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Eight Steps to Weight Loss: Development of an Evidence-Based Collaborative Provider-Patient Workbook for Overweight or Obese Adults

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EIGHT STEPS TO WEIGHT LOSS: DEVELOPMENT OF AN EVIDENCE-BASED COLLABORATIVE PROVIDER-PATIENT WORKBOOK FOR OVERWEIGHT OR OBESE ADULTS

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Abstract

Despite decades of effort on the part of health care providers and policy makers to reduce the prevalence of obesity, the prevalence of obesity in the United States remains high (CDC, 2015). In the adult population ages 20 years of age and older, 35.7% are considered obese. The annual medical costs for people who are obese are $1,429 higher than people of a healthy weight (CDC, 2013). Obesity increases the risk for chronic health conditions such as hypertension, type 2 diabetes, hypercholesterolemia, coronary heart disease, stroke, asthma, arthritis, and cancer (Hammond & Levine, 2010). Over-weight and obesity are the main cause for most health related conditions treated by heath care providers (Tsai, Abbo, & Ogden, 2011). Barriers to the treatment of obesity include difficulty in treating patients with complex co-morbidities, time constraints, resources, training, and reimbursement (Tsai et al., 2011). Identifying strategies to assist healthcare providers to evaluate, treat, and manage their overweight and obese patients are essential.

A review of the literature revealed gaps in the literature related to the limited number of collaborative self-management resources that enable providers to assist and empower their patients to lose weight. To address this gap, this DNP project was developed as an evidenced-based collaborative workbook for healthcare providers and patients to work together to facilitate patients weight loss efforts.

An initial step in the evaluation of a new workbook is the analysis of the content and relevance of the proposed workbook. A 28 question survey was developed by the DNP student for use on Survey Monkey. The survey questions were developed to provide content validity to the proposed workbook and were designed to evaluate each section of the workbook by health care providers engaged in the care for overweight and obese patients. Each question was rated on

a 1–4 Likert scale and was calculated to establish a percentage of agreement by the provider / evaluator with a content validity index (CVI). The CVI is a measurement tool to evaluate abstract concepts. Polit and Beck (2017) recommend a scale range of .80 to 1.00 that would be considered as having excellent content validity. When calculating a CVI only the items rated 3 or 4 are calculated, this provides a percentage in agreement among the evaluators about relevance of the concept being evaluated and measured (Polit & Beck, 2017).

The results of the CVI for the proposed workbook were calculated with a CVI of 1.0 which translates to 100% of agreement of relevance among the evaluators. Since the CVI was so high, a second CVI was calculated by removing all the items rated as 3. There were 17 items rated as 3. The 17 items were subtracted from the total items rated. The second calculation of the CVI resulted as 0.93 which is 93% of agreement among the evaluators. The evaluators also provided qualitative statements in the comments section for each question. The qualitative responses will be helpful in the next revision of the workbook.

The next step in the development of this weight loss tool will be the implementation of the evaluators' recommended revisions. After the workbook is revised, subsequent validity measurement will be conducted by health care providers and patients. Participants will be sought to review the revised workbook for the appropriate literacy level, readability, helpfulness of content, ease of use, and weight-loss results. On final review and modification, the workbook will be ready for dissemination and implementation by providers and patients.

Acknowledgement

I wish to express my gratitude to the many people who have helped me complete this DNP project and DNP program. This has been a very long journey. I feel I have made new friends and gained a new appreciation for scholarship.

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I want to express gratitude and love, to all of my family, friends, and coworkers for putting up with me while I complete my education. I want to give thanks to two members of my cohort, Rita and Darin, you made the coursework enjoyable. I would like to express gratitude to my friend Mia who provided honest constructive feedback whenever I asked. I consider you a true friend, mentor, and role model. Next, I would like to tell my son how proud I am of him for completing his education, and how much I appreciate him for putting up with me, and encouraging me, to complete my education. You have been through it all with me, from the associate degree in nursing, through this doctorate of nursing practice program. Finally, I want to express love, appreciation, and gratitude to my husband Bob for putting off vacations, cooking countless dinners, and washing mountains of laundry. I love all of you. Thank you!

Dedication

To everyone who wants to lose weight.

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CHAPTER I

Introduction

Background and Significance

Despite decades of effort on the part of health care providers and policy makers to reduce the prevalence of obesity, the prevalence of obesity in the United States remains high, and the annual incidence of obesity continues to climb (CDC, 2015). In a report by Trust for America's Health and the Robert Wood Johnson Foundation (2015) 34.9% of adults are obese and 68.6% of adults are overweight or obese. Obesity has significant consequences on long-term health. Obesity increases the risk for chronic health conditions such as Alzheimer's, dementia, depression, type 2 diabetes, hypertension, hypercholesterolemia, coronary heart disease, stroke, asthma, nonalcoholic liver disease, kidney disease, arthritis, and cancer (Trust for America's Health and Robert Wood Johnson Foundation, 2015).

Economic Consequences of Obesity

Adult obesity has imposed a substantial burden on the U.S. health care system and the national economy. The estimated annual cost of treating obesity and associated co-morbidities is between $147 billion to $210 billion dollars. The cost in loss of productivity is $4.3 billion dollars annually. Employers pay approximately $506 per obese employee per year for reduced productivity while at work. The annual medical costs for people who are obese are estimated to be $1,429 higher than people of a healthy weight (CDC, 2013). Finkelstein, Trogdon, Cohen, and Dietz (2009) reports the cost of treating chronic conditions such as diabetes is reduced in the absence of obesity, specifically, Medicare would be 8.5% lower, and Medicaid would be 11.8% lower than currently seen. In addition to direct medical costs, obesity burdens businesses financially through the loss of productivity caused by absenteeism and "presenteeism" (in which

employees perform at work in a diminished capacity), and through obesity-related disability benefit payments (Hammond & Levine, 2010).

Phenomenon of Interest

The purpose of the United States Preventive Services Task Force (USPSTF) is to review medical, pharmaceutical, medical technology, and preventive health care information to develop clinical evidence-based practice guidelines. The guidelines help providers with decision making processes to provide optimal care to their patients (USPSTF, 2014). The United States Preventive Service Task Force (USPSTF, 2012) recommends that primary care providers screen all adults for obesity. The USPSTF also suggests that individuals who have a body mass index (BMI) 30 kg/m^2 or higher "should be offered, or referred to, intensive, multi-component behavioral interventions" (Moyer, 2012, p. 374). However, despite the USPSTF guidelines, fewer than 50% of primary care providers routinely provide diet and weight management guidance to their adult patients who are overweight or obese. Barriers preventing primary care providers' (PCP) adherence to the USPSTF guidelines include lack of time, skills, and resources (Yanovski, 2011).

Problem Statement

Treating the overweight and obese patient is time intensive. Health care providers have limited time and resources, and some have limited skills in the evaluation and treatment of their overweight and obese patients. Current resources for health care providers to assist patients in self-management of weight loss and weight management include primarily text or reference books, and booklets directed at either the provider or the patient; these resources do not easily facilitate collaboration between health care providers or the patient in weight loss strategies.

Patients frequently resort to websites or other media for finding resources on weight-loss. These media may not follow evidence-based practice guidelines that consider best research

evidence, practitioner's expertise, and patient values. In addition, the media may not consider the patients income, culture, or co-morbidities, such as, mental health status, diabetes, cardiac, pulmonary, or musculoskeletal conditions that may impede individual efforts to lose weight and maintain their weight loss.

Purpose Statement

The purpose of this DNP project was to develop and test the content validity of an evidence-based, self-management weight loss workbook based on the USPSTF guidelines that facilitates collaboration between the health care provider and patient in the weight loss and weight management processes.

CHAPTER II

Review of the Literature

Introduction

A literature review was conducted to find evidence-based guidelines that facilitate health care provider and patient collaboration to assist patients in weight loss and weight management. The search initially focused on finding systematic reviews that identified evidence-based guidelines for the evaluation, treatment, and management of adults who are overweight or obese. The literature revealed the United States Preventive Services Task Force (USPSTF) guidelines for the identification, evaluation, treatment, and management of adults over the age of 18, who are overweight or obese.

The literature search focused on discovering the best clinical recommendations supporting each intervention of the USPSTF guideline. The clinical recommendations provided the foundation of the workbook. Subsequently, a review of the current reference books, textbooks, and handbooks for the management of obesity was performed to find examples of collaborative guidebooks for the health care provider and patients. The databases searched were University of Nevada, Las Vegas and University of Nevada, Reno library databases, Google Scholar, and PubMed. The search terms were; adult obesity, obesity, primary care, United States Preventive Services Task Force obesity guidelines, obesity guidelines, and self-management of obesity.

United States Preventive Services Task Force Guidelines

The United States Preventive Services Task Force (USPSTF) developed guidelines to be used for screening and management of obesity in adults. The complete guidelines, released in 2012, may be accessed at:

http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/

obesity-in-adults-screening-and-management. The USPSTF guidelines are an important tool in the development of obesity screening or management interventions to assure that the most recent presentation of evidence-based practices are followed.

USPSTF obesity guidelines include attention to a number of different areas, both physiological and psychological, that facilitates weight loss and weight management of adults. The guidelines provided the foundation and outline for the workbook created for this DNP Project. The primary areas addressed in the guidelines include: definition of obesity as a body mass index (BMI) greater than or equal to 30 kg/m^2; interventions directed at behavioral management activities, improving diet or nutrition, and increasing physical activity; barriers to change; self-monitoring and self-management; and strategies to maintain lifestyle changes (USPSTF, 2012).

The literature reviewed to support the USPSTF guidelines provided specific information related to the screening for obesity and the complications secondary to obesity. In addition, the literature review provided specific information related to behavioral management activities such as, goal setting, the recognition of barriers preventing weight loss, and problem-solving and assertiveness skills. The literature review also provided the information for the content of the workbook related to dietary and physical activity interventions. Further, specific guidelines on areas evaluated and addressed in the workbook included topics such as dietary interventions with recommended specific types of diets, balance of caloric intake in regards to age, gender, and physical activity level. Physical activity interventions included a focus on general exercise guidelines and heart rate monitoring. Finally, barriers to weight loss were introduced including pathophysiology processes, and their influence on weight gain or weight loss, endocrine system influences, medications, sleep patterns, psychological readiness to change, mental status, and the patients' perception of their own health status.

Literature Review for the Workbook Weight Loss Interventions

Screening adults for obesity. The USPSTF guidelines recommend that all adults over the age of 18 be screened annually for obesity. Obesity is linked to many co-morbidities including hypertension, type 2 diabetes, hypercholesterolemia, coronary heart disease, stroke, asthma, arthritis, and cancer The definition of obesity is a body mass index (BMI) greater than or equal to 30 kg/m^2. The BMI is determined by height and weight. There are three classifications of obesity; class 1 is a BMI between 30 kg/m^2 to less than 35 kg/m^2; class 2 is a BMI 35 kg/m^2 to less than 40 kg/m^2; and class 3 is a BMI of greater than or equal to 40 kg/m^2 (U.S. Department of Health Services and National Heart, Lung and Blood Institute, n.d.).

Increased weight around the waist, also referred to as central adiposity, and is linked to cardiovascular disease, even if the BMI is within a normal range (McTigue et al., 2003). To evaluate for central adiposity a waist-to-hip measurement is performed. The measurement for waist-to-hip ratios is performed by measuring the hips at the widest part of the buttocks; the waist is then measured at the smallest area of the natural waist-line, which is usually just above the umbilicus. Individuals with more weight around their waist are said to be "apple shaped" and individuals with more weight around their hips are said to be "pear shape." Individuals who are apple shaped are at higher risk for developing cardiovascular disease than are individuals who are pear shaped (University of Maryland, Medical Systems, n.d.).

Causes of weight gain. There are many causes of weight gain that can lead to obesity. The foremost reason individuals gain weight is a matter of energy imbalance, in which the two main variables are calories consumed, and calories expended. Calories are expended three ways: (a) resting metabolic rate where the energy used to carry out the bodily functions such as sleeping, repair and maintenance of cells, maintaining the heart rate, maintenance of body temperature, and hormonal balances; (b) the thermal effect which is the heat generated from the

consumption, digestion, absorption, and metabolism of food and nutrients; (c) physical activity is a third way of calorie expenditure depending on the amount and type of physical activity (Moore & Pi-Sunyer, 2012). Over time, an excess of calories consumed relative to calories expended leads to weight gain and obesity.

Setting goals and monitoring weight. The USPSTF guidelines recommend that primary care providers assist patients to set goals and monitor their weight. The initial goal is to prevent further weight gain; a specific, reasonable initial weight loss goal is a weight loss of 5% –7% of body weight. Once this goal is achieved, subsequent additional, incremental goals of 5%–7% loss may be established. Many patients set an unrealistic initial weight-loss goal of 30% or more (Bray, 2015). Additional behavioral management strategies include setting daily and weekly goals for calorie and fat consumption, and scheduling exercise time, and meal times. Researchers Burke and Turk (2014) recommended that strategies used in standard behavioral treatment (SBT) for goal setting include; establish daily goals for behavioral change in eating breakfast daily, establish scheduled times for meals, snacks, and exercise; become aware of triggers to minimize undesirable behaviors related to physical activity or eating; learn problem solving skills (i.e., identifying the problem, brainstorming for solutions, discover the pros and cons of the possible solution, implementing a solution or plan and evaluating its success); become assertive in social situations that may threaten desirable eating and physical activity behaviors; become aware of changes in negative thought patterns such as all or nothing thinking, self-doubt, and perfectionism (Burke & Turke, 2014).

Barriers to weight loss. One of the components of the USPSTF obesity guidelines is the identification of the patient's barriers to weight-loss. There are many barriers that can prevent a patient from losing weight. A few of the possibilities include; cultural barriers, perception of a patients' physical and mental health, patients' readiness for change, economic status, patients

mental health status, changes in sleep patterns, endocrine disorders, the number of calories consumed, and physical activity levels.

Culture is a learned system that guides a person's behavior (Sobal, 2001). Culture permeates every aspect of a person's life, including how one thinks about fatness and thinness, eating behaviors, activity patterns, and all aspect of living in the world. Sobal (2001) reports that an individual's migration between cultures places individuals into new food systems and predisposes them to obesity because typically the relocation places the individual from a less developed region to more developed region.

An individual's perception of their physical health can also be a barrier to weight loss. Often, people who are overweight or obese see themselves as having a healthy weight (Duncan, Wolin, Scharoun-Lee, Ding, & Bennett, 2011). In addition, the researchers found that individuals who were overweight or obese were less likely to report that they wanted to lose weight. The respondents' misperception of their weight status may have been due to a lack of interest in adopting healthy behaviors including losing weight and increasing physical activity (Duncan, et al., 2011). Researchers Nelson et al. (1987) developed an easy-to-use screening tool that measures the health and functional status of patients in the outpatient primary care setting. The screening tool is called the COOP charts. This screening tool is important because most primary care providers only see their patients three or four times a year and the duration of these clinical encounters are only for 6 to 15 minutes. The instrument consists of nine charts depicting cartoons and a 5-point system of scoring. The charts are designed to measure physical fitness, feelings, daily activities, and social life (Sajatovic & Ramirez, 2012). The COOP charts were used in the DNP project workbook to assist health care providers in identifying possible barriers preventing their patient's weight loss (see Appendix. A. Workbook).

It is important for health care providers to identify whether their patient is motivated and ready to lose weight. One tool to identify if a patient is ready to make a change is the Prochaska Transtheoretical Model (TTM) for behavioral health changes. This model is used in the workbook to identify the patient's readiness to make healthy lifestyle changes (see Appendix. A. Workbook). In the TTM, Norcross, Krebs, and Prochaska (2010) describe the five stages of behavior change;

Pre-contemplation – the individual has no intention of changing behavior in the near future. In the pre-contemplation stage, individuals are unaware that they have a problem.

Contemplation– the individual is aware that a problem exists, but has not made a commitment to make a change.

Preparation –the individual intends to take action within the next month and has started making small behavioral changes. The individual is taking small actions to "testing the waters."

Action– In this stage individuals modify their behavior, experiences, and environment to solve or rectify their problem. In the action stage, individuals have adhered to a change in behavior for at least one month.

Maintenance – In the maintenance stage, individuals continue to commit to sustaining new behavior from 6 months of initiating the change to an indeterminate period past the action stage (Norcross, et al., 2010).

Poverty as a barrier to weight loss. Research has shown there is a link between poverty and obesity. Levine (2011) reports that in the United States 14% of the U.S. counties have one in five individuals receiving the Supplemental Nutrition Assistance program (SNAP) and are not able to acquire healthy food. Research has shown that individuals who live in minority and low-income areas have less access to supermarkets and fresh produce (Trust for America's Health and Robert Wood Johnson Foundation, 2015). Another association between poverty and obesity

is that people who live in poorer neighborhoods are typically more sedentary. Factors that may contribute to a sedentary lifestyle are neighborhood violence, and fewer resources for gym memberships, sports equipment, and recreational activities (Levine, 2011).

The role of mental health in obesity. As a condition, obesity is both psychological and physiological. Psychological disorders that can lead to obesity include depression, anxiety, and eating disorders (Collins & Bentz, 2009). Further consequences of increased weight gain are psychological conditions such as low self-esteem, body image disturbances, and social stigmatization. A study by Zhao et al. (2009) evaluated Behavioral Risk Factor Surveillance System (BRFSS) data from 177,047 participants who were 18 years of age or older. Zhao et al. found that the increased rate of obesity was associated with development of psychiatric disorders.

An additional consequence of obesity is *weight bias* as the inclination to form unreasonable judgments based on a person's weight (Washington, 2011). In obese individuals, weight bias can lead to low self-esteem. Weight bias is caused by a general belief that (a) individuals who are overweight lack self-discipline and willpower and (b) stigmatization and shame will motivate a person to lose weight (Washington, 2011). Weight bias and associated forms of discrimination occur in many physical settings (including schools, workplaces, and health care facilities) and in the media. One consequence of weight bias is a societal propensity to find fault with obese individuals rather than to address obesity's environmental causes. As an aspect of the prevention and treatment of obesity, prevention of weight bias is important for avoiding impeding psychological harm to obese individual (Washington, 2011).

The American Psychiatric Association defines depression as more than sadness. Individuals with depression can experience a lack interest or pleasure in daily activities, and has weight gain or loss, insomnia or sleep too much, difficulty concentrating, feelings of

worthlessness or guilt, and may have thoughts of suicide (American Psychiatric Association, 2013, pp. 161–168.).

Depression screening tool. The PHQ-9 depression health questionnaire, developed by Kroenke, Spitzer, and Williams (2001), is a tool that helps health care providers evaluate patients for depression. The questionnaire is a self-rated version of the Primary Care Evaluation of Mental Disorders (PRIME-MD). The PRIME-ED mental health diagnostic tool evaluates 12 mental health disorders, including depression. The PHQ-9 evaluates depressive symptoms based on nine of the DSM-IV criteria but it is still relevant with the new DSM-5 diagnostic criteria (see Appendix A. Workbook).

