General

Guideline Title

Prevention and management of obesity for adults.

Bibliographic Source(s)

Fitch A, Everling L, Fox C, Goldberg J, Heim C, Johnson K, Kaufman T, Kennedy E, Kestenbaum C, Lano M, Leslie D, Newell T, O'Connor P, Slusarek B, Spaniol A, Stovitz S, Webb B. Prevention and management of obesity for adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2013 May. 99 p. [161 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Institute for Clinical Systems Improvement (ICSI). Prevention and management of obesity (mature adolescents and adults). Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2011 Apr. 98 p.

Recommendations

Major Recommendations

Note from the National Guideline Clearinghouse (NGC) and the Institute for Clinical Systems Improvement (ICSI): For a description of what has changed since the previous version of this guidance, refer to Summary of Changes Report -- May 2013 (see the "Guideline Availability" field). In addition, ICSI has made a decision to transition to the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system as a method of assessing the quality of evidence and writing recommendations.

The recommendations for the prevention and management of obesity in adults are presented in the form of a table with a list of evidence-based recommendations and an algorithm with 13 components, accompanied by detailed annotations. An algorithm is provided in the original guideline document at the ICSI Web site for Prevention and Diagnosis (see the "Guideline Availability" field). Clinical highlights and selected annotations (numbered to correspond with the algorithm) follow.

Quality of evidence (Low Quality, Moderate Quality, and High Quality) and strength of recommendation (Weak or Strong) definitions are repeated at the end of the "Major Recommendations" field.

Clinical Highlights

- Obesity is a chronic disease that is a multifactorial, growing epidemic with complex political, social, psychological, environmental, economic, and metabolic causes and consequences. Obesity affects essentially every organ system in the body. Health consequences increase across the body mass index (BMI) span, not just for the extremely obese. (*Introduction*)
- Calculate the body mass index; classify the individual based on the BMI categories. Educate patients about their BMI and their associated

risks. (*Annotation #1; Aim #1*)
- Effective weight management strategies are available and include nutrition, physical activity, lifestyle changes, medication, and surgery. (*Annotation #6; Aim #2*)
- A 5% to 10% weight loss can reduce a patient's risk of heart disease and diabetes that is clinically significant, and should be encouraged for all patients who are overweight and obese. This amount of weight loss and maintenance should be considered a clinical success and commended. This can be achieved and maintained with a high-intensity medical weight loss program even for the morbidly obese. (*Annotation #8; Aim #2*)
- The clinician should follow the 5 A's (Ask, Advise, Assess, Assist, Arrange). Physician intervention can be effective, the clinician can have an important influence, and successful weight management is possible. (*Annotation #8; Aim #3*)
- Weight management requires a team approach. Be aware of clinical and community resources. The patient needs to have an ongoing therapeutic relationship and follow-up with a health care team. Weight control is a lifelong commitment, and the health care team can assist with setting specific goals with the patient. (*Annotation #10, 13; Aim #2*)
- Beyond their clinical role, primary care clinicians should be aware of their roles as community leaders and public health advocates. (*Annotation #10, 13; Aim #4*)

Prevention and Diagnosis Algorithm Annotations

1. Measure Height and Weight, and Calculate Body Mass Index
   Recommendations:

   - Clinicians should calculate BMI for their patients on an annual basis for screening, and as needed for management. Classify BMI based on the National Institute of Health categories (see Table below). Educate patients about their BMI and associated risks for them *(Strong Recommendation, High Quality Evidence)*.
   - Clinicians should consider waist circumference measurement to estimate disease risk for patients who have normal or overweight BMI scores. Refer to Table 2 of the original guideline document for disease risk relative to weight and waist circumference *(Strong Recommendation, Moderate Quality Evidence)*.
   - Clinicians need to carefully consider BMI and its associated mortality risk across different ethnicity, sex and age groups *(Strong Recommendation/Moderate Quality Evidence)*.

   BMI continues to be a common and reasonably reliable measurement to identify overweight and obese adults who may be at an increased risk for future morbidity. Although good quality evidence supports obtaining a BMI, it is important to recognize it is not a perfect measurement. BMI is not a direct measure of adiposity and as a consequence it can over- or underestimate adiposity.

   In contrast, waist circumference is positively associated with abdominal fat, which is an independent predictor of risk factors and morbidity of obesity-related diseases *[Reference]*. Waist circumference should be measured midway between the lowest ribs and the iliac crest *[Reference]*. At BMIs greater or equal to 35, waist circumference provides little value over BMI value in predicting disease risk. Waist circumference cut points can generally be applied to all adult ethnic or racial groups *[Moderate Quality Evidence]*.

   In contrast with waist circumference, BMI and its associated disease and mortality risk appear to vary among ethnic subgroups. Female African American populations appear to have the lowest mortality risk at a BMI of 26.2 to 28.5 kg/m^2 and 27.1 to 30.2 kg/m^2 for women and men, respectively. In contrast, Asian populations may experience lowest mortality rates starting at a BMI of 23 to 24 kg/m^2. The correlation between BMI and diabetes risk also varies by ethnicity *[Moderate Quality Evidence]*. In addition, in adults older than 65 years, waist circumference, but not BMI, is associated with greater mortality risk. It is important to not rely solely on BMI scores to predict future mortality risk across different populations.

   Other screening tools are available, as well. These include waist-to-hip ratio (WHR) measurement, bioimpedance (BIA), dual-energy x-ray absorptiometry (DXA) and the recently proposed Body Adiposity Index (BAI= [hip circumference]/[height] 1.5-18 *[Reference]*. Some research indicates if BMI is known, BAI provides little additional information of coronary heart disease (CHD) risk factors and is not shown to be a replacement for BMI in the Caucasian population *[Reference]*. Further BAI measurement research is needed. In the clinical setting, BMI and waist circumference measurements are not associated with any direct physical harm; one must consider possible secondary harms – for example, potential negative self-esteem and associated stigma from BMI category label. Research is extremely limited in this area but must be considered *[Reference]*.

Recommendation: For adult patients with a BMI of 25 to 34.9 kg/m^2, sex-specific waist circumference cutoffs should be used in conjunction with BMI to identify increased disease risk.

Adult BMI Categories

BMI	Category
Less than 18.5	Underweight
18.5 to 24.9	Normal weight
25 to 29.9	Overweight
30 to 34.9	Obese -- class I
35 to 39.9	Obese -- class II
40 or more	Extreme obesity -- class III

6. Advise Weight Maintenance and Manage Other Risk Factors
   Lifetime risk of obesity is high for residents of the United States. Lifetime risk of diabetes is about 32.4% for men and 35.5% for women, and lifetime risk for obesity is higher than this *[Reference]*. Therefore, it is important to address the issue of weight maintenance for those with BMI in the normal range (18.5 to 24.9 kg/m^2). Successful weight management requires a lifestyle approach that integrates physical activity, nutrition, behavioral management, and attention to psychosocial needs.

