

The Clinical Nutritional Implications of Obesity and Overweight

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Introduction

It can be argued that our unstated national policy, until recently, has been that a person's weight is his/her "personal responsibility." Until 2005, the unspoken philosophy of our Dietary Guidelines was to encourage consumption of the variety of our national food supply. This policy coupled with limited, if any, reimbursement for non-pharmacological and non-surgical obesity treatments remain a major deterrent for adults and children in receiving appropriate preventive and treatment counseling. Only recently has obesity been recognized as a disease that has both medical and economic sequelae.

Adults, too, report that they know "what to do" but just don't do it.¹ However, there is little evidence that Americans know how to estimate their caloric need or select a health promoting diet. Only one third of Americans report obtaining nutrition advice from physicians and even fewer (13%) receive counseling from a nutrition professional.²

The American food supply is very complex, and stereotypes and myths of "healthful eating" are pervasive.¹ That shouldn't be surprising considering consumers receive most of their nutrition information from the media.² And though the United States government publishes evidence based dietary guidelines, it has virtually no budget for their promotion. As a result, few Americans have the knowledge, skill or motivation to embrace a diet that is health

promoting and leads to a healthy weight. Nutrition knowledge alone does not guarantee healthy eating behaviors, but consumers cannot make informed food choices without it. Nutrition professionals have the education and experience to aid adults and children in developing eating plans that are personally satisfying and health promoting. For this paper, "nutritionist" refers to a licensed dietitian/nutritionist (RD/LDN).³

Additionally, RD/LDNs contribute to the nutrition education of physicians and other care providers. They work in coalitions toward environmental and policy changes to improve opportunities for physical activity and healthy eating.

Nutrition Education of and by the Physician

Nutrition and obesity education of medical students, residents and practicing physicians is uneven but generally inadequate.⁴⁻⁶

The specialty of Family Medicine has led the way by requiring nutrition training.^{4,5} As an example, medical students and Family Medicine residents at the Brody School of Medicine at East Carolina University (ECU) analyze their personal diets, learn to routinely include nutrition assessment in

their history taking, practice counseling overweight patients with standardized patients, develop a relationship with a skilled clinical dietitian, and learn evidence based guidelines for treatment of

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overweight. Unfortunately, the inclusion of nutrition and obesity training in North Carolina medical schools is not assured. This led the Fit Families North Carolina Study Committee to recommend that "North Carolina based medical schools should teach the basic principles of prevention including the benefits of healthful eating and physical activity, the importance of breastfeeding, and how to effectively counsel people to change health behaviors as part of the core curriculum."⁷

Kahn⁶ suggested that even if medical students receive good training, their interest and enthusiasm for nutrition assessment and counseling rapidly diminishes if they do not receive reinforcement from their clinical house officers and faculty mentors. It seems paradoxical that primary care physicians agree that providing nutrition counseling to their patients is their responsibility, even when they are not entirely comfortable and confident with the advice they give for life style change.⁴ Kahn confirms that few take advantage of CME opportunities.⁶ Too often we observe physicians who have embraced the concept of evidence-based practice for their specialty but either are unaware or ignore nutrition evidence when counseling patients. Physicians need to determine the nutrition and obesity prevention and treatment messages they have the time and skill to provide to their patients. They should follow practice guidelines (not dietary fads or trends) that include practices such as annually monitoring weight of patients, plotting the BMI of children on growth charts, measuring waist circumference, encouraging the DASH diet for patients with pre-hypertension, pre-diabetes, or metabolic syndrome. Physicians who choose to counsel their patients about weight should be guided by the National Heart, Lung and Blood Institute (NHLBI) guidelines.⁸ Tools for office practice developed by NHLBI Nutrition Academic Award are available at <http://www.nhlbi.nih.gov/funding/training/naa/products.htm>. "Practical Advice for Family Physicians to Help Overweight Patients" describes implementation of a systematic and practical approach to management of obesity in practice.⁹ Physicians who find time, reimbursement or skill as barriers to providing this type of care, can still serve their patients by reinforcing the messages of the North Carolina Eat Smart Move More campaign which are to: 1) decrease sugar-sweetened beverages, 2) decrease TV time, 3) prepare and eat more meals at home, 4) decrease portion sizes, 5) increase physical activity, 6) increase fruits and vegetables, and 7) breast-feed your baby (www.myeatsmartmovemore.com).¹⁰ They should refer their patients to an RD/LDN or to a weight loss program that conforms to the North Carolina safe weight control program regulations.³

Referral to Weight Control Programs.

