Behavioral Modification for the Management of Obesity

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KEYWORDS

• Obesity • Behavioral modification • Cognitive behavioral interventions for weight loss • Weight management

KEY POINTS

- An understanding of and appreciation for the multifactorial and ecological nature of the etiology of obesity are important.
- There are significant obesity-related health disparities, particularly in African American women.
- Providing a nonstigmatizing approach to overweight and obese patients is important.
- Motivational interviewing techniques are effective within the patient-centered medical home; behaviorally based programs for obesity management inform patients of reasonable goals and expectations.
- Collaborating with behavioral health care specialists and registered dietitians also facilitate success as part of an integrated patient-centered approach to weight management.

INTRODUCTION: NATURE OF THE PROBLEM

Placing the Behavioral Management of Obesity in the Larger Context

In 2003, the US Preventive Services Task Force recommended that primary care practitioners (PCPs) screen all adults for obesity and offer behavioral interventions and intensive counseling for those identified as being obese.[1] This recommendation came at a time when fewer than half of primary care physicians were routinely discussing weight management with their patients.[2] In addition, there were no established evidence-based guidelines for behavioral weight loss counseling in primary care

The authors had been funded by NIH (P20MD000505); NIHMS-ID: 729321.

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Prim Care Clin Office Pract 43 (2016) 159–175
http://dx.doi.org/10.1016/j.pop.2015.10.004 **primarycare.theclinics.com**
0095-4543/16/$ – see front matter

settings.[3] Obesity is a complex combination of genetic, biological, psychological, and sociocultural factors. Health behaviors such as eating patterns and volitional physical activity are under the complex influence of many psychological and social factors.[4] Viewing obesity in the context of a complex interaction between genetics and environment guides the understanding of the condition and helps form multidimensional treatment plans. Addressing the social and psychological cues associated with overeating and low physical activity through behavioral modification helps patients see success in the context of individual weight management goals.[5–7]

This article provides primary care–based behavioral strategies for working with obese patients and their families. A multifactorial model for obesity is presented. Strategies for creating effective patient encounters and specific recommendations to motivate and support patients are provided. Multicomponent programs include nutritional, physical activity, and cognitive behavioral approaches to target overweight/obesity. This article focuses on behavioral strategies for weight management.

Weight Stigma

The discussion of the behavioral management of obesity must include an understanding of weight stigma. Overweight is often stigmatized in American culture. This, unfortunately, includes health care providers.[8] Individual provider biases must be recognized and overcome to develop treatment environments that welcome overweight and obese patients (**Boxes 1** and **2**). Providers often view obese patients as lazy, weak-willed, and noncompliant.[9] Patients perceive these biases and delay or avoid seeking care because they anticipate being disrespected.[10,11] As a result, obese patients are *less* likely to obtain recommended preventive health services. Obese patients are also more likely to cancel appointments or delay care,[12–14] which creates an unhealthy paradox whereby patients requiring medical care actively avoid it. Health care providers should use language appropriately when referring to patients with overweight/obesity, actively avoiding stigmatizing words or phrases (**Box 3**).[15]

An Ecological Model for Understanding Obesity: Understanding Microsystem and Macrosystem Factors to Produce Change

Environmental factors that determine an individual's weight-related health behaviors occur at the *microsystem level* (family/social determinants) and *macrosystem level* (eg, cultural and social values).[16] Some of these are modifiable and others are not. This microsystem/macrosystem concept aligns well with the modern patient-centered medical home (PCMH) model of health care. The PCMH emphasizes caring for the patient in the context of his or her "unique needs, culture, values, and preferences."[17]

Macrosystem factors promoting obesity include the marketing of calorie-dense processed foods to certain segments of the population at increased risk for obesity. For example, African Americans view 50% more fast food television advertisements and dine more frequently at fast food restaurants than Caucasians.[18] Obesity-related

Box 1
Patient perspectives: weight stigma

I think the worst was my family doctor who made a habit of shrugging off my health concerns…The last time I went to him with a problem, he said, "You just need to learn to push yourself away from the table."

