

DNP PROJECT PROPOSAL

OVERCOMING BARRIERS AND INCREASING CONFIDENCE OF PROVIDERS AND
NURSES IN ADDRESSING OVERWEIGHT AND OBESITY

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Abstract

The purpose of this project is to improve weight loss management by decreasing barriers and increasing provider and nurse confidence in addressing overweight and obesity with patients. The overall goal of the project is to increase the number of overweight and obese patients who receive evidence based weight management counseling and referrals. The project will take place at a Midwest Veterans Affairs (VA) facility, and will provide a 30 minute educational session for health care providers and nurses who work in primary care clinics. Participants will be recruited via an email introduction that will be sent to all health care providers and nurses involved in primary care with a link to an online pre-intervention survey. This educational program will incorporate both the Transtheoretical Model of Change and the 5As of behavioral counseling (Asses, Advise, Agree, Assist, and Arrange). Staff members who participate in this quality improvement project will be educated on barriers to addressing obesity, and using the 5As in obesity management, as well as incorporating Motivational Interviewing into patient discussions. A patient education folder will be made available to health care providers and nurses to provide to patients who are overweight or obese. Furthermore, a clinical reminder will be created in the computerized patient record that asks “yes” or “no” as to whether a patient was given the educational folder. Pre and post-intervention surveys, as well as chart audits will be analyzed to determine if competency and self-confidence improved, and if more patients were provided weight loss information.

Introduction and Background

Background Knowledge

Overweight and obesity is one of the greatest health issues in the United States. In 2011-2012, 16.9% of youth and 34.9% of adults were obese (Ogden, Carroll, Kit, & Flegal, 2014). Since the 2011-2012 data were collected, there has been no significant change in obesity prevalence in youth or adults (Ogden et al, 2014). The estimated cost of obesity annually in the U.S. was \$147 billion in 2008. In 2006, obesity was accountable for around \$40 billion of increased medical spending, including \$7 billion in Medicare prescription drug costs (Finkelstein, et al., 2009). Persons diagnosed with obesity and other common chronic conditions have significant increases in medical costs (Padula, Allen, & Nair, 2014). Obese adults have a 30% increase in medical care costs when compared to adults of normal weight (Withrow & Alter, 2011). According to the Centers for Disease Control and Prevention (2013), 31.8% of Indiana residents are obese. The issue of obesity has a clear impact on healthcare. An estimated 300,000 deaths occur in the United States each year from complications associated with obesity (Hill, Wyatt, & Peters, 2011).

Obesity is a common disease encountered by health care providers. Clinicians have many opportunities to address weight management and health promotion in overweight and obese individuals, but they are failing to do so. Overweight and obesity has not received as much consideration from clinicians as other health issues (Banerjee, Gambler, & Fogleman, 2013). Barriers that hinder the development and implementation of weight-loss interventions may include the belief of clinicians that they lack the necessary skills needed to help patients manage their weight, failure to recognize obesity as a medical issue, belief that changing patient behavior is futile, negative attitudes towards patients who are obese, belief that patients are not interested

in management of their obesity, and belief that weight management is the responsibility of the patient (Findholt, Davis, and Michael, 2013; Forman-Hoffman, Little & Wahls, 2006).

In 2012, the U.S. Preventative Services Task Force (USPSTF) issued a statement that all adults should be screened for obesity. Despite this recommendation, patients have failed to report increased rates of weight loss counseling by their providers (Gudzune, Clark, Appel, & Bennett, 2012). Data from research imply that physicians are underreporting and under treating obesity (Barnes, Theeke, & Mallow, 2015). Communication strategies such as using the 5 As (Ask, Advise, Assess, Assist, Arrange) and Motivational Interviewing, have been shown to be effective at promoting weight loss; however, health care providers either do not use these techniques properly or fail to utilize them at all (Gudzune, et al., 2012).

Although clinical practice guidelines and clinical trials do exist on weight loss management (VA/DOD, 2014; Kay & Fiararone, 2006; McTigue, 2006; Nordmann et al., 2006; Gonzalez-Campoy, 2013), many providers still lack the ability to apply these weight loss principles to individual patient situations that will promote their adherence. In addition, many clinicians feel that they lack the expertise to manage overweight and obesity effectively (Bleich, Bennett, Gudzune, & Cooper, 2012; Forman-Hoffman, Little, & Wahls, 2006). One study showed that the barrier that most greatly affected whether clinicians discussed diet and exercise with patients was lack of good training and education regarding obesity management in medical school and residency programs (Forman-Hoffman, et al., 2006). Nearly 30 years ago, the National Academy of Sciences recommended that a minimum of 25 hours should be focused on nutritional education, yet most medical schools of today still fall short of this minimum standard (Barnett, 2014). In order to have an effect on the obesity epidemic, medical schools and health care systems must focus on improving knowledge of clinicians regarding management of obesity

and increasing awareness of available services for obesity management (Forman-Hoffman, et al., 2006). Clinicians must have comprehensive knowledge regarding obesity, its health consequences, and concrete strategies to manage obesity among patients. Education of clinicians should focus on better assessment, counseling skills, and behavior modification techniques to address overweight and obesity, and include utilization of the 5As and Motivational Interviewing (Gudzune, et al., 2012; Bleich, et al., 2012). Furthermore, a team approach to management of overweight and obesity, such as the use of ancillary care providers (e.g., nutritionists and behavior counselors) can be helpful (Institute for Clinical Systems Improvement, 2013).