   - First, encourage regular physical activity at recommended levels. Regular physical activity is strongly related to maintaining normal weight. In selecting types of physical activity, it is important to consider the age of the patient, musculoskeletal limitations, and availability of exercise facilities. For inactive patients, this may include as little as 10 minutes of physical activity a day. Ideally, 30 to 60 minutes of moderate physical activity on most days of the week is recommended (>150 minutes a week). However, for those who have lost a considerable amount of weight, higher amounts of physical activity may be required for weight maintenance (>275 minutes a week). Enjoyment and variety of physical activity are also key features for adherence *[Reference]*.
   - Second, provide structured lifestyle modification suggestions that include specific nutrition recommendations, educational sessions, and frequent contact with health care clinicians, such as a dietitian. Focus on calorie balancing, using a combination of decreased caloric intake with increased calorie expenditure. Include nutrition education (e.g., interpreting food labels); managing restaurant and social eating situations; making healthy, nutritious food choices; using portion control; and recipe modifying.
     There is considerable evidence that individuals consuming low-fat, low-calorie diets are successful at maintaining weight loss for 12 months and longer. Data from the National Weight Control Registry demonstrates that successful weight-maintainers consume a low-calorie diet containing approximately 40 g fat (24% of calories), 200 g carbohydrate (56% of calories), and 70 g protein (19% of calories). A low-fat diet (25% to 30% calories from fat) is considered the conventional therapy for treating obesity *[Reference]*.
     Data is emerging to suggest that patients who are insulin resistant may respond better to a lower carbohydrate diet (<30% carbohydrate). This may also be linked to genetics *[Reference]*.

   - Third, encourage behavior management strategies that may include weekly weight checks, food journals, and monitoring daily routine that focuses on a balanced lifestyle. Balance includes eating a nutritionally balanced breakfast soon after awakening and eating balanced meals at regular intervals thereafter; incorporating fun physical activity into the day; and scheduling the week to include rest, play, and social interactions along with work, school, and family responsibilities.
     Specific behavioral strategies to promote behavior change include self-monitoring some aspect of behavior that, in itself, typically results in behavior change; non-food rewards and positive reinforcements; reminders; stimulus control (changing social or environmental cues that trigger eating behavior); stress management, problem solving, and helping patients believe they can be successful.

7. Assess for Major and Minor Comorbid Conditions
   Recommendation:

   - Waist circumference greater than or equal to 40 inches for males and 35 inches for females is an additional risk factor for complications related to obesity. Measuring waist circumference is recommended to further assess the patient *(Weak Recommendation, Moderate Quality Evidence)*.

   It is important to assess for comorbid conditions as treatment decisions and outcomes may be influenced by their presence. Evaluation for depression, eating disorders and sleep disorders in particular are encouraged. Assessment should include a complete medical history including identification of medications that may include weight gain or interfere with weight loss.

Prevention of Obesity and Management of Obesity Interventions

Comorbid Condition	BMI			
	25 to 30 kg/m^2	30 to 35 kg/m^2	35 to 40 kg/m^2	40+ kg/m^2
0	Counsel and educate: • Lifestyle changes • Behavioral management	Counsel and educate: • Lifestyle changes • Behavioral management • Medication considerations	Counsel and educate: • Lifestyle changes • Behavioral management • Medication considerations	Counsel and educate: • Lifestyle changes • Behavioral management • Medication and surgical considerations
1-2 Minor Comorbid Conditions	Counsel and educate: • Lifestyle changes • Behavioral management	Counsel and educate: • Lifestyle changes • Behavioral management • Medication considerations	Counsel and educate: • Lifestyle changes • Behavioral management • Medication therapy • Surgical options	Counsel and educate: • Lifestyle changes • Behavioral management • Medication and surgical considerations
Major Comorbid Conditions OR 3 Minor Comorbid Conditions	Counsel and educate: • Lifestyle changes • Behavioral management • Medication considerations The Food and Drug Administration (FDA) approves drug therapy only for body mass index (BMI) greater than 27 kg/m^2.	Counsel and educate: • Lifestyle changes • Behavioral management • Medication and surgical considerations	Counsel and educate: • Lifestyle changes • Behavioral management • Medication and surgical considerations	Counsel and educate • Lifestyle changes • Behavioral management • Medication and surgical considerations

Minor Comorbid Conditions

- Cigarette smoking
- Hypertension (blood pressure [BP] greater than or equal to 140/90) or current use of antihypertensives†
- Low-density lipoprotein (LDL) cholesterol >130 mg/dL
- High-density lipoprotein (HDL) cholesterol <40 mg/dL for men; <50 mg/dL for women†
- Pre-diabetes*†
- Family history of premature coronary artery disease
- Age ≥65 years for males
- Age ≥55 years for females or menopausal females

Major Comorbid Conditions

- Waist circumference (males ≥40 inches, females ≥35 inches)†
- Established coronary artery disease
  - History of myocardial infarction
  - History of angioplasty
  - History of coronary artery bypass graft (CABG)
  - History of acute coronary syndrome
- Peripheral vascular disease
- Abdominal aortic aneurysm
- Symptomatic carotid artery disease
- Type 2 diabetes mellitus
- Obstructive sleep apnea

*The term pre-diabetes has been adopted by the American Diabetes Association and others, and refers to those who have a fasting plasma glucose of 100 mg/dL to 125 mg/dL, those with a two-hour post-75-gram oral glucose tolerance test value of 140 mg/dL to 199 mg/dL or those with a glycosylated hemoglobin (A1C) in the range of 5.7% to 6.4%.

†The clustering of these symptoms has been described as the metabolic syndrome. Several formal definitions exist. *[Moderate Quality Evidence]*, *[Reference]*

Assessing for Depression

The evidence showing the linkage between depression and obesity is mixed *[Reference]*. Higher rates of depression have been found in severely obese people, especially younger women with poor body image *[Reference]*. It is difficult to study whether the depression is secondary to the obesity or to existing comorbid conditions *[Reference]*. Weight loss often leads to improvement of depression scores *[Reference]*.

Depression is identified more often in obese women and teenagers and is less likely to be diagnosed in men *[Reference]*. Depression in the elderly is often associated with weight loss, while depression in younger females can be associated with weight gain *[Reference]*.

In the past, depression has been associated with poor weight-loss outcomes *[Reference]*. However, this is not necessarily the case. People with depression can do well in weight-loss treatment, and their symptoms can improve *[Reference]*.

Bariatric surgery patients with poorly managed depression or anxiety are at greater risk for weight regain within the first five postoperative years *[Reference]*. One explanation for this may be found in a line of research investigating biological pathways that link depressive symptomatology to increased adiposity and weight gain *[Reference]*. Weight-loss studies have often excluded people with depression *[Reference]*. More studies to address this issue are warranted.