Box 2
Weight stigma: what you can do?

1. Realize obesity is a health problem, not an issue of personal appearance
2. Talk to patients about their current health status and goals
   a. Weight and BMI
   b. Laboratory values
   c. How they feel, in general
3. Make office accommodations for larger patients (eg, waiting room chairs, scales, examination tables)
4. Educate office/clinic staff about the importance of making overweight individuals feel welcome and not embarrassed

health disparities among African American individuals are discussed in more detail throughout this chapter.

Microsystem factors include how culture, family environment, and social settings impact eating and activity patterns (**Box 4**). For example, fewer food rules about where and when food may be eaten in the home are associated with increased weight.[19] Small changes to the household environment supports behavioral weight loss interventions (eg, no food allowed in front of television, avoid excessive snacking between meals). Families should be encouraged to work together to engage in healthy behaviors rather than just focusing on one person within the family who is struggling with weight (Tracy Sbrocco, PhD, unpublished data).[20]

Microsystem factors also involve issues relating to stimulus control. Environmental cues associated with overeating can be altered to assist weight loss and long-term weight maintenance. Patients and physicians should collaborate to identify individual stimuli that patients can avoid. Examples include eliminating television within the eating environment, removing snack foods from the home, and using smaller plates for meal consumption.[21]

Food intake is higher when individuals are distracted during meals.[22] Food consumption is associated with the length of the meal and the number of individuals at the table.[22,23] Individuals are less attentive to caloric intake when eating with company or while watching television. These distractions reduce the ability to self-monitor food consumption and can promote unintended weight gain.

Emotional eating also plays an important role in the management of overweight and obesity. Stress is a primary predictor of overeating and poor weight maintenance.[21]

Box 3
Patient-preferred terms

- Weight problem
- BMI
- Excess weight

Avoid the following:

- Fatness/Excess fat/Fat
- Obesity
- Large size
- Heavy

Box 4
Healthier environment: what can you do?

1. Encourage household rules to limit consumption of excess calories
2. Remove less healthy foods from the home
3. Limit mindless snacking
4. Restrict TV and video game time
5. Address family views on weight
6. Encourage stress management:
   a. Breathing exercises
   b. Progressive muscle relaxation
   c. Meditation

For information on stress management, see https://nccih.nih.gov/health/stress/relaxation.htm.

Acute and chronic stress alters the desire for food and subsequent food intake. Stress influences central reward pathways, resulting in consumption of higher calorie foods. Stress causes overeating, and stress is often suppressed by eating.[24] Patients must learn alternative methods for coping with stress (eg, diaphragmatic breathing, progressive muscle relaxation, mediation) to prevent stressed-induced overeating.

Cultural Competency in the Behavioral Management of Obesity

Not all cultures view overweight/obesity as a problem. This perspective relates to beauty ideals about ideal body size or health beliefs suggesting that bigger is healthier. Food-scarce environments are also obesogenic. For example, African American women (who are at particularly high risk for obesity) may be less likely to engage in traditional weight management programs and may experience decreased success when they do participate (**Box 5**).[25–27] Rather than "blame the victim," providers should work to engage these women and their families. African American women often have leadership roles in their families and are very influential in their children's eating patterns.[28] Engaging patients to provide culturally appropriate education and community-specific recommendations for change can have a broad impact.

Key points:
1. Obesity occurs in a large ecological context and is multifactorial in nature.
2. Many ecological and environmental factors contribute to and maintain overweight and obesity. Understanding these factors helps destigmatize obesity and promotes culturally appropriate treatment.

Box 5
Patient perspective: African American women

We really don't know a lot about healthiness [in eating]. Traditionally, most of our habits have been handed down to us. You eat all of the food on your plate and you have all this fat and that fat and more fat on top of fat…we really have a lack of knowledge when it comes to that and we learn it the hard way. You get sick…You've been taught this stuff all your life, but you never knew it was wrong.

