

HOD ACTION: Council on Medical Education Report 3 adopted, and the remainder of the report filed.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 3-A-17

Subject: Obesity Education

Presented by: Patricia Turner, MD, Chair

Referred to: Reference Committee C
(Kenneth Certa, MD, Chair)

1 American Medical Association (AMA) Policy D-440.980 (5), “Recognizing and Taking Action in
2 Response to the Obesity Crisis,” directs the AMA to “encourage medical school accrediting bodies
3 to study and report back on the current state of obesity education in medical schools and, through
4 this report, identify organizations that currently provide educational resources/toolkits regarding
5 obesity education for physicians in training and, in consultation with relevant specialty
6 organizations and stakeholders, identify gaps in obesity education in medical schools and submit
7 recommendations for addressing those gaps.” This report is in response to that directive, which was
8 adopted at the 2015 Annual Meeting of the AMA House of Delegates.

9
10 **OBESITY: SCOPE OF THE PROBLEM, DEFINITIONS, DETERMINATES**

11
12 Obesity is defined by the Centers for Disease Control and Prevention (CDC) as “Weight that is
13 higher than what is considered as a healthy weight for a given height.”¹ Body mass index (BMI) is
14 the most commonly used screening tool for excess body weight, and correlates well with other
15 methods to measure adiposity and with adverse health outcomes associated with increased
16 adiposity. BMI is calculated as a person's weight in kilograms divided by the square of height in
17 meters. Obesity is generally defined as a BMI greater than or equal to 30 kg/m².

18
19 There is little doubt that obesity has become a prominent health concern in the United States. In
20 2011-2012, 34.9 percent of adults and 16.9 percent of 2- to 19-year-olds were obese.² Obesity in
21 adulthood increases the risk for and morbidity from type 2 diabetes mellitus, hypertension,
22 dyslipidemia, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, some
23 cancers, and other acute and chronic conditions. Obesity is also associated with increased risk in
24 all-cause and cardiovascular disease (CVD) mortality.³ In 2008, the estimated annual medical cost
25 burden of obesity in the U.S. was \$147 billion; the annual medical costs for people who are obese
26 were \$1,429 higher than those of normal weight.⁴

27
28 Obesity during childhood poses a greater risk of high blood pressure, high cholesterol, impaired
29 glucose tolerance, insulin resistance, type 2 diabetes, sleep apnea, asthma, joint problems, fatty
30 liver disease, gallstones, gastro-esophageal reflux (i.e., heartburn), depression, behavioral
31 problems, low self-esteem, and social and emotional dysfunction. Children who are obese are more
32 likely to become obese adults, and if children are obese, obesity and disease risk factors in
33 adulthood are likely to be more severe.⁵

34
35 The cause of obesity is often multifactorial, but the usual common pathway is an energy balance
36 mismatch—excess energy consumption in relation to energy use. Contributing factors include
37 inactive or low-activity lifestyle; high-caloric food choices; food portion size; environmental

1 factors such as availability of healthy food choices, work schedules, and access to activity; genetic
2 factors; health conditions; medications; emotional and psychological factors; age; childbearing; and
3 sleep and circadian rhythm disruptions. Consistent with the causes of obesity, the CDC notes:
4 “There is no single or simple solution to the obesity epidemic. It’s a complex problem and there
5 has to be a multifaceted approach. Policy makers, state and local organizations, business and
6 community leaders, school, childcare and healthcare professionals, and individuals must work
7 together to create an environment that supports a healthy lifestyle.”⁶ The CDC, recognizing
8 multifactorial causes of obesity, has published guides to community engagement strategies for the
9 prevention of obesity, noting 24 strategies and recommendations for implementation.^{7, 8}

10
11 The health care education community has placed considerable effort into developing resources to
12 guide health professionals in the prevention and treatment of obesity. A web search using the term
13 “obesity guidelines” on the AHRQ National Guideline Clearinghouse search engine returned more
14 than 200 guidelines from United States-based health care organizations.