Screening for depression can include asking the following questions.

Over the past month, have you been bothered by:

- Little interest or pleasure in doing things?
- Feeling down, depressed, or hopeless?

If the patient answers "yes" to either one of the above questions, consider using a questionnaire to further assess whether the patient has sufficient symptoms to warrant a full clinical interview and a diagnosis of clinical major depression. An example of such a questionnaire is the Patient Health Questionnaire (PHQ-9).

This should not be considered a comprehensive screening for depression, which is beyond the scope of this guideline. See the NGC summary of the ICSI guideline Adult depression in primary care for more information.

The work group's opinion is that patients who are clinically depressed should undergo treatment with medication and/or psychotherapy to maximize their ability to lose weight. An antidepressant that does not contribute to weight gain should be chosen. Medications such as bupropion, venlafaxine, and sertraline have been shown in clinical studies to be associated with the least weight gain over time.

Assessing for an Eating Disorder

Eating disorders, particularly binge eating disorder, may complicate the treatment of obesity.

Assessing for eating disorders can include asking the following questions:

- Do you eat a large amount of food in a short period of time — like eating more food than another person may eat in, say, a two-hour period of time?
- Do you ever feel like you can't stop eating even after you feel full?
- When you overeat, what do you do? (e.g., Have you ever tried to "get rid of" the extra calories that you've eaten by doing something like: Take laxatives? Take diuretics [or water pills]? Smoke cigarettes? Take street drugs like cocaine or methamphetamine? Make yourself sick [induce vomiting])?

If the patient answers "yes" to any of the above questions, consider further evaluation or a referral to a dietitian or a behavioral health specialist who specializes in eating disorders or in health psychology and working with bariatric patients.

More comprehensive assessment tools include the SCOFF Questionnaire or Eating Attitudes Test (EAT-24).

Assessing for Medication Use That Contributes to Weight Gain

The assessment of the obese patient should include a complete medication history to identify medications that may induce weight gain or interfere with weight loss. Non-steroidal anti-inflammatory drugs and calcium channel blockers may cause peripheral edema rather than body fat weight gain. Human immunodeficiency virus (HIV) protease inhibitors are associated with lipodystrophy (central obesity) that is actually a change in body fat distribution rather than a body fat weight gain. If possible, alternative medications that are weight-neutral or that induce weight loss should be selected *[Reference]*. A common belief exists among women and clinicians that there is an association between the use of combination hormonal contraceptives and weight gain. This belief may prevent some women from starting hormonal

contraception or cause early discontinuation of medication. A review of 42 clinical trials – including three randomized, placebo-controlled trials – did not find evidence to support a causal relationship between the use of combination oral contraceptives and weight gain. The authors of the review concluded that current evidence is not sufficient to determine the effect of combination contraceptives on weight, but no large effect is evident *[Reference]*.

Please see Appendix A, "Medications Associated with Weight Gain and Weight Loss," in the original guideline document and the NGC summary of the ICSI guideline Diagnosis and management of type 2 diabetes mellitus in adults for more information.

Assessing for a Sleep Disorder

Overweight and obese patients who have not had a sleep study should be encouraged to do so if they show signs of sleep disturbance such as daytime somnolence, snoring, evidence of apnea episodes provided by a partner, or issues with daytime memory and attention.

Assessing for sleep disorders such as sleep apnea and sleep-related eating disorder is important. Patients with documented sleep apnea need to be encouraged to be compliant with their treatment plan in order to improve their ability to lose weight. Sleep duration is important for weight loss, as well. Sleep curtailment decreased the proportion of weight lost as fat by a total of 2.4% if patients slept for 5.5 hours compared to 5.4% if the patient slept for 8.5 hours *[Reference]*.

8. Is Patient Ready to Lose Weight?
Recommendation:

    - Clinicians should use motivational interviewing techniques as a tool for encouraging behavior change *(Strong Recommendation, Moderate Quality Evidence)*.

Knowing the patient's readiness to change can help the clinician understand a patient's level of motivation and how to tailor communication about weight loss. Patients will need to set realistic, achievable goals and be held accountable to practice new behaviors that produce and maintain weight loss.

Introduction to Weight Management/Lifestyle Change

Weight management is a skill. Patients need to set realistic, achievable goals and to be held accountable to practicing the new behaviors that produce and maintain weight loss. Recordkeeping or self-monitoring of progress on specific behaviors is key to successful weight management.

The ICSI Patient Advisory Council reviewed this guideline and supports the value of the physician initiating the conversation and suggested that patients were more likely to act on the recommendations of their clinician. Also, because obesity can be an overwhelming condition for the patient, creating small achievable goals and celebrating those achievements were important for continued success and healthy choices. The work group recommends that clinicians guide goals using the acronym "SMART" (specific, measurable, action based, realistic, and time based).

Refer to Appendix K of the original guideline document for a SMART Goal example tool.

Stages of Change Model

When evaluating a patient with obesity, it is recommended to get a general sense of his or her readiness to change specific dietary and physical activity habits.

The Transtheoretical Model of Change, also known as the Stages of Change model, can be helpful to understand where in the process of change the patient stands. This can be organized into five stages including precontemplation, contemplation, preparation, action and maintenance.

Refer to the original guideline document including Table 5 "Stages of Change," for more information about the five stages.

Overview of Motivational Interviewing (MI)

Motivational interviewing is an empathy-based, patient-centered approach to behavior modification. It has been shown to help patients set realistic, achievable goals and be held accountable to practicing new behaviors. This is a reversal from the traditional role of the physician as advisor and expert "problem solver" *[Reference]*.

The "spirit" of MI is to elicit from patients their own good motivations for making behavior changes; it is collaborative, evocative and honors a patient's autonomy. It recognizes that there is something in human nature that resists being told what to do or being coerced *[Reference]*.

The Guiding Principles of MI = RULE:

- R: Resist the righting reflex. Rather, seek to "fix" a patient, recognize the natural human tendency to resist persuasion (especially the ambivalent). Aim to support the patient's own discovery of the reasons for change.
- U: Understand your patient's motivations. If your consultation time is limited, you are better off asking patients why they would want to make a change and how they might do it, rather than telling them that they should.
- L: Listen to your patient. MI involves as much listening as informing; maintain empathetic interest and acknowledge that the answers most likely lie within the patient.
- E: Empower your patient. MI helps patients explore how they can make a difference in their health. A patient who is active in the consultation, thinking aloud about the why and how of change, is more likely to do something about this afterward. Recognize and guide through "change talk" in which the patient states the good reasons for and steps toward change, rather than resisting change.