Changes in sleep patterns as a barrier to weight loss. Sleep is important for restorative processes in the brain and for overall health. In our 24-hour society, people spend more time at night with work and leisure activities resulting in less time available for sleep (Beccuti & Pannain, 2011). Recent research suggests that sleep debt may contribute to obesity by effecting changes in the hormones leptin and ghrelin (Moore & Sunyer, 2012). Beccuti and Pannain (2011) report that sleep regulates neuroendocrine functions and glucose metabolism. Sleep loss results in decreased glucose tolerance, decreased insulin sensitivity, and increased evening levels of cortisol, and ghrelin, and decreased levels of leptin. These hormones increase night-time hunger and appetite. Beccuti and Pannain (2011) describe several studies that have similar results in demonstrating that with each hour of decreased sleep time, of less than 5–6 hours of sleep, resulted in an increase of leptin and a decrease in ghrelin. These hormonal changes can lead to an increase in calorie intake and therefore, increased weight gain.

National Sleep Foundation interventions for quality sleep. The National Sleep Foundation recommends that all adults should receive 7–9 hours of sleep each night. The foundation further recommends for quality sleep, and to stay alert during the day, an individual

should maintain a regular sleep and wake routine seven days a week; avoid stimulants such as caffeine, nicotine, and alcohol too close to bedtime because these stimulants can interrupt the sleep cycle during the second half of sleep; engage in regular exercise daily; spend time outside daily in natural light in order to maintain a healthy circadian rhythm; establish a regular bedtime routine; make sure the bedroom is not too hot or too cold; and avoid using electronic devices an hour before bedtime such as a television, video games, and computers (National Sleep Foundation, 2015).

Endocrine disorders as a barrier to weight loss. The medical conditions that most commonly impede weight loss are those that are influenced by the endocrine system. Some hormones of the endocrine system impact fat distribution and play a role in the maintenance of body homeostasis including energy balance. The hypothalamus- pituitary-adrenal axis system regulates reactions to stress and influences energy expenditures, food intake, and body fat storage (Farshchi & Macdonald, 2014). The hormones that influence energy balance are the thyroid, glucocorticoid, insulin, and leptin hormones (Farshchi & Macdonald, 2014). Thyrotropin-releasing hormone (TRH) is synthesized and stored in the hypothalamus. TRH is then released into the hypothalamic-pituitary portal system and circulates to the anterior pituitary, where TRH stimulates the release of TSH. TRH is increased by exposure to cold, stress, and decreased levels of thyroxine (T_4). The thyroid hormones triiodothyronine (T_3) and thyroxine (T_4) are important hormones in influencing energy expenditures through the regulation of (a) protein, fat, and carbohydrate catabolism in all cells of the body, (b) metabolic rate, (c) body temperature, (d) insulin antagonist, (e) growth hormones, (f) central nervous system development necessary for muscle tone and energy, (g) maintains cardiac rate force and output, (h) secretion of gastrointestinal tract, (i) affects red blood cell production, (j) stimulates lipid turnover, free fatty acid release and cholesterol synthesis (Brashers & Jones, 2010). An

imbalance of these hormones can lead to hyperthyroidism or hypothyroidism (Brashers & Jones, 2010). Hyperthyroidism can result in weight loss. However, this weight loss can lead to serious complications resulting in cardiac muscle protein depletion (Farshchi & Macdonald, 2014). In contrast, with hypothyroidism the opposite occurs because the metabolic rate slows down leading to weight gain. Hypothyroidism is caused by a deficiency of thyroid hormone leading decreased energy metabolism and heat production. Patients develop a lowered basal metabolic rate, cold intolerance, lethargy, tiredness, and slightly lowered basal body temperature (Jones, Brashers, & Huether, 2010).

Dietary interventions. In 2015, the U.S. Department of Agriculture and U.S. Department of Health and Human Services updated the calorie guidelines for all age groups. Food choices can vary among age groups, ethnic groups, and geographical region (CDC, 2013). The dietary guidelines for adults 18 years and older are carbohydrates, 45% – 65%; protein, 10% –35%; and fat 20% –35%. Maintaining body weight requires approximately 22 calories per kilogram of weight. To lose weight an individual must expend more energy than energy intake. An average expenditure of 500 calories a day should result in an initial weight loss of 1 pound (0.5kg) per week. Unfortunately, after 3 to 6 months of weight loss the body adapts to the energy expenditure and prevents further weight loss. Reducing energy intake can be accomplished by selecting a diet plan according to the patients' preferences, as individuals' preferences may improve their adherence. General guidelines for meal planning include eating a variety of fruits, vegetables, and whole grains; and choose chicken, fish, and beans instead of red meat and cheese. Oils used for cooking should be monounsaturated fats such as corn oil, olive oil, and peanut oil. Baked goods that contain partially hydrogenated oils should be avoided (Colditz, 2015). The calorie guidelines to maintain weight vary according to age, gender and activity levels. The activity levels are; sedentary which includes only the activities of independent living;

moderate activity includes activities of daily independent living and moderate physical activity such as, walking 1.5 miles to 3 miles per day at 4 miles per hour; and active which includes activities of independent living and activities comparable to walking more than 3 miles per day at 3–4 miles per hour. The calorie guidelines do not include women who are pregnant or breastfeeding (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2015).

Physical activity interventions. The CDC (2014) report on physical activity indicates regional, cultural, gender, and socioeconomic factors influence individuals' level of physical activity. The CDC has reported less than half (48%) of all adults met the 2008 physical activity guideline of 150 minutes per week. The CDC's Division of Nutrition, Physical Activity and Obesity (2008) recommends that adults need a minimum of 150 minutes of moderate intensity activity every week and muscle strengthening activities at least 2 days per week. All major muscle groups need strengthening including the legs, hips, back, abdomen, chest, shoulders and arms. Examples of moderate physical activity include walking fast, doing water aerobics, riding a bike on level ground, playing doubles tennis, and pushing a lawn mower. Examples of vigorous-intensity aerobic exercise include jogging or running, swimming laps, riding a bike fast on hills, playing singles tennis and playing basketball.

Behavioral management interventions to facilitate weight loss. Behavioral management strategies to facilitate weight loss include establishing reasonable goals. The initial goal is to prevent further weight gain; a specific reasonable weight loss goal is a weight loss of 5% –7% of body weight. Many patients set an unrealistic weight-loss goal of 30% or more (Bray, 2015). Additional behavioral management strategies include setting daily and weekly goals for calorie and fat consumption, and scheduling exercise time, and meal times.

In 1994, researchers Wing and Hill at Brown Medical School started tracking and researching people who have successfully lost significant amounts of weight and have kept it off for at least one year. Wing and Hill's (1994) ongoing longitudinal study, the National Weight Control Registry (NWCR), now has over 10,000 participants. The NWCR investigates participants' behavioral and psychological characteristics and the strategies these participants use to lose and maintain their weight. The researchers use detailed questionnaires in annual follow-up communications to track the participants' weight progress. Wing and Hill have reported several key elements that are typically common among the participants who have lost weight and maintained their weight loss; 45% of the participants have lost weight on their own; the other 55% lost weight with the help of some type of program, such as Weight Watchers, 98% of the participants have lost weight by modifying their food intake. Examples include reducing refined carbohydrates, portion control, and reducing consumption of sugary and fast foods; the most common diet consumed by these participants was low in calories and low in fat; 78% of the participants eat breakfast every day; 75% of participants weigh themselves at least once a week; 62% of the participants watch less than 10 hours of television a week; and 90% of participants exercise an average of one hour per day, with the most frequent form of exercise being walking (National Weight Control Registry, n.d.).

Support of the USPSTF Guidelines

In a statement on behalf of the USPSTF, Moyer (2012) reports that the evidence in support of the USPSTF guidelines indicates the risks in providing the weight loss interventions are small. Interventions include setting weight-loss goals, improving diet or nutrition, increasing physical activity, acknowledging barriers to change, self-monitoring, and strategies to maintain lifestyle changes. These interventions can lead to weight-loss, improved glucose tolerance, and reducing the risk of cardiovascular disease (Moyer, 2012). Moyer also stated that clinical

outcomes improve with more provider-patient intervention sessions (i.e., 12–26 sessions) within the first year (Moyer, 2012).

In all of the behavioral intervention trials in Moyer's study, participants' mean body mass index (BMI) ranged from 25 to 39 kg/m^2 with an average baseline BMI of 31.9 kg/m^2 and 55% of the participants demonstrated evidence of cardiovascular risk factors and impaired glucose tolerance (Moyer, 2012). The trials found that following 12–18 months of behavioral interventions, participants had statistically significant weight-loss. Control group participants (no intervention sessions) lost minimal to little, if any, weight; in comparison, the intervention group lost 3.3–11 lbs or 4% of baseline weight. The participants in the 12–26 month intervention group lost an average of 8.8–15.4lbs or 6% of baseline weight as compared to participants in fewer than 12 intervention sessions losing 2.8% of baseline weight. The trials suggested that the more intervention sessions, the more weight participants lost (Moyer, 2012). Unfortunately, health care providers in the outpatient setting may have difficulty incorporating these interventions because they lack the time, skills, and resources.

In a systematic review, Wadden, Butryn, Hong, and Tsi (2014) investigated existing literature to evaluate behavioral counseling for the overweight and obese patients in primary care. The behavioral health counseling was provided either by primary care providers (PCP) or by "interventionists" (i.e. medical assistants or registered dieticians). Wadden et al. (2014) reviewed 3,304 abstracts resulting from 12 distinct clinical trials with a total of 3,893 participants. The investigators found no studies in which the health care provider delivered counseling following the USPSTF guidelines.

Wadden et al. (2014) found that the mean 6-month weight loss changes in the intervention group ranged from 0.3 kg to 6.6 kg (.66 lbs to 14.6 lbs). In the control group weight change resulted in a weight gain of 0.9 kg to a loss of 2.0 kg (weight gain of 1.98 lbs to a weight

loss of 4.4 lbs). In both the intervention group and the control group, weight loss declined with longer time intervals between follow-up sessions. The interventions prescribed were diets with a calorie deficit of greater than or equal to 500 calories per day, an increase in physical activity of greater than 150 minutes per week of walking, and behavioral therapy. All three interventions combined resulted in greater weight loss than an intervention of only one of the individual components. The investigators concluded that intensive behavioral counseling can lead to significant weight loss (Wadden et al., 2014). Unfortunately, there is little research that health care providers provide such care despite the current USPSTF guidelines.

USPSTF Clinical Guidelines: Barriers to Adherence

Health care providers spend a substantial amount of time diagnosing and treating conditions related to obesity (Tsai, Abbo & Ogden, 2011). Over-weight and obesity are the main cause for most health-related conditions treated by health care providers, which include hypertension, 28.1%; arthritis, 17.5%; diabetes, 11.9%; and depression 10.4%. Barriers to treatment of obesity include difficulty in treating patients with complex co-morbidities, time constraints, resources, training, and reimbursement (Tsai et al., 2011).

Tsai et al. (2011) collected data from diagnosis codes reported to the National Ambulatory Medical Care Survey (NAMCS), which is a national representative sample of outpatient visits to physicians in the United States. The data Tsai and fellow researchers collected established the percentage of diagnosis codes and patient visits attributed to overweight and obesity, and estimated the amount of time spent addressing these conditions. The data reviewed in the Tsai et al. (2011) study represented a total of 6,368 primary care visits, of which a total of 26.7% (1,745) patients were of normal weight; 30.7% (2,011) were overweight; and 39.9% (2,612) were obese. Diagnostic codes with a BMI of less than 18.5 kg/m^2 (underweight) were excluded from the analysis. The total time spent on all weight-related conditions was 5.65

minutes per patient visit of which 1.75 minutes resulted from co-morbidities associated with overweight and obesity. The 1.75 minutes accounted for 8.0% of the total mean visit time in the NAMCS of 21.77 minutes, equivalent to 38 minutes out of an 8-hour work day (Tsai, et al., 2011).

Approaches in the treatment of obesity in primary care vary. In a systematic review, Tsai and Wadden (2009) reviewed ten randomized controlled trials. The authors identified two main approaches, in outpatient clinical settings that have been tested by primary care providers to manage obesity in their own practice. The first approach is for the health care provider to provide behavioral weight loss counseling; this counseling can be conducted with or without pharmacotherapy. The second approach referred to as collaborative obesity management, uses a team approach in which a non-physician (i.e., a registered dietician or registered nurse) serves as the primary treatment provider and the physician performs a supportive role. Of the ten studies that met Tsai and Wadden's inclusion criteria, only two met the U.S. Preventive Services Task Force recommendations for adult screening and treatment for obesity. In their study, the authors stipulated that counseling would be considered "intensive" if it entailed at least "two visits per month for the first 3 months" (Tsai & Wadden, 2009, p. 1074). Treating adult patients with intensive therapy is a daunting task when considering the fact that 35.7% of Americans are obese.

Obesity Reference Books, Textbooks and Handbooks

A search was conducted for current collaborative guidebooks that are evidence-based and facilitate health care providers and patients working together and supporting the elements of the USPSTF guidelines. Several reference books were identified and examined for their usefulness in presenting the content and for ease of use by patients. The references reviewed for this project represent a number of advantages and disadvantages which will be summarized.

The Textbook of obesity: Biological, psychological and cultural influences (2012) was edited by Akabas, Lederman, and Moore. This publication is an excellent, current, comprehensive resource and text book covering all of the criteria for USPSTF guidelines in the evaluation, management, and treatment of obesity for both adults and children. However, at 456 pages the Textbook of Obesity is cumbersome. Furthermore, the textbook does not provide patient education material and it does not promote provider and patient collaboration. It is written at a college level and is not meant to assist patients in self-management.

Managing obesity: A clinical guide, (2nd ed.) (2009) edited by Nonas and Foster for the American Dietetic Association is a textbook that provides an overview of nutrition and dietary approaches to weight loss; for example, meal replacement diets, Dietary Approaches to Stop Hypertension (DASH) diet, Mediterranean diet, and low carbohydrate diet. In addition, this textbook provides explanations of glycemic index and glycemic load which can be important when planning a meal directed at weight loss or when the co-morbidity of type 2 diabetes mellitus is involved. The text includes an overview on nutrition, medication, surgery, weight loss management, and discussions on the economic, public health, and psychosocial issues related to obesity. The target audience for the text is registered dieticians and neither does it provide patient education material nor promote collaboration between health care provider and patient.

The Handbook of obesity: Epidemiology, etiology, and physiopathology (3rd ed., Vol., 1) edited by Bray and Bouchard (2014) is a two-volume comprehensive handbook. The target audience is individuals who are interested in the epidemiology of obesity worldwide. The first volume presents the history and prevalence of obesity throughout the world, the genetics and pathophysiology of obesity, behavioral issues related to obesity, environmental, social, and cultural determinants of obesity and the consequences of obesity. Volume two focuses on clinical applications and is written to provide clinical researchers and health care providers with the

clinical information necessary for diagnosis, evaluation, prevention, and treatment of obesity. Additionally, volume two provides an excellent resource for the development of patient education material. This two-volume handbook does not facilitate collaboration between health care providers and patients for patient self-management.

The practical guide: Identification, evaluation and treatment of overweight and obesity in adults (2000) was written by the National Institute of Health, National Heart, Lung and Blood Institute, National Heart, Lung Blood Institute Obesity Education Initiative, and the North American Association for the Study of Obesity. The handbook seeks to provide healthcare providers and patients with the information they need to facilitate collaboration and patient self-management for the treatment of adult obesity. At 94 pages, the guide is easy to read, and appropriate for persons who have difficulty reading. However, the guide was published in 2000 and does not include the USPSTF guidelines that were revised in 2012.

The Handbook of obesity treatment (2002) edited by Wadden and Stunkard, is a comprehensive textbook on the treatment of obesity. The book includes a discussion on the prevalence, consequences, and etiology of obesity, health and psychosocial consequences of weight reduction, medical and psychological evaluation, treatment approaches to adult obesity, including diet, exercise, behavioral, medications, and surgery, and includes a section on childhood obesity and obesity prevention. The disadvantages of this handbook are similar to the other textbooks in that it is not written to provide collaboration and self-management tools for the patient. Another disadvantage of this book is that it was published in 2002 and does not reflect the 2012 USPSTF guidelines.

Literature Review Summary

A review and analysis of the literature demonstrates that the evaluation, treatment, and management of obesity is an extremely complex topic. Interventions listed in the USPSTF

guidelines provided an outline for the content of the workbook. The content of the workbook was developed from the literature review identified previously, along with many other sources listed in the resource section and bibliography of the workbook (see Appendix A. Workbook).

For the health care provider, several handbooks in current use discuss the evaluation, treatment, and management of the overweight and obese patient. These handbooks should serve as reference materials, rather than collaborative guidebooks for the healthcare provider and patient. Topics commonly discussed in current obesity handbooks include the scope of the problem, etiology, pathophysiology, health consequences, prevention, evaluation, and treatment of obesity. The books are a helpful contribution to the content of the workbook prepared for this project, but would not serve well as a basis for provider-patient efforts for day-to-day weight loss or weight management collaborations.

Gaps in the literature which contribute to the identified problem and purpose of this DNP project demonstrate a lack of evidence-based literature directed at promoting and facilitating health care provider and patient collaboration in the treatment of the obese adult. The USPSTF guidelines provide the most current evidence-based information which when combined with content from the other resources, provided the basis for the development of the workbook to assist out-patient treatment and self-management of the overweight and obese adults.

Needs Assessment

Gaps in the literature may be summarized as the limited number of evidence-based guides for provider-patient collaborations or patient self-management to assist efforts for weight loss and management. Fewer than 50% of primary care providers consistently provide diet and weight management advice to their adult patients who are overweight or obese because they lack the time, skills, and resources. Current resources available for health care providers for assisting

patients to lose weight include textbooks and reference books; these resources do not facilitate collaboration between health care provider and patients.

Patients frequently resort to websites or other media for finding resources on weight-loss. Unfortunately, these media may not follow evidence-based practice guidelines that consider best research evidence, provider expertise, and patient values. In addition, the media may not consider the patients income, culture, or health conditions, such as, mental health status, diabetes, cardiac, pulmonary, or musculoskeletal health conditions that may influence an individual's efforts to lose weight.

Population Identification

Two populations are of interest in this project. Potential users of the final workbook include adults who are overweight or obese and would benefit from a program of self-management for weight loss and weight management. The other populations of interest are the health care providers who participated in the evaluation of the workbook for content and relevance and the providers that may ultimately incorporate use of this workbook in their patient care strategies. The content review evaluator group for the first draft of the workbook was comprised of health care providers, primarily nurse practitioners, who work in the outpatient setting and care for adults between ages 18 to 70 who are overweight or obese.

Key Stakeholders

Key stakeholders for this project are health care providers who treat overweight or obese adult patients ages 18 to 70. Other key stakeholders include overweight or obese patients who may benefit from applying the information gained from the workbook to their daily lives.

Description and Scope of the Project

The DNP project entailed the creation of a workbook for use in the outpatient clinical setting for the management of weight loss in overweight and obese patients. The content of the

workbook was evaluated by providers who work with the population of interest. The theoretical foundation for this project was Pender's Health Promotion Model.

The primary goal of this DNP project was to design a workbook that may be disseminated to patients in out-patient clinics and provider offices to assist in provider-patient collaborative efforts for weight loss and weight management in patients who are overweight or obese. The workbook was designed to be practical and easy-to-follow for patients and a time-saving tool for health care providers. The workbook was designed to apply the USPSTF guidelines for the evaluation, treatment, and management of over-weight and obese adults. The workbook incorporates the recommendations for self-management of weight loss identified during the literature review. The content of the workbook includes a brief explanation of the pathophysiological causes of weight-gain, behavioral management activities such as goal setting, monitoring weight, and the identification of barriers to weight-loss, ways to increase physical activity, and caloric needs for each age group over the age of 18.