Many times, when discussion on weight issues occurs between the patient and clinician, it is not as comprehensive as the patient would like. Research has shown that patients want more involvement by their healthcare provider in weight loss management, specifically in dietary choices/plans, setting realistic weight goals, and recommending exercise (Strategies to Overcome and Prevent (STOP) Obesity Alliance, 2014). Patients are willing to discuss weight management with their primary care providers, but are not receiving the counseling that they desire (Cygan, Baldwin, Chehab, Rodriguez, & Zenk, 2014). There are also system issues that hinder the implementation of weight loss programs in primary care. Although weight related counseling and management is now reimbursable with the Affordable Care Act, many health care providers and office billing staff remain unaware of the process for obtaining this reimbursement. Other system issues include lack of time in the office setting during patient visits, lack of available written materials for patients, and lack of available ancillary care providers to refer patients (Forman-Hoffman, et al., 2006).

Nurses also play a key role in management of obesity, yet there are few studies that explore the extent of the nurse's role in weight loss management. According to a study by Brown

et al. (2007), few nurses reported having obesity management training, and did not feel there was sufficient organizational support. Advanced practice nurses reported spending 5% of their contracted hours on obesity management, while other nurses reported even less time. Nurses also reported some negative beliefs relating to obesity and obese patients. The authors concluded that organizational support and training was required for primary care nurses, and should include addressing beliefs and attitudes related to obesity and obese patients.

Health care providers and nurses have opportunities to address obesity with patients, and many patients want to discuss their weight with health care providers and nurses. In order for change to occur, the barriers to addressing weight management must be addressed, health care providers and nurses should feel better equipped to address this issue with patients, and ancillary providers, health care providers, and nurses should feel confident working as a team to encourage healthy lifestyles among patients.

Local Problem

The project will take place at the Veterans Affairs (VA) Northern Indiana Health Care System (VANICHS), which is comprised of Marion, Fort Wayne, Muncie, South Bend, and Goshen facilities. The population for the project will be providers and nurses who are involved in primary care at the Marion, Fort Wayne, Muncie, South Bend, and Goshen facilities. There are a total of 23 physicians and 16 nurse practitioners that are involved in primary care at VANIHCS (VA PACT site, 2014). There are primary care clinics at all campuses of VANIHCS (US Department of Veterans Affairs, 2014).

According to the VA, 78% of veterans are overweight or obese, and the estimated cost is \$370 per year for each patient (VA/DOD, 2014). MOVE is a weight management program that was introduced by the Veterans Health Administration (VHA) in 2006 to provide services for the

nearly six million veterans who are served by the VA system (Kahwati, et al, 2011). MOVE coordinators within VA systems have noted that some staff are uncomfortable with discussing weight with veterans, and are unfamiliar with the MOVE program, yet they are supposed to address weight and the MOVE program during encounters with veterans (US Department of Veterans Affairs, 2014).

As mentioned previously, there are clinical practice guidelines on weight loss management (VA/DOD, 2014; Kay & Fiatarone, 2006; McTigue, 2006; Nordmann et al., 2006), however, many clinicians and nurses feel they lack the expertise and time to manage obesity effectively (Bleich, Bennett, Gudzone, & Cooper, 2012). The goal of management of overweight and obesity involves preventing weight gain, reducing body weight, and maintaining a lower weight over time among patients (Osama, 2014). The combination of a reduced calorie diet and an increase in physical activity is recommended since it is associated with weight loss with concomitant decreases in abdominal fat and increases in cardiorespiratory fitness. (Osama, 2014). At VA Northern Indiana Health Care System, 35,618 veterans are overweight; of those individuals, only 2.67% have had one or more MOVE visits (US Department of Veterans Affairs, 2014).

Intended Improvement

Many times as providers, we do our patients a disservice because we vaguely address this issue, and usually have little time to educate in great detail about how to eat healthy and exercise. The intended improvement through this project is to elicit change by providing an informative educational opportunity for providers and nurses at the VA Northern Indiana Health Care System. This program will incorporate both the Transtheoretical Model of Change and the 5As

of behavioral counseling (Asses, Advise, Agree, Assist, and Arrange). A patient education folder will also be created and made available to staff to provide to patients who are overweight or obese. This folder will contain information on physical activity, diet, indoor and outdoor exercise options, and the MOVE program. Providers and nurses will be asked to participate in a brief education session. Staff members who participate in the project will be educated on barriers to addressing obesity, and using the 5As in obesity management, as well as incorporating Motivational Interviewing into patient discussions. Furthermore, a clinical reminder will be created in the computerized patient record that asks “yes” or “no” as to whether a patient was given the educational folder.