[Reference]

The goal of motivational interviewing is to move the patient along the "stages of change," from one stage to the next. The majority of patients in the primary care office are either precontemplation or contemplative *[Reference]*. As such, the success of motivational interviewing lies in the physician allowing the patient to "set the agenda" regarding which health behavior he or she is willing to address.

Refer to the original guideline document for more information on motivational interview and to Appendix L of the original guideline for a sample of motivational interviewing scripting for adults.

See also the "Implementation Tools and Resources Table" in the original guideline document for links to video examples of motivational interviewing techniques.

The clinician should follow the 5 A's (Ask, Advise, Assess, Assist, Arrange). Clinician intervention can be effective and influential, and successful management is possible.

- *ASK* about weight, measure height and weight and calculate BMI.
- *ADVISE* to lose weight. In a clear, strong, but sensitive and personalized manner, urge every overweight or obese patient to lose weight.
- *ASSESS* readiness to lose weight. Ask every overweight or obese patient if he or she is ready to make a weight loss attempt at the time (e.g., within the next 30 days).
- *ASSIST* in weight-loss attempt. Help the patient with a weight loss plan. Refer to appropriate resources
- *ARRANGE* follow-up. Schedule follow-up contact, either in person or via telephone.

Refer to Appendix M in the original guideline document for details on the 5 A's.

10. Negotiate Goals and Management Strategy to Achieve Weight Loss. Refer to Risk Appropriate Resources as Needed
Nutrition

Appropriate nutrition therapy for weight management will be developed collaboratively with the patient. Assessment and education may require a clinician with expertise in nutrition therapy. It is important that clinicians understand and support the general principles of nutrition recommendations for weight management.

Diet history or eating pattern history. A food/beverage frequency checklist, three-day food/beverage record and weekly food/beverage diary are common tools used to collect information about dietary habits.

Nutrition assessment. Evaluate the patient's current food and beverage choices, and eating and drinking habits. Assessment may include the following:

- Current intake of food and beverage calories and fat
- Portion sizes and inclusion of all food groups
- Under- or overconsumption of nutrients
- Use of supplements
- Use of meal replacements
- Stage of behavior change for specific behaviors, such as fruit and vegetable consumption
- Symptoms of possible eating disorder – triggers for overeating
- Timing/consistency of meals and snacks

For more information, including interactive guidance for evaluating portion sizes and calorie analysis, the work group recommends the Center for Nutrition Policy and Promotion Web site at http://www.usda.gov/cnpp and choosemyplate.gov

Refer to the original guideline document for additional information on nutrition recommendations.

Physical Activity

Improved outcomes for long-term weight reduction occur when a low-calorie intake is combined with increased physical activity and behavior therapy *[Reference]*.

Refer to the original guideline document for information on physical activity, including the following topics:

- Specific roles for physical activity in obesity
  - Prevention of obesity
  - Acute weight loss
  - Long-term weight maintenance
  - Metabolic fitness with or without weight loss
- Physical activity prescription
  - Frequency
  - Duration
  - Intensity

Behavioral Management

Self-monitoring of Weight, Nutrition and Activity

Patients should be encouraged to keep track of their dietary intake, physical activity level and body weight. Dietary intake and activity should be recorded on a daily basis, and weight should be recorded on a weekly basis. For example, see the American Medical Association's "Road Maps for Clinical Practice – Assessment and Management of Adult Obesity," booklet 8, figures 4.2 and 5.7.

Refer to the original guideline document for additional information on Behavioral Management, including the following topics:

Additional behavioral modification strategies that play a key role in successful weight loss and maintenance including:

- Stimulus control
- Cognitive restructuring
- Goal setting
- Problem solving
- Social support
- Relapse prevention
- Behavior therapy
- Follow-up

Pharmacologic Therapy

Pharmacotherapy, when used for six months to one year, along with lifestyle modification including nutrition and physical activity, produces weight loss in obese adults. Behavioral modification programs including dietary and exercise counseling typically result in a 5% weight loss *[Reference]*. The average weight loss with pharmacological agents is 10% to 15% of initial weight *[Reference]* or 2 to 10 kg (4.4 to 22 lbs). However, it is not possible to predict the exact amount of weight an individual may lose. Most of the weight loss with these agents will occur during the first six months of therapy. The amount of weight lost with medications is more likely to be maintained if medications are able to be continued long term. Therefore, medications for obesity are most effective if they are continued indefinitely, unless weight is regained or if significant side effects develop.

Weight-loss drugs should only be used as part of a comprehensive weight-loss regimen that includes a low-calorie diet, increased physical activity and behavior therapy. If a patient has been on a combination regimen that includes nutrition therapy, physical activity and behavior modification and has not lost 1 lb/week, the addition of pharmacotherapy should be considered.

Patients considered for pharmacotherapy should have a BMI of greater than or equal to 30 or a BMI of greater than or equal to 27 with concomitant obesity-related risk factors or diseases. The risk factors and diseases that are serious enough to support pharmacotherapy at a BMI of 27 to 29.9 include hypertension, dyslipidemia, cardiovascular disease (CVD), type 2 diabetes, fatty liver disease, and sleep apnea.

Medication therapy should consist of an initial trial period with a single drug to establish efficacy in a given patient. If a patient does not

respond to a drug with reasonable weight loss, the patient should be evaluated to determine adherence with the medication regimen and adjunctive therapies, or to consider the need for a dosage adjustment. If the patient continues to be unresponsive to the medication, or serious adverse effects occur, the medication should be discontinued.

Patients who respond to pharmacotherapy should lose at least 2 kg (4.4 lb.) in the first four weeks after initiating therapy. If a patient has not lost 2 kg (4.4 lb.) in the first four weeks, the chance of a long-term response is low and they may be considered non-responders. The amount of weight lost in the first four weeks may be used as a guide to subsequent therapy. Medication can be continued in patients meeting the appropriate response criteria. Consideration should be given to stopping medication in those patients who fail to meet the four-week weight-loss guide. Successful therapy is characterized by weight loss in the first six months of therapy or weight maintenance after the initial weight-loss-phase, and consideration should be given to continued use of medication. Drug therapy may be continued as long as there is a clinical response and there are no serious or unmanageable adverse effects. Patients should be monitored for adverse events as long as they continue on a medication regimen.

Refer to the original guideline document for additional information on Pharmacologic Therapy, including the following topics:

- Patient monitoring
- Phentermine
- Orlistat
- Qsymia
- 2013 review lorcaserin (Belviq)
- Non-prescription and alternative medicine
- Safety and adverse effects (see also "Potential Harms" field in this summary)

Surgery for Obesity

Bariatric surgery should be considered as an adjunct to the overall treatment paradigm, rather than as a separate and independent therapy for obesity. Please see Table 13, "Overview of Bariatric Procedures" and Appendix D, "Overview of Bariatric Procedures," in the original guideline document for more information.