Mission

The project's principal mission was to develop an evidence-based tool to be used in the fight against obesity. Health care providers have a limited amount of time to evaluate, treat, and collaborate with the patient in the management of weight loss and weight management in overweight and obese patients. It is anticipated that this workbook will supplement provider care and promote patient self-management of optimal, healthy weight. Use of the workbook to help patients' weight loss and weight management will concurrently promote activities that lead to diminished progression or prevention of co-morbidities associated with being overweight or obese.

Goals and Objectives

The goal of the DNP Project was to develop a workbook that can assist health care providers in following the recommended USPSTF guidelines for assisting patients with their efforts to lose weight and to maintain weight loss. Specifically, the workbook will assist health care providers and patients in the evaluation, treatment, and management of obesity. The project's principal objective was to have health care providers who work with overweight and obese patients evaluate the content of an evidence-based workbook, created by this DNP student for content validity. The workbook was designed to be patient-centered, evidence- based, interdisciplinary, and directed towards assisting provider-patient collaborative teams in weight loss and weight management.

CHAPTER III

Theoretical Framework

Introduction

Solberg (2013) highlights the Institute of Medicine (IOM) report, Crossing the Quality Chasm, which sets six national goals to improve health care. These goals include "safety, effectiveness, timeliness, equity, efficiency, and patient centeredness" (Solberg, 2013, p. 400). Solberg also claims that to improve patients' health and level of care, along with reducing health care costs, primary health care must be redesigned. It is hoped that this DNP project will contribute to the achievement of the IOM national goals by providing an evidence-based provider-patient collaborative workbook aimed at providing a time saving tool for health care providers and assist patients to self-manage their weight loss. This DNP project was developed based on the theoretical framework of Nola Pender's nursing Health Promotion Model (HPM).

Nola Pender's Health Promotion Model

Pender's Health Promotion Model (HPM) is a middle range theory that provides a specific path for nursing activities (Sitzman, and Eichelberger, 2017). The purpose of the HPM is to assist in understanding patients' health behaviors and to promote healthy lifestyle changes for the patient (Pender, 2011). The philosophical foundation of the HPM model has a shared interaction world view in which patients are viewed holistically. Pender (2011) describes humans as interacting with their environment and shaping it to meet their needs and goals.

Pender's theoretical foundation is based on expectancy value theory and social cognitive theory. In the expectancy value theory the individual engages in activities to reach goals that they perceive as possible and result in valued outcomes. In the social cognitive theory, thoughts, behavior, and the environment interact. Pender believes, "for people to alter how they behave, they must alter how they think" (Pender, 2011, p. 2). Pender's HPM is appropriate for any

health care setting that is promoting behavioral health changes. During the assessment phase of the HPM the nurse would gather data related to prior health care behavior. The nurse would consider the patient's personal factors, perceptions of their health, and any competing demands or barriers to change. During the planning phase of the model the nurse and patient collaborate to develop a plan for the promotion of health and the patient commits to the plan. Next, the implementation phase begins and the patient starts incorporating health promoting behaviors into their daily routine. Following the implementation phase, the nurse evaluates the patients' actual health promoting behavior, if required; the nurse will reassess what is working or not working for the patient, then collaborate with the patient and modify the plan as needed. Pender's HPM outlines the continuum of the nursing process; assessment, planning, implementation and evaluation.

Health Promotion Model for DNP Project

This DNP project completed the initial phase of the HPM. Before the dissemination of the workbook can be realized severe more cycles of the HPM must be completed. The HPM not only encourages health promotion and collaboration between nurse and the patient, the HPM outlines the nursing process. Developing the workbook and establishing initial content validity completed this DNP project. The next steps in the ongoing development of this workbook will be to start planning for the development and implementation of the recommended revisions by the evaluators for the next draft of the workbook. Following the implementation of the revisions, another CVI will be conducted with healthcare providers and patients to evaluate face validity. This process will continue until the workbook is ready to be disseminated to healthcare providers who work in the outpatient setting. The next steps in the sustainability of this project will also help to further the application of Pender's HPM to the process of development and application of the workbook to overweight and obese patients and their holistic healthcare plans. Pender's

HPM is relevant for any health promotion effort that helps patients to become informed and empowered in their efforts to self-manage their health. The HPM also encourages collaboration between the health care provider and patient.

CHAPTER IV

Project Plan

Plan

This DNP project was the development of a workbook using evidence-based practice recommendations, primarily the United States Preventive Services Task Force Guidelines (USPSTF), designed to provide a tool for providers and patients to work collaboratively on weight loss and weight management strategies. The completed workbook was evaluated for content validity by health care providers who care for patients who are overweight or obese. Content validity was assessed with evaluators' responses being communicated by use of Survey Monkey.

Setting

The Survey Monkey assessment was completed online by evaluators following review of the workbook. Evaluators were primarily nurse practitioners, physicians, and physician assistants who were selected by convenience and agreed to participate in the study two months prior to its initiation. The evaluators serve adult patients between ages 18 to 70 and include overweight and obese patients.

Population of Interest

The two populations of interest for this DNP project were the healthcare providers who provide medical care to patients who are overweight or obese, and the patients who require this specific care. All of the health care providers who served as workbook evaluators currently provide care to patients who are overweight or obese

After the workbook is revised, the population of interest will become the health care providers and patients themselves. Additional health care providers will be sought to conduct a second

content validity assessment, and patients will be sought to review the revised workbook for the appropriate literacy level, readability, helpfulness of content, and ease of use. Over the long-term evaluation of actual weight-loss and weight management results will be important in determining the level of support that the workbook may provide to both providers and patients.

Measures and Activities

Initially, fifteen health care providers agreed to review the completed workbook and complete the questionnaire on Survey Monkey for content validity. The workbooks were then distributed to study participants via Federal Express or delivered in person.

The questionnaire measured the relevance of each section of the workbook's contents. The measurement determined the content validity index (CVI). The CVI is a method for quantifying abstract concepts (Wynd, Schmidt and Schaefer, 2003). The CVI allows two or more persons to independently review and evaluate for relevance of the sample of items in question. According to Polit and Beck (2017) CVI is progressively more recognized as a measurement in the early steps of developing new constructs. If the CVI is considered relevant it is more likely to achieve the researcher's objectives (Polit & Beck, 2017). CVI should have at least three evaluator-participants to be considered valid, however, more evaluators are recommended. This project followed the criteria set forth in Polit and Beck (2017) recommending a scale range of .80 to 1.00 to be considered as having excellent content validity. The questions in the survey allowed for a had a 4-point Likert rating scale and used standardized responses identified as: 1= not relevant; 2 = unable to assess relevance without item revision or item is in such revision that it would no longer be relevant; 3 = relevant but needs minor alterations; and 4 = very relevant and succinct (Burns & Grove, 2009, p. 382). Ratings 1 and 2 were excluded from the CVI score while ratings of 3 and 4 were considered valid and were included in the CVI calculated score.

An anonymous 28-item survey (see Appendix D. Survey Results) was created by the DNP student. Items 1–4 were demographic questions and the last question asked the length of time it took the participant to review the workbook and conduct the online questionnaire. Thus, questions 1–4 and question 28 were not used in the calculation of the CVI, leaving 23 questions used in calculating the CVI of the workbook.

The survey also included a consent form and demographic questions that included the participant's title (i.e., nurse practitioner, physician, and physician assistant). One of the survey's demographic questions and included the identification of the participant's clinical specialty (i.e., primary care, internal medicine, pediatrics, psychiatry, and other). For this project, the Survey Monkey plan utilized allowed for customizing the survey and export capability to PDF, PowerPoint, SPSS and the ability to protect the anonymity of the participants. The collection of email addresses and IP addresses were blocked to maintain evaluator anonymity.

Timeline and Project Tasks

The timeline for this DNP project started in 2014 and was completed in the spring of 2016 (see Appendix B. Timeline). The project started with the literature review to determine the best clinical practices for health care providers to assist their patients with the evaluation, management, and treatment of their overweight and obese patients. The literature search revealed the USPSTF guidelines which were used to provide a foundation and outline for the development of the workbook. Each intervention of the USPSTF guidelines was investigated to provide the best-practices in the development of the content of the workbook. The 28 question survey instrument was written to evaluate each section of the workbook for content validity. Following the development of the questionnaire both the workbook and the questionnaire were sent to the University of Nevada, Las Vegas (UNLV) biomedical Institute Review Board (IRB). The UNLV IRB deemed the project exempt and approved the questionnaire along with the consent to

participate, all of which was entered into Survey Monkey for evaluators to complete the questionnaire (survey instrument).

After the IRB deemed the project exempt, final edits to the workbook were made and then sent to the printer for printing and coil binding. While the workbook was at the printers, contact was made with the providers who agreed to participate in this study by evaluating the workbook. Evaluators had two weeks to review the workbook and complete the online survey. At the end of the survey, participants received their choice of a $30 gift card from either Amazon or Target department store as an acknowledgement for participation. Following completion of the survey, the results were evaluated for content validity, creating a percentage of agreement along with the assessment of the qualitative open-ended responses.

Risks and Threats

To evaluate the risks and threats for this project the SWOT analysis tool was used. SWOT stands for "strengths, weakness, opportunities, and threats analysis" (White & Zaccagnini, 2014, p. 429). SWOT analysis is beneficial to detect the strengths of the project, identify the opportunities, and be alert to possible threats to the project (White & Zaccagnini, 2014). The strength for this project was the USPSTF guidelines served as a foundation for the development of the workbook. One of the weaknesses for this project was the lack of experts that specialize in weight-loss and weight management to evaluate the workbook and complete the online survey. Another weakness of this project was that evaluators were selected through the DNP students' network of current and former colleagues rather than "neutral" experts in weight loss and weight management who were previously unknown to the DNP student. The opportunities for this project included the potential to provide a time saving resource for health care providers to assist their patient in weight loss and weight management. Threats included

health care providers being unable or unwilling to review the workbook or complete the survey after receiving the workbook.

Resources

The most useful resource for completing the CVI was the access to Survey Monkey. The online survey website was easy to use for both the DNP student researcher, and for the evaluator-participants of this study. The Survey Monkey website also provides the ability to obtain statistical information regarding each survey question. The resources for writing the content of the workbook included the USPSTF obesity guidelines that provided the foundation and outline of the workbook. Additional resources for the content of the workbook are listed in the resource and bibliography section of the workbook (see Appendix A. Workbook) . To reduce the use of medical terminology the CDC *Plain Language Thesaurus* from the National Center for Health Marketing and Centers for Disease Control and Prevention, (2009) was used. The Dartmouth functional assessment charts are a helpful resource in evaluating a patient's perceived health of how they are doing physically, mentally, and socially. Copyright permissions were granted to use the Dartmouth functional assessment charts (see Appendix A. Workbook) The illustrations for the workbook are from a paid subscription services that provide images that are royalty free and copyright permissions are given as long as the illustrator receives credit for their images. The two services used for the illustrations were thinkstock.com and canstockphotos.com.

Institutional Review Board Approval

The workbook, flyer for evaluator recruitment, and survey questions were provided to the University of Nevada, Las Vegas Biomedical Institute Review Board (UNLV IRB) for review. On November 24, 2015 the UNLV IRB deemed this project exempt (See Appendix G. IRB Approval).

CHAPTER V

Summary of Implementation and Results

Initiation of the Project

The primary goal of this DNP project was the development of the workbook and to determine its relevance by measuring the content validity with content evaluators, primarily nurse practitioners involved in the care of overweight and obese patients. This project was deemed exempt by the University of Nevada, Las Vegas biomedical institute review board. After receiving the exempt status, the final edits of the workbook were completed and the workbook was then sent to the printing company for printing and coil binding. While the printing was being completed contact was made with healthcare professionals who agreed to evaluate the workbook and complete the survey questionnaire.

Threats and Barriers to the Project

In order for patients to self-manage their weight loss, patient education materials must be written in plain language. The recommendation for patient education literature should be written at the sixth to seventh grade level (National Institute of Health, U.S. National Library of Medicine, and MedlinePlus. (n.d.). The final Flesch-Kincaid readability score for this project was 8.9 grade-level. Unfortunately, due to the complexity of the evaluation, treatment, and management of obesity content, the workbook required other strategies to make it easier to understand than could be accomplished by simply lowering the reading level. The strategies implemented included bulleted points, short simple sentences, and the use of color separating areas of text, charts, and pictures. It is also recommended to avoid or limit the use of medical terminology; so, the CDC *Plain Language Thesaurus* from the National Center for Health Marketing and Centers for Disease Control and Prevention (2009) was used to address this recommendation and limit medical terminology.

Another threat to the implementation of this project was the retaining of participants to review the workbook and provide an evaluation of its content. Initially, 15 evaluators agreed to review the workbook and complete the survey. Some initially recruited evaluators either did not initiate or did not complete the review requiring recruitment of additional evaluators until a total of 12 evaluators completed the entire review task and submitted recommendations via the Survey Monkey questionnaire. These evaluator's responses were used in the calculation of the final content validity scoring. When the workbook is revised for the next phase of workbook development, immediately on completion of this project, additional experts in the field of overweight and obesity treatment will be accessed for another review of the content.

Monitoring of the Project

The Survey Monkey website was monitored daily to see how many participants responded. However, the responses to the survey were not viewed in order to maintain the anonymity of the participants, and the objectivity of the DNP student researcher.

Data Collection

The questionnaire for this project was created on Survey Monkey. All participants rated each item in the survey on a 1-4 Likert scale. The CVI survey had a total of 28 questions providing demographic date and evaluating each section of the workbook (see Appendix D. Summary of Results). A total of 20 workbooks were distributed to participants, and a total of 12 evaluator-participants reviewed the workbook and completed CVI survey. The participants had two weeks to complete the survey.

Data Analysis

Twenty potential participants were provided with the workbook for evaluation and comment. Twelve (60%) of the potential participants (evaluators) completed the review of the workbook and the survey questionnaire on Survey Monkey. One respondent was not calculated

in the analysis because the person is a pharmacist and was not eligible to review the workbook. Of the survey participants 72.73% (n=8) were nurse practitioners; 18.18% (n=2) were physicians; and 9.09% (n=1) was a physician assistant.

Questions one through four was not included in the CVI calculation because the questions requested demographic information about the participants and did not contribute to the evaluation of the workbook content analysis. Question 28 was eliminated from the CVI results because it asked how long it took the participant to review the workbook and complete the survey. The results of question 28 (n=7), the responses 30 minutes 28.57% (n=2), 1 hour 28.57% (n=2), 1 hour and 30 minutes 14.29% (n=1), 2 hours 28.57% (n=2). The average time to review the workbook and complete the survey was 73 minutes.

CVI Analysis

Polit and Beck (2017, p. 311) recommend that for the CVI to be considered valid it must be reviewed by at least three evaluators; however, a larger number is preferable to determine excellent content validity. A satisfactory score for relevance would be greater than .80 CVI. If an item has a CVI less than .78 the item should be re-examined or rewritten. From the questionnaire Likert scale of 1–4, no items evaluated for the workbook received a rating of 1 or 2. The cumulative total of all survey questions related to the workbook content, that received a rating of 3 or 4 was 253. The total items that received a rating of 3 (n=17) and the number of items that received a rating of 4 (n=236). The overall CVI for items rated 3 and 4 received CVI of 1.00 or 100% of agreement. Since this CVI was so high a second CVI was calculated by removing the items rated as 3 (n=17) this resulted in a CVI rating of 0.93 or 93% of agreement (See Appendix C. CVI calculation).

Project Outcomes and Dissemination

The content of the workbook for this project was deemed relevant by the evaluators with a CVI of 0.93 to 1.0 or 93% to 100% agreement on content validity. The evaluators also provided qualitative responses in the optional, comments section of the survey. The evaluators suggested modifications in the workbook to include an increase in font size, larger images, and requested sample menus for a healthy diet. To accommodate these changes the workbook will need to be printed on 8.5 inches by 11 inches portrait layout paper. The current design of the workbook was made 5.5 inches by 8.5 inches for easier portability.

Question number three asked the evaluator if they screen their adult patients for obesity, the results for this survey were 63.6% (n=7) of the evaluators screen adults for obesity. This score is higher than anticipated because according to the literature reviewed only 50% of all primary health care providers screen and offer weight loss treatment strategies to their patients (Yanovski, 2011).

After the suggested changes are made from the open-ended comments from the survey, the plan is to do a second CVI with healthcare providers and face validity testing with patients. Dissemination of the results of this project will follow a variety of different courses. First, the workbook will be revised, reevaluated, and final modifications will be made. The workbook will be made available to healthcare providers involved in the workbook review process for use with their patients. The workbook will also be presented as a weight loss and weight management strategy at professional conferences and the review process and an overview of the completed workbook will be submitted for publication in professional journals. It is hoped that future research may involve a longitudinal study of patients who are supported by provider-patient collaborative use of this workbook to assess weight loss and weight management success and barriers to success over time.

Discussion of Results

The results and feedback from the evaluators were positive given that the CVI was rated as 0.93 to 1.0 providing 93 to 100% agreement among the evaluators. The overall open ended responses provided positive feedback for the workbook (see Appendix D. Summary of Survey results). For the purposes of this project, this means the evaluators deemed this project relevant and the workbook to be beneficial to healthcare providers and patients in the management and treatment of the overweight and obese adult. However, the workbook has not been tested with patients. With the next phase, the workbook will be evaluated by a larger group of health care providers who will include their patients. Evaluating the workbook with both healthcare providers and patients will provide a more valid measure of relevance and effectiveness of the workbook.

As discovered in the literature review, finding new ways to reduce the prevalence of obesity in the United States is paramount when recognizing that 68.6% of the adult population is either overweight or obese. The cost of health care is in the billions of dollars. Obesity is the primary contributing factors for many health care conditions treated in the primary care office (Trust for America's Health and Robert Wood Johnson Foundation, 2015). One of the discoveries when reviewing the literature is also that obesity in not just a primary care issue. Obesity leads to many chronic health conditions such as Alzheimer's , dementia, depression, type 2 diabetes, hypertension, hypercholesterolemia, coronary heart disease, stroke, asthma, nonalcoholic liver disease, kidney disease, arthritis and cancer. Most health care providers either treat obesity directly, or they treat the complications associated with obesity (Trust for America's Health and Robert Wood Johnson Foundation, 2015). Obesity should be treated and evaluated by all health care providers. This workbook, after further revisions and CVI testing, can become another tool in fighting the obesity epidemic.