Health care providers and nurses are in key roles to address the issue of overweight and obesity among patients, as well as promote healthy lifestyle choices. The purpose of this project is to improve weight loss management by decreasing barriers and increasing provider and nurse confidence in addressing overweight and obesity with patients. By working with and educating health care providers and nurses, it is hoped that veterans will also be positively influenced to make changes toward a healthier lifestyle and to consider participating in the MOVE program. The overall goal of the project is to increase the number of overweight and obese patients who receive evidence based weight management counseling and referrals.

After working within the VA setting as a provider for nearly three years, I have observed providers and nurses voice frustration at not having enough time to address weight management with patients, and feeling uncomfortable with addressing a patient’s weight. I have also observed that many staff are unfamiliar with the resources available as aids in weight management of patients, such as VA specific clinical practice guidelines for weight management, the specifics about the MOVE program, and available handouts that can be printed from the National Center

for Health Promotion and Disease Prevention. I have also heard from patients who want more specific information on how to effectively manage their weight and feel that it is not addressed adequately by primary care providers.

Overweight and obesity continues to be a problem within the U.S., and the numbers are continuing to escalate. Furthermore, the responsibilities and time constraints among providers and nurses continues to increase, as does staff turnover and shortages among physicians and nurses (NPR, 2012; USA Today, 2014). Providers and nurses have a pivotal role to work as a team with other ancillary providers to encourage each other and their patients to lead healthier lifestyles. Now is the opportune time to provide a staff education program that will aid in increasing awareness, knowledge and promoting change.

Staff who will be involved in this project include primary care providers and nurses who volunteer to enroll in the educational program, as well as primary care nurse managers, who will be notified of the program. The leadership involved in Medical Services at VA Northern Indiana Health Care System are supportive of the project as well. The MOVE coordinator, Clinical Reminder/Informatics Specialist, and Education Department Psychologist will be involved as mentors/champions. The Clinical Reminder/Informatics Specialist will be closely involved in the creation of an electronic record clinical reminder.

Project Questions

Project questions include the following:

1. Does an educational program for health care providers and nurses that incorporates the Transtheoretical Model of Change, Motivational Interviewing and the 5As of behavioral

counseling decrease barriers and increase confidence in addressing weight management with patients?

2. Does an educational program that addresses barriers to weight management, and promotes utilization of the Transtheoretical Model, 5As, and Motivational Interviewing increase discussion of weight management among patients and nurses/providers?
3. Does discussion of weight management among patients and nurses/providers increase the number of patients who enroll in the MOVE program?

Project Outcome Objectives

Program outcome objectives include the following:

1. In the four months following the implementation of a weight management provider/nurse education program, there will be a 50% decrease in perceived barriers to addressing weight loss with patients among providers and nurses.
2. In the four months following the implementation of a weight management provider/nurse education program, there will be a 50% increase in confidence in addressing weight loss with patients among providers and nurses.
3. In the four months following the implementation of a weight management provider/nurse education program, there will be at least a 30% increase in number of obese patients who receive weight management education from the providers and nurses.
4. In the four months following the implementation of a weight management provider/nurse education program there will be a 5% increase in the number of patients who enroll in the MOVE program.

Theoretical Model Framework

The Transtheoretical Model of Change was originally explained by Prochaska and DiClemente in 1983. It serves as the basis for developing interventions to promote behavior change. This model focuses on intentional change and decision making in individuals (Nursing Theories, 2012).

According to the model, change is not a solitary event, but must be viewed as gradual. The Transtheoretical Model describes how individuals move toward implementing and sustaining behavior change. The Transtheoretical Model is made of up 5 stages, which are precontemplation, contemplation, planning/preparation, action and maintenance.

Precontemplation is before an individual is considering changing a particular behavior. An individual who is in the Precontemplation stage does not intend to change in the near future, which is usually measured as the next six months. This can occur due to not being informed about the consequences of one's behavior. A person in the Precontemplation stage may be described as resistant to change, or unmotivated (Pro-Change behavior systems, Inc., 2014).

Contemplation occurs when an individual is considering changing a behavior within the next six months. Individuals weigh the pros and cons of changing, which can sometimes cause ambivalence, where an individual can remain in this stage for a long period of time. An action-oriented program that expects participants to act immediately would not produce change in an individual who is in the Contemplation stage. The Planning or Preparation stage occurs when the individual begins to take steps to make change, and intends to take action in the near future—usually the next month. Individuals in the Preparation stage usually have a plan of action. They may have already joined a class, bought a self-help book, or consulted with a counselor.

Individuals in this stage could be enlisted in action-oriented programs (Pro-Change Behavior Systems, Inc., 2014).

