice gaps with regard to managing vitamin deficiencies; counseling patients about dietary supplements; counseling patients about weight loss options, including the use of motivational interviewing; having an awareness of patient education materials, tools, and resources, including structured programs such as AAFP AIM-HI; utilizing a health and nutrition specialist; using follow-up and monitoring; developing collaborative plans that including nutrition monitoring, diet, and exercise; and implementing a team-based approach to manage dieting and weight loss.⁴



Reports from the both the Association of American Medical Colleges (AAMC) and from the Nutrition in Medicine staff at the University of North Carolina at Chapel Hill (UNC), indicate that medical schools are not providing sufficient education with regard to nutrition.⁷ In fact, the amount of nutrition education that medical students receive is so "inadequate" that "medical school graduates feel unprepared to intervene in their patients' care with regard to nutrition," according to the UNC preliminary survey results. There are several barriers to effective nutritional counseling which include which include skepticism about the effectiveness of nutritional interventions, concerns about patient response and compliance, lack of specific knowledge and training about nutrition as it relates to disease, and the perceived un-palatability of nutritional changes, time constraints, and absence of guidelines.⁸⁻¹⁰

More than 80% of Americans say they plan to change their diet or exercise regimen, with most trusting physicians more than online resources for advice on healthy behaviors; however, only about 40% will consult their physician while doing so.¹¹ Studies suggest that patients are more likely to read nutrition labels when prompted to do so by their physician.¹² Physicians need to be provided strategies to help overcome this physician-patient communication barrier. Adding to this communication barrier is the fact that much of the dietary information presented as fact, is actually myth (i.e. concepts poorly supported or contradicted by the scientific evidence).¹³ Physicians will require continuing medical education regarding the new 2015 United States Department of Agriculture (USDA) Dietary Guidelines for Americans.¹⁴ Additionally, physicians can utilize the AAFP Nutrition Toolkit (free to members) to help their patients meet their nutritional needs.¹⁵

A review of the literature confirms these knowledge and practice gaps, summarized as follows:¹⁶⁻²⁹

- The majority of the US population does not meet recommendations for consumption of milk, whole grains, fruit, and vegetables.
- Barriers specific to adult caregivers include lack of meal preparation skills or recipes; lack of knowledge of recommendations for portions and health benefits.
- Barriers specific to children include competing unhealthy foods; and dislike of taste/flavor/texture/smell of healthier food options.
- Patients are frequently confused by conflicting news about the health benefits of certain foods, vitamins, and supplements
- Patients often feel embarrassed and ashamed of their situations regarding proper nutrition
- Adolescents frequently do not understand the link between obesity and lifestyle choices or the connection to future morbidities
- Obese patients frequently do not receive an obesity diagnosis or weight-related counseling.
- Time to counsel patients regarding diets and nutrition is a barrier during a typical office visit
- Physicians often receive inadequate nutrition education in US medical schools
- As patient-centered and chronic care models have emerged to emphasize patient empowerment, particularly through the use of eHealth, some studies indicate that younger female patients are more likely to engage in eHealth activities compared to lower SES, older, and male patients.



Physicians may improve the care and guidance regarding nutrition principles they provide to patients with by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:^{13,30,31}

- Diets should include nutrient-dense foods in all food groups and in the proper amounts.
- Intake of added sugars and saturated fat should be limited, and sodium intake should be reduced.
- Nutrient-dense foods should replace those that are less healthy, taking into account cultural and personal preferences.
- Supplemental calcium has limited efficacy in the prevention of bone fracture (NNT = 1,000 in community-dwelling women, NNT = 111 in nursing home residents).
- Supplemental calcium increases the risk of kidney stones, and possibly cardiovascular events and hip fracture.
- Diets higher in fat produce and sustain as much or more weight loss than lower-fat or calorie-restricted diets.
- Ultraprocessed foods containing saturated fat (e.g., preserved meat) are associated with increased risk of cardiovascular and all-cause mortality, whereas whole foods containing saturated fat (e.g., dairy products) are inversely associated with incident cardiovascular disease, type 2 diabetes mellitus, and obesity.
- Consuming more dietary fiber in the form of whole foods may help prevent cardiovascular disease, diabetes, constipation, and gastrointestinal and breast cancers. Artificially added functional fibers have not been shown to be beneficial.
- Maintaining a 3,500-calorie energy deficit per week will not result in 1 lb (0.45 kg) of weight loss per week.
- Maintaining a deficit in energy intake of about 100 calories per day without any other changes may lead to an eventual weight loss of approximately 10 lb (4.5 kg) —50% of the change achieved by one year, and about 95% achieved by three years.
- Nutritional assessment should be based on the patient history and physical data, including weight loss and dietary intake before admission; disease severity; comorbid conditions; and function of the gastrointestinal tract (e.g., Subjective Global Assessment). Serum markers (e.g., albumin, prealbumin, retinol binding protein, transferrin) alone are not adequate.
- The decision to administer specialized nutrition support should consider the patient's preexisting nutritional status, the impact of the disease process on nutritional intake, and the likelihood that specialized nutrition support will improve patient outcome or quality of life.
- Enteral nutrition is preferred over parenteral nutrition because it has been shown to be more cost-effective and may decrease the rate of infections.
- Specialized nutrition support is not obligatory at the end of life. Enteral nutrition is unlikely to be helpful in patients with advanced dementia, and may be harmful.

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may



result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- 2015-2020 Dietary Guidelines for Americans³²
- Nutrition Myths and Healthy Dietary Advice in Clinical Practice¹³
- Specialized Nutrition Support³⁰
- AAFP: Nutrition Toolkit¹⁵
- Nutrition and physical activity guidelines for cancer survivors³³
- Encouraging patients to change unhealthy behaviors with motivational interviewing³⁴
- Integrating a behavioral health specialist into your practice³⁵
- Four strategies for promoting healthy lifestyles in your practice¹⁶
- Health Coaching: Teaching Patients to Fish³⁶
- Adding health education specialists to your practice³⁷
- Envisioning new roles for medical assistants: strategies from patient-centered medical homes³⁸
- The benefits of using care coordinators in primary care: a case study³⁹
- Engaging Patients in Collaborative Care Plans⁴⁰
- Documenting and coding preventive visits: a physician's perspective⁴¹
- U.S. Department of Agriculture. Dietary Guidelines for Americans¹⁴
- FamilyDoctor.org. Nutrition for Weight Loss: What You Need to Know About Fad Diets (patient education)⁴²
- FamilyDoctor.org. Nutrients & Nutritional Info (patient education)⁴³

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