BEHAVIORAL MODIFICATION FOR OBESITY MANAGEMENT

Treatment Basics

The behavioral treatment of obesity is noninvasive and relatively low cost. Behavioral interventions to promote lifestyle changes should include face-to-face contact and provide at least 14 sessions within the first 6 months to yield the best results.[29] These interventions are often conducted in group settings and may be available at local hospitals, through commercial programs or in the office setting. Behavioral interventions require time and commitment on the part of the patient and the provider. Patients can be referred to commercial or medical center–based behavioral group programs for weight loss and weight maintenance. If providing an outside referral, it is important that primary care physicians continue to provide ongoing support. Several simple behavioral principles[30,31] can easily be integrated into an office practice, as follows.

Collaborative goal setting

Setting reasonable goals that are achievable promotes long-term success. Patients often think they need to lose a great deal of weight to be successful. Helping patients choose a long-term weight loss goal that is reasonable and achievable (eg, 5% weight loss) increases the likelihood of successful adherence. Establish a specific goal for physical activity. Set a specific goal for dietary intake. Set a specific goal for weight management. When possible, tie other health outcomes (better blood pressure control, improved lipid profile) to the weight management goal to increase motivation and adherence.

Accountability

Incorporate a measure of accountability to each of the goals. How often will patients come into the office to assess weight-related goals? Have them participate in a program that meets weekly for several months with required sign-in. Which patients would succeed with an online program? Link established goals to office visits to assess progress and provide ongoing support and encouragement.

Nutrition consultation and meal planning

Having a registered dietitian nutritionist (RDN) visit with each patient and assess their knowledge and preferences also augments success. RDN expertise allows each patient to develop an individual nutrition plan that is culturally appropriate, practical, affordable, and achievable. When meeting with an RDN, a patient might expect to aim for the following:

- A daily reduction in caloric intake by 500 kilocalories (1200–1500 calories/d for women, 1500–1800 calories/d for men);
- An increase in physical activity to achieve 150 minutes per week of aerobic activity;
- Review of the Mifflin-St Jeor equation (recommended by the Academy of Nutrition and Dietetics to calculate metabolic rate [in kcal/d] in overweight or obese adults using actual body weight): multiply patient's resting energy expenditure by an activity factor to estimate needs. Energy needs should then be reduced by 500 to 750 kilocalories (3500–5250 kcal per week) for weight loss of 1 to 1.5 lb per week.[29,32]

Self-monitoring food intake, weight, and activity

Self-monitoring is the cornerstone of successful behavior therapy (**Boxes 6** and **7**). Monitoring food intake and activity levels directly increases self-awareness of personal behaviors. Self-monitoring slows down the decision-making process, allowing

Box 6
Patient perspective: I was a sloth!

It seems the older I got, the heavier I got. The weight just kept creeping up. It wasn't until my physician suggested I wear an activity monitor that I realized what a sloth I had become! My typical day involved only 2500 steps! I couldn't believe it at first. I went from my car, to the elevator, to my office, and back home. I now have a daily goal of 10,000 steps, which I usually make. I get up every hour and walk a quarter mile loop twice. It really adds up, I've lost weight, and I feel better!

individuals time to make healthier choices. Self-monitoring also alerts individuals about overconsumption and the nutritional content of foods.

- Smart phone applications allow patients to search for healthy food choices and record activities at little or no cost. Such applications allow for short- and long-term monitoring and augment weight loss treatment within primary care.[33] Examples include the following:
  - Goal setting for certain number of steps (10,000/d)
  - Prompts to get up and move after sedentary periods

Stimulus control
Stimulus control strategies alter an individual's environment to maximize healthy choices. An example is moving less healthy foods (or foods an individual tends to overeat) out of the house to limit consumption. A reminder note on the refrigerator or a prompt to exercise on the bathroom mirror are other examples of how to alter the home environment to promote healthy eating and exercise patterns.