Conclusions and Project Sustainability

In summary, this DNP project was the evaluation of the relevance of the proposed workbook by measuring the content validity of an evidence-based collaborative provider-patient workbook for the evaluation, management, and treatment of the overweight or obese adult. The workbook was developed to provide a time saving resource for health care providers and a self-management tool for patients who want to lose weight. The importance of this project is related to the significant rise in the numbers of overweight or obese adults in the United States. The most recent data reports that 68.6% of adults are either overweight or obese. The economic burden of obesity is in the billions of dollars. Obesity can lead to long-term chronic health conditions such as, Alzheimer's, dementia, depression, type 2 diabetes, hypertension, hypercholesterolemia, coronary heart disease, stroke, asthma, nonalcoholic liver disease, kidney disease, arthritis, and cancer (Trust for America's Health and Robert Wood Johnson Foundation, 2015). The United States Preventive Services Task Force obesity guidelines recommend that primary care providers screen all adults over the age of 18 for obesity. Unfortunately, only 50% of primary care providers screen their adult patients for obesity or offer weight loss treatment. The cited reasons for not screening patients, or offering weight loss treatment relate to health care providers lack the time, skill, or resources.

The literature reviewed for this project revealed a gap in literature that facilitates collaboration between health care providers and patients. To fill the gap, this DNP student developed the proposed workbook. The USPSTF guidelines provided an outline for the interventions for the workbook. The interventions included, the definition and screening of overweight and obesity, behavioral management activities such as setting weight-loss goals, calorie requirements for age, gender, and physical activity levels, potential barriers preventing patients weight loss, monitoring weight, and ways to maintain a healthy weight.

The theoretical framework for this project was based on Nola Pender's Health Promotion Model (HPM). In the HPM the advanced practice nurse seeks to understand the patients' health behaviors to promote a healthy lifestyle. The philosophical foundation of the HPM model has a shared interaction world view in which patients are viewed holistically. Pender (2011) describes humans as interacting with their environment and shapes it to meet their needs and goals.

In this initial phase of a longer term project, the goal was to create a workbook contributes to strategies providers and patients may have to support weight loss and weight management goals, have health care providers review the workbook and complete an online survey to evaluate the workbook for relevance to their individual practice area. The measurement for evaluating for relevance was a content validity index (CVI). The results of this initial phase proved to be positive with a CVI of 93% to 100% of agreement on the content presented in the workbook. After the recommended revisions are written, the next draft of the workbook will be completed and a second CVI will be measured with review input from both health care providers and overweight or obese patients. The participants will evaluate the revised workbook for the appropriate literacy level, readability, helpfulness of content, ease of use, and weight-loss results.

Appendix A: Weight Loss Workbook

EIGHT STEPS TO WEIGHT LOSS

A PROVIDER-PATIENT PARTNERSHIP

Katherine A. Wagner, MSN, FNP-BC, NP-C
Doctor of Nursing Practice Student Project
University of Nevada, Las Vegas

EXEMPT RESEARCH STUDY

INFORMATION SHEET

Department of Nursing

TITLE OF STUDY: WEIGHT LOSS FOR ADULTS A FIVE STAR APPROACH (ASSESS OR ASK, ADVISE, AGREE, ASSIST, AND ARRANGE)

An evidence-based workbook for patients to self-manage their weight loss and fills the communication gap between health care providers and patients.

INVESTIGATOR(S) AND CONTACT PHONE NUMBER:

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Committee Chair
Principal investigator
Email: diane.thomason@unlv.edu
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Doctorate of Nursing Practice Student
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Phone: (916) 806-1706

The purpose of this study is to assist health care providers to implement a tool for the evaluation, management and treatment of obesity by adhering to the United States Preventive Services Task Force recommended guidelines by providing a cost effective, easy to follow workbook, for patient self-management in achieving and maintaining weight-loss. You are being asked to participate in the study because you meet the following criteria: A licensed physician, nurse practitioner or physician assistant. If you volunteer to participate in this study, you will be asked to do the following: review the attached workbook and complete an anonymous survey on *Survey Monkey*. No identifying information will be collected from you, including your IP address and email address.

This study includes only minimal risks. The study will take 1–2 hours of your time. To thank you for your time you will receive a $30 gift card from either Amazon or Target Department Store. Please let Katherine know which gift card you would prefer. This study will be from **February 1, 2016 through February 20, 2016.** For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact **the UNLV Office of Research Integrity Human Subjects at 702-895-2794, toll free at 877-895-2794, or via email at IRB@unlv.edu.**

Your participation in this study is voluntary. You may withdraw at any time. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Participant Consent:

I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

Signature:

Thank you for participating in this study!

After reviewing the workbook please go online to complete the survey at

https://www.surveymonkey.com/r/weightlossfivestarapproach

Password: obesity

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Butte County Department of Employment and Social Services

Yuba County Health and Human Services Department

El Dorado County Department of Health and Human Services

Illinois—Cook County Department of Health Services

Nevada Department of Health and Human Services Division of Welfare and

Supportive Services (DWSS)— Las Vegas

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Daily Journal

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Bibliography

Welcome

In the United States, adults' ages 20 years and over, 35.7% are dangerously overweight (CDC, 2013). People who are overweight puts them at risk for many health conditions– such as, depression, sleep disorders, asthma, high blood pressure, stroke, heart disease, type 2 diabetes, high cholesterol, arthritis, constant pain and cancer. Weight related conditions are the main reason for most conditions treated by health care providers.

As a family nurse practitioner, I have seen many patients in clinical practice that are dangerously overweight. Unfortunately, there are few resources for health care providers to help patients lose weight. Since weight related medical conditions are the main reason for most health care visits I decided to develop this workbook. The goal of this doctorate nursing practice (DNP) project is to develop a collaborative self-management workbook that adheres to the United States Preventive Services Task Force (USPSTF) clinical guidelines in the evaluation, management, and treatment of obesity.

If you are a patient reading this and you do not understand certain medical terms please ask a member of your health care team to explain the terms. If you decide to use the internet please read reliable medical websites. The resource section of this workbook has a list of reliable easy to read medical websites.

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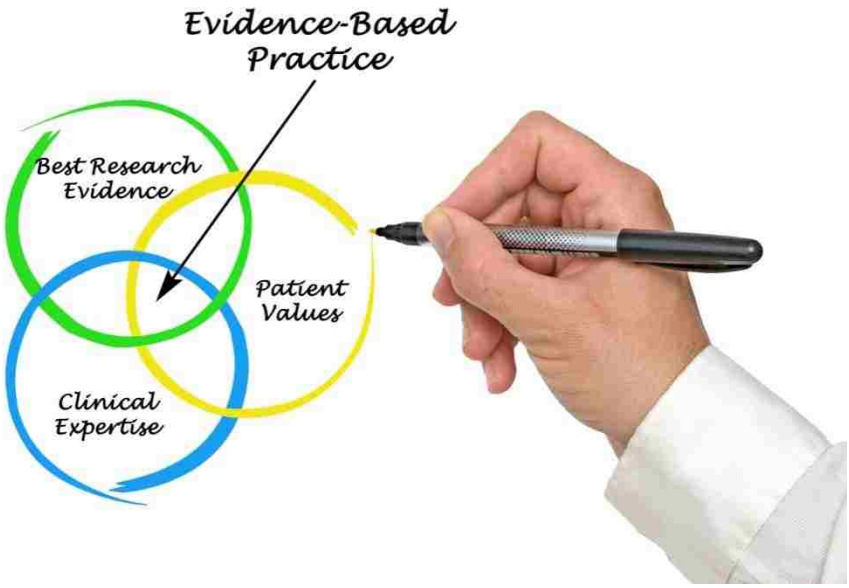
After reviewing the workbook please go online

https://www.surveymonkey.com/r/weightlossfivestarapproach

Password: obesity

STEP 1

USPSTF Guidelines and Building Your Weight-Loss Team



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Vaeenma. (n.d.). *Diagram of EBP.* Retrieved from www.thinkstockphotos.com

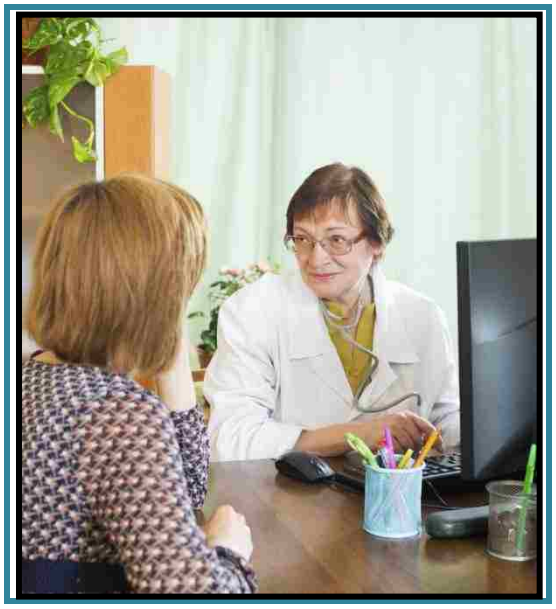
United States Preventive Services Task Force (USPSTF)

The workbook follows the United States Preventive Services Task Force (USPSTF) recommended guidelines. The USPSTF recommends that primary care providers screen all adults who are 18 years or older for obesity. USPSTF further recommends:

Patients with a body mass index (BMI) of greater than or equal to 30 kilograms per meter squared (≥ 30 kg/m^2) should be offered or referred to intensive, multi-component behavioral interventions. The interventions should include:

- Behavioral management activities; such as setting weight-loss goals.
- Improving diet or nutrition and increasing physical activity.
- Address barriers to change.
- Self-monitoring and self-management

- Strategies how to maintain lifestyle changes (USPSTF, 2012).



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JackF. (n.d.). *Mature doctor behind computer with patient.*
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Introduction

Congratulations! You've decided to lose weight. Locating information on weight loss is easy. Many popular magazines, TV programs, websites, Smartphone apps and books offer weight loss advice. These "Evaluator" and "Advertisers" promise you can get a beach body in just a few weeks if you only follow their advice. Unfortunately, the diets and weight loss plans often don't work because the diets do not consider other causes for weight gain that may prevent you from losing weight. Examples include mental health conditions and medical conditions such as, diabetes, thyroid disorders, heart disease and conditions that cause constant pain. You may have some other roadblocks preventing you from losing weight that we will discuss in Step 5.

Beginning a weight loss plan can be a long journey so we need to gather your team and develop a strategy for success. The purpose of this workbook is for your primary care provider (PCP) and you to work together to develop the best strategy for your weight loss.

Identifying Your Weight Loss Team

The first step in your weight loss journey can be to identify your own personal weight-loss team. The head coach for your team will probably be your primary health care provider, or they may be a health care provider that specializes in obesity. Your primary health care provider may be a nurse practitioner, physician, or a physician assistant. The differences between the three titles are below:

- Nurse practitioner (NP)— an experienced registered nurse (RN) who has a master's degree or higher, additional training, national certification, and licensed to provide medical care.
- Physician – medical doctor (MD).
- Physician assistant (PA) – is a graduate of an accredited education program who is nationally certified and state-licensed to practice medicine with physician supervision.

Also, you may have other health care professionals on your weight loss team. For example, depending on your insurance coverage and if you have health conditions preventing you from losing weight, you may also qualify to receive care from:

- Certified diabetes educator –who has received special training and national certification in helping people with diabetes to control their blood sugars.
- Registered dietician – a dietitian is a qualified health professional who helps promote good health through proper nutrition.
- Nutritionist – a nutritionist is someone who works with food and nutritional science to prevent diseases related to nutrient deficiencies.

In addition to these health care professionals many people who succeed in losing weight ask family members and friends to join their weight loss team. Think of people you can call when you feel down or discouraged and need encouragement.

Weight Loss Organizations

Your insurance company may have weight loss programs, so call your insurance company and find out what resources are available to you. Some insurance companies will pay for gym membership or weight loss surgery. Other organizations such as *Weight Watchers* offer support and advice on weight loss and can help people succeed in losing weight.

Weight Loss Aids

In addition to your weight loss team and weight loss organization you and your health care team may decide to use other weight loss aids. For example:

- Medication. Your health care provider may prescribe medication on a short-term basis to help decrease your appetite.
- A gym membership.
- Surgery to help you lose weight also called bariatric surgery.

To Do List – The Beginning of the Plan

Every journey begins with a plan to get where you want to go. In the resource section there is a "To Do" list. This list is to help you organize your weight loss plan. So start getting in the habit of writing down the tasks your team wants you to do. In the resource section there is also a place to write down your teams contact information.

Unfortunately, there are no pills, diet, or surgery that can do it all for you. You must do the work!

Visualize health and keep telling yourself

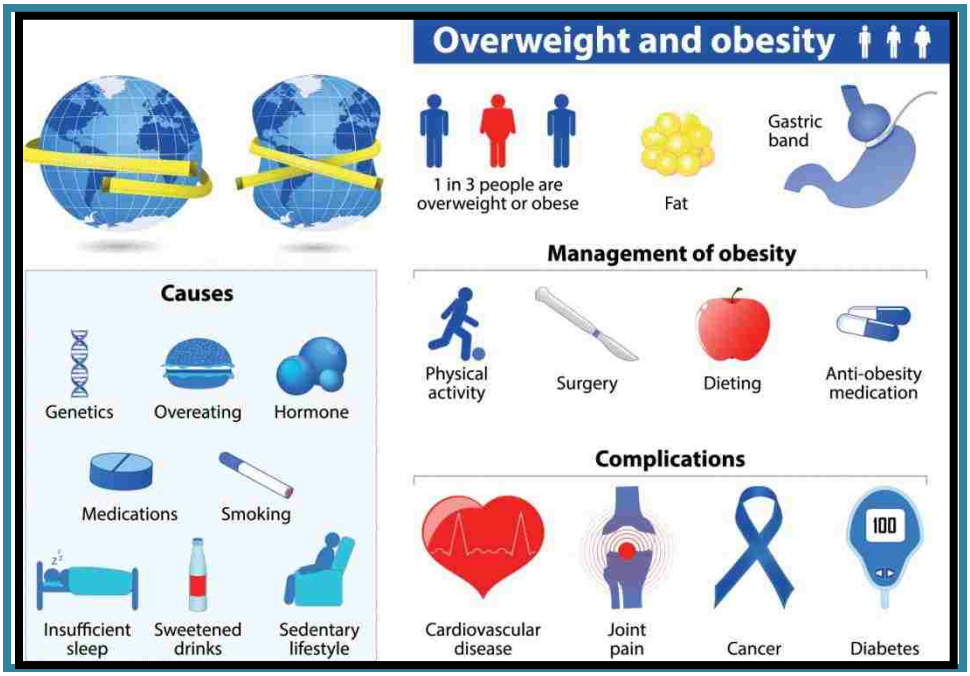
I CAN LOSE WEIGHT!!!

For fun, place your before picture here. In the back of the workbook there is a place for your after picture.

My Before Picture

STEP 2

Causes of Weight Gain: It's more than you think!



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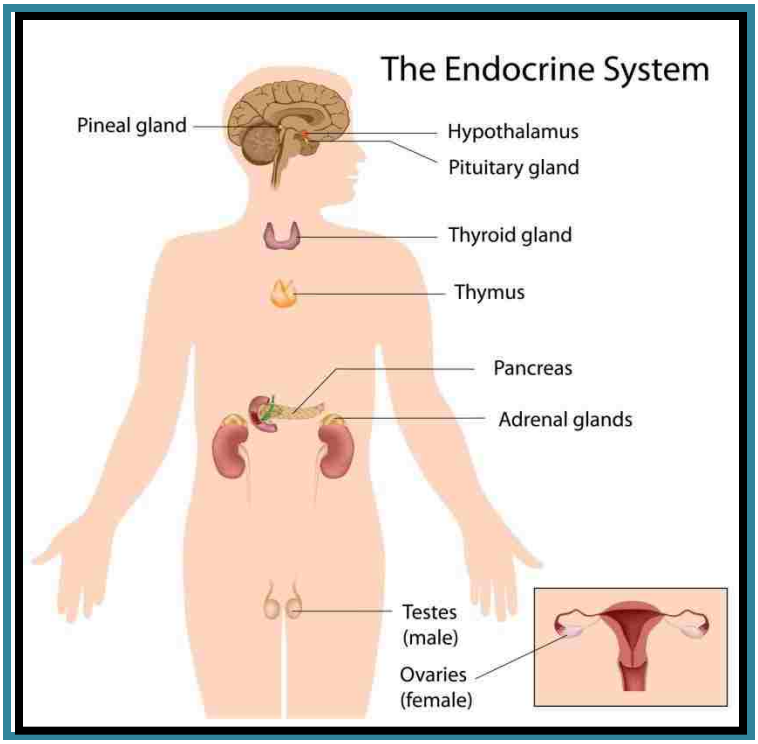
Why Do People Gain Weight?

People gain weight for many reasons. The main reasons are eating too much and not enough exercise. Think of the food you eat as energy. We commonly call this energy "calories." Weight gain happens when you eat more calories than you use. Calories are used in three ways.

- Our body uses calories during work and play –and even during sleep accounting for 60%–70% of the calories you eat.
- Our body uses 10% of the calories you eat to digest and use food. Some of these calories are also used to convert our food into a form of sugar called "glucose."
- Exercise of the body accounts for 10% or as much as 40% of the energy you use depending how much and the type of exercise you do.



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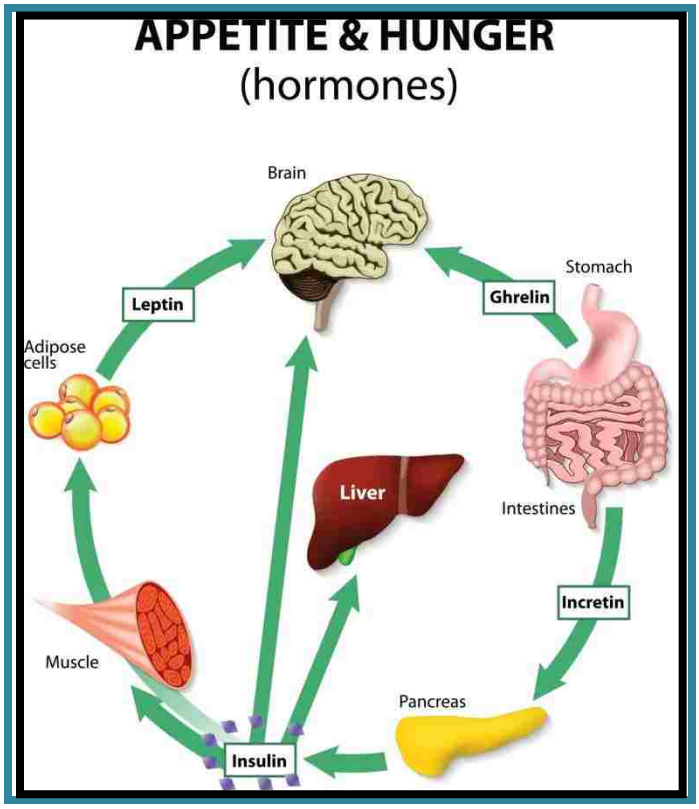
Hormones and Weight Gain

The appetite is controlled by certain hormones. Hormones are chemicals that tell the cells of your body to do certain things. Hormones are made by small organs in your body called glands. Examples include; the pineal, pituitary, thymus, pancreas, adrenal, and the reproductive glands (ovaries and testes). This system is called the endocrine system. Insulin is an important hormone made by the pancreas that aids in the transports of glucose into the cells so the cells can use it for energy. There are certain hormones that can control eating. Fat cells (adopocytes) can secrete hormones called adipokines. Adipokines affect food intake, fat storage, and insulin. Adipokines can affect insulin causing insulin sensitivity which is the inability for the body to use insulin effectively. Insulin sensitivity over a period of time can cause metabolic syndrome that can lead to serious health complications such as;

- high blood pressure;

- high blood sugar levels (diabetes);
- high triglycerides – a type of fat in your blood;
- low levels of good cholesterol in your blood HDL (think of the H in HDL as happy fat); higher levels LDL are bad cholesterol (think of sad fat) in your blood; too much fat around your waist is called visceral fat commonly known as belly fat.