The Federal Trade Commission's "Voluntary Guidelines for Providers of Weight Loss Products or Services" encourages consumers to protect themselves from programs that do not adhere to standards.¹¹ North Carolina seeks to further protect consumers from unsafe weight loss programs by requiring annual review of programs, which are not provided by an RD/LDN. The regulations require that the client's level of health risk should be identified as low, moderate, high, or

inappropriate for participation in a weight loss program. Patients at "low risk" can obtain nutrition education about the Dietary Guidelines for Americans and the Food Guide Pyramid from health educators and nurses. Patients of higher risk require physician clearance and a nutrition prescription and consultation from an RD/LDN. Key features of the standards include: 1) the program should not promise weight loss in excess of the safe two pounds per week; 2) plans should have at least 1,000 calories per day; adequate protein (0.8-1.8 grams/kilogram of goal weight) and no less than 100 grams carbohydrate/day; 3) participants receive nutrition education that encourages permanent change; 4) a maintenance component is provided; and 5) appropriate staff is available. Any supplements should not exceed 100% of the Recommended Dietary Allowances and neither formula products nor appetite suppressants should be used with low risk clients. Although these regulations became effective in 1995, the North Carolina Board of Dietetics/Nutrition has very limited resources for promotion or enforcement. Complaints can be filed with the Board at www.ncbdn.org.

Referral to a Licensed Dietitian/Nutritionist (RD/LDN).

There is adequate evidence that weight loss can be achieved with a variety of dietary approaches.¹² The RD/LDN has the education and skill to assist patients with the selection of an approach that not only leads to a healthy weight but is health promoting. The RD/LDN can assist patients with the most difficult aspect of weight loss treatment—adherence. North Carolina has licensed nutrition professionals³ since 1991. The Dietetics Practice Act is to protect the citizens of North Carolina from harmful nutrition practices. Anyone who holds a valid license from the North Carolina Board of Dietetics/Nutrition can legally practice in the state. Additionally, those who are exempt (e.g., doctors, physician assistants, nurses, dentists, dental hygienists and psychologists) from the Act (NCGS 90-368) can offer nutrition education, but cannot use the title "registered dietitian," "licensed dietitian" or "nutritionist."³ Additionally, federal, state and local government employees, herbalists, and weight control service providers are among those who are exempt as a function of their employment (e.g., sales person in a health food store). In 2005, Blue Cross Blue Shield of North Carolina (BCBSNC) invited about 700 North Carolina RD/LDNs to become credentialed and listed in their provider network (www.bcbsnc.com). The weight loss interventions offered by these RD/LDNs are guided by "Adult Weight Management Evidence-Based Nutrition Practice Guidelines."¹³ Recently BCBSNC began reimbursing up to four doctor's office visits and up to 6 credentialed RD/LDN visits for weight assessment and counseling to adults enrolled in their "Healthy Lifestyle Choices." (www.bcbsnc.com/health-wellness/mhp/healthy_lifestyle.cfm) Although the reimbursement is very modest, the action by BCBSNC is a laudable first step to improving access for weight management services.

North Carolina RD/LDNs in partnership with BCBSNC have launched a study to evaluate the cost and clinical outcomes of Medical Nutrition Therapy (MNT) provided by RD/LDNs.

Physicians can assist by referring patients to this 24-month prospective study. There already are published trials demonstrating lifestyle change occurs with intensive therapy. For example, the Diabetes Prevention Program (DPP) trial¹⁴ showed that nutrition and physical activity interventions were superior to pharmacological interventions. In that study, participants had multiple interactions with nutrition professionals including culturally sensitive training in diet, exercise, self-monitoring, goal-setting, and problem-solving as part of a 16-session core-curriculum. Monthly individual or group sessions, phone or mail contacts were provided. Unfortunately, the significant barrier to translating the DPP findings into real life practice is the lack of reimbursement for this intervention and lack of willingness or inability of the patients to pay for these services.