Action occurs when the individual has made a particular, observable change within the past six months. Not all changes count as action; instead, individuals have to achieve a certain criteria that is appropriate to reduce risk of disease. For example, just decreasing number of cigarettes smoked per day is not acceptable, but abstaining from cigarettes completely does count as Action. Maintenance is when the change has persisted for at least six months. Individuals are working to prevent relapse, and are more confident that the change can continue. Maintenance lasts from six months to around five years (Zimmerman, Olsen, & Bosworth, 2000; Pender, Murdaugh, & Parsons, 2011; Pro-Change Behavior Systems, Inc., 2014).

The Transtheoretical Model stresses the importance of “raising consciousness” in the Precontemplation and Contemplation stage. This is a time when the provider can highlight the benefits of change, such as adopting a healthier lifestyle through increased physical activity, managing stress, and making nutritious food choices. Additionally, the model identifies “reevaluating self,” or recognizing inconsistencies between values/beliefs and behavior (Pender, et al., 2011).

The core constructs of the TTM are the Stages of Change, decisional balance, and the processes of change. Pros and cons are the two components of decisional balance. Pros and cons shift as individuals progress through the Stages of Change. For example, in the Precontemplation stage, the cons outweigh the pros, whereas in the Contemplation stage, the pros and cons are usually equal in weight. In the Maintenance stage, the pros should outweigh the cons of maintaining the change. Tipping decisional balance in favor of the pros should decrease the risk of relapse (Pro-Change Behavior Systems, Inc., 2014).

Bandura's self-efficacy theory is integrated into the TTM. Self-efficacy indicates the level of confidence that an individual has in maintaining a particular desired behavior change in situations that could prompt relapse. In earlier stages of change, such as Precontemplation and Contemplation stages, temptation to continue in one's present state is greater than self-efficacy to change or abstain from a problem behavior. Relapse occurs when feelings of temptation supersede an individual's self-efficacy to maintain a desired behavior change (Pro-Change Behavior Systems, Inc., 2014). Self-efficacy can be promoted by the health care provider and nurse through providing positive feedback for steps taken toward changing behavior and providing strategies to overcome barriers to change. Managing barriers is an integral part of the Transtheoretical Model. By minimizing barriers, the health care provider and nurse can assist in the "preparation, action, and maintenance stages of behavior change" (Pender, et al., 2011, p. 57).

Use of Model in Clinical Practice

One of the roles of the health care provider and nurse is to help patients to change behavior. Interventions that address change are useful in regards to lifestyle modification (Zimmerman, Olsen, & Bosworth, 2000). This model has been utilized and found to be useful in cessation of smoking, contraceptive use, dietary behavior, and exercise (Zimmerman, et al., 2000; Sarbandi, Niknami, Hidarnia, Hajizadeh, & Montazeri, 2013). It is also useful for selecting appropriate interventions. Through use of the TTM, the healthcare provider and nurse can identify which stage the patient is in and tailor interventions that are appropriate and specific for the patient. Furthermore, stage-matched interventions can be more successful at increasing physical activity over stage mismatched interventions. Physical activity and motivation usually

increase as individuals progress through stages of change (Parker, Martin, Martinez, Marsh, & Jackson, 2010).

In regards to overweight and obesity, barriers to change in patients include lack of motivation, lack of understanding of the risks and benefits, financial and time constraints, lack of support from friends and family, lack of a realistic plan for lifestyle changes, lack of access to facilities for exercise, unhealthy family eating patterns, lack of access to stores that sell healthy foods, and negative attitudes toward diet and exercise (The New York Department of Health and Mental Hygiene, 2007).

Much research and intervention studies have been performed using the Transtheoretical Model as a guide. Evidence has shown that individuals who show readiness to change are more responsive to interventions than those who are not (Pender, Murdaugh, and Parsons, 2011). In a study by Logue, et al. (2004), researchers examined the relationship between elapsed time in the action/maintenance stages of change in regards to weight loss among overweight and obese clients. The purpose of the study was to examine the longitudinal relationship between elapsed time in action and maintenance stages of change for certain target behaviors and weight loss or gain. The target behaviors were increased planned exercise, decreased dietary fat, increased fruit and vegetable consumption, and increased dietary portion control. 329 middle aged men and women with elevated BMIs were recruited from 15 primary care practices in Northeast Ohio. Patients were placed in an obesity management program based on the Transtheoretical Model. There were significant ($p < 0.05$) longitudinal relationships between the number of periods in action or maintenance for the target behaviors and weight loss. Researchers found that the longer that individuals were in the action/maintenance stage of change, the more weight loss was achieved. Their findings support the use of the Transtheoretical Model in managing obesity in

the primary care setting, and in assessing the stage that each patient is in, and guiding the patient to achieve the latter stages of the model (action/maintenance).