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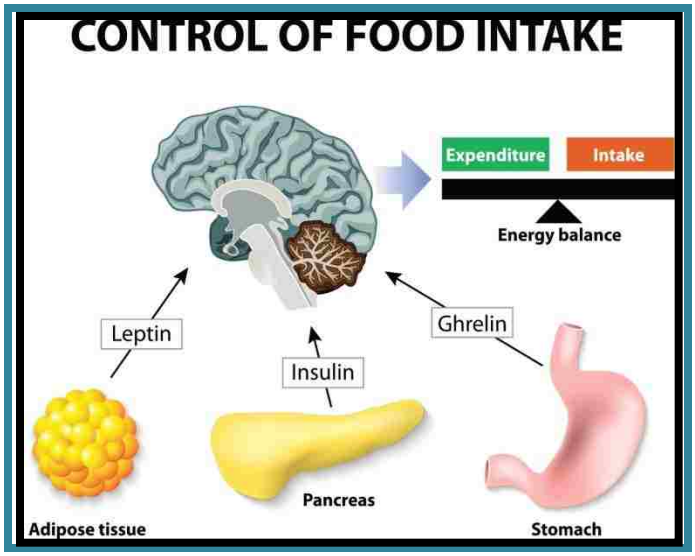
Visceral fat (commonly known as belly fat) around your waist alters the regulation of the adopocytes hormones which can result in complications of obesity especially heart disease. Appetite control and the feeling of fullness are controlled by the brains and endocrine system through hormones that either increase the appetite or decrease the appetite. The hormones that increase the appetite are called orexins.



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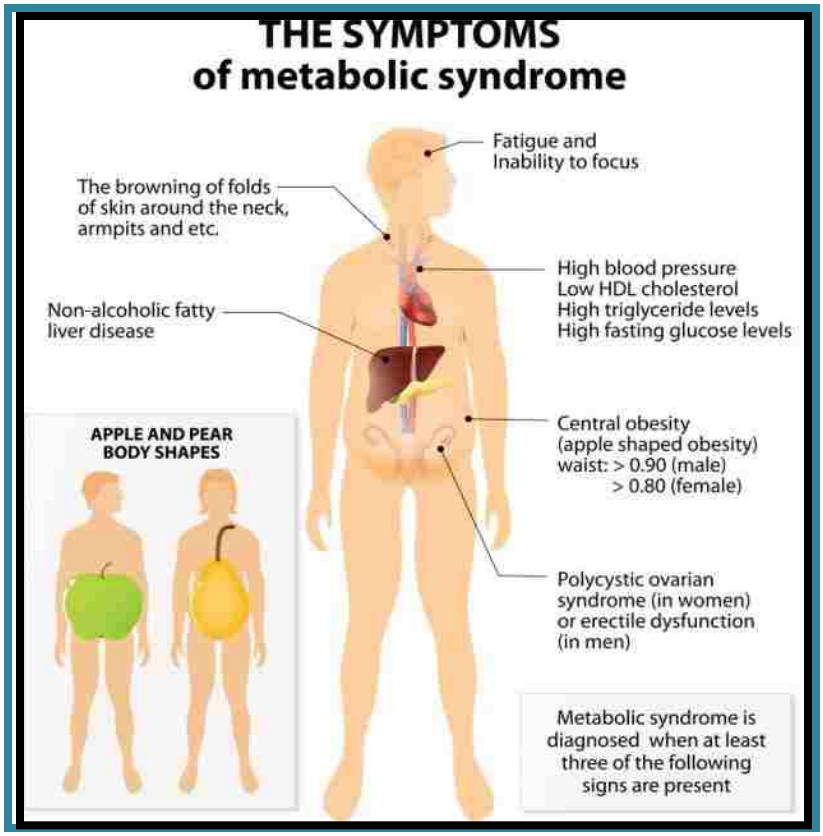
Important hormones that decrease appetite are leptin, insulin and ghrelin. Obesity is associated with increased blood levels of these hormones. Low levels of leptin while fasting increase the appetite and decrease the amount of calories used. On the other hand, high leptin levels after eating use more calories and decrease the appetite. High levels of leptin in obesity are not effective in decreasing appetite and increasing the number of calories use; this is known as *leptin resistance.* Leptin resistance is thought to be a cause of inflammation that leads to heart disease.



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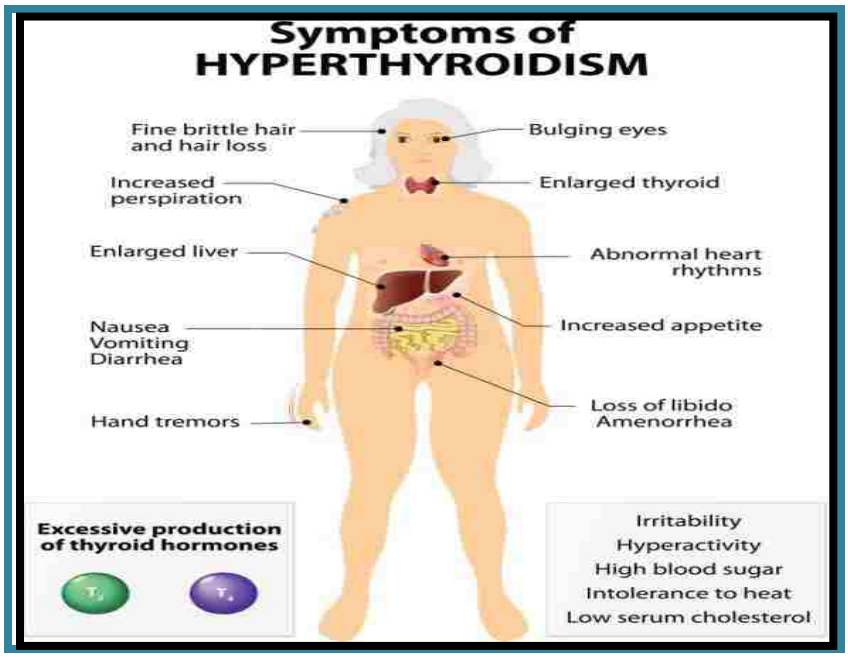
Hyperthyroidism and Hypothyroidism



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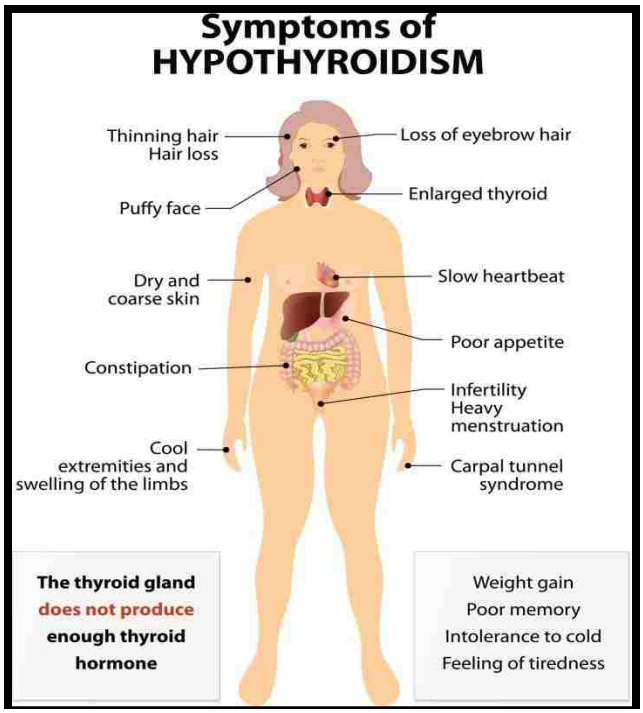
Hormones play an important role in controlling weight. The thyroid hormones triiodothyronine (T_3) and thyroxine (T_4) are important hormones that influence energy spending. An imbalance of these hormones can lead to hyperthyroidism or hypothyroidism. Hyperthyroidism can result in weight loss. However, this weight loss can lead to serious heart muscle conditions.

In contrast, hypothyroidism the opposite occurs because the metabolic rate slows down leading to weight gain. Hypothyroidism is caused by a deficiency of thyroid hormone leading decreased energy metabolism and heat production. Patients develop a low basal metabolic rate, cold intolerance lethargy, tiredness, and slightly lowered basal body temperature.



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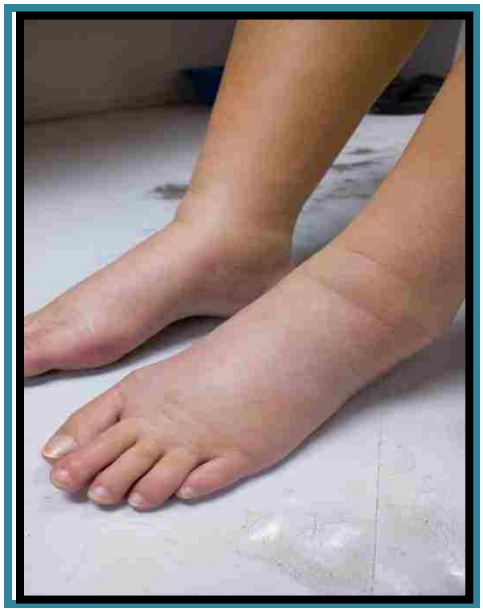
Congestive Heart Failure

Some people have a health conditions that causes their body to retain extra fluid. For these people, weight can vary from day to day. One condition is congestive heart failure (CHF). CHF is when the heart becomes weak and does not pump as well as it should. CHF can cause fluid to back up into the lungs, legs, ankles and feet. This is also called edema. Common reasons for CHF are coronary artery disease, high blood pressure and diabetes.



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Gross edema of leg and foot. Retrieved from www.thinkstockphotos.com

Constipation

Constipation is another condition that can affect weight. The definition of constipation is no bowel movement for three days. You can improve your bowel routine in several natural ways:

- Increase your fluid intake.
- Increase your physical activity.
- Eat more fruits, vegetables, and whole grains foods.
- Laxatives. Use laxatives only if your health care provider says that doing so is ok.

STEP 3

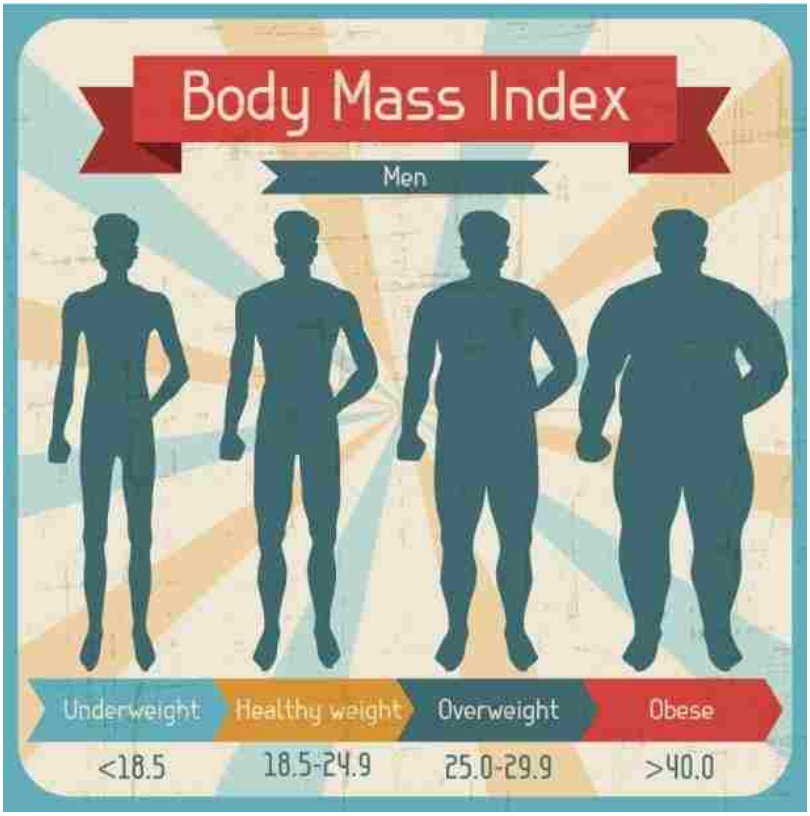
Are You a Healthy Weight?

Next, we are going to figure out how much weight you need to lose. Figuring out a healthy weight for you is determined by your Body Mass Index (BMI) and Waist to Hip Ratio. Your health care team can help you with the math or if you are good with math you can use the formulas below.

There are Smartphone applications (APPs) and BMI calculators on the internet such as, the Centers for Disease Control and Prevention (CDC) to determine your body mass index (see resource section).

The BMI formula is

$$\left(\frac{Weight\ in\ lbs\ x\ 703}{Height\ in\ inches}\right) \div Height\ in\ inches = \text{BMI}$$



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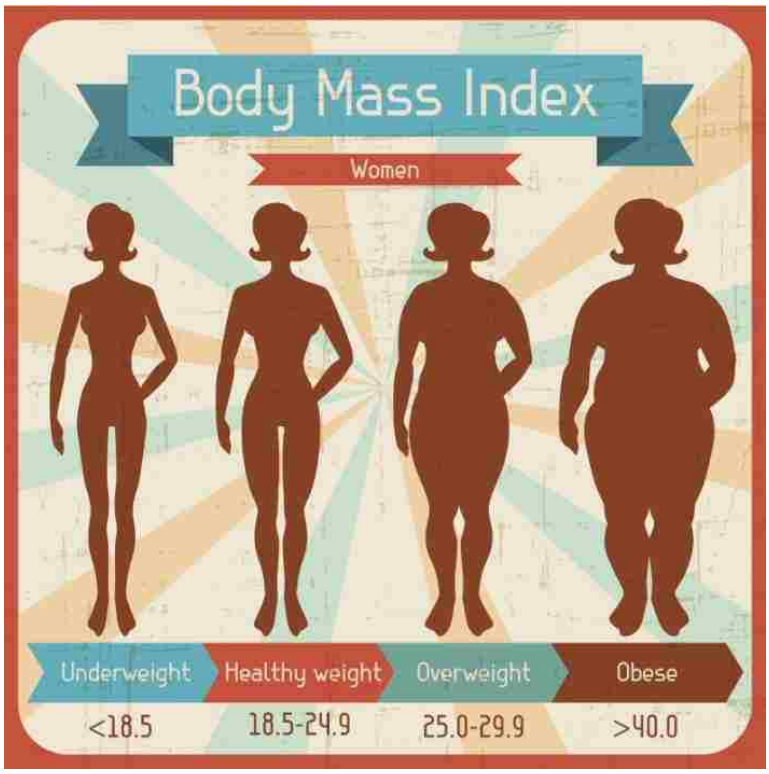

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Waist to Hip Measurement

Are you an apple  or a pear  ? Belly fat is linked to heart disease even if your BMI is within a normal range. To determine belly fat risk we need to find out our waist-to-hip ratio.

- First, use a measuring tape to measure the hips at the widest part of the buttocks,
- next, measure the waist at the smallest area of the natural waist line, usually just above the belly button,
- then, find your waist-to-hip ratio by dividing your waist measurement by your hip measurement.

  The formula is $\frac{\text{waist measurement}}{\text{hip measurement}} = \textit{waist to hip ratio}$.

A body with more weight around the waist is said to be “apple” shape. A body with more weight around the hips is said to be pear shaped. Apple shape is at higher risk for developing heart disease and blood vessel disease than individuals who are pear shape.

STEP 4

Setting Goals and Monitoring Weight

How much weight do you need to lose? See the "Body Mass Index Table" in the resource section. Remember, this is a long journey. A safe weight loss is 1 to 2 pounds per week. It does not matter how long it takes as long as you are making progress. We are looking for progress not perfection!

Following the BMI chart in the resource section, you'll find a sample daily and weekly record for tracking your

- weight
- BMI
- waist measurement
- hip measurement
- daily exercise
- daily calorie totals
- number of hours of sleep you get each night.

Make enough photocopies of the chart for the number of weeks you need to achieve your goal weight.

When to Weigh

You don't need to weigh yourself every day unless you have a medical condition that requires you to check your weight daily.

You and your health care team can decide how often you should weigh yourself. Be consistent when you weigh. For best results, weigh yourself

- first thing in the morning,
- at the same time of day each week or each day,

- after you have gone to the bathroom,
- before you have anything to eat or drink,
- without clothes or with the same amount of pajamas or clothing.

Write down your current weight.

Write down your goal weight.

Write down the number of weeks it will take you to achieve your goal weight.

Remember a healthy weight loss is 1–2 pounds per week.
Write down your goal date.

STEP 5

Roadblocks to Weight Loss

Now let's look at roadblocks to weight loss that we may encounter on our journey to lose weight. As we've discovered in Step 2, some medical conditions can prevent weight loss. Other factors that influence weight loss include

- readiness to lose weight
- view of personal health
- mental health status
- certain medicines
- lack of sleep
- your culture
- income level.

Desire to Lose Weight

We can be our own roadblock to making healthy choices. Sometimes we are our own worst enemy. Some of us who are overweight or obese see ourselves as having a healthy weight. Or, we may procrastinate and tell ourselves that we do not need to lose weight. Or we put off our weight-loss program because we feel that we are too busy. However, we know that excess weight will eventually impact our health. Weight-loss is not easy — it is hard work.

Next, ask yourself the question "How is the excess weight impacting my life?" Write in the space below.

Journal

Readiness for Change

Circle your answer to the following questions

1. In the past month, have you been actively trying to lose weight?

   Yes / No

2. In the past month, have you been actively trying to keep from gaining weight?

   Yes / No

3. Are you seriously considering trying to lose weight to reach your goal in the next 6 months?

   Yes / No

4. Have you maintained your desired weight for more than 6 months?

   Yes / No

Scoring

Stage	Q1	Q2	Q3	Q4
Pre-contemplation	No	No	No	
Contemplation	No	No	Yes	
Action	Yes	Yes		No
Maintenance	Yes	Yes		Yes

View of Personal Health

To evaluate your view of your health status we have included the Dartmouth Primary Care Cooperative Information Project (COOP charts). Please review and complete the charts.

Check the box that best describes how you have been feeling over the past 2 weeks. Share the charts with your health care team.

The COOP charts evaluate

- physical fitness
- feelings
- daily activities
- social activities
- pain
- change in health
- overall health
- social support.

Purpose of COOP Charts

These charts were developed by the Dartmouth Primary Care Cooperative Information Project (COOP project) as a method to screen and measure the functional status in an outpatient primary care setting. These COOP charts are important because most health care providers see about 20 to 30 patients a day and can spend only 6-15 minutes an individual patient.

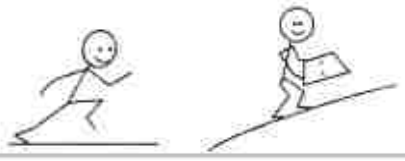
These charts can provide a quick view of how patients are doing both physically and mentally. The charts measure physical fitness, feelings, daily activities, and social life.