Refer to the original guideline document for additional information on Surgical Management, including the following topics:

- Patient selection
- Shared decision-making
- Bariatric surgery for patients with class I obesity (BMI of 30 to 34.9 kg/m^2)
- Review of bariatric procedures
- Impact on mortality
- Preoperative workup of the bariatric surgical patient
- Medical emergencies following bariatric surgery
- Postoperative nutritional follow-up
- Duodenal switch nutritional deficiencies
- Medications
- Surgery for adolescents
- Failed bariatric surgery

13. Reassess Goals and Risk Factors and Counsel Regarding Weight Maintenance
Patients need regular follow-up for obesity, which is a lifelong problem in most cases. Regular follow-up conveys the message that the condition is important to the patient, and affords the opportunity for monitoring BMI, as well as evaluation and management of any of the common complications that are often associated with obesity.

Intensive intervention with weekly contact for the first three months and then continued support out to four years such as the Look AHEAD program is the most successful at creating and maintaining the 5% to 10% weight loss needed to reduce clinically significant health risks *[Reference]*.

Patients on pharmacotherapy for obesity need ongoing evaluation for blood pressure, adequacy of nutrition, and surveillance for specific nutrient deficiencies such as low levels of fat-soluble vitamins in those on orlistat.

Patients who have had bariatric surgery may also need procedure-specific follow-up.

Ongoing reinforcement of important behavior strategies may include provision of new information on obesity management, control of local

food environment, strategies to cope with restaurant eating, strategies to limit perimeal snacking and high-calorie beverages, and strategies for achieving regular physical activity.

See Annotation #6, "Advise Weight Maintenance and Manage Other Risk Factors."

The primary care physician also may serve as community leader and public health advocate. Such advocacy may occur in a variety of forms and settings including schools, work sites, and other community settings.

Definitions:

Quality of Evidence and Strength of Recommendations

Category	Quality Definitions	Strong Recommendation	Weak Recommendation
High Quality Evidence	Further research is very unlikely to change confidence in the estimate of effect.	The work group is confident that the desirable effects of adhering to this recommendation outweigh the undesirable effects. This is a strong recommendation for or against. This applies to most patients.	The work group recognizes that the evidence, though of high quality, shows a balance between estimates of harms and benefits. The best action will depend on local circumstances, patient values or preferences.
Moderate Quality Evidence	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.	The work group is confident that the benefits outweigh the risks, but recognizes that the evidence has limitations. Further evidence may impact this recommendation. This is a recommendation that likely applies to most patients.	The work group recognizes that there is a balance between harms and benefit, based on moderate quality evidence, or that there is uncertainty about the estimates of the harms and benefits of the proposed intervention that may be affected by new evidence. Alternative approaches will likely be better for some patients under some circumstances.
Low Quality Evidence	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change. The estimate or any estimate of effect is very uncertain.	The work group feels that the evidence consistently indicates the benefit of this action outweighs the harms. This recommendation might change when higher quality evidence becomes available.	The work group recognizes that there is significant uncertainty about the best estimates of benefits and harms.

In addition to evidence that is graded and used to formulate recommendations, additional pieces of literature will be used to inform the reader of other topics of interest. This literature is not given an evidence grade and is instead identified as a Reference throughout the document.

Clinical Algorithm(s)

A detailed and annotated clinical algorithm for prevention and diagnosis of obesity is provided in the original guideline document (see the "Guideline Availability" field).

Scope

Disease/Condition(s)

Obesity

Other Disease/Condition(s) Addressed

- Depression
- Dyslipidemia
- Eating disorders
- Hypertension

- Sleep apnea
- Type 2 diabetes mellitus (T2DM)

Guideline Category

Counseling

Diagnosis

Management

Prevention

Risk Assessment

Screening

Treatment

Clinical Specialty

Endocrinology

Family Practice

Internal Medicine

Nursing

Nutrition

Preventive Medicine

Psychology

Surgery

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Dietitians

Health Care Providers

Health Plans

Hospitals

Managed Care Organizations

Nurses

Physician Assistants

Physicians

Psychologists/Non-physician Behavioral Health Clinicians

Guideline Objective(s)

- To increase the percentage of patients age 18 years and older who have an annual screening for obesity using body mass index (BMI) measure specific for age and gender
- To increase the percentage of patients age 18 years and older with BMI >25 kg/m^2 who have received education and counseling regarding weight management
- To increase the percentage of patients age 18 years and older with BMI >25 who have improved outcomes from the treatment

Target Population

Adult patients 18 years of age and older

Note: This guideline does not address pregnant women or bodybuilders/weight trainers.

Interventions and Practices Considered

Prevention/Diagnosis/Risk Assessment

1. Measurement of height and weight and calculation of body mass index (BMI)
2. Advice on weight maintenance and management of other risk factors
3. Assessment for major and minor comorbid conditions, including depression, eating disorders, medication use, and sleep disorders
4. Assessment of readiness to lose weight

Treatment/Management

1. Counseling
2. Negotiation of goals and management strategies:
    - Physical activity
    - Behavioral management
    - Pharmacologic therapy, including phentermine, orlistat, and Qsymia
    - Surgery
3. Reassessment of goals and risk factors and counseling regarding weight maintenance

Major Outcomes Considered

- Effectiveness of weight loss interventions (e.g., diet, physical activity, medication, prevention of comorbid conditions)
- Adverse events and complications associated with pharmacological agents and surgery
- Mortality risk and long-term survival after weight loss surgery

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

A consistent and defined process is used for literature search and review for the development and revision of Institute for Clinical Systems Improvement (ICSI) guidelines. Literature search terms for the current revision of this document included adults (18 years and older), published since January 2005 – systematic reviews, randomized control trials, meta-analyses restricted to human studies, in the following topic areas: prevention, screening, treatments/drug studies, medications, gastric bypass and/or bariatric surgery, lipid and cholesterol screening, activity recommendations, genetic studies, family-based therapy, readiness for change, motivational interviewing, goal setting, managing chronic conditions,

binge eating disorders, binge eating disorder assessment and scale, and obesity with diabetes.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Quality of Evidence and Strength of Recommendations

Category	Quality Definitions	Strong Recommendation	Weak Recommendation
High Quality Evidence	Further research is very unlikely to change confidence in the estimate of effect.	The work group is confident that the desirable effects of adhering to this recommendation outweigh the undesirable effects. This is a strong recommendation for or against. This applies to most patients.	The work group recognizes that the evidence, though of high quality, shows a balance between estimates of harms and benefits. The best action will depend on local circumstances, patient values or preferences.
Moderate Quality Evidence	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.	The work group is confident that the benefits outweigh the risks, but recognizes that the evidence has limitations. Further evidence may impact this recommendation. This is a recommendation that likely applies to most patients.	The work group recognizes that there is a balance between harms and benefit, based on moderate quality evidence, or that there is uncertainty about the estimates of the harms and benefits of the proposed intervention that may be affected by new evidence. Alternative approaches will likely be better for some patients under some circumstances.
Low Quality Evidence	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change. The estimate or any estimate of effect is very uncertain.	The work group feels that the evidence consistently indicates the benefit of this action outweighs the harms. This recommendation might change when higher quality evidence becomes available.	The work group recognizes that there is significant uncertainty about the best estimates of benefits and harms.

