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Recommended Curriculum Guidelines for Family Medicine Residents

Nutrition

This document was endorsed by the American Academy of Family Physicians (AAFP), the Association of Departments of Family Medicine (ADFM), the Association of Family Medicine Residency Directors (AFMRD, and the Society of Teachers of Family Medicine (STFM), and was developed in cooperation with the Crozer-Keystone Family Medicine Residency Program.

Introduction

This Curriculum Guideline defines a recommended training strategy for family medicine residents. Attitudes, knowledge and skills that are critical to family medicine should be attained through longitudinal experience that promotes educational competencies defined by the Accreditation Council for Graduate Medical Education (ACGME) http://www.acgme.org. The curriculum must include structured experience in several specified areas. Most of the resident's knowledge will be gained by caring for ambulatory patients who visit the family medicine center. Structured didactic lectures, conferences, journal clubs and workshops must be included in the curriculum with an emphasis on outcomes-oriented, evidence-based studies that delineate common and chronic diseases affecting patients of all ages. Targeted techniques of health promotion and disease prevention are hallmarks of family medicine. Appropriate referral patterns and provision of cost-effective care should also be part of the curriculum.

Program requirements specific to family medicine residencies may be found on the ACGME Web site. Current AAFP Curriculum Guidelines may be found online at http://www.aafp.org/cg. These guidelines are periodically updated and endorsed by the AAFP and, in many instances, other specialty societies as indicated on each guideline.

Each residency program is responsible for its own curriculum. ***This guideline provides a useful strategy to help residency programs form their curricula for educating family physicians.***

Preamble

Nutrition plays a major role not in the only treatment of existing diseases, but also in both health promotion and disease prevention. There is increasing direct evidence that links diet to health and disease. Nutritional guidelines are important components of the

treatment plans for medical, surgical and emotional illness. Nutrition-related diseases such as coronary artery disease, stroke, hypertension, diabetes and certain types of cancers are the leading causes of morbidity in the United States. Healthy People 2010 (a government initiative which partners with the National Institutes of Health, the CDC, the FDA and the Centers for Medicare and Medicaid Services) is striving to increase the quality and years of healthy life and eliminate health disparities among different areas of the population. Two of the ten initiatives specifically target fighting obesity and increasing physical activity with the goal of reducing the burden of disease. A healthy diet can contribute to the prevention of many diseases. As patients are increasingly bombarded with nutrition advice from multiple sources, they rely on their physicians to help them evaluate the quality of popular nutrition, diet and supplement claims. Physicians should develop the skills necessary to assess nutritional status and provide information on diet and nutrition.

Competencies

At the completion of residency training, a family medicine resident should:

- Understand general principles of nutrition, including its role in the prevention and management of specific diseases, and be able to translate these principles into a plan of care for the patient. (Patient Care, Medical Knowledge)

- Be able to perform a comprehensive nutritional assessment including:
  1. Medical, social and diet histories
  2. Physical examination
  3. Anthropometrics (height, weight, body mass index [BMI], head circumference and body-fat distribution [waist circumference and waist-to-hip ratios])
  4. Laboratory tests (Patient Care, Medical Knowledge)

- Be able to counsel patients regarding nutritional recommendations in a culturally-sensitive manner. (Professionalism, Interpersonal and Communication Skills)

- Use an evidence-based approach to assess the patient's nutritional status and determine the effectiveness of interventions. (Practice-based Learning, Improvement)

- Recognize patients who are at high risk for nutrition-related complications and refer them to nutrition consultants who can provide counseling and education. (Patient Care, Medical Knowledge and Systems-based Practice)

- Recognize his or her own nutritional biases and make attempts to compensate for possible effects on patient care. (Professionalism)

Attitudes

The resident should demonstrate attitudes that encompass:

- Nutrition is an integral part of:
    1. Health promotion and disease prevention: Nutrition counseling that targets dietary risk factors as primary prevention has the potential to significantly reduce mortality and morbidity throughout the life cycle.
    2. Medical treatment of disease: Nutritional interventions have the potential to reverse certain disease processes. Additionally, proper nutritional status can help patients respond positively to medical interventions.
- Dietary intake is influenced by a variety of patient factors, including:
    1. Culture (family, community, ethnicity and religion)
    2. Socioeconomic situation (ability to make independent food choices, purchase and prepare food)
    3. Psychosocial and mental health (depression, anorexia, dementia, bulimia, binge eating, etc.)
    4. Knowledge (including educational level and reading ability)
    5. General health and lifestyle (co-morbid conditions, diseases and habits)
- Nutrition consultants should be utilized when appropriate to help provide counseling for at-risk patients. Nutritionists, registered dieticians and licensed dieticians have specialized training in public health nutrition, wellness, disease prevention, medical nutrition therapy and nutrition education and counseling for individuals.

Knowledge

In the appropriate setting, the resident should demonstrate the ability to apply knowledge of:

1. General principles of nutrition, including:
    a. The roles of dietary components: carbohydrates, fats, proteins, vitamins, minerals, water and fiber
    b. Dietary reference intakes
    c. Nutritional content of foods
    d. Dietary recommendations, e.g., dietary guidelines for Americans, food pyramid, DASH diet, Step I and II diets
    e. Vegetarian and vegan diets (understanding the benefits and nutritional issues throughout the life cycle)
    f. Rationale for including more whole foods and fewer processed foods in the daily diet

2. Nutritional assessment
    a. Medical and social history, physical examination
    b. Anthropometrics (height, weight, body mass index [BMI], head circumference and body-fat distribution [waist circumference and waist-to-hip ratios])
    c. Ordering and evaluating laboratory tests (inpatient and outpatient)
3. Nutritional issues for specific populations, including:
    a. Infants (e.g., breastfeeding, bottle-feeding, adding solids, allergy prevention, calcium)
    b. Children (e.g., picky eating, pica, snacks, calcium)
    c. Adolescents (e.g., healthy choices, eating disorders, calcium)
    d. Adults (e.g., portion size, habits, convenience foods, energy balance, calcium)
    e. Pregnancy (e.g., weight gain, folic acid, iron, calcium)
    f. Lactation (e.g., nutritional needs, support, counseling)
    g. Elderly (e.g., psychosocial issues, co-morbid conditions, swallowing disorders, iatrogenic factors, calcium, Vitamin D)
    h. Athletes (e.g., eating disorders, overtraining, energy balance)
4. The role of nutrition in the prevention and treatment of specific diseases, including:
    a. Cancer
    b. Cardiovascular disease
    c. Dental disease
    d. Diabetes
    e. Gastrointestinal disorders
    f. Hematologic disorders
    g. Hyperlipidemia
    h. Hypertension
    i. Liver disease
    j. Obesity
    k. Osteoporosis
    l. Renal disease
5. Secondary malnutrition caused by systemic diseases, including:
    a. Alcoholism
    b. Cancer
    c. HIV/AIDS
    d. Malabsorption
    e. Pulmonary disease

6. Weight loss strategies and counseling
    a. Behavior modification and goal setting
    b. Diet drugs (prescription, herbal and over-the-counter)
    c. Popular diets and supplements
    d. Surgical approaches, including care of the patient after weight loss surgery
7. Disordered eating
    a. Anorexia nervosa
    b. Binge eating
    c. Bulimia nervosa
8. Use of dietary supplements, including:
    a. Vitamin and mineral deficiency, toxicity and recommended intakes
    b. Guidelines for herbal, alternative and other supplements, including drug interactions, safety and efficacy
    c. Evidence-based nutrition resources and unproven nutritional supplement claims
9. Preventing, recognizing, and treating food-borne illness
10. Allergies and food intolerances
11. Physical activity and sports
    a. Recommendations for health and weight gain or loss
    b. Nutritional needs for various levels of activity (i.e., elite athletes) and for different age groups
    c. Hydration
    d. Overhydration and hyponatremia
12. Enteral and parenteral nutrition
13. Community nutrition resources (e.g., food bank, Meals on Wheels, Women, Infants and Children (WIC) supplemental food program and school lunch programs)
14. An awareness of the political issues surrounding the food industry as they impact patients' ability to determine the nutritional content and availability of healthy foods

Skills

In the appropriate setting, the resident should demonstrate the ability to independently perform or appropriately refer:

1. Integrating nutrition assessment and intervention into the medical history, review of systems, physical examination, laboratory evaluation and plan of care.