Problem solving
Specific problem-solving tactics help patients explore their weight-related health behaviors. Using a behavioral chain to consider outcomes associated with different choices, patients are encouraged to consider different solutions before selecting the healthiest solution. Patients develop and implement a specific plan for the desired behavior and then evaluate the success of their solution. Patients are encouraged to think about problems differently and engage in creative problem solving. Group visits offer an ideal way to engage in problem solving that focuses on a specific health topic. Individuals learn from how others have handled similar problems and often create innovative solutions specific to their own circumstances.

Box 7
Patient perspective: I ate what?

My nutritionist had me record the food I was eating before I tried to lose any weight. She wanted me to understand the kinds of foods I was eating and where I might "get into trouble" as I try a new way of eating. It was such an eye opener! I just could NOT believe there were almost 200 calories in ½ cup of macaroni and cheese. And, let me tell you, a ½ cup was not my serving size—I was eating 2 ½ cups! Yes, that's almost 900 calories. I still eat it, but now I know to be sure to watch my portion sizes and not eat it as often if I want to maintain my weight loss.

Problem solving: troubleshooting specific eating situations

Social eating and eating outside of the home Restaurants are a potential bonanza for excessive caloric intake. Patients must learn skills for healthy eating outside of the home (**Box 8**). Americans eat more meals outside of the home than ever before. Dining out is no longer a rare event and, as such, cannot be used as an excuse for overeating. Controlling social eating and caloric consumption outside of the home must include an understanding of the impact this type of eating has on an individual's weight. The challenges of dining out include portion size, type of food, food preparation techniques, and the desire or habit of eating everything on the plate.

Emotional eating Many people eat in response to a variety of emotions, including anger, boredom, stress, anxiety, and frustration. Such eating behaviors have a significant influence on weight or health (**Box 9**).

Relapse prevention

Slip-ups are normal when initiating any lifestyle changes (**Box 10**). Learning how to get back on track is important. Necessary components of relapse prevention include the following:

- Understand the social cues that relate to both healthy and unhealthy weight-related behaviors. Patients should generate strategies to help navigate social events, travel, and vacations that commonly challenge the ability to make healthy lifestyle choices.
- Stress management is essential. Patients should be encouraged to use a variety of techniques including problem solving, regular physical activity, relaxation

Box 8
Tips for eating out

1. Do NOT skip meals before eating out. Being hungry makes it more difficult to think and plan wisely.
2. Plan ahead. Choose a restaurant that has a wide variety of choices.
3. There are new rules for buffets! Do not overfill your plate. Choose a little bit. Cut back on portions. Make one pass and call it quits.
4. *Study the menu* carefully. Order items that are broiled, baked, poached, or steamed. Limit fried, buttered, or creamed foods, or items with sauce/gravy.
5. *Ask questions* about the food before you place an order. Inquire about preparation methods.
6. Ask for dressing, sauce and gravy *on the side*.
7. Fresh rolls or breads are delicious without added butter.
8. *Portion sizes*. Consider the following strategies to limit portion sizes:
   - Split a meal or item with someone.
   - Order à la carte (side dishes or appetizers).
9. Decide what you are going to eat before you dig in. Put the remainder to the side. Take it home.
10. Use *alcohol* sparingly.
11. *Salad bars*. People think of salads as "free food." They are not. Dressing, bacon, high-fat cheeses, and premixed salads are high in calories.
12. Beware of *eating on the run*! Fast food restaurant choices tend to be abundant in fat and calories. Take lower fat food choices with you.

Box 9
Where does emotional eating come from?

Our culture often takes care of its people with food. Children who are upset might be offered a lollipop or an ice cream cone. Parents often soothe children with food. Food comes to be associated with comfort.

It is important to help patients and families find other ways to deal with negative feelings.