In addition to evidence that is graded and used to formulate recommendations, additional pieces of literature will be used to inform the reader of other topics of interest. This literature is not given an evidence grade and is instead identified as a Reference throughout the document.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

New Guideline Development Process

A work group consisting of 6 to 12 members that includes physicians, nurses, pharmacists, and other healthcare professionals relevant to the topic, along with an Institute for Clinical Systems Improvement (ICSI) staff facilitator develops each document. Ordinarily, one of the physicians will be the leader. Most work group members are recruited from ICSI member organizations, but if there is expertise not represented by ICSI members, 1 or 2 members may be recruited from medical groups, hospitals, or other organizations that are not members of ICSI. Patients on occasion are invited to serve on work groups.

The work group will meet for 7 to 8 three-hour meetings to develop the guideline. A literature search and review is performed and the work group members, under the coordination of the ICSI staff facilitator, develop the algorithm and write the annotations and footnotes and literature citations.

Once the final draft copy of the guideline is developed, the guideline goes to the ICSI members for critical review.

Revision Process of Existing Guidelines

ICSI scientific documents are revised every 12 to 24 months as indicated by changes in clinical practice and literature. For documents that are revised on a 24-month schedule, ICSI checks with the work group on an annual basis to determine if there have been changes in the literature significant enough to cause the document to be revised earlier or later than scheduled. For yearly reviewed documents, ICSI checks with every work group 6 months before the scheduled revision to determine if there have been changes in the literature significant enough to cause the document to be revised earlier than scheduled.

Literature Search

ICSI staff, working with the work group to identify any new pertinent clinical trials, systematic reviews, or regulatory statements and other professional guidelines, conduct a literature search.

Revision

The work group will meet for 1 to 2 three-hour meetings to review the literature, respond to member organization comments, and revise the document as appropriate.

A second review by members is indicated if there are changes or additions to the document that would be unfamiliar or unacceptable to member organizations. If a review by members is not needed, the document goes to the appropriate steering committee for approval according to the criteria outlined in the "Description of Method of Guideline Validation" field above.

Rating Scheme for the Strength of the Recommendations

See the "Rating Scheme for the Strength of the Evidence" field.

Cost Analysis

The guideline developers reviewed published cost analyses.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

Critical Review Process

The purpose of critical review is to provide an opportunity for the clinicians in the member groups to review the science behind the recommendations and focus on the content of the guideline. Critical review also provides an opportunity for clinicians in each group to come to consensus on feedback they wish to give the work group and to consider changes necessary across systems in their organization to implement the

guideline.

All member organizations are expected to respond to critical review guidelines. Critical review of guidelines is a criterion for continued membership within the Institute for Clinical Systems Improvement (ICSI).

After the critical review period, the guideline work group reconvenes to review the comments and make changes, as appropriate. The work group prepares a written response to all comments.

Document Approval

Each document is approved by the Committee for Evidence-Based Practice (CEBP).

The committee will review and approve each guideline/protocol, based on the following criteria:

- The aim(s) of the document is clearly and specifically described.
- The need for and importance of the document is clearly stated.
- The work group included individuals from all relevant professional groups and had the needed expertise.
- Patient views and preferences were sought and included.
- The work group has responded to all feedback and criticisms reasonably.
- Potential conflicts of interest were disclosed and do not detract from the quality of the document.
- Systematic methods were used to search for the evidence to assure completeness and currency.
- Health benefits, side effects, risks and patient preferences have been considered in formulating recommendations.
- The link between the recommendation and supporting evidence is clear.
- Where the evidence has not been well established, recommendations based on community practice or expert opinion are clearly identified.
- Recommendations are specific and unambiguous.
- Different options for clinical management are clearly presented.
- Clinical highlights and recommendations are easily identifiable.
- Implementation recommendations identify key strategies for *health care systems* to support implementation of the document.
- The document is supported with practical and useful tools to ease *clinician* implementation.
- Where local resource availability may vary, alternative recommendations are clear.
- Suggested measures are clear and useful for quality/process improvement efforts.

Once the document has been approved, it is posted on the ICSI Web site and released to members for use.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is classified for selected recommendations (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Effective prevention and appropriate management of obesity in adults

Potential Harms

Safety and Adverse Effects of Weight-Loss Drugs

- The safe and effective use of any weight-loss drug beyond two years has not been established. Adverse side effects from the use of weight-loss drugs have been observed in patients. Dose-related minor effects may occur soon after beginning therapy.
- None of the weight-loss drugs is approved for use in pregnant or lactating women, and the safe use of these drugs in pregnant or lactating

women has still not been determined.