15
16 One of the often-quoted evidence-based guidelines is the 2013 AHA/ACC/TOS Guideline for the
17 Management of Overweight and Obesity in Adults: A Report of the American College of
18 Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity
19 Society,³ which was endorsed by ten other related specialty societies. This document included 17
20 evidence-based recommendations for the evaluation and treatment of obesity. Most of these
21 recommendations included evaluation, lifestyle counseling and intervention, prescribing activities,
22 and surgical procedures. Another similar reference document is *The Practical Guide to*
23 *Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*,⁹ published by the
24 National Institutes of Health and also available online.

25
26 Despite the number and quality of guidelines on obesity prevention and treatment, a recent study
27 based on a national sample of family physicians, internists, obstetrician-gynecologists, and nurse
28 practitioners found that these health professionals reported needing more time to address patient
29 obesity (70 percent), more training in obesity management (53 percent), improved reimbursement
30 (53 percent), and better tools to help patients recognize obesity risks (50 percent).¹⁰ A study by
31 Frinter et al., presented at the Pediatric Academic Societies Annual Meeting in 2014, found that
32 only 46 percent of senior pediatrics residents considered their medical school obesity education
33 adequate.¹¹

34 35 MEDICAL STUDENT EDUCATION ON OBESITY

36
37 There are few data on the current state of obesity education in U.S. medical schools. A study
38 conducted in 2012 by Vitolins et al.¹² found only 11 publications pertinent to medical student
39 obesity education, and only five of these included descriptions of interventions and evaluations of
40 education effectiveness. A 2014 survey of medical schools by Adams et al. found that most did not
41 provide nutrition education in the clinical portion of the curriculum, and concluded, “Many US
42 medical schools still fail to prepare future physicians for everyday nutrition challenges in clinical
43 practice. It cannot be a realistic expectation for physicians to effectively address obesity, diabetes,
44 metabolic syndrome, hospital malnutrition, and many other conditions as long as they are not
45 taught during medical school and residency training how to recognize and treat the nutritional root
46 causes.”¹³ Beyond nutrition education, a literature review conducted by Dacey et al. found reports
47 of 10 programs with physical activity counseling education that included evaluation of education
48 effectiveness.¹⁴ In structured interviews of allopathic and osteopathic medical school faculty
49 (n=171), Stoutenburg noted that 31 programs felt that they offered a sufficient level of “physical
50 activity-related” training for their students to successfully counsel their patients in the future, but
51 that counseling was not noted to be specific to obesity prevention or treatment.¹⁵

1 The 2015-2016 Liaison Committee on Medical Education Part II Questionnaire, administered to all
2 U.S. medical schools, asked respondents to “Indicate where in the curriculum the following
3 subjects are covered during required experiences.” Of the 142 schools responding, 91 percent
4 included obesity prevention education in pre-clerkship courses, 31 percent in pre-clerkship clinical
5 experiences, 80 percent in the required clerkships, and 18 percent in didactic sessions outside
6 specific clerkships in the clinical years. Obesity treatment was included in the curriculum by 83
7 percent in pre-clerkship courses, 30 percent in pre-clerkship clinical experiences, 83 percent in the
8 required clerkships, and 19 percent in didactic sessions outside specific clerkships in the clinical
9 years. Only five schools (four percent) indicated that obesity prevention and obesity treatment were
10 not included in the curriculum. Details on curricular content—such as pedagogy, depth of coverage
11 and methods of assessment—were not part of the survey.¹⁶ Of note, a number of studies have been
12 published describing curricular offerings to address bias toward obese patients and bias recognition
13 training for medical students. In addition, numerous sources note that medical school curricula
14 often include the significance of obesity in the pathogenesis or confounding of common disease
15 states, but it is not known if the same curricula offer any content on patient education, obesity
16 prevention, or obesity treatment. Similarly, a recent analysis of questions from the United States
17 Medical Licensing Examination (USMLE) found that a number of test items pertained to the
18 diagnosis and management of obesity-related conditions, but the important concepts of obesity
19 prevention and treatment were not represented on any of the three USMLE Step examinations.¹⁷

20 21 KEY STAKEHOLDERS AND SELECTED RESOURCES FOR HEALTH CARE PROVIDERS

22
23 When developing obesity curriculum for health care students, a number of resources are available
24 from medical organizations and groups to guide curricular content and structured clinical
25 encounters; these include the following:

- 26
27 • The Obesity Medicine Association offers a number of online clinical resources,¹⁸ including
28 an Obesity Algorithm and Pediatric Obesity Algorithm. The Obesity Society also provides
29 adult and pediatric clinical and educational resources on its website.¹⁹ The Obesity
30 Medicine Association provides online a free 215-slide presentation covering the definition,
31 prevention, diagnosis, and treatment of obesity.²⁰
- 32
33 • The American Academy of Family Physicians’ website features two bulletins on the
34 management of obesity,^{21, 22} a Clinical Evidence handbook on Obesity in Adults,²³ and a
35 collection of the content from American Family Physician (AFP), as identified by the AFP
36 editors, on obesity and related issues.²⁴
- 37
38 • The American Academy of Pediatrics provides a number of obesity educational resources
39 online for AAP members and the public, including online courses, print materials, decision
40 flow charts, and video materials.²⁵
- 41
42 • The American College of Physicians offers online practice assessment tools to assist
43 practices in providing high-value care for patients with obesity, practice guidelines for the
44 evaluation and treatment of obesity, and patient resource materials.²⁶
- 45
46 • The American College of Preventive Medicine makes resources available on its website,
47 including an Adult Obesity Clinical Reference and an Adult Obesity Time Tool, to assist
48 health professionals in developing efficient and effective strategies to address obesity
49 concerns with their patients.²⁷

- 1 • The American College of Sports Medicine offers a number of free online publications that
2 address the prevention and management of obesity and obesity-related conditions.²⁸
3
- 4 • The American Nutrition Association website provides access to numerous publications on
5 the prevention and treatment of obesity, including non-traditional approaches and
6 resources.²⁹
7
- 8 • The CDC provides a comprehensive website on “obesity and overweight,” with links to a
9 number of topics.³⁰
10
- 11 • The Fit for Residents project, a 3-year program coordinated by University of California,
12 Los Angeles in collaboration with the American Academy of Pediatrics and American
13 Academy of Family Medicine, resulted in a document with specific learning objectives
14 across several domains of competence and levels of mastery.³¹
15
- 16 • The National Academies of Sciences, Engineering, and Medicine provides a number of
17 free obesity prevention resources, including a comprehensive online toolkit for
18 community-level obesity prevention.³²
19
- 20 • The National Institutes of Health website provides information or links to publications,
21 statistics, tools, and recommendations.³³
22

23 SUMMARY AND RECOMMENDATIONS

24

25 Obesity is well-recognized as a burgeoning societal problem by way of co-morbidities and the
26 costs associated with these co-morbidities, as well as premature loss of life and lifestyle impact.
27 The causes of obesity are multifactorial; some are beyond the scope of undergraduate medical
28 education or medical practice and require societal and community efforts. Most U.S. allopathic
29 medical schools have incorporated some level of obesity education into the curriculum, but the
30 emphasis on the subject appears to be quite variable, and evidence of effectiveness of these efforts
31 is sparse. The health care education community has developed a number of resources to support the
32 education of health care professionals, patients, and community leaders in their efforts to prevent
33 obesity.
34

35 The Council on Medical Education therefore recommends that the following recommendations be
36 adopted and that the remainder of the report be filed.
37

- 38 1. That our American Medical Association (AMA) make this report available on the AMA
39 website for use by medical students, residents, teaching faculty, and practicing physicians.
40 (Directive to Take Action)
41
- 42 2. That AMA Policy D-440.980 (5), “Recognizing and Taking Action in Response to the
43 Obesity Crisis,” be rescinded, as having been fulfilled by this report. (Rescind HOD
44 Policy)

Fiscal Note: \$1,000.