Box 10
Sample dialogue for helping patients understand and plan for slips and prevent relapses

Slips

A slip is an error. You did something you really did not want to do. A slip stops there. Say, for example, you intended to enjoy one cookie and wound up eating 10. If you can see this as temporary, spend a bit of time trying to figure out how you did this and make sure to treat it as a Learning Experience rather than a failure, you'll be okay.

In the big picture, 10 cookies are not going to make you overweight or keep you overweight. However, if you let one slip turn into a series of slips, you are on the road to Relapse. Again, it is your belief about what you've done that causes you trouble, not what actually happened. Know the difference between a Learning Experience and a Failure. A failure attitude does not lead to success. Learning, on the other hand, is a lifelong endeavor.

Physical activity example: planning for an exercise slip

The time changes; seasons change, or you get bored or injured. All of these are common reasons that call for a change in an exercise routine. Rather than denying that this could ever happen to you, look ahead and anticipate what can cause you problems. Anticipate and plan. For each potential problem, what will you do?

exercises, engaging social supports, or other cognitive strategies (eg, positive self-talk).

- Maintaining motivation over the long term can be a challenge. Acknowledge personal successes, engage in regular review of progress, reassess goals, and set new goals as necessary. Primary care physicians are well-positioned to help patients with weight management over the long term.

Box 11 summarizes effective behavioral strategies for weight loss.

Box 11
Effective behavioral strategies for weight loss

- Self-monitoring of nutritional intake and physical activity
- Goal setting
- Problem solving
- Social support
- Stress management
- Stimulus control
- Alternative behaviors (identifying internal cues for eating, such as craving and finding alternate behaviors rather than giving in to the craving)

- Cognitive restructuring
- Contingency management—making specific plans for slip-ups
- Continuous care—the value of a patient-centered medical home
- Establish a weight management range
- Construct a weight maintenance plan
- Meet with an RDN to discuss structured meal plans, meal replacements, and understanding of portion sizes and portion control
- Develop specific relapse prevention techniques[32,34]

RESEARCH REVIEW: PROTOTYPICAL PROGRAMS FOR BEHAVIORAL MODIFICATION IN THE MANAGEMENT OF OBESITY

Archetypal weight loss research studies such as the Diabetes Prevention Program (DPP) and the Look AHEAD (Action for Health in Diabetes) trial (based on the DPP but administered in a group setting) provide valuable information on eating patterns and physical activity habits that are associated with weight loss. They also highlight behavioral strategies as the hallmarks of a successful cognitive behavioral weight loss intervention to help in weight loss efforts. The DPP program has proven efficacy in a primary care setting, using either coaches or a home-based DVD approach.[35] These trials have resulted in long-term weight loss after 10 years and longer delay in onset of diabetes in the lifestyle intervention group (as compared with the placebo and the metformin medication group).[6] Weight loss among those in the lifestyle intervention was approximately 5% of body weight, whereas those in the usual care condition of diabetes support and education lost only 2% of body weight.[7] Overall, half of the lifestyle intervention participants lost more than 5% of their body weight[7] and decreased risk factors for cardiovascular disease.[36] Over a quarter of these participants lost 10% of their body weight or more.[7]

CHANGING LIFESTYLES FOR LONG-TERM WEIGHT MANAGEMENT: BACKGROUND ON NONDIETING BEHAVIORAL MODIFICATION APPROACHES

Although studies such as the Look AHEAD and DPP trials boast low attrition rates (94% retention in the Look AHEAD randomized cohort[7] and 98% retention in the randomized cohort of the DPP[5]), these interventions require substantial calorie deficit (eg, cutting at least 500 calories per day from intake). Behavioral weight loss interventions have yielded significant results in adherent participants, but many studies report high attrition rates (up to 50% in those emphasizing food intake restriction). These studies also show that patients have significant difficulty maintaining weight loss, exhibit marked after-intervention weight regain,[37] and also show potentially negative psychological impacts (eg, attributing self-worth with weight loss success) associated with dieting.[38,39] The self-discipline required to be successful in these weight loss programs often requires adhering to a strict diet and may engender a pattern of restraint that paradoxically leads to compensatory overeating.[40] Diet-approach interventions are sometimes followed by a pattern of slow weight regain that results in participants returning to baseline weight.[41]