- Infrequent, but potentially serious, effects can also occur much later in the course of therapy. The practice of combination drug therapy for obesity may increase the frequency of adverse events.
- *Phentermine*: Patients taking phentermine or any other anorexiant should have their blood pressure monitored carefully during treatment due to the possibility of increased blood pressure as a side effect of this medication. Due to its anticholinergic effects, phentermine can cause severe constipation and severe dry mouth. Insomnia can also occur but usually resolves if the patient continues to take this medication. Phentermine should be used with caution with selective serotonin reuptake inhibitors (SSRIs) or stimulant medications.
- *Orlistat*: The adverse events of orlistat are mainly gastrointestinal (GI), including oily spotting, flatulence, fecal urgency, oily stool, oily evacuation, increased defecation, and fecal incontinence. Most common adverse reactions were mild and transient, and decreased during the second treatment year. Events usually began within the first three months of therapy. Approximately 50% of all episodes of GI adverse events lasted for less than one week, and most lasted for no more than four weeks. However, adverse GI events may occur in some individuals over a period of six months or longer. Orlistat has also been shown to reduce serum concentrations of fat-soluble vitamins (vitamins A, D, E and K). Caution should also be exercised with concomitant use of orlistat and other lipophilic drugs, as their overall bioavailability may be compromised. In May 2010, the FDA approved a revised label for orlistat that included new safety information about cases of severe liver injury that are reported rarely with use of the drug. New warnings about reports of rare liver injury were also added to the label of the over-the-counter version of orlistat.
- *Qsymia (Phentermine and Topiramate)*: The most common adverse reactions identified during clinical trials and occurring at a rate of greater than or equal to 5% and at a rate of at least 1.5 times greater than placebo include paresthesia, dizziness, dysgeusia, insomnia, constipation and dry mouth. Qsymia 15 mg/92 mg should be discontinued gradually by dosing every other day for at least one week before stopping completely because of the possibility of inducing a seizure. Dosing adjustments are necessary for patients with renal or hepatic impairment. Qsymia can increase resting heart rate; this drug's effect on heart rate in patients at high risk for heart attack or stroke is not known. Regular monitoring of heart rate is recommended for all patients taking Qsymia, especially when starting Qsymia or increasing the dose. Qsymia can also cause mood disorders, including depression and anxiety, insomnia and cognitive dysfunction (such as impaired concentration and attention, memory difficulties, and problems with language and speech). Dosage reduction or drug discontinuation may be required. Acute myopia associated with secondary angle closure glaucoma has been reported in patients taking topiramate. Symptoms include acute onset of decreased visual acuity with or without ocular pain. Refer to Qsymia section in Annotation 10 of the original guideline document for additional information.
- *Lorcaserin (Belviq)*: Lorcaserin has the potential to cause serotonin syndrome like effects and should not be used with other drugs that can cause this potentially life-threatening syndrome. If symptoms of serotonin syndrome appear, lorcaserin should be discontinued. Mitral valve regurgitation has been linked with lorcaserin through its serotonergic pathway. If signs and symptoms of valvular disease appear, it may be necessary to discontinue lorcaserin. Use with caution in patients with a history of bradycardia or heart block greater than first degree. Lorcaserin can cause cognitive impairment, leading to memory and attention changes. Caution patients with the operation of hazardous machinery when starting lorcaserin. Do not exceed the maximum dose of 10 mg twice daily, as psychiatric disorders of euphoria and dissociation have been reported. Monitor patients for suicidal thoughts. Refer to Lorcaserin section and Table 11, "Incidence of Adverse Reactions", in Annotation 10 of the original guideline document for more information on lorcaserin side effects.
- *Combination Drug Therapy*: The practice of combination drug therapy may increase the frequency of adverse events. Using the lowest possible effective dose may also reduce the chance of an adverse event. Refer to Drug Interactions section in Annotation 10 of the original guideline document for additional information.

Complications of Surgical Procedures

All bariatric procedures are associated with hair loss, excess skin, nausea, vomiting, and dehydration.

- *Vertical sleeve gastrectomy* may cause leakage, stricture and significant issues with nausea and vomiting.
- *Laparoscopic adjustable banding* is associated with erosion, slippage of the band, concentric dilation, and port-related problems.
- *Duodenal switch* is associated with malnutrition, leak, stricture, and bowel obstruction.
- *Roux-en-Y gastric bypass* may cause nutritional problems, leak, stricture, marginal ulcer, bowel obstruction, and internal hernia. A study showed a small increase in suicide rate and accidental death in patients who have undergone gastric bypass operation.

Refer to Appendix D, "Overview of Bariatric Procedures," in the original guideline document for more information on complications of surgical procedures.

Contraindications

Contraindications

Contraindications to Medications

None of the weight-loss drugs are approved for use in pregnant or lactating women, and the safe use of these drugs in pregnant or lactating women has still not been determined.

Phentermine

Phentermine is contraindicated for use with monoamine oxidase (MAO) inhibitors, and it should not be started within 14 days of discontinued MAO inhibitors.

Qsymia

- Qsymia is contraindicated in patients who have glaucoma, hyperthyroidism, a known hypersensitivity or idiosyncrasy to sympathomimetic amines, or who are taking or have taken within the past 14 days a monoamine oxidase inhibitor.
- Qsymia must not be used during pregnancy because it can cause harm to a fetus. Females of reproductive potential must not be pregnant when starting Qsymia or become pregnant while taking Qsymia. Females of reproductive potential should have a negative pregnancy test before starting Qsymia and every month while using the drug, and should use effective contraception consistently while taking Qsymia. If a patient becomes pregnant while taking Qsymia, treatment should be immediately discontinued.
- Qsymia use should be avoided in patients with a history of suicidal attempts or active suicidal ideation and should be discontinued if a patient experiences suicidal thoughts or behavior.
- The use of Qsymia in patients with recent (within the last six months) or unstable heart disease or stroke is not recommended.

Lorcaserin (Belviq)

- Lorcaserin is contraindicated in pregnancy, risk factor X, and should not be taken by nursing mothers.
- Do not use lorcaserin in severe renal impairment (creatinine clearance [Cl_{cr}] < 30 mL/minute) and use with caution in severe hepatic impairment. Use in end-stage renal disease (ESRD) is not recommended as this has not been studied.

Contraindications for Surgery

- *All bariatric surgical procedures* are contraindicated in patients with unstable psychological conditions, endocrine disorders, and pregnancy.
- *Adjustable band* is contraindicated in patients with esophageal dysmotility and inflammatory bowel disease.
- Contraindications to *Roux-en-Y Gastric Bypass* include history of gastric cancer, need for nonsteroidal anti-inflammatory drugs (NSAIDs), bile duct pathology, inflammatory bowel disease.
- *Duodenal switch* is contraindicated in vegetarians and patients with inflammatory bowel disease

Qualifying Statements

Qualifying Statements

- The information contained in this Institute for Clinical Systems Improvement (ICSI) Health Care Guideline is intended primarily for health professionals and other expert audiences.
- This ICSI Health Care Guideline should not be construed as medical advice or medical opinion related to any specific facts or circumstances. Patients and families are urged to consult a health care professional regarding their own situation and any specific medical questions they may have. In addition, they should seek assistance from a health care professional in interpreting this ICSI Health Care Guideline and applying it in their individual case.
- This ICSI Health Care Guideline is designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.

Implementation of the Guideline

Description of Implementation Strategy

Once a guideline is approved for general implementation, a medical group can choose to concentrate on the implementation of that guideline. When four or more groups choose the same guideline to implement and they wish to collaborate with others, they may form an action group.

In the action group, each medical group sets specific goals they plan to achieve in improving patient care based on the particular guideline(s). Each medical group shares its experiences and supporting measurement results within the action group. This sharing facilitates a collaborative learning environment. Action group learnings are also documented and shared with interested medical groups within the collaborative.

Currently, action groups may focus on one guideline or a set of guidelines such as hypertension, lipid treatment, and tobacco cessation.

Detailed measurement strategies are presented in the original guideline document to help close the gap between clinical practice and the guideline recommendations. Summaries of the measures are provided in the National Quality Measures Clearinghouse (NQMC).

Implementation Recommendations

Prior to implementation, it is important to consider current organizational infrastructure that address the following:

- System and process design
- Training and education
- Culture and the need to shift values, beliefs and behaviors of the organization

The following system changes were identified by the guideline work group as key strategies for health care systems to incorporate in support of the implementation of this guideline.