Physical Fitness

Dartmouth COOP Functional Assessment Charts

Physical Fitness

During the past 2 weeks,
What was the hardest physical activity
you could do for at least 2 minutes?

Very heavy – for example: • Run, fast pace • Carry a heavy load upstairs or uphill (25 pounds or 10 kilograms)		1
Heavy – for example: • Jog, slow pace • Climb stairs or a hill at moderate pace		2
Moderate – for example: • Walk, medium pace • Carry a heavy load on level ground (25 pounds or 10 kilograms)		3
Light – for example: • Walk, medium pace • Carry light load on level ground		4
Very light – for example: • Walk, slow pace • Wash dishes		5

Feelings

Dartmouth COOP Functional Assessment Charts

Feelings

During the past 2 weeks,
How much have you been bothered by emotional problems such as feeling anxious, depressed, irritable or downhearted and blue?

Not at all		1
Slightly		2
Moderately		3
Quite a bit		4
Extremely		5

Daily Activities

Dartmouth COOP Functional Assessment Charts

Daily Activities

During the past 2 weeks,
How much difficulty have you had doing your usual activities or tasks,
both inside and outside the house because of your physical and emotional health?

No difficulty at all		1
A little bit of difficulty		2
Some difficulty		3
Much difficulty		4
Could not do		5

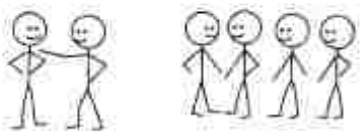
COOP Functional Assessment Chart with permission

Social Activities

Dartmouth COOP Functional Assessment Charts

Social Activities

During the past 2 weeks,
Has your physical and emotional health limited
your social activities with family, friends, neighbors or groups?

Not at all		1
Slightly		2
Moderately		3
Quite a bit		4
Extremely		5

COOP Functional Assessment Chart with permission

Pain

Dartmouth COOP Functional Assessment Charts

Pain

During the past 2 weeks,
How much bodily pain have you generally had?

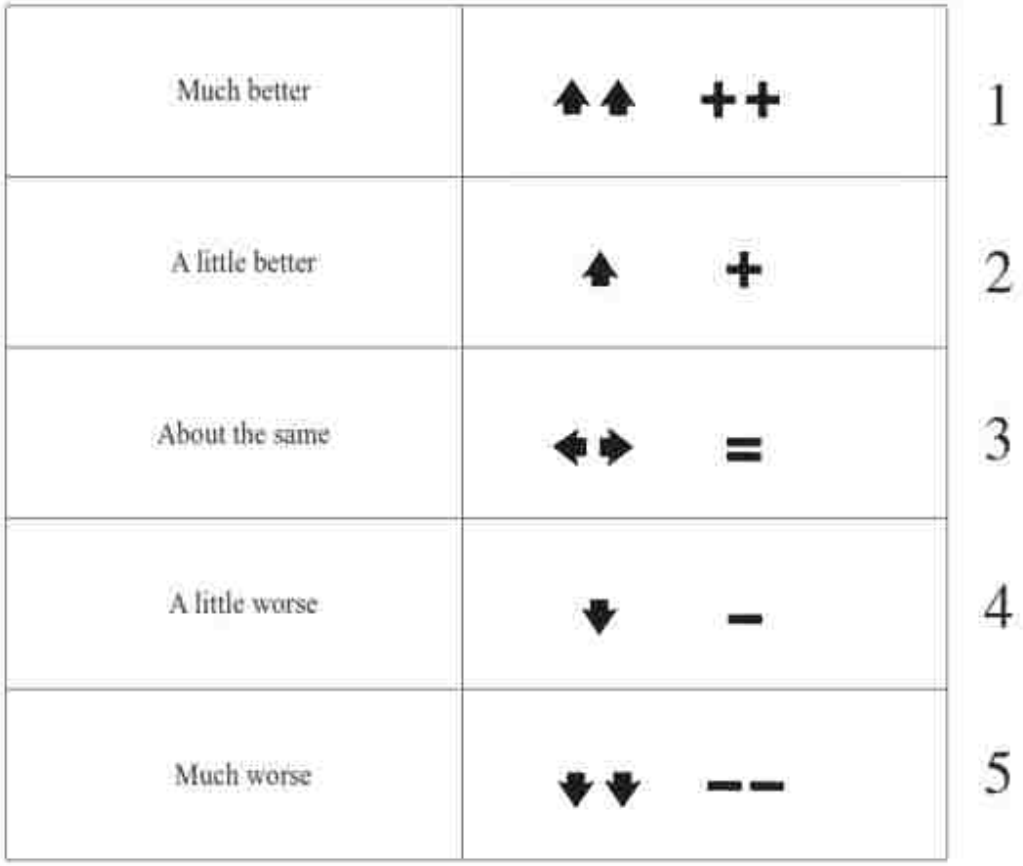
No pain		1
Very mild pain		2
Mild pain		3
Moderate pain		4
Severe pain		5

Change in Health

Dartmouth COOP Functional Assessment Charts

Change In Health

How would you rate your overall health now compared to 2 weeks ago?



COOP Functional Assessment Chart with permission

Overall Health

Dartmouth COOP Functional Assessment Charts

Overall Health

During the past 2 weeks,
how would you rate your health in general?

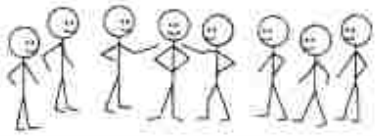
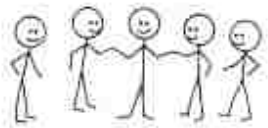
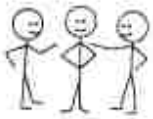
Excellent		1
Very good		2
Good		3
Fair		4
Poor		5

Social Support

Dartmouth COOP Functional Assessment Charts

Social Support

During the past 2 weeks,
was someone available to help you if you needed and wanted help? For example, if you:
- felt nervous, lonely, or blue
- needed someone to talk to
- needed help just taking care of yourself
- got sick and had to stay in bed
- needed help with daily chores

Yes, as much as I wanted		1
Yes, quite a bit		2
Yes, some		3
Yes, a little		4
No, not at all		5

Mental Health

Note: If you have thoughts of suicide or thoughts of wanting to harm yourself or others PLEASE tell someone, notify your health care team, go to the emergency room, or call the National Suicide Prevention Lifeline.

1 (800) 273-8255

National Suicide Prevention Lifeline

Hours: 24 hours, 7 days a week

Languages: English & Spanish

Website:

www.suicidepreventionlifeline.org

The Role of Mental Health in Obesity

Obesity is both mental and physical. Mental health problems that can lead to obesity include; depression, anxiety, and eating disorders. As a further result, increased weight gain can lead to conditions such as low self-esteem, body image disorder, and social embarrassment.
In the United States, most people believe that the ideal body type is thin. Some people make unreasonable judgments based on a person's weight. Such judgments are called weight bias or weight discrimination. Weight bias is caused by general beliefs that people who are overweight

lack self-discipline and willpower, and embarrassment and shame will motivate a person to lose weight.

Weight discrimination occurs in many physical settings including schools, workplaces, healthcare facilities, as well as in the media. One result of weight bias is a social tendency to find fault with an obese person rather than addressing the reason why the individual is over-weight or obese. As an aspect of the prevention and treatment of obesity, prevention of weight bias is important for prevention of mental health disorders.

Depression

The American Psychological Association defines depression as more than sadness. Individuals with depression can experience a lack interest or pleasures in daily activities, they can have weight gain or weight loss, they may not get enough sleep or they sleep too much. People with depression may also experience difficulty staying focused on their daily tasks, they may feel worthless and have low self-esteem, some people experience feelings of guilt and may experience thoughts of suicide.

The DSM-5 Diagnostic Criteria for Major Depression

In diagnosing depression the health care provider should consider other medical conditions that may be present for example, hypothyroidism or diabetes. The American Psychiatric Association (2013) defines depression if a person has more than five of the following symptoms in the past two weeks:

- Diminished interest or pleasure in their usual daily activities most of the day on most of the days of the week.
- A 5% change in weight in one month, either a weight gain or a weight loss.
- Difficulty sleeping, either sleeping too little, or too much on most days.

- Easily agitated and is noticed by others.
- Feeling tired all the time with very little energy on most days.
- Feelings of worthlessness or guilt.
- Difficulty concentrating and unable to make decisions.
- Thoughts of suicide with or without a plan (not fear of dying).

There are many depression screening tools; however, many of the screening tools require copyright permissions as well as a hefty price to use them. *Pfizer* provides this tool for free. The PHQ-9 evaluates depressive symptoms based on nine of the DSM-IV criteria but it is still relevant with the new DSM-5 diagnostic criteria.

Patient Health Questionnaire (PHQ-9)

NAME: _____

DATE: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems? Use a ✓ to indicate your answer.

	Not at all	Several days	More than half the days	Nearly everyday
Little interest or pleasure in doing things.	0	1	2	3
Feeling down, depressed, or hopeless.	0	1	2	3
Trouble falling or staying asleep, or sleeping too much.	0	1	2	3
Feeling tired or having little energy.	0	1	2	3
Poor appetite or overeating.	0	1	2	3
Feeling bad about yourself or that you are a failure or have let yourself or your family down.	0	1	2	3
Trouble concentrating on things such as reading the newspaper or watching television.	0	1	2	3
Moving or speaking so slowly that other people could have noticed. Or the opposite –being so fidgety or restless that you have been moving around a lot more than usual.	0	1	2	3
Thoughts that you would be better off dead, or of hurting yourself.	0	1	2	3

Totals: add columns				
Healthcare professional: For interpretation of total– please refer to accompanying scoring card.				
If you check off any problems: how difficult have these problems made it for you to do your work, take care of things at home or get along with other people?	Not difficult at all____ Somewhat difficult ____ Very difficult _____ Extremely difficult____			

PHQ-9 Questionnaires are available at www.pfizer.com No copyright needs to be obtained. The questionnaires are available in several languages.

PHQ-9 Patient Depression Questionnaire: Scoring

For initial diagnosis:

PHQ-9 Patient Depression Questionnaire

Patient completes PHQ-9 Quick Depression Assessment. If there are at least 4✓s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider major depressive disorder— if there are at least 5✓s in the shaded section (one of which corresponds to Question #1 or #2)

Consider other depressive disorder— if there are 2-4✓s in the shaded section (one of which corresponds to Question #1 or #2)

Note: Since the questionnaire relies on patient self-reporting, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient. Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms. To monitor severity over time for newly diagnosed patients, or patients in current treatment for depression:

1. Patients may complete questionnaires at baseline and at regular intervals (e.g., every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.

2. Add up ✓by column. For every✓:

Several days = 1

More than half the days = 2

Nearly every day = 3

Add together column scores to get a TOTAL score.

Refer to the accompanying PHQ-9 Scoring Box to interpret the TOTAL score.

Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9

For every:

Not at all = 0

Several days = 1

More than half the days = 2

Nearly every day = 3

Interpretation of Total Score

Total Score Depression Severity

1-4 Minimal depression

5-9 Mild depression

10-14 Moderate depression

15-19 moderately severe depression

20-27 severe depression

Medicines that Prevent Weight-loss

It is important for your health care team to know what medicines you are taking because certain medicines can prevent you from losing weight. Ask your pharmacist if any of your medicines can cause weight-gain or prevent you from losing weight. Common medicines that prevent weight loss include:

- Medicines to treat diabetes
    - insulin secretagogues
    - thiazolidinediones
    - insulin.
- Steroid hormones.
- Medication to treat psychiatric medical conditions.
- Beta-blockers.
- Antihistamines.

Make a list of all the medications you take. Your list should also include any over the counter medicines, including vitamins and herbal remedies. The Medication List form is in the resource section.

Lack of Sleep

Sleep is important for mental health and for overall health. In our modern society, people spend more time at night with work and leisure activities. These activities result in less time for sleep. The lack of sleep can cause changes in hormones that increase night-time hunger and appetite. This increased night-time hunger can cause us to gain weight.

Adults need 7–9 hours of sleep each night. The National Sleep Foundation recommends for quality sleep and alertness during the day includes:

- Maintain a regular sleeping and waking routine seven days a week.
- Avoid taking a nap during the day because napping can interfere with our normal pattern of sleep and wakefulness.
- Avoid stimulants such as caffeine, nicotine, and alcohol to close to bedtime.
- Regular vigorous exercise should be done in the morning or late afternoon.
- Getting outside daily in natural light helps maintain a healthy sleeping -waking cycle. Establish a regular, relaxing bedtime routine.
- Make sure the room you sleep in is not too hot or too cold.

- Avoid having electronic devices in the bedroom —such as television, video games, and computers.

People and Culture

Culture is what we learn from our family, friends and our environment. Our culture influences every aspect of our life. For example our culture influences

- how we think about fatness and thinness,
- our eating habits,
    - as a child, were you required to eat everything on your plate
- how much and the type of physical activity we do.

Today in America, most people feel that the "ideal body" is thin. Before the mid-20th century beliefs about weight varied from culture to culture. In some cultures they prefer plumpness or moderate fat rather than thinness or extreme obesity.

Questions to consider in identifying your roadblocks to losing weight:

- Do you have family or friends discouraging you from achieving a healthy weight?
- Do you have a favorite cultural food that is high in calories?
- Is it difficult for you to select healthy food choices when you are with family and friends?
- As a child, were you discouraged from participating in sports or exercise?
- Have you ever been criticized for your weight — either too thin or too fat?

Write down your answer in the space on the following page. Also, write down possible solutions to your roadblocks. Discuss with your health care and support team.

Journal

Income Level as a Roadblock

2015 Poverty Guidelines for the 48 Contiguous States and the District of Columbia

Number of Persons In Household	Poverty Guideline
1	$11,770
2	$15,930
3	$20,090
4	$24,250
5	$28,410
6	$32,570
7	$36,730
8	$40,890

*For families and households with more than 8 persons, add $4,160 for each additional person.

U.S. Department of Health & Human Services Office of the Assistant Secretary for Planning and Evaluation. (2015). *Poverty Guidelines.* Retrieved from *http*://aspe.hhs.gov/poverty-guidelines

Unfortunately, there is a link between poverty and obesity. Low income is a roadblock because persons with low income may have less access to fresh and healthy food, live in an unsafe neighborhood, and may have difficulty obtaining reliable transportation. People who live in low income areas may have difficulty obtaining fresh and healthy foods and rely on fast food and processed food. These foods are high in calories, fat, and salt. Another unfortunate link between poverty and obesity is that people who live in poorer areas are less active. A possible

reason these people may be less physically active is because of violence in their neighborhood and few resources for gym memberships, sports equipment and recreational activities. Plus, they may lack transportation to get to and from safe areas to shop for healthy food and places to exercise. Below are questions and possible solutions to income level roadblocks.

- Look at the chart for poverty guidelines —what is your household income?
- Are you at or below poverty level for you and your family?
- What plans or goals do you have to increase your income?
- Do you have a job?
- Are you physically and mentally able to work?
- If not, why not and what is a solution?
- Did you graduate from high school?

If not, in the resource section there is a website listed for each state on how to obtain a GED and possible vocational schools.

  - Do you need job training?
  - Is vocational school an option?

- Do you have access to fresh fruits and vegetables?

  In the resource section there is a list of Farmers Markets that accept SNAP. In California SNAP is called CalFresh. (food stamps).

- 99 cent stores often have low cost produce.

- Do you live in a safe neighborhood?
    - If not, exercise around your house, dance to music, stretch, watch and do exercise programs on television.
    - Form a walking group with neighbors and friends.
- Do you have reliable transportation?

Brain storm for solutions with your health care and support team.

Journal

STEP 6

Improving Physical Activity

IMPORTANT REMINDER: Please consult with your primary care provider or cardiologist before beginning an exercise program.

Physical Activity Guidelines for Adults

Adults need at least 2 ½ hours of moderate activity every week. Finding the best type of exercise is a personal choice. The best type of exercise is the exercise you will enjoy. Also, we need muscle strengthening activities at least 2 days every week. All major muscle groups need strengthening including our legs, hips, back, abdomen, chest, shoulders and arms. Physical activity has many benefits

- burns calories to lose weight
- lowers blood sugar levels
- reduces your risk for injury
- reduces your risk of having a heart attack or stroke
- reduces muscle and joint pain
- improves mood
- improves sleep
- improves physical appearance
- improves self-esteem and confidence
- increases your physical energy.

Physical Activity for Heart and Lungs (Aerobic)

Physical activity to strengthen your heart and lungs is important to improve the ability of the heart to pump blood and oxygen throughout your body. Moderate physical activity includes

walking fast, water exercise, bicycling, playing, and mowing the lawn. To determine if your exercise is aerobic, you first need to determine what your target heart rate should be by

- subtracting your age from 220
- then multiply by 0.50 (50%) or .70 for (70%)
- the goal of aerobic physical activity is to maintain your maximum heart rate at 50% -70% this will give you the maximum heart rate to meet moderate intensity.
- To check your heart rate – place two fingers (first finger and middle finger) on the thumb side of your wrist
- or along the side of your neck.
- Count the number of beats for 15 seconds and then multiply by four.
- To achieve aerobic exercise benefits the target heart rate needs to be sustained for at least 10 minutes.

Physical Activity to Improve Strength

Exercise to improve your strength is just as important as exercising your heart and lungs. Strength building exercise is any exercise that makes your muscles work harder. There are many benefits to improving muscle strength. The benefits include

- reduces the risk of injury to our muscles, tendons, and ligaments
- reduces joint and back pain
- prevents bone fractures caused by osteoporosis which is a condition where the bones become weak and brittle
- improves balance which reduces the risk of falls
- increases muscle mass and burns more calories.
- The type of physical activity that builds muscle and improves strength includes

- lifting weights — the weights do not need to be heavy you can start by using cans of soup and gradually increase the amount of weight you lift
- using your own body weight— doing push- ups, pull-ups, sit-ups, and squats (remember your high school gym class)
- yoga
- resistance bands— stretchy elastic bands used for building strength. There are difference levels of elastic bands from very easy to very difficult.

Physical Activity to Improve Flexibility (Stretching)

Physical activity to improve flexibility is necessary to prevent injury by improving the range of motion and improving circulation. Yoga, Tai Chi, and Pilates are excellent forms of physical activity that improves flexibility. Stretching reduces muscle tightness and reduces stress. Tips to prevent injury while stretching include:

- Stretching is not a warm-up exercise. Before stretching do warm-up exercises such as walking for 10 minutes.
- Focus on the main muscle groups when stretching— calves, thighs, hips, lower back, neck and shoulders.
- Stretch both sides of your body — if you stretch your right hip, make sure you stretch the left hip as well.
- Do not bounce because bouncing can cause injury — stretching is a smooth movement.
- Hold each stretch for 30 to 60 seconds.
- If you feel pain you have stretched too far. Pull back on your stretch.

STEP 7

Improving Diet and Nutrition

Eating to Lose Weight

To lose weight you must burn more calories than you take in. A recommended safe weight loss is 1 pound per week. In order to lose 1 pound a week, you should take in fewer than 500 calories a day, or burn at least 500 calories a day through physical activity. Unfortunately, after 3 to 6 months the body adapts to the change in fewer calories and prevents further weight loss. Reducing calories can be accomplished by selecting a diet plan according to your personal preference. If you choose a diet plan that you enjoy, you are more likely to stick with it.