A FEASIBLE ALTERNATIVE: FEATURES OF NONDIET APPROACHES TO WEIGHT MANAGEMENT

Recent obesity research focuses on a nondiet approach due to difficulty adhering to low-calorie diets over the long term. The nondieting approach shifts the focus from

weight loss to improvements in overall health.[42] Small, manageable changes and a healthy lifestyle are emphasized rather than a sole focus on weight loss/control.[40] Moderation leads to a balanced approach to eating and exercise.[41] Goals include steady weight loss and maintenance of lost weight as well as overall physical and psychological well-being. Nondiet strategies also appear to offer some protection against disordered eating behaviors (eg, food restriction and binge eating).[43] Nondiet interventions have lower attrition rates and longer-term adherence because participants are more able to follow realistic eating plans.[38] Intuitive eating and behavioral choice treatment (BCT) are examples of nondieting approaches. These are promising approaches and an overview of these modalities follows. However, a caveat is that these results from studies using nondieting methods may not be fully supportive. As an example, some studies showed negligible or clinically insignificant weight loss.[38,44]

Intuitive Eating

Intuitive eating includes an unrestricted permission to eat. Intuitive eating allows individuals to eat for physical reasons as opposed to emotional reasons. This technique teaches patients to focus on internal hunger and satiety cues to guide food consumption and also emphasizes body-food choice congruence.[42] Intuitive eating is associated with improvements in body mass index (BMI) and healthy weight maintenance, improved long-term weight maintenance, and decreased unhealthy diet behaviors (caloric restriction and binge eating).[42,45]

Nondieting Approach: Behavioral Choice Treatment

BCT is an example of a weight management program that de-emphasizes significant caloric restriction and aims for moderation in healthy eating and exercise patterns. It is typically a group-based intervention. Participants are taught to view eating and exercise as choices. When healthy weight–related behavior choices are made, permanent weight and health changes are likely to follow. Significant emphasis is placed on how participant choices are linked to weight outcomes, regulation of hunger, and a general feeling of well-being. BCT includes individual exploration of previous negative outcomes following poor food or exercise choices (eg, regret after indulging in “bad foods”). Cognitive restructuring is introduced as a tool to prevent these negative outcomes. Steady weight loss is set as a realistic expectation of the program. BCT emphasizes that there are no forbidden foods. Participants learn to recognize high-calorie, high-carbohydrate, or high-fat food choices and moderate consumption accordingly. Participants maintain a weekly food diary and engage in a moderate program of physical activity, starting with 15 minutes of walking per day 3 times per week with the ultimate target of walking 180 minutes each week. The key skills of BCT include moderating caloric restriction through small changes in eating and exercise. Patients learn self-monitoring, are encouraged to engage social support networks, and augment self-efficacy to sustain behaviors over time.[46]

RESEARCH REVIEW: BEHAVIORAL CHOICE TREATMENT

Disparately higher rates of obesity are found among African American women,[47] thus interventions addressing this health disparity could potentially impact national obesity rates. BCT has yielded a steady, measured reduction in weight over time (12 and 24 months), whereas traditional behavior therapy participants (adhering to the typical restraint model for dieting to include reduced caloric intake, self-monitoring, stimulus control, and behavioral substitution) have regained lost weight.[48] BCT and its offshoot, behavioral choice treatment with a family component (BCTF) that adds a family module, has been used

successfully over the last decade and a half in research and community settings with Caucasian and African American individuals (Tracy Sbrocco, PhD, unpublished data).[48–53]