Healthcare providers can use information about the stage of change that each patient is in to provide care that is patient centered and given at the right stage. In a study by Sutton et al. (2000), 284 obese patients ages 30-69 years were recruited from a community-based-hospital-affiliated family practice center. Nurses measured each patient's abdominal circumference and administered a staging questionnaire using the assessment strategy developed by Prochaska. Patients chose one of five statements that best described their readiness to change in six weight-related target behaviors (increased planned exercise, increased daily activity, increased fruit consumption, increased vegetable consumption, decreased dietary fat, and decreased portion sizes). Stage of change for the five target behaviors were associated with body mass index or abdominal circumference ($p < .05$) in a manner consistent with stage-of-change theory-(Sutton, et al., 2000). Researchers found that patients in the later stages of change had smaller BMI and waist circumference, whereas patients in earlier stages of change had larger BMI and waist circumference.

In a study by Macqueen, Brynes, and Frost (2001), 118 overweight and obese patients were referred to a Nutrition and Dietetic Department for appointments. A stages of change questionnaire was mailed to patients prior to attending two different visits (Group 1), patients who attended one visit (Group 2), and patients who did not attend any visits (Group 3). There was no significant difference in stages of change questionnaire at visit one between Group 1 and Group 2. No patient in Group 3 returned any of the stages of change questionnaires after the first mailing and only 17% returned one after a reminder was sent. Researchers found that although the Transtheoretical Model could not differentiate between which patients would attend a second

appointment or lose weight, the model did help to recognize patients who were motivated to change. Additionally, those patients who were in the action/maintenance stage of the model lost weight and were more positive and dedicated.

The Transtheoretical Model has also been utilized in training health care providers and nurses in areas such as leadership training. Many times, health care providers and nurses find themselves in positions where they want to elicit change, but don't feel they have the training to be catalysts of change. Training of health care providers and nurses can help to improve health worker retention, improve health care system environments, and improve patient health. In one study, health care providers and nurses underwent leadership training utilizing the Transtheoretical Model and demonstrated increased leadership development. An article presenting data from the pilot year of the Afya Bora Fellowship (an African-based training program to increase the leadership capacity of health professionals) fellows involved in the program exhibited increased leadership development during and shortly after the intervention. A total of 19 African and three US post-residency physicians, medical post-graduates and master's-prepared nurses were selected to participate in the pilot training. The program included six weeks of classroom training a six month practicum, and mentoring. Fellows of the program reflected the contemplation, preparation and action stages, but did not reflect being in the maintenance stage. The authors attributed fellows not reaching the maintenance stage of the program due to the training being relatively short. Additional time may be needed to support change towards the maintenance stages. The authors concluded that the Health Leadership Development Model was useful for enlightening health leadership training design and evaluation (Daniels, et al., 2014).

Half of all deaths in the US are related to patient health behaviors. Sadly, only 5% of the \$2 trillion spent on health care each year is dedicated to decreasing behavioral and social risk

factors (Hauer, Carney, Chang, & Satterfield, 2012). Counseling on behavior change has the potential to promote healthy lifestyles, but is not being adequately addressed by health care providers and nurses. Many times, health care providers and nurses do not feel adequately prepared to engage in behavior counseling. The Transtheoretical Model promotes Motivational Interviewing and can assist health care providers and nurses to “maintain a patient centered focus, show empathy, and explore ambivalence to counteract patients’ resistance to change” (Hauer, et al., 2012, p. 960).

Motivational interviewing (MI) is a patient-centered approach that can be used to enhance motivation to change by exploring ambivalence. It aids in assisting patients to develop their own agenda and find their reasons for change. It is a method of communication that can be used to help to prepare the patient for treatment, as a brief intervention, as a clinical style, or as an approach when obstacles are met. MI is a method that utilizes a collaborative approach, in which the patient is the expert (Croston, 2010). Motivational interviewing has been effective across a wide range of health behaviors, including weight loss interventions (Hardcastle, Taylor, Bailey, & Hagger, 2013). Motivational interviewing is helpful in health care provider and nurse interactions with patients to set personally meaningful goals and provide feedback. Motivational interviewing is centered around the patient and collaboration in conjunction with health care providers and nurses. It allows for more patient autonomy, builds motivation for change, and allows the patient and health care provider/nurse to assess importance of certain behavior changes from the patient’s perspective. The “role of the practitioner is to elicit rather than impart wisdom and knowledge” (Hardcastle, et al., 2013, p. 2).

Ambivalence is the central focus of MI, and MI is meant to help the patient to resolve ambivalence and proceed in a positive direction of change. If ambivalence is not resolved, an

individual can remain stuck in a certain behavior, or stage of change, for long periods of time. Open ended questions are also a key component of MI. They help to obtain more detailed information than a closed ended question. Examples of open ended questions include: “What’s worrying you today about your illness?” and “What concerns you most about these medications?” Furthermore, assessing a patient’s confidence to change and asking about pros and cons to change can help to explore ambivalence. Active listening is an important aspect of MI as well and allows for the ability to understand the “essence of a patient’s concerns” (Croston, 2010, p. 18). As Croston (2010) so clearly describes, “at the heart of MI is the conviction that patients themselves have most of the answers” (p. 17).