General guidelines for meal planning include eating a variety of fruits, vegetables and whole grains. For protein, choose chicken, fish, and beans instead of red meat and cheese. Cook with monounsaturated oils like corn, olive and peanut. If oil is liquid at room temperature it is monounsaturated oil. If the oil is solid at room temperature, it is saturated oil (fat). Try to limit or avoid foods that are canned, packaged, and processed because they will contain a saturated fat called "partially hydrogenated" oils. For better nutrition, it best to buy fresh food and prepare the food yourself. If you do not know how to cook, try taking a cooking class. Look for low-cost or free cooking classes at a kitchen supply store, grocery stores or through adult education programs. One very important skill for reducing calories is learning how to read food labels. In the resource section there is an information sheet on how to read food labels.

Calorie Needs

The amount of food you eat depends on the amount of physical activity you do each day. The calories listed for each day are to maintain your weight. In the resource section are the new 2015 calorie recommendations for each age group and activity level. For example if you are a 51 year old female and you work in an office sitting at a computer all day and do not get much

physical activity your calorie limits are 1,600 each day to stay at your current weight. If you are getting a moderate amount of physical activity you can eat an extra 200 calories a day to stay at your current weight. Look at the calorie recommendations before planning your meals and snacks for the day. The number of calories depends on whether you are female or male, your age, and how much exercise you get each day. Remember  the numbers of calories listed in the adult daily calorie needs chart are for maintaining your weight not losing weight. To lose 1-2 pounds a week you must reduce the number of calories you eat each by 500 calories, or burn the 500 calories with exercise.

Diet Options

The calorie guidelines to maintain weight vary according to your age, if you are male or female, and the amount of physical activity you do. The most common weight loss meal plans have calorie intakes above 800 calories a day. The diets in this category include:

Balanced low-calorie diets/ portion control diets— with this approach, the dieter eats individually packaged foods such as formula diets, drinks nutrition bars, frozen food and prepackaged meals. It is not recommended to use this formula alone because the meals may not provide adequate nutrition.

Low-fat diets— if it melts in your mouth it probably has too much fat in it. It is recommended to keep calories from fat below 30% of total calories. This means eating less than 30 grams (1.054 ounce or 2.107 tablespoons) of fat for every 1000 calories you eat. If a person eats a 1,500 calories a day this would be about 45 grams of fat per day (approximately 3.161 tablespoons or 1.581 ounces). There are many calculators on the internet that will convert the

grams to ounces, tablespoons or cups). In the resource section there is a gourmet cooking website with a calculator.

Low-carbohydrate diet— is 60-130 grams of carbohydrate (approximately 2 ounces – ½ cup). Foods that contain carbohydrates are alcohol, sugar, honey, fruit, starchy vegetables and grains – oats, corn, rice, wheat, and barley. Carbohydrates are a necessary part of our diet. Carbohydrates are what provide the necessary energy for our body and brain.

Very low carbohydrate diet — contains 0-60 grams of carbohydrates per day. A low carbohydrate diet can be accomplished by either reducing the total amount of carbohydrates — avoiding foods that are white in color or by eating foods with very little sugar.

High protein diets—are not recommended because of the risk of developing kidney stones and bone loss.

Mediterranean diet — consists of high in fruits, vegetables, whole grains, beans, nuts, and seeds. It also includes olive oil, low to moderate amounts of fish, poultry and dairy products and very little red meat.

DASH diet — the DASH diet was originally designed to help people lower their blood pressure. However, research has shown this diet also helps people lose weight. The American Heart Association and the American College of Cardiology recommend the DASH diet. The diet focuses on heart healthy foods with a focus on fruits, vegetables, whole grains, low-fat dairy products, poultry, fish and nuts. The diet helps lower blood pressure and cholesterol, reduces the risk of cancer, heart disease, stroke, heart failure, diabetes, and kidney disease.

STEP 8

Strategies for Successful Weight Loss

Self-Management

Self-management is a daily process in which those of us with a chronic health condition learn to manage our own health. Self-management involves our ability to communicate with our health care team, family and community. Managing our health includes:

- Being aware of symptoms that are new and different and knowing when to ask for help.
- Taking medicine as prescribed.
- Following the recommended diet and exercise plan.
- Remaining socially active.
- Being aware of emotional, mental, social, cultural, and spiritual influences that may prevent you from continuing your journey to become healthier.

Changing Behaviors (Habits)

A common myth about getting rid of and forming new habits is it takes 21 days. Unfortunately, this is a myth; it really takes 2– 3 months to change and form a new habit. Recommendations to form healthy habits and promote weight loss include:

- The first goal is to prevent further weight gain.
- Establishing reasonable goals. A reasonable goal is ½ to 1 pound per week.
- Set daily and weekly goals for:
    - Daily routine.
    - Number of calories per day.
    - Scheduled exercise time.
    - Scheduled meal times.

- Sleep – go to bed at the same time each night and get up at the same time each morning.

Top Tips from Successful Dieters

In 1994 researchers started tracking people who have successfully lost weight and have kept it off for at least one year. The researchers looked at many aspects of the people who have lost weight and maintained their weight. What the researchers discovered were several key activities for success in weight loss. The top tips for successful weight loss are:

- 45% of the people lost weight on their own; the other 55% lost weight with the help of a support group or program such as Weight Waters or diabetes education classes.
- 98% of the people lost weight by changing their diet. For example, the successful people ate less fast food and sugary foods. They also reduced their portion sizes. Most of the dieters followed a low calorie and low fat diet.
- 78% of the dieters eat breakfast every day.
- 75% check their weight at least once a week.
- 62% of the successful dieters watch less than 10 hours of television a week.
- 90% exercise one hour per day. The most popular form of exercise is walking.
- The successful dieters have a daily routine for meals, snacks, and exercise.

Another important weight loss tip is to become aware of your "triggers" that will sabotage your success. Learning problem solving skills is a way to identify your triggers. Problem solving skills may include:

- Identify the problem.
- Keep a journal.
- Brainstorming for solutions. Talk to your support team.
- Discover the pros and cons of the possible solution.

- Implement the solution or the plan, and then evaluate its success.
- Become assertive in social situations that may threaten desirable eating and physical activity plans.
- Change negative thought patterns such as all-or-nothing thinking, self-doubt and perfectionism.
- Seek therapy if you are stuck and unable to make successful change.

Workbook Resources

BMI Chart

Body Mass Index Table

	Normal								Overweight				Obese											Extreme Obesity																			
BMI	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**
Height (inches)	**Body Weight (pounds)**																																			
58	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	172	177	181	186	191	196	201	205	210	215	220	224	229	234	239	244	248	253	258
59	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267
60	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276
61	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285
62	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295
63	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220	225	231	237	242	248	254	259	265	270	276	282	287	293	299	304
64	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314
65	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324
66	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334
67	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344
68	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354
69	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365
70	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376
71	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386
72	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397
73	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408
74	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420
75	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431
76	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443

Source: Adapted from *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report.*

Health Care Team

Write down your team members' address and phone number or attach their business card in the space below.

Insurance company:

Member number:

Address:

Phone number:

Fax number:

Email:

Website:

User name:

Password:

Security question answers:

Primary care provider:

Address:

Phone number:

Fax number:

Email:

Website:

Bariatric surgery office:

Surgeon name:

Address:

Phone number:

Fax number:

Email:

Specialists:

Name:

Address:

Phone number:

Fax number:

Email address:

Certified diabetic educator:

Address:

Phone number:

Fax number:

Email:

Registered dietician name:

Address:

Phone number:

Fax number:

Email:

Physical therapist name:

Address:

Phone number:

Fax number:

Email:

Gym:

Address:

Phone number:

Fax number:

Email:

Website

Friend and Family Weight Loss Support Team

Name:

Phone number:

Email:

Name:

Phone number:

Email:

Name:

Phone number:

Email:

My To Do List

To Do List	Date Started	Date Completed
Call insurance company to find out what resources are available to me.		

My Medicine List

Name:

Date:

Medicine	Dosage	Frequency	Who Prescribed	Reason

How to Read Food Labels

United States Food and Drug Administration. (2015). *Nutrition fact label: Read the label youth outreach campaign*. Retrieved from http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm281746.htm#educators_and_outreach

Daily Journal

Date:

Weight:

Hours of sleep:

What are my goals for today?

Is there anything I need to remember to talk to my health care team about at my next appointment?

Did I remember to take all of my medicine as prescribed today?

Daily Medicine Record

Medicine	Dosage	Morning	Noon	Evening	Bedtime

Mood

Feeling Social: (circle one) not at all – slightly – quite a bit – extremely

Daily Activities: (circle one) no difficulty– a little bit of difficulty– some difficulty – much difficulty— could not do

Physical activity level: very heavy – heavy— moderate–light –very light

Aerobic exercise: Exercise that gets your heart pumping and you breathe faster.

Heart rate: before exercise ____ during exercise_____ after exercise _____

Exercise type: minutes _____ distance _____

Strength training:

Upper body: Type of exercise_____ amount of weight_____

repetitions_____

Lower body: Type of exercise_____ amount of weight_____

repetitions_____

Abdomen (belly): Type of exercise _____ repetitions _____

Journal Notes

What are my goals for this week?

Calorie Needs for Adults

Calorie Needs per Day by Gender, Age, and Physical Activity Level

Gender	Age	Sedentary	Moderate Activity: 50% or 70% of maximum heart to meet moderate intensity exercise goals	Vigorous Activity: 70% or 85% of maximum heart to meet intensity exercise goals
Female	18	1,800	2,000	2,400
	19-20	2,000	2,200	2,400
	21-25	2,000	2,200	2,400
	26-30	1,800	2,000	2,400
	31-50	1,800	2,000	2,200
	51–60	1,600	1,800	2,200
	61 and up	1,600	1,800	2,000
Male	18	2,400	2,800	3,200
	19–20	2,600	2,800	3,000
	21-25	2,400	2,800	3,000
	26-35	2,400	2,600	3,000
	36-40	2,400	2,600	2,800
	41-55	2,200	2,400	2,600
	56-60	2,200	2,400	2,600
	61-75	2,000	2,400	2,600
	76 +	2,000	2,200	2,400

U.S. Department of Agriculture and U.S. Department of Health and Human Services. (2015). 2015–2020 Dietary guidelines for Americans. *Estimated calorie needs per day, by age, physical activity level.* Retrieved from http://health.gov/dietaryguidelines/2015/guidelines/appendix-2/.

Weekly Food and Activity Log

Weekly Record

Date	Weight	BMI	Waist Measurement	Hip Measurement	Number of Days Exercised	Number of days stay within Calorie Limits	Number of Nights get 7-9 Hours of Sleep

My After Picture

CONGRATULATIONS!

YOU ACHIEVED YOUR GOAL!!!

Websites and Books

Calorie King. Low cost book that helps you track calories, carbohydrates, fat, protein, and salt (sodium). The book is updated every year. They also have a website and Smartphone Application. You can usually purchase the books at pharmacies, bookstores, and online.
Website: www.CalorieKing.com

Choose my plate.gov. Website to help you learn more about nutrition. This website also has a "Supertracker" which is a free online tracker to track nutrition and physical activity to help you with your weight loss.
Website: www.choosemyplate.gov/men-and-women

The CDC Adult BMI calculator website.
www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator

Centers for Disease Control & Prevention (CDC) website has a wealth of information about how to stay healthy, travel information, emergency and disaster preparedness and more.
Website: www.cdc.gov

DASH diet– www.dashdiet.org

Gourmet Sleuth. Gram Calculator. The gourmet food and cooking resource.
Website:http://www.gourmetsleuth.com/conversions/grams/general-gram-calculator

Heathway's Silver Sneakers is an organization that contracts with insurance companies and local gyms throughout the United States to offer discounted basic gym membership for older adults. Call your insurance company or go online to find out if your insurance offers Silver Sneakers. Many Medicare insurance programs offer Silver Sneakers.

Phone: 1(800) 548-7389
Monday through Friday 8 am – 8 pm EST
Website: https: www.silversneakers.com

Health.gov. 2015-2020 dietary guidelines for Americans. This website has a wealth of information on nutrition and health related topics.
Website:www.health.gov/dietaryguidelines/2015/guidelines/chapter-1/a-closer-look-inside-healthy-eating-patterns/#other-components

Learningpath.org. Provides information for each state on how to get your GED as well as information on how to train for a variety of jobs.

Mayo Clinic. Healthy lifestyle and fitness. The Mayo Clinic website has exercise tips and specific exercises for specific sports.
Website: www.mayoclinic.org

Medline Plus is an excellent resource to learn about medical conditions and medicines.
Website: https://www.nlm.nih.gov/medlineplus/

National Suicide Prevention Lifeline
Hours: 24 hours, 7 days a week
Languages: English, Spanish
Website: www.suicidepreventionlifeline.org
1 (800) 273-8255

United States Department of Agriculture (USDA) Food and Nutrition Services

Supplemental Nutrition Assistance Program (SNAP):

Provides links to each states local SNAP office. http://www.fns.usda.gov/snap/apply

California (CMSP), CalFresh (formerly known as Food Stamps) and California Work Opportunity and Responsibility to Kids (CalWorks)
Website: http://www.benefitscal.org/

Sacramento County
Sacramento County Department of Human Assistance
Website: Apply online at www.mybenefitscalwin.org
Office: (916) 874-3100 or (209) 744-0499

Offices Apply in person at a Sacramento County office Monday through Friday Hours: 8 am – 4 pm

4433 Florin Road, Sacramento, CA 95823
2700 Fulton Ave., Sacramento, CA 95821
1725 28th St., Sacramento, CA 95816
5747 Watt Ave., North Highlands, CA 95660
10013 Folsom Blvd, Rancho Cordova, CA 95827
3960 Research Drive, Sacramento, CA 95838
2450 Florin Road, Sacramento, CA 95822
210 North Lincoln Way, Galt CA 95638

Sacramento County farmers markets that accept CalFresh (food stamps)

Arden Garden Market, 1409 Del Paso Blvd., Sacramento, CA 95815

Central Farmers' Market EBT Association, 220 8th Street, Sacramento, CA 95818

Cesar Chavez Plaza CFM, 910 I Street, Sacramento, CA 95814
Country Club Plaza Farmers Market, 2310 Watt Ave., Sacramento, CA 95825
Fair Oaks Plaza Park Farmers Market, 7003 Park Drive, Fair Oaks, CA 95628
Florin Farmers Market Ebt Association, 5901 Florin Road, Sacramento CA 95823
Florin Farmers Market, 6601 65th St, Sacramento, CA 95828
Galt Farmers Market, 610 Chabolla Ave., Galt, CA 95632
Geo Market, 1221 South Ave, Sacramento, CA 95838

Historic Folsom Farmers Market, 915 Sutter Street, Historic Folsom Public Plaza, Folsom, CA 95630

Inderkum Farmers Market Farmers Ebt, 3600 North Freeway Blvd., Sacramento, CA 95834

Mack Road-Valley Hi Farmers Market, 7833 Center Parkway, St. Andrew Lutheran Church, Sacramento, CA 95823

Midtown Farmers Market, 2020 J Street, Sacramento, CA 95811

Midtown Farmers Market Ebt Association, 1050 20th Street, Sacramento, CA 95811

Mission Oak Swanston Park Farmers Market, 2350 Northrop Ave., Sacramento, CA 95828

Mutual Assistance Network –Produce Stand, 810 Grand Ave., Sacramento, CA 95838

Orangevale Farmers Market, 9259 Greenback Lane, Orangevale, CA 95662

Placer County Department of Health and Human Services

Apply online: www.getcalfresh.org or www.benefitscal.org
(916) 784-6000 or (530) 889-7610
Auburn at Placer County Government Center
11552 B Avenue, Auburn CA 95603
(530) 889-7610 Fax: (530) 889-7608

Farmers Market that accept CalFresh
Sierra Fresh Farmers Market Downtown Lincoln, F Street, Lincoln, CA 95648

Butte County Department of Employment and Social Services

Apply online: www.C4Yourself.com
Customer Service Center: (877) 410-8803
North County: (530) 879-3845
South County: (530) 538-7711
78 Table Mountain Blvd., Oroville, CA 95965

Butte County Farmers Markets that accept CalFresh
Oroville Hospital Farmers Market, 2767 Olive Hwy., Oroville, CA 95966

Oroville Saturday Farmers Market, Meyers Street and Montgomery St., Oroville, CA 95965

Yuba County Health and Human Services Department

Apply online: www.C4Yourself.com
5730 Packard Ave., Suite 100, Marysville, CA 95901

Phone: (530) 749-6311 Fax: (530) 749-6797

Yuba County Farmers Market that accepts CalFresh:
Hwy 20 Farmers Market, 1270 Messick Road, Yuba City, CA 95991

El Dorado County Department of Health and Human Services

Applications can be completed by phone, in person, US Mail or online.
Website:http://www.edcgov.us/HumanServices/Cash_Aid_Services/Food_Stamp_Applications.aspx
Placerville Office: 3057 Briw Road, Placerville, CA 95667
Phone: (530) 642-7300

South Lake Tahoe Office
3368 Lake Tahoe Blvd., Suite 100, South Lake Tahoe, CA 96150
Phone: (530) 573-3200

El Dorado county farmers markets that accept CalFresh:
Main Street Farmers Market 385, Main Street, Placerville, CA 95667

Edc Farmers Markets Ebt Association, 601 Main Street, Placerville, CA 95667

EDCEBT Farmers Market Association, 345 Fairlane Drive, Placerville, CA 95667

Edc Farmers Markets Ebt Association, 4364 Town Center Blvd, Eldorado Hills, CA 95762

Edc Farmers Markets Ebt Association, 1021 Harvard Way, El Dorado Hills, CA 95762

Illinois—Cook County Department of Health Services

Apply online: http://www.dhs.state.il.us/
Department of Human Services
401 S. Clinton Street, 7th floor, Chicago, IL 60607
Family Community Resource Center, 831 West 119th Street, Chicago, IL 60643
Phone: (773) 660-4700

TTY: (866) 439-3713
Fax: (773) 660-4718

Farmers Markets in Chicago that accepts SNAP

Andersonville Farmers Market, 1500 W Berwyn Ave., Chicago IL 60640

Black Oaks Center, 7823 S. Ellis Ave., Chicago IL 60619
Devon Community Market, 2720 West Devon Ave., Chicago IL 60659

Eden Place Farmers Market, 4417 S. Stewart Ave.,

Chicago, IL 60609

El Conuco Farmers Market, 2739 W. Division Street, Chicago, IL 60622

Experimental Station 6100 S. Blackstone Ave., Chicago, IL 60637

Garfield Park Community Council, 300 N. Central Park Ave. Chicago, IL 60624

Nevada Department of Health and Human Services Division of Welfare and Supportive Services (DWSS), Las Vegas

Apply online: https://dwss.nv.gov/?SNAPApply.html#

Craig Road District Office:
3223 West Craig Road, Suite 140, North Las Vegas, NV 89032
Phone: (702) 631-3386 Fax: (702) 631-3387

Flamingo District Office:
3330 East Flamingo Road, Suite 55 Las Vegas, NV 89121
Phone: (702) 486-9400 Fax: (702) 486-9401

Henderson District Office:
520 South Boulder Hwy, Henderson, NV 89015
Phone: (702) 486-1001 Fax: (702) 486-1270

Las Vegas Farmers Markets that accept SNAP

Fresh52 Farmers' & Artisan Market, 9480 S. Eastern Ave., Las Vegas, NV 89123
Garden Plaza Parking Lot, North, Las Vegas, NV 89032
Las Vegas Farmers Market Llc, 1600 N. Rampart, Las Vegas, NV 89134
On the Ranch Farmers and Artisan Market, 628 W. Craig Road
The Farms 1717 S. Decatur Blvd, Las Vegas, NV 89102
The Green Chefs Farmers Market, 333 S. Valley View Blvd., Las Vegas, NV 89107

New Mexico Human Services Department, Las Cruces
Apply online: http://www.hsd.state.nm.us

If you live on the east side of Las Cruces
2121 Summit Ct., Las Cruces, NM 88011
Mon-Friday 8 am – 4:30 pm
Phone: (575) 524 – 6568
Fax: 1-855-804-8960

West Las Cruces
655- Utah Ave., Las Cruces, NM 88001-6006

Phone: (575) 524-6500 Fax: 1-855-804-8960

New Mexico farmers markets that accept SNAP – Las Cruces
Farmers and Crafts Market of Las Cruces, Inc. 125 North Main Street, Las Cruces, NM, 88001

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Appendix B: Project Timeline

Project Timeline	
Timeline	**Activity**
January 2014 – August 2014	Literature review and project development.
August 2014	Proposal defense
September 2015– January 2016	Development of the workbook
November 2015	Development of the workbook CVI survey
November 2015	UNLV IRB Submission and Approval
December 2015	List of potential participants
January 2016	Final edits to workbook
January 2016	The workbook was sent to the printer for printing and coil binding.
January 2016	Contact was made with potential participants to review the workbook and complete the survey for content validity.
February 2016	Interested participants received the workbook via Federal Express or it was delivered in person.
February 2016	Survey Monkey survey was open for participants to complete survey.
February 2016	Analysis of participant CVI and qualitative comments.