PRIMARY CARE PLAN OF ACTION: FRAMEWORK FOR BUILDING A CLINICAL PROGRAM IN THE BEHAVIORAL MODIFICATION IN THE MANAGEMENT OF OBESITY

Programs implemented in clinical settings contrast with research intervention trials. Behavioral health specialists with expertise in weight management, therefore, are ideal collaborators to help their obese patients succeed in weight loss. Improved adherence, increased motivation for attending more sessions, and an emphasis on more intensive and longer-term treatment are important elements of success.[54] Low-intensity (less than 2 visits per month) physician counseling is not likely to yield the same results as intense counseling (at least 2 visits per month for the first 3 months).[55]

Spotlight on: motivating overweight/obese veterans everywhere! a veteran's administration medical center weight management program

- *MOVE!* (Motivating Overweight/Obese Veterans Everywhere) is an evidence-based intervention that has been utilized nation-wide since 2006[56] and serves as an example of a widely disseminated behavioral modification program for the management of obesity with an interdisciplinary collaborative focus.
- Incorporates a person-centered individualized and group-support approach to obesity that includes many of the cognitive and behavioral treatment components discussed above (e.g., self-monitoring, goal setting, stimulus control).[56,57]
- Intended to be easily implemented as a part of each veteran's care via their primary care clinic.[56]
- For further study… http://www.move.va.gov/

Results show that….

- Moderate weight loss has been noted in these programs over short term follow up periods (e.g., up through 12 months post-intervention participation).[58] Though veterans participating in an intense and sustained delivery of the *MOVE!* program experience some short term weight loss, the average number of *MOVE!* visits is less than 5 (in 2010) and more than half of *MOVE!* patients have only two visits or less per year.[54]

A COLLABORATIVE APPROACH: PRIMARY CARE PHYSICIANS AND BEHAVIORAL HEALTH SPECIALISTS

Primary care physicians collaborating with behavioral health specialists have the distinct opportunity to facilitate patients' motivation for weight loss. Increased patient motivation leads to increased adherence and improves the likelihood of success. Two practical primary care techniques to facilitate patient motivation include (1) motivational interviewing (MI) and (2) BCTF—a family-based approach to the behavioral modification in the management of obesity.

Motivational Interviewing

Primary care physicians are often the first health care provider with whom patients discuss weight loss goals. This office visit with the primary care physician is an excellent opportunity to have a meaningful and motivating conversation about patient-specific goals. MI is a therapeutic modality that has its origins in counseling for alcohol abuse.[59] MI has been used for behavior change in obesity[60] and many other health

conditions. MI is a person-centered, goal-directed approach that augments an individual patient's intrinsic motivation for committing to behavior change. Working with and through a patient's ambivalence to elicit behavior change is a hallmark of MI.[61] MI aligns well with weight management objectives by eliciting behavior change within the context of a positive provider-patient relationship.

MI is a patient-centered approach with the following core principles:

- Express empathy
- Support the patient's self-efficacy
- Roll with resistance
- Develop discrepancy[61]

Empathic and reflective listening is central to MI. The acronym OARS describes core elements of MI:

- O: ask open questions
- A: affirm the patient's perspective
- R: reflect what was heard to ensure understanding
- S: summarize shared understanding to set specific goals[61]

Tips for Motivational Interviewing

1. Determine the patient's desire for change: "On a scale of 1 to 10, how important is achieving a healthy weight status as a goal for you?"
2. Determine patient confidence in their ability to make the change: "On a scale of 1 to 10, how confident are you that you can make the necessary changes to achieve a healthy weight status?"
3. Obtain a commitment (verbally or, preferably, in writing) to making the necessary changes.[61]
4. Do not oppose a patient if they are resistant to change ("roll with resistance").
5. Summarize the patient's "change talk" as part of a patient-centered dialogue.
6. Create a patient-directed plan for making necessary changes.[61]
7. Understand that motivational interviewing principles are a part of a comprehensive behavioral weight management program.[61]
8. Appreciate how the principles of motivational interviewing integrate well within the PCMH model of care.[62]