In a study by Martino, et al (2007), Yale University medical students were taught behavior change counselling called ‘brief motivational interviewing’ (BMI). Curriculum was delivered within 2-hour training episode. Researchers used a pretest, post-test and 4-week follow-up design to assess students' BMI skills, knowledge and attitudes toward the approach. Students who attended the training session increased their use of BMI-consistent behaviors ($p \leq 0.05$). Students also showed increases in BMI knowledge, interest in the MI approach, and confidence in their ability to use BMI, as well as commitment to including BMI skills into their future medical practice (Martino, et al., 2007).

Motivational interviewing interventions have been shown to be effective at increasing physical activity, reducing caloric intake, and decreasing body mass index, and also are linked to the Transtheoretical Model’s increased motivational readiness to learn (Hardcastle, et al., 2013). Primary care is an important network in which weight loss interventions can be addressed. Providing health care providers and nurses with the knowledge and skills for using the TTM and engaging patients with Motivational Interviewing requires the use of a variety of teaching

methods. Successful educational strategies include didactic, role playing with standardized patients, and practicing counseling techniques with patients. Outcome curricula that are successful should include education of both patients and providers about the specific behavior change needed and use of “point of care reminders,” such as notes to providers on charts during encounters with patients (Hauer, et al., 2012, p. 6). The Transtheoretical Model of Change has been one of the most commonly utilized theoretical frameworks for development of educational interventions. According to Hauer et al. (2013), three interventions that have resulted in lasting change in provider’s behavior are: a) showing the gap between “current behavior and optimal behavior,” b) “addressing gaps in knowledge and performance in the practice environment,” and c) “reinforcing change over time until the new behavior is well established (p. 6).”

The 5As is recommended by the US Preventive Services Task Force as a counseling strategy that is useful in certain areas of office based counseling, such as smoking cessation, weight loss, and decreasing cholesterol. The 5As framework consists of Assess, Advise, Agree, Assist and Arrange. It is useful as a guide to Assess risk, present behavior, and readiness to change. The healthcare provider can then Advise of change, Agree with the patient to set goals, Assist in addressing barriers and obtaining support, and Arrange follow up. In a study by Jay et al (2008), researchers sought to determine the needs of residents and faculty regarding obesity care. Surveys were developed using the 5As as a behavioral health framework, and then given to faculty and residents. Sixty-five residents and 250 faculty members completed surveys, and almost 20% of physicians reported inadequate competency for each item in the survey. For the Advise component, nearly 50% of all physicians felt they could not respond adequately to patient’s questions about treatment options for obesity, and for Agree, 34% of physicians felt they could not adequately set weight loss, lifestyle, or physical activity goals. In the Assist

component, 59% of physicians felt they could not use Motivational Interviewing competently. Findings of this study demonstrate the need for evidence-based curricula in the training of healthcare providers.

Healthcare providers report a lack of training and competence in management of obesity, and report less desire to help obese patients, because they believe that obese patients are less likely to benefit from counseling. In another study by Jay et al (2009), 399 physicians from internal medicine, pediatrics, and psychiatry were surveyed. Physician attitudes and competency were assessed. Competency was broken down into five aspects of obesity counseling and treatment using the 5As of behavioral counseling. Over 40% of physicians had a negative reaction towards obese patients, and 66% of physicians felt that treating obese patients is very frustrating. In the Assess category, the competency score was negatively associated with physician discomfort/bias and positively associated with physician success/self-efficacy, which suggests that physicians with lower competency may have more discomfort and lower self-efficacy in treating obese patients. The Agree category competency score was positively associated with physician self-efficacy, demonstrating that physicians who feel competent with mutual goal-setting may possess greater confidence. This study demonstrates that 5As may provide a useful guide in training of healthcare providers to improve competency and attitudes of healthcare providers in treating obese patients, and ultimately improve care for obese patients.

The Transtheoretical Model, Motivational Interviewing, and 5As can be interlinked to provide a strong curriculum for the education of health care providers. As mentioned previously, individuals may not progress linearly through each stage of change. MI is useful in progressing through stages by facilitating behavior change (Croston, 2010). The 5As is useful not only in health care provider and patient interactions, but also in training of health care providers

regarding management of obesity. This trilogy of education (TTM, MI, and 5As) includes important aspects of self-efficacy, collaboration, patient-centered care, and when utilized together provides a comprehensive approach to improving competency among providers in management of obese patients.

Overweight and obesity pose as one of the greatest challenges for healthcare providers. The healthcare provider however is in a primary position to increase awareness, provide education, and address barriers to management of overweight and obesity among patients. Due to barriers to providers addressing weight management, there are many patients who do not receive adequate education and management of their weight. Through use of the Transtheoretical Model of Change, barriers among adult patients who are overweight or obese can be addressed, change can be promoted and lasting change can occur that results in a healthier lifestyle.