Facilitating a Successful Referral to the Dietitian.

RD/LDNs report that the success of their patients, including their “show rate” for MNT visits, is dependent on the physician setting strong expectations. This should not be the “referral of last resort” that occurs only after medicines have been maximized. Physician need to tell patients the dietary intervention is integral to their treatment and is best provided by a nutrition specialist. The RD/LDN will tailor the dietary prescription to the patient’s lifestyle and preferences. Physicians who inform their patients that they will monitor progress increase the patient’s likelihood of success. And when the change occurs, the physician needs to note changes and as appropriate adjust medications. Physicians can explain that the cost of the consultation, if not reimbursed, is reasonable and will more than likely save the patient time and money in planning healthy eating and reducing medications. A directory of RD/LDNs can be found at www.eatright.org/find.html. While consumers can refer themselves to a dietitian they are best served when their physician offers the opportunity.

The Special Case of Medical Nutrition Therapy for Gastric Bypass Patients.

Since most third party payers began requiring a nutrition assessment prior to gastric obstructive procedure (GOP) the opportunity for RD/LDNs to counsel GOP patients has dramatically increased. The authors of this paper provide assessment and counseling to patients from multiple surgical practices. At the pre-surgical assessment, some patients are well informed. Others see the surgery as a quick fix or “magic pill”. The RD/LDN helps the patient understand the mechanisms of the surgery and its short and long term impact on both nutritional and overall health. Some surgical candidates have attempted many weight loss programs, but many have not experienced a structured nutrition intervention. While traditional diet and exercise programs may not be sufficient to help most morbidly obese patients, some lose significant weight and elect not to pursue surgery. Unfortunately, the requirement for the pre-GOP nutrition assessment is often without reimbursement, contributing to wide variations in the comprehensiveness of the MNT patients receive. Since little is known about the natural

history of nutrient status and eating habits of these patients, it is prudent for all GOP patients to have access to MNT both pre- and post- their gastric obstructive procedure. Many GOP patients who were not provided MNT peri-surgically, self refer to an RD/LDN when weight re-gain begins, about two years post-surgery. Currently clinical experience rather than evidence guides most nutrition recommendations made for GOP patients.

Surgery remains the most effective means currently available to induce and sustain substantial weight loss in these morbidly obese patients, however, experience suggests that too few patients have the opportunity, while they are gaining the excess weight, to receive the MNT they need about portion sizes, calories, carbohydrates, fat, and protein. In addition to lack of reimbursement, barriers include lack of physician referral as well as physicians’ negative attitudes about potential success.

The Special Case of Treating Children, Adolescents, and Their Families.

Children, adolescents, and their families would benefit from assessment and nutrition intervention by a RD/LDN. In the absence of national guidelines in 2004, RD/LDNs associated with the Pediatric Healthy Weight Research and Treatment Center at ECU developed a seven visit MNT protocol (www.ecu.edu/pedsweightcenter). Pitt Memorial Hospital Foundation funding supported a dietitian providing MNT in eight pediatric and family medicine offices. A retrospective chart review of 129 at-risk or overweight youth who received multiple sessions with the RD/LDN was completed. It typically took four visits, over five months, for patients to make lifestyle changes impacting their BMI. Strategies such as increasing the number of days of physical activity, reducing the number of times eating out per week, increasing servings of fruits and of vegetables, decreasing consumption of fried foods, and reducing total amount of sweetened beverages consumed made a difference. These changes resulted in a decrease in BMI. To some, the effect size appears small, but those children who had abnormal laboratory values for lipids or blood sugar generally normalized them.