RESEARCH REVIEW: MOTIVATIONAL INTERVIEWING

In a review of randomized controlled trials using MI for weight loss among overweight/obese individuals, medium effect sizes were found for the reduction of body mass compared with a control intervention.[60] MI is effective in helping patients make dietary and physical activity changes to manage diabetes,[63] which has implications in the management of obesity. MI techniques are easily learned within a reasonable time commitment and yield positive results relevant to obesity-related conditions.[64] Over one-third of MI interventions for obesity in primary care settings showed significant weight loss compared with a control condition.[65]

BEHAVIORAL CHOICE TREATMENT WITH A FAMILY COMPONENT

Because of the alarming rates of obesity in the United States, particularly among non-Hispanic black and Hispanic youth and adults, there is a clear need to understand the manner in which the family environment influences obesity. Little research focuses on family interventions for weight loss, and studies with diverse samples are scarce.[66]

Thus, a family-based approach to behavioral modification for obesity management likely offers a solution that fits the problem. A family-based approach focusing on an entire family's weight-related health behaviors is a novel primary care intervention.

Previous success in weight loss in both Caucasian and African American participants has been demonstrated with BCT.[48,52] A planned collaboration between primary care physicians and behavioral health specialists using the BCTF approach addresses obesity across many ethnic groups. Treatment approaches that consider the ecological context and environment of the patient conceptualize obesity from a more comprehensive perspective. The BCTF program harnesses the impact of positive changes in the household environment and engages families to promote healthy weight loss efforts.[20,66,67]

Target participants (primary participants) in BCTF engage in a behavioral weight management program with family members (secondary participants) and have their progress assessed throughout the intervention.[68] A family module is included with each topic. Primary participants are provided with family meal plans and handouts on healthy snacks and drinks for children and family, and tips for healthy and quick-packed lunches. Verbal encouragement is used to motivate participants during group sessions. Primary participants are encouraged to set family goals in addition to their individual weight loss/health goals (eg, whole family physical activity sessions, increased fruit and vegetable consumption, and limiting fast food dinners).

The BCTF treatment model serves as one example of a behavioral modification approach to the management of obesity that is appropriately administered in a primary care setting. Understanding the basic principles of cognitive behavioral therapy and MI allows primary care physicians to create a holistic partnership with patients and families to work together toward weight management goals.

Spotlight on obesity health disparities: behavioral choice treatment and behavioral choice treatment with a family component research in African American women

BCT interventions within community settings have demonstrated success in improved weight loss outcomes among African American individuals.[49–52] A recent trial run of BCTF in a community setting with African American women indicates weight loss among both primary participants and their family members. Although there was some tendency toward regain of some of the lost weight at after-intervention follow-up time points, participants lost weight overall when assessed at the 12-month follow-up session (Tracy Sbrocco, PhD, unpublished data).

Key points:

1. MI techniques translate well in the PCMH setting.
2. A sample behavioral modification weight loss program with a family focus serves as a potential interdisciplinary model for weight management.

SUMMARY

An interdisciplinary, PCMH approach to weight management in primary care settings includes multiple factors. An understanding of and appreciation for the multifactorial and ecological nature of the cause of obesity is important. There are significant obesity-related health disparities, particularly in African American women. Providing a nonstigmatizing approach to overweight and obese patients is important. MI techniques are effective within the PCMH. Behaviorally based programs for obesity management inform patients of reasonable goals and expectations.[69] Collaborating with

behavioral health care specialists and registered dietitians also facilitates success as part of an integrated patient-centered approach to weight management.

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The opinions expressed herein are those of the authors and are not necessarily representative of those of the Uniformed Services University or the Department of Defense.

FUNDING/SUPPORT

This work was supported in part by Award Number P20 MD000505 from the National Institute on Minority Health and Health Disparities. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Minority Health and Health Disparities or the National Institutes of Health.

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