2. Assessing the nutritional status and writing diet prescriptions for outpatients.

3. Assessing the nutritional status and writing diet prescriptions for inpatients (e.g., hospitals, nursing homes, other supervised living situations).

4. Ordering and interpreting laboratory and metabolic studies related to nutritional assessment.

5. Evaluate results of lab data to determine patient's progress with nutrition goals.

6. Ordering and managing oral supplements and tube feeding, and understanding when and how to order and monitor total parental nutrition.

7. Counseling patients and family members about specific nutritional needs related to stages of the life cycle, lifestyle, habits, disease prevention and/or treatment of disease.

8. Counseling patients on safe lifestyle approaches to weight management and balancing caloric intake and physical activity.

9. Assess patient's readiness to change behavior and motivate them to the next step.

10. Monitor patient's progress with nutritional behavioral interventions, providing appropriate feedback and guiding patients towards solutions in overcoming obstacles.

11. Personalizing nutrition recommendations for diagnosis, age, ethnicity, belief systems and gender.

12. Advising patients about the appropriate use of and, when needed, prescribing vitamin, mineral and other dietary and botanical supplements.

13. Answer patient's questions about nutrition and its role in disease prevention.

14. Collaborating with nutritionists, registered dieticians and licensed dieticians. Referring patients to reliable community nutrition resources (including Internet sites).

Implementation

This curriculum should be taught during both focused and longitudinal experiences. It should be integrated into patient care, didactic conferences and experimental learning activities. Nutritional status of the patient should be an integral part of case presentation, staffing, rounds and other clinical activities in the inpatient and outpatient settings. Qualified nutrition professionals should teach nutrition and mentor residents. Family Medicine faculty should both model and teach nutrition, as well as demonstrate ways to integrate nutritional information into patient care.

Resources

Physician's curriculum in clinical nutrition: a competency based approach for primary care, Kansas City, Mo.: Group on Nutrition Education, Society of Teachers of Family Medicine, 2000.

Barnard, N., Jaster, B., Kahan, S., Smyth, C., Weissinger, R. (2007). Nutrition Guide for Clinicians. Washington, DC: Physicians Committee for Responsible Medicine.

Deen D, Hark L. The Complete Guide to Nutrition in Primary Care. Malden, Ma.: Blackwell Publishing, 2007

Hark L, Morrison G. Medical Nutrition and Disease. 3rd ed. Malden, Ma.: Blackwell Science, Inc, 2003.

Manual of Clinical Dietetics. 6th ed. Chicago, Il: The American Dietetic Association, 2000.

Mahan LK, Escott-Stump S. Krause's Food and Nutrition Therapy. 12th ed. Philadelphia, Pa.: Saunders, 2008.

Nestle, Marion. Food Politics: How the Food Industry Influences Nutrition and Health. Berkeley, Ca.: University of California Press, 2002.

Shils, M. Modern Nutrition in Health and Disease 10th ed. Philadelphia, Pa.: Lippincott Williams & Wilkins, 2006.

Web Sites

Healthy People 2010: US Department of Health and Human Services
http://www.healthypeople.gov

American Dietetic Association (ADA)
http://www.eatright.org

Arbor Nutrition Guide
http://www.arborcom.com

National Center for Complementary and Alternative Medicine
http://nccam.nih.gov

Office of Disease Prevention and Health Promotion
http://www.odphp.osophs.dhhs.gov

Physician's Committee for Responsible Medicine
http://www.pcrm.org

National Academic Award Program
http://www.nhlbi.nih.gov/funding/training/naa

Nutrition Care Manual
http://www.nutritioncaremanual.org

USDA Center for Nutrition Policy and Promotion
http://www.usda.gov/cnpp

CNN health-related site
http://www.cnn.com/HEALTH

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