Plan for Use of Model in Project

As the issue of obesity is so prevalent, providers cannot ignore overweight and obesity among their patients. Health care providers and nurses will be educated on the Transtheoretical Model (TTM), the five stages of change and how to assess the stage of change as well as Motivational Interviewing (MI) and the 5As in order to better address weight management. The intervention will be geared around the Transtheoretical Model framework, while incorporating both MI and the 5As. The 5As and MI have been linked with increased motivation to lose weight and increased weight loss (Gudzune, et al., 2012). During the planning phase, addressing barriers that prevent or decrease effective weight loss communication between health care providers and nurses will be considered.

Throughout the planning and implementation stage of the capstone project, the TTM will be utilized in developing staff education outlines. Consideration will be given to what processes and

principles work best at each stage when educating patients on weight loss and what is required to move to the next stage of change (Pro-Change, 2014). Pre and post-test surveys will be important in assessing degree of confidence that health care providers and nurses have to address weight management with patients.

Special attention will be devoted to demonstrating the gap between current behavior of health care providers and nurses and optimal behavior by providing examples in research and journals. Also, addressing gaps in knowledge and performance in the health care setting and reinforcing change over time will be considered during the planning and implementation of the capstone project (Hauer, et al., 2012). Principles of behavioral theory will be addressed, and during the implementation, one component of the educational session will include practicing skills through teacher/participant interaction using case scenarios. In summary, the TTM will be utilized to decrease barriers, increase confidence, and increase discussion of weight management between health care providers/nurses and patients, as well as increase the number of patients enrolled in the MOVE program.

Description of Strengths and Weaknesses of the Model as Relates to Project and Population

Weaknesses related to the Transtheoretical Model of Change include a lack of consideration for socioeconomic status and income, which can play a part in a person's stage of change (Boston University School of Public Health, 2013). Within the VA population, there are many patients who have limited incomes, and this must be considered when educating patients on healthy lifestyles. By incorporating handouts in the patient folder that include low cost options for healthy foods and low cost exercise options, it is hoped that this will aid in increasing efficacy of the project.

The lines between stages within the TTM can be rather fluid, making it difficult to determine the stage of change that a person is in. Also, there is not a clear sense of how long a person can remain in a particular stage or how much time is needed in each stage. This can be seen as both strength and a weakness. Individuals may not start at the same stage, and some individuals may skip a stage, or proceed very quickly through a particular stage. When planning and implementing the project, it will be important to address the possibility of stable stages of change, but also the possibility of fluidity within the stages. Interventions by health care providers and nurses must be individualized and tailored to meet the needs of each patient in order to be the most effective (Pro-Change, 2014).

There is also the assumption that most individuals make rational and logical plans in their decision making process, which is not always the case (Boston University School of Public Health, 2013). When planning and implementing the project, it will be important to address the fluid nature of stages of change and that individuals can progress, but also regress to former stages at times. Furthermore, health care providers will be encouraged to consider any mental health history in patients when providing patient education.

Project Design

Setting

This project will be implemented within the VA Northern Indiana Health Care System (VANIHCS). VANIHCS was formed in 1995 by the incorporation of the VA Medical Centers in Fort Wayne and Marion, Indiana. The Fort Wayne campus has been serving veterans since 1950, and has 26 inpatient beds. The Fort Wayne medical center provides acute medical and surgical services, as well as primary care, medical and surgical specialty care, and mental health

clinics. The Marion campus was originally constructed as the Marion branch of the National Home for Disabled Volunteer Soldiers. The Marion campus has been serving veterans since 1889, and has 75 acute psychiatry beds and a 150 bed nursing home care unit, as well as primary care, medical and surgical specialty care and mental health clinics. The Marion campus offers programs for Mental Health Intensive Case Management, Post-Traumatic Stress Disorder (PTSD), Extended Substance Abuse Treatment and Intensive Outpatient Substance Abuse Treatment. Both the Marion and Fort Wayne campuses also have a dental and eye clinic as well. Specialty services include Ear Nose and Throat, Dermatology, Urology, Neurology, Physiatry (Physical Medicine and Rehab), Cardiology, Physical Therapy and Occupational Therapy. Primary care clinics are available at both medical center campuses and at Community Based Outpatient Clinics (CBOCs) located in South Bend, Goshen, Peru and Muncie Indiana (US Department of Veteran Affairs, 2014).

The mission of VANIHCS is to “honor American Veterans by providing exceptional health care that improves their health and well-being” (US Department of Veterans Affairs, 2014). The vision of VANIHCS is “to be a patient centered integrated health care organization for veterans providing excellence in health care, research and education; an organization where people choose to work; an active community partner and a back-up for National emergencies” (US Department of Veterans Affairs, 2014). VANIHCS provides comprehensive health services to veterans in northern Indiana and parts of western Ohio. Veterans are eligible if they served in active military, naval or air service and were separated under any condition other than dishonorable. Additionally, current and former members of the Reserves or National Guard who were called to active duty (other than for training only) by a federal order and completed the full period for which they were called or ordered to active duty may be eligible for VA health.