Appendix C: Content Validity Index (CVI) Formula and Calculation

Formula for Calculation of CVI

$$\frac{\#\text{ Q rated 3 or 4 total score}}{\#\text{ evaluator x }\#\text{ Q rated}} = \%\text{ Agreement}$$

CVI calculation

Questions: 1,2,3,4 and 28 were eliminated from the CVI calculation.

Question: 5 –27 were included in the CVI calculation.

Ratings:

1= not relevant (not valid and is excluded from the CVI score).

2= unable to assess relevance with item revision or item is in such revision that it would no lower be relevant (not valid and is excluded from the CVI score).

3= relevant but needs minor alterations (valid and is included in the CVI score)

4= very relevant and succinct (valid and is included in the CVI score).

$$\frac{253\text{ total Q scored 3 or 4}}{(11\text{ evaluator x 23 Q rated})=253} = \frac{253}{253} = 1.0\text{ CVI} = 1.0 \text{ x } 100 = 100\%\text{ agreement.}$$

The evaluator rated 17 items 3. To determine the CVI by removing the rating of 3 the following calculation was computed.

$$\frac{\text{Q rated 3 or 4}=253-17=236}{11\text{ evaluator x 23 Q rated}=253} = \frac{236}{253} = .93\text{ CVI} = .93 \text{ x } 100 = 93\%\text{ agreement.}$$

Appendix D: Summary of Survey Results

Ratings:

1= not relevant (CVI rating considered is not considered relevant and is not calculated in the CVI score).

2= unable to assess relevance with item revision or item is in such revision that it would no lower be relevant (CVI rating not considered relevant is not calculated in the CVI scoring).

3= relevant but needs minor alterations (considered relevant and computed in the over-all CVI score).

4= very relevant and succinct (considered relevant and computed in the over-all CVI score).

	Physician	Nurse Practitioner	Physician Assistant	Other
Q1: What is your title?				
Responses:	xx	xxx xxx xx	x	Pharmacist responses not calculated

Q2: What is your specialty or clinical practice setting?

	Family Practice	Internal Medicine	Geriatrics	Pediatrics	Psychiatry	Other
Responses:	xxx xxx	xxx			xxx	Surgery Chronic pain

Q3: Do you routinely screen all adults 18 years or older for obesity is

	Yes	No
Response:	xxx xxx x	xxxx

Comments:

Q4: If you routinely screen all adults 18 years or older for obesity do you offer weight loss treatment is

Response: **Yes** **No**

xxx xxx xxx x

x

Comments:

1. Diet and exercise recommendation, rarely medication, occasionally bariatric surgery referral.
2. At the present time I do not but as a wellness clinic I will be adding a weight loss program.
3. Refer back to PCP. Encourage patients to contact their insurance for weight loss benefits. I do hand out food group lists and sometimes print an internet diet list to help patients learn what type of diet would meet their needs.
4. I offer advice to stay healthy. I encourage patients to be more physically active and to be pro-active of their health.
5. Encourage weight loss and provide information where they can go.
6. Bariatric surgery clinic, offer RYGB sleeve gastrectomy and the rare lap band. Can also refer to medically supervised weight loss program in house if preferred. Will soon offer gastric balloon as well.

Q5: In step 1 USPSTF guidelines and identifying a weight loss team is

Response:	**1**	**2**	**3**	**4**
			xx	xxx xxx xxx

Comments: I like the team work approach; It's a win-win situation for all of us. We benefit from each other.

Q6: In step 2 causes of weight gain is

Response	**1**	**2**	**3**	**4**
			x	xxx xxx xxx x

Comments: I like the explanation of how patients gain weight in a patient friendly language.

Q7: In step 2 the section on the pathophysiology of weight gain is

Response:	**1**	**2**	**3**	**4**
			xx	xxx xxx xxx

Comments:
1. The pictures are small, information important
2. Only alterations should be to make the picture a little larger for better viewing by patients.

Q8: Calculating BMI and waist to hip measurements is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx
				xx

Comments: I like the BMI chart on page 95. It gets to the point.

Q9: Assisting patients to set goals is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments:
1. Good job

Q10: The section for setting goals and monitoring weight is

Response:	**1**	**2**	**3**	**4**

x xxx xxx xxx x

Comments:
1. I would suggest helping patients with this and review goals each time and in the evaluation reset new goals each visit.
2. I think patients that have it written down can visualize the goal better.

Q11: Identifying roadblocks (barriers) to weight loss is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments:
1. Could list many but this was good.
2. I like the way you addressed poverty / food deserts. I think this would be more relevant to that population.

Q12: The evaluation of readiness for change is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments:
1. This clearly is an important point and one that needs constant discussion.
2. I think that it's a tool to demonstrate to the patient and practitioner how effective they will be.

Q13: The COOP charts for the evaluation of the patients perceived health status is

Response:	**1**	**2**	**3**	**4**
			x	xxx xxx xxx x

Comments:
1. Really like this.
2. I think the COOP is relevant by may not be done consistently by the

patient.

3. Many charts are not directly applicable to my practice, but I can see where they could be very useful for primary care and internal medicine.

Q14: The information on obesity and mental health is

Response:	**1**	**2**	**3**	**4**
			x	xxx xxx xxx x

Comments:

1. This is a point that is not discussed often and I think it is very important and needs to be addressed at each visit.
2. I had not thought of this prior to the book but this section added to the entire program.
3. Sometimes depression is manifested by overeating and weight gain, I only saw weight loss and decreased appetite for depression.
4. Definitions of depression very helpful reminders for healthcare providers, but may be bulky for the average patient.

Q15: The information on medications that prevents weight loss is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments:

1. As new information comes out the patient needs to have the medications re-evaluated.
2. Giving examples of medications in each category could help patients identify these medications on their own to bring up in medical visit, rather

than relying on provider to identify in an already rushed visit.

Q16: Information on improving sleep is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments:
1. This is also important to discuss as in our busy life we forget the importance of a good 8 hours of sleep and what the lack of it does to health.

Q17: The section on people and culture as possible roadblocks to weight loss is

Response:	**1**	**2**	**3**	**4**
			x	xxx xxx xxx x

Comments:
1. Could list some of the common things and how one would get around those issues.
2. Good identification for an issue a lot of folks skip over.

Q18: Income level as a roadblock to obesity is

Response:	**1**	**2**	**3**	**4**
			x	xxx xxx xxx x

Comments:
1. Would suggest individual providers update this section with their own local resources.

Q19: The information on physical activity is

Response:	**1**	**2**	**3**	**4**
			xx	xxx xxx xxx

Comments:

1. I would recommend to some patients who are afflicted with various chronic illnesses, pain and perhaps have never exercised stating what is recommended time/week is, but giving a lower starting level and telling them to gradually increase working up to the 2 and 1/2 hours per week. Two and a half hours plus weight training could sound impossible.
2. The information about exercise is controversial and you listed the good reasons to exercise and those need to be repeated each time the PCP and client get together.
3. Very clear!
4. Good break down on types and amounts of exercise needed.

Q20: The information on improving diet and nutrition is

Response:	**1**	**2**	**3**	**4**
			xx	xxx xxx xxx

Comments:

1. Are you letting the patient decide what diet they want to try? Or would the provider help to tailor a diet to the uniqueness of the person as much as possible?
2. A sample of a healthy meal would be nice.
3. Good resource choices for patients to review.
4. I would give commercial examples to help individuals identify (Atkins, Paleo, Jenny Craig, Weight Watchers, Seattle Sutton, etc.).

Q21: The strategies for successful weight loss and patient self-management is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments: 1. I think a more specific outline example of diets would be good as well.

Q21: The strategies for successful weight loss and patient self-management is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments: 1. Great section, loved tips for successful weight loss, advice I give daily!!

Q22: The tips for successful weight-loss is

Response	**1**	**2**	**3**	**4**
			x	xxx xxx xxx x

Comments: It would be nice to list the pro's and con's of weight loss for example divorce friends who have a weight issue and you lose weight you may also lose your friend.

Q23:The graphs and journal section for self-monitoring is

Response:	**1**	**2**	**3**	**4**
			x	xxx xxx xxx x

Comments:
1. Size and the ability to see the numbers clearly.
2. Would include link to BMI calculator, calculations and graphs would be difficulty. Encourage each practice using pamphlet to update with local resources. Encourage online food tracking and apps for ease of use and calorie/protein/nutrient counts Spark People, My fitness Pal, Lose it, Etc.

Q24: Knowing if my patient is at or below the poverty line is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments:

1. This can direct care.
2. Again, great resource.
3. Has a huge impact on resources for dietary and activity changes.

Q25: In the treatment of persons who are over-weight or obese, I feel this workbook is

Response:	**1**	**2**	**3**	**4**
			x	xxx xxx xxx x

Comments:

1. Font on page 48-55 for physical fitness too small to see/read.
2. I like the style and the places where the client has to participate is valuable if people are involved there is a better chance of success.
3. Could be difficult to implement all steps in busy primary care, but could be helpful to remind providers to touch upon an aspect at each visit, keep obesity in the forefront of medical diagnoses to be addressed and not glossed over.

Q26: The resource guide in the workbook is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments:

1. Great resource.
2. A very good start to get folks thinking about weight loss. A first step.

Q27: After reviewing the workbook I feel the over-all content of the workbook is

Response:	**1**	**2**	**3**	**4**
				xxx xxx xxx xx

Comments:

1. Great work and will benefit many.
2. I would give this to my patients to work with.
3. Should be routine practice to address obesity as any other medical conditions.

Q28: How long did it take you to review the workbook and complete the survey?

30 minutes	**1 hour**	**1 hour and 30 minutes**	**2 hours**	**over 2 hours**
xx	xx	x	xx	

1. I reviewed a couple of sections twice going back to them after reading the rest of the book to get more clarity.

Total responses:	**1**	**2**	**3**	**4**
253	**0**	**0**	17	236

Appendix E: Copyright Permissions COOP Functional Assessment Charts

DEPARTMENT OF
COMMUNITY AND FAMILY MEDICINE
GEISEL SCHOOL OF MEDICINE
AT DARTMOUTH

1 August 2014

Katherine A. Wagner, MSN, RN, PHN, FNP-BC, NP-C
200 Bill Bean Circle
Sacramento, CA 95835

Dear Katherine:

Thank you for your inquiry about the Dartmouth CO-OP Project Functional Assessment Charts. Enclosed please find the Charts and an information packet as well as a Chart Request Information Form. It would be helpful to us if you would complete and return this form. We continue to improve the Charts based on feedback from people using them in clinical and research settings. Your permission to use the CO-OP charts specifically excludes the right to distribute, reproduce or share the Charts in any form for commercial purposes or sale. Permission is granted to reproduce the CO-OP Charts for clinical and research only.

The reliability and validity of the Charts has been extensively tested and several important manuscripts summarizing the results are enclosed in this packet.

The Charts are meant to be a measure that can be used to screen or monitor function and health-related quality of life. They are a tool that may be self- or clinically-administered. Instruction sheets for both modes of administration are provided. You will see that the Charts are very user-friendly and most patients can easily complete them without assistance.

To defray administrative and processing costs, we usually ask for **$100.00**. However, as you are a student, we will waive this fee for you.

If you have any questions, please do not hesitate to contact me. Thank you for your interest and I look forward to talking further with you.

Sincerely,

Deborah J. Johnson

DEBORAH J. JOHNSON
Executive Director

Enclosures

Dartmouth CO-OP Project Hinman Box 7250 Hanover, NH 03755 603-653-3458

Appendix F: Copyright Permission for Prochaska Readiness for Change

Katherine Wagner
<wagnerk5@univ.nevada.edu>

Copyright permission
2 messages

Katherine Wagner <wagnerk5@univ.nevada.edu> Sat, Aug 2, 2014 at 11:56 AM
To: tbarton@uri.edu

Hello,

I am a family nurse practitioner and a doctorate of nursing practice student at the University of Nevada, Las Vegas. For my capstone project I am planning to develop a collaborative self-management workbook and resource guide for the evaluation, management, and treatment of obese adults in primary care. The workbook will be evaluated by healthcare practitioners for content and face validity.

I would like to obtain copyright permission to use the weight-loss measurement tools including stages of change, decisional balance, and processes of change as screening tools for adults in my workbook.

The measurement tool will be shown in my workbook, PowerPoint presentations for my project proposal and the final defense of my project. After my final defense in the Spring 2015 my dissertation and workbook will be published online in ProQuest.

Thank you

Best regards,

Katherine A. Wagner, MSN, RN, PHN, FNP-BC, NP-C

200 Bill Bean Circle

Sacramento, CA 95835

Cell Phone: (916) 606-1706

Email: wagnerk5@univ.nevada.edu

Tracey Barton <tbarton@uri.edu> Mon, Aug 4, 2014 at 9:03 AM
To: Katherine Wagner <wagnerk5@univ.nevada.edu>

Copy right permission granted to be used for research.

James Prochaska

Appendix G: IRB Exempt Status

UNLV Biomedical IRB - Exempt Review Exempt Notice

DATE: November 24, 2015

TO: Diane Thomason, PhD, MN, RN

FROM: Office of Research Integrity - Human Subjects

PROTOCOL TITLE: [784680-1] Weight-Loss for Adults a Five Star Approach

ACTION: DETERMINATION OF EXEMPT STATUS

EXEMPT DATE: November 24, 2015

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this protocol. This memorandum is notification that the protocol referenced above has been reviewed as indicated in Federal regulatory statutes

45CFR46.101 (b) and deemed exempt.

We will retain a copy of this correspondence with our records.

PLEASE NOTE:

Upon final determination of exempt status, the research team is responsible for conducting the research as stated in the exempt application reviewed by the ORI - HS and/or the IRB which shall include using the most recently submitted Informed Consent/Assent Forms (Information Sheet) and recruitment materials. The official versions of these forms are indicated by footer which contains the date exempted.

Any changes to the application may cause this protocol to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**. When the above-referenced protocol has been completed, please submit a **Continuing Review/Progress Completion report** to notify ORI - HS of its closure.

If you have questions, please contact the Office of Research Integrity - Human Subjects at 702-895-2794. Please include your protocol title and IRBNet ID in all correspondence.

Office of Research Integrity - Human Subjects 4505 Maryland Parkway.
Box 451047. Las Vegas, Nevada 89154-1047 (702) 895-2794. FAX: (702) 895-0805.

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Curriculum Vitae

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Education

Doctor of Nursing Practice
University of Nevada, Las Vegas, Las Vegas, NV
August 2012 – present (Anticipated graduation May 2016)

Masters of Science in Nursing, Family Nurse Practitioner
University of Phoenix, Sacramento, CA
Graduated September 2011

Student Re-entry program for Acute Care Nursing
University of California, San Diego, CA
July 2009–August 2009

Bachelors of Science in Nursing and Public Health
University of Phoenix, Sacramento, CA
Graduated January 2009

Associate Degree in Nursing
Shasta Community College, Redding, CA
Graduated June 1987

Licensure

California Registered Nurse
California Nurse Practitioner
California Furnishing Number
Controlled Substance Certificate – DEA
California Public Health Nurse

Certifications

CPR for Healthcare Providers (BCLS)
ANCC Family Nurse Practitioner Certification
AANP Nurse Practitioner Certification

Employment History

November 2013 –present
Nurse Practitioner
Fair Oaks Psychiatric Associates
Sacramento, CA

June 2013-August 2013 (short-term contract)
Wellness – Nurse Practitioner
Peak Health Solutions
San Diego, CA

November 2012 – November 2013
Family Nurse Practitioner
Sacramento Family Medical Clinic, Sacramento, CA

March 2012 –November 2012
Nurse Practitioner
SNFist (hospitalist) for rehabilitation, sub-acute and long-term care facilities.
Capitol Medical Extended Care, Fair Oaks, CA

September 2009 to August 31, 2011
Family Nurse Practitioner Student
University of Phoenix Masters of Science in Nursing Family Nurse Practitioner

- Sacramento Family Medical Clinic, Carmichael, CA
- Sutter Lakeside Family Medical Group, Upper Lake, CA
- Gentry Vu, MD, Obstetrics and Gynecology, Stockton, CA
- West Sacramento Pediatrics, West Sacramento, CA
- QMC Adult and Family Practice, Roseville, CA

October 2009 to March 2010
Health Facilities Evaluator Nurse
State of California, Department of Public Health, Licensing and Certification Division, Sacramento, CA

May 2008 to August 2008
Temporary Contract: Workers Compensation Telephonic Case Manager
Corvel Corporation, Gold River, CA

April 2007 to July 2007
Home Health RN
Mercy Home Health, Sacramento, CA

March 2006 to October 2008
Case Manager
Independent Contractor for Home Health Agencies, Sacramento, CA

- Tender Loving Care Home Health
- Gentiva Home Health Care
- Interim Home Health Care

September 2001 to March 2006
Clinical Nurse Consultant
LifeMasters Supported Selfcare

March 2001 to September 2001
Case Manager/ Independent Contractor
All Care Home Health, Rancho Cordova, CA

March 1995 – January 2001
Home Health RN Case Manager
Sutter Visiting Nurses, Sacramento, CA

1990 – 1995
Nursing Registry: Sacramento Region

June 1987 – 1990
Staff Nurse
American River Hospital
Carmichael, CA

Affiliations

American Academy of Nurse Practitioner
American Psychiatric Nurses Association
California Association of Nurse Practitioners
Sigma Theta Tau International Honor Society of Nursing