Based on experience with more than 800 overweight children, single visits seem to be of limited value. At least one visit is needed to “sell” the patient and family that eating healthy and being physically activity is for everyone in the household, including part-time care providers like grandparents and “weekend parents.” The RD/LDN empowers the family to set realistic goals. The patient is told in follow up that the RD/LDN will provide a structured plan and non-judgmental support. We are surprised by the prevalence of emotional eating by children. Youth who are singled out in their family often “sneak” “hoard” or “binge” on restricted foods. Our first strategy is to help the family switch from sugar sweetened beverages (e.g. sweet teas, colas, kool-aid and juices) to sugar free drinks, plain and flavored water, and low fat milk. Much work is needed in this area as families often only switch from one sugar sweetened beverage to another without instruction. It is particularly

important to help pre-teens and teens become accountable for their food and beverage choices through skill building including label reading, portion size recognition, and recognition of internal hunger cues.

The challenge remains that medical nutrition therapy for overweight children is not reimbursed, except at health departments. In 2005, The North Carolina Study Committee for Childhood Overweight/Obesity proposed that “the State Health Plan, Medicaid, Health Choice and Special Health Services should include coverage in North Carolina to include prevention and treatment services for children, youth, and their families who are overweight or at risk for overweight, and to allow RD/LDN practicing in both public and private settings to be reimbursed for medical nutrition therapy.”⁷

There are many different lifestyle change programs to help parents and children with weight management. However, a systematic literature review found that the limited evidence conclusions about the effectiveness of these interventions was not conclusive.¹⁵ It is not clear what criteria should be used to call a group weight management program for youth “a success.”

We find that youth taking part in the eight to ten week, age specific programs at ViQuest Center—Greenville (www.uhseast.com) have varying outcomes. In 2005, 68% of the school age participants maintained or reduced their BMI percentile for age. But these results vary from session to session, in no predictable way. Defining success, providing appropriate follow-up, and making these programs affordable to overweight North Carolina youth remain unresolved challenges for those providing group classes.

Moving Outside the Clinical Setting: Environmental and Policy Changes to Support Healthy Eating

More than a skilled clinician and a motivated patient is required to achieve lifestyle changes that support healthy weights. Environmental and policy changes are needed to make it easier for people to make healthy food choices. North Carolina has a variety of plans available to allow citizens to begin to make these changes. Healthcare providers and persons in healthcare leadership positions should review these plans and identify objectives that can be incorporated into their own

work and community environments.

The North Carolina Division of Public Health has championed the development of plans and tools to address obesity including “Moving Our Children to A Healthy Weight”¹⁶ as well as “Blue Prints for Changing Policies and Environments in Support of Healthy Eating and Physical Activity.”¹⁷ North Carolina published achievable standards for all foods available in schools.¹⁸ North Carolina’s plan to prevent obesity and reduce chronic diseases is expected in August, 2006. The North Carolina Health and Wellness Trust Fund (HWTF) supported the development of recommendations to address Childhood Obesity in its Report of the Fit Families’ Study Committee.⁷ HWTF, also, in partnership with Blue Cross Blue Shield of North Carolina has tools for healthier weight and lifestyle at www.fittoghernc.org.

The experts note that solutions to the obesity epidemic need to be “local.” The Eat Smart Move More web site (www.eatsmartmovemorenc.com) includes a catalogue of success stories. Nutrition education resources in North Carolina’s rural areas are limited. Food Literacy Partners Program (FLPP) is an example of a successful program where RD/LDNs in Pitt County have trained more than 240 community volunteers who share their new health and food literacy with others at schools, churches, clinics, health fairs, and other events. Most graduates, who are required to provide 20 hours of community service in return for the free training, report changing their own food choices and finding themselves talking about nutrition to their families, friends and co-workers. Finding the resources to sustain successful local nutrition education initiatives like FLPP remains a challenge.

Bottom line

North Carolinians have limited access to evidence-based food and nutrition information to help prevent or treat overweight and obesity. RD/LDNs are uniquely qualified to train others to provide nutrition education and to deliver medical nutrition therapy directly to patients.

Physicians can find a dietitian by using the Blue Cross Blue Shield of North Carolina list of credentialed dietitian or Find A Dietitian at www.eatright.org. **NCMedJ**

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