- Establish a system for using a Patient Readiness Scale to determine if the patient is ready to talk about weight loss and/or would like information.
- Establish a system for staff to efficiently calculate body mass index (BMI) prior to the physician entering the exam room. The BMI may provide more health risk information than traditional vital signs and should be built into the patient assessment protocol. A BMI chart should be placed by each scale in the clinic. All organizations with electronic medical records should build BMI calculators as a component for immediate calculation.
- Develop a tracking system that periodically reviews patient charts to identify patients who are overweight or obese so that clinicians are aware of the need to discuss the issue with the patient.
- Establish a system for staff and clinician training around skills and knowledge in the areas of motivational interviewing; brief, focused advice on nutrition, physical activity and lifestyle changes; and evaluation of evidence of effectiveness of treatment options.
- Establish a system for continuing education on evidence-based obesity management for clinicians, nurses, and ancillary clinic staff.
- Remove barriers to referral programs for weight loss by understanding where programs are and what process is required for referrals.
- Develop medical record systems to track status of patients under the clinician's care with the capability to produce an outpatient tracking system for patient follow-up by clinician/staff.
- Use tools such as posters and brochures throughout the facility to assist with identifying and notifying patients about health risk in relationship to NIH-based categories of BMI. Promote a healthy lifestyle around nutrition and activity while encouraging patient knowledge of his or her BMI.
- Develop patient-centered education and self-management programs, which may include self-monitoring, self-management, and skills such as journaling.
- Build systems to track outcomes measures, as well as ongoing process measures. Track the response rate to various treatments/strategies. Improvement rates – the BMI is stable or has decreased over time.
- Systems to coordinate care ensure continuity and keep clinicians informed of progress.
    - Develop electronic tracking systems for panel or population management.
    - Educate patients to foster awareness and knowledge of BMI for self-monitoring and reporting
    - Structure follow-up visits with patient per guideline recommendations

Implementation Tools

Chart Documentation/Checklists/Forms

Clinical Algorithm

Quality Measures

Quick Reference Guides/Physician Guides

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Related NQMC Measures

Prevention and management of obesity for adults: percentage of patients who have an annual BMI measured and documented.

Prevention and management of obesity for adults: percentage of patients with a BMI greater than or equal to 25 who received education and counseling for weight management strategies that include nutrition, physical activity, lifestyle changes, medication therapy and/or surgical considerations.

Prevention and management of obesity for adults: percentage of patients with a BMI greater than or equal to 25 who have reduced their weight by 5%.

Prevention and management of obesity for adults: percentage of patients with BMI greater than or equal to 25 who have 30 minutes of any type of physical activity five times per week documented.

Prevention and management of obesity for adults: percentage of patients with a BMI greater than or equal to 25 who have reduced their weight by 10%.

Prevention and management of obesity for adults: percentage of patients with a BMI greater than or equal to 40 who have been provided with a referral to a bariatric specialist.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Fitch A, Everling L, Fox C, Goldberg J, Heim C, Johnson K, Kaufman T, Kennedy E, Kestenbaum C, Lano M, Leslie D, Newell T, O'Connor P, Slusarek B, Spaniol A, Stovitz S, Webb B. Prevention and management of obesity for adults. Bloomington (MN): Institute for

Clinical Systems Improvement (ICSI); 2013 May. 99 p. [161 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2004 Nov (revised 2013 May)

Guideline Developer(s)

Institute for Clinical Systems Improvement - Nonprofit Organization

Guideline Developer Comment

The Institute for Clinical Systems Improvement (ICSI) is comprised of 50+ medical group and hospital members representing 9,000 physicians in Minnesota and surrounding areas, and is sponsored by five nonprofit health plans. For a list of sponsors and participating organizations, see the ICSI Web site .

Source(s) of Funding

- The Institute for Clinical Systems Improvement (ICSI) provided the funding for this guideline. The annual dues of the member medical groups and sponsoring health plans fund ICSI's work. Individuals on the work group are not paid by ICSI, but are supported by their medical group for this work.
- ICSI facilitates and coordinates the guideline development and revision process. ICSI, member medical groups, and sponsoring health plans review and provide feedback, but do not have editorial control over the work group. All recommendations are based on the work group's independent evaluation of the evidence.

Guideline Committee

Committee on Evidence-Based Practice

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

The Institute for Clinical Systems Improvement (ICSI) has long had a policy of transparency in declaring potential conflicting and competing interests of all individuals who participate in the development, revision and approval of ICSI guidelines and protocols.

In 2010, the ICSI Conflict of Interest Review Committee was established by the Board of Directors to review all disclosures and make recommendations to the board when steps should be taken to mitigate potential conflicts of interest, including recommendations regarding removal of work group members. This committee has adopted the Institute of Medicine Conflict of Interest standards as outlined in the report Clinical Practice Guidelines We Can Trust (2011).

Where there are work group members with identified potential conflicts, these are disclosed and discussed at the initial work group meeting. These members are expected to recuse themselves from related discussions or authorship of related recommendations, as directed by the Conflict of Interest committee or requested by the work group.

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Research Grants: NIH, Diabetes, Hypertension, AHRQ, Bariatric Surgery
Financial/Non-financial Conflicts of Interest: Patent pending, drug software, BP, Glucose monitoring

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Financial/Non-financial Conflicts of Interest: One time Nursing Education – Ethicon

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Research Grants: None
Financial/Non-financial Conflicts of Interest: None

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Institute for Clinical Systems Improvement (ICSI). Prevention and management of obesity (mature adolescents and adults). Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2011 Apr. 98 p.

Guideline Availability

Available for purchase from the Institute for Clinical Systems Improvement (ICSI) Web site . Also available to ICSI members for free at the ICSI Web site and to Minnesota health care organizations free by request at the ICSI Web site .

Availability of Companion Documents

The following companion is provided to those who access the guideline (see the "Guideline Availability" field):

- Prevention and management of obesity (mature adolescents and adults). Executive summary. Bloomington (MN): Institute for Clinical Systems Improvement; 2013 May. 1 p.

In addition, several tools, including a sample physical activity prescription, meal tolerance test orders, a band assessment protocol, and sample weight-loss surgery checkout orders, are available in the appendices to the original guideline document.

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI on January 12, 2005. It was updated by ECRI on January 11, 2006 and January 30, 2007. This NGC summary was updated by ECRI Institute on August 20, 2009. This summary was updated by ECRI Institute on January 28, 2010 following the U.S. Food and Drug Administration advisory on Meridia. This summary was updated by ECRI Institute on July 20, 2010 following the U.S. Food and Drug Administration advisory on Orlistat. This summary was updated by ECRI Institute on July 14, 2011. This NGC summary was updated by ECRI Institute on August 26, 2013.

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