APPENDIX: RELEVANT AMA POLICY

D-440.980, "Recognizing and Taking Action in Response to the Obesity Crisis"

Our AMA will: (1) collaborate with appropriate agencies and organizations to commission a multidisciplinary task force to review the public health impact of obesity and recommend measures to better recognize and treat obesity as a chronic disease; (2) actively pursue, in collaboration and coordination with programs and activities of appropriate agencies and organizations, the creation of a "National Obesity Awareness Month"; (3) strongly encourage through a media campaign the re-establishment of meaningful physical education programs in primary and secondary education as well as family-oriented education programs on obesity prevention; (4) promote the inclusion of education on obesity prevention and the medical complications of obesity in medical school and appropriate residency curricula; and (5) encourage medical schools' accrediting bodies to study and report back on the current state of obesity education in medical schools, and through this report, identify organizations that currently provide educational resources/toolkits regarding obesity education for physicians in training and, in consultation with relevant specialty organizations and stakeholders, identify gaps in obesity education in medical schools and submit recommendations for addressing those gaps.

D-440.954, "Addressing Obesity"

1. Our AMA will: (a) assume a leadership role in collaborating with other interested organizations, including national medical specialty societies, the American Public Health Association, the Center for Science in the Public Interest, and the AMA Alliance, to discuss ways to finance a comprehensive national program for the study, prevention, and treatment of obesity, as well as public health and medical programs that serve vulnerable populations; (b) encourage state medical societies to collaborate with interested state and local organizations to discuss ways to finance a comprehensive program for the study, prevention, and treatment of obesity, as well as public health and medical programs that serve vulnerable populations; and (c) continue to monitor and support state and national policies and regulations that encourage healthy lifestyles and promote obesity prevention.

2. Our AMA, consistent with H-440.842, Recognition of Obesity as a Disease, will work with national specialty and state medical societies to advocate for patient access to and physician payment for the full continuum of evidence-based obesity treatment modalities (such as behavioral, pharmaceutical, psychosocial, nutritional, and surgical interventions).

H-440.902, "Obesity as a Major Health Concern"

The AMA: (1) recognizes obesity in children and adults as a major public health problem; (2) will study the medical, psychological and socioeconomic issues associated with obesity, including reimbursement for evaluation and management of obese patients; (3) will work with other professional medical organizations, and other public and private organizations to develop evidence-based recommendations regarding education, prevention, and treatment of obesity; (4) recognizes that racial and ethnic disparities exist in the prevalence of obesity and diet-related diseases such as coronary heart disease, cancer, stroke, and diabetes and recommends that physicians use culturally responsive care to improve the treatment and management of obesity and diet-related diseases in minority populations; and (5) supports the use of cultural and socioeconomic considerations in all nutritional and dietary research and guidelines in order to treat overweight and obese patients.

H-440-842, "Recognition of Obesity as a Disease"

Our AMA recognizes obesity as a disease state with multiple pathophysiological aspects requiring a range of interventions to advance obesity treatment and prevention.

H-150.953, "Obesity as a Major Public Health Problem"

Our AMA will: (1) urge physicians as well as managed care organizations and other third party payers to recognize obesity as a complex disorder involving appetite regulation and energy metabolism that is associated with a variety of comorbid conditions; (2) work with appropriate federal agencies, medical specialty societies, and public health organizations to educate physicians about the prevention and management of overweight and obesity in children and adults, including education in basic principles and practices of physical activity and nutrition counseling; such training should be included in undergraduate and graduate medical education and through accredited continuing medical education programs; (3) urge federal support of research to determine: (a) the causes and mechanisms of overweight and obesity, including biological, social, and epidemiological influences on weight gain, weight loss, and weight maintenance; (b) the long-term safety and efficacy of voluntary weight maintenance and weight loss practices and therapies, including surgery; (c) effective interventions to prevent obesity in children and adults; and (d) the effectiveness of weight loss counseling by physicians; (4) encourage national efforts to educate the public about the health risks of being overweight and obese and provide information about how to achieve and maintain a preferred healthy weight; (5) urge physicians to assess their patients for overweight and obesity during routine medical examinations and discuss with at-risk patients the health consequences of further weight gain; if treatment is indicated, physicians should encourage and facilitate weight maintenance or reduction efforts in their patients or refer them to a physician with special interest and expertise in the clinical management of obesity; (6) urge all physicians and patients to maintain a desired weight and prevent inappropriate weight gain; (7) encourage physicians to become knowledgeable of community resources and referral services that can assist with the management of overweight and obese patients; and (8) urge the appropriate federal agencies to work with organized medicine and the health insurance industry to develop coding and payment mechanisms for the evaluation and management of obesity.

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