VANIHCS has serviced approximately 40,770 veterans in fiscal year 2015 thus far, with 14,727 in the Fort Wayne and 7,139 in the Marion campuses alone. Approximately 14,454 veterans in the VANIHCS are obese (United States Department of Veterans Affairs, 2015). There are a total of 23 physicians and 16 nurse practitioners that are involved in primary care at VANIHCS (VA PACT site, 2014). Presently, there are vacancies for nurse practitioners, physicians and nurses at all the locations at VANIHCS, and therefore, staffing is an issue. Physicians are supposed to have no more than 1200 patients and nurse practitioners are to have no more than 900 patients enrolled in their panels; however, due to limited staffing, nearly all of the physicians and nurse practitioners are over their panel size. Additionally, there is a lack of support staff, to include Patient Support Assistants (PSA), Registered Nurses, and Licensed Practical Nurses. Due to this, providers have more responsibility and less time to spend with each patient. VANIHCS is actively seeking more staff, but provider turnover continues to be a problem as well. There is a focus on quality of care as well as making access available to veterans to see their providers within a timely manner. Due to the limited staffing, panel sizes have increased so that patients can be seen by providers in a timely fashion. Although this has helped to increase access for veterans to see their providers in a timely manner, it places a strain on both nurses and providers, who are already understaffed, and increases patient load, and thus total work load for staff. Many veterans do not have private insurance, and rely on VANIHCS for all their health care needs. Additionally, they may lack the financial resources to seek care outside of the VA.

Any meeting with providers and nurses would have to take place either before or after hours, or during lunch break, as there is no available administrative time allowed for this during a typical work day. The physical environment of the VANIHCS allows for easy communication

either face to face, via email, or instant messaging that is available on all VA computers. The Computerized Patient Record System (CPRS) is accessible at all sites, and allows for continuity of care for patients, as providers and nurses have the ability to access patient information from any VA in the United States. Weaknesses in the setting include limited staffing, increased patient loads, and lack of time for additional workload or education. The project will be short in regards to amount of time for provider education, and it will be stressed that the time needed to discuss weight management does not need to be lengthy. The addition of the patient education folder should also help with this process. Strengths of VANIHCS are that healthcare providers, nurses, and other staff are committed to putting the veteran first, and working as a team.

It is hoped that barriers encountered by providers and nurses in patient interactions will be decreased by providing education that will increase confidence and provide health care providers and nurses with the tools to effectively communicate with patients with the time they have available. Patient education folders will be readily available, and the Project director will inquire of participants on a weekly basis to ensure that the clinical reminder is working, patient education folders are available, and to obtain feedback on any problems encountered.

The literature review demonstrates that Motivational Interviewing and the 5As can be used within a provider and patient encounter to positively affect patient outcomes. The Transtheoretical Model will also allow health care providers to determine what stage the patient is in and gear Motivational Interviewing and the 5As towards that stage. By doing so, it is hoped that patients will see the benefit of following a healthy lifestyle.

Population

The target population for the intervention is physicians, nurse practitioners, and nurses who are involved in primary care within VANIHCS. Health care providers and nurses will be recruited via email. An email providing information regarding the project will be sent to all health care providers and nurses within VANIHCS. Anyone interested in participating in the project will be instructed to contact the project director via email or phone. A phone conversation or in person conversation will then follow with more specifics regarding the project and dates of training. The final participants will be a convenience sample of all health care providers and nurses who voiced interest and availability/willingness to participate in the project. It is hoped that providers from all locations within VANIHCS will participate, as this will provide better representation of VANIHCS.

Planning the Intervention

The goal of this project is to decrease the barriers and increase confidence among health care providers and nurses in addressing weight management among veterans. Outcome objectives include the following: within the four months following the implementation of the program, there will be a 50% decrease in perceived barriers to addressing weight loss with patients among providers and nurses, a 50% increase in confidence in addressing weight loss with patients among providers and nurses, a 30% increase in number of obese patients who receive weight management education from the providers and nurses, and a 5% increase in the number of patients who enroll in the MOVE program.

After obtaining IRB approval, a chart review will be performed four weeks prior to the start of the intervention to assess how many patients are asked about enrolling in the MOVE program. There will be no patient identifiable data obtained. At the conclusion of the project, a

chart audit will be performed again to assess how many patients are asked about enrolling and who have enrolled in the MOVE program. The chart audit will also include assessment of whether overweight or obesity was documented in the nurse's note, progress note, or encounter form. Furthermore, the project director will also assess for documentation of the patient education folder being given/offered to patients via chart review. A pre and posttest survey will be given to assess perceived barriers to addressing weight management and confidence in health care providers and nurses. Pre and posttest surveys will be given by Qualtrics via a link that will be sent to health care providers and nurses via email.

Four weeks prior to the start of the intervention, an email will be sent out to health care providers and nurses with a brief description of the project and an invitation to participate. Participants can respond via email or can contact the project leader via phone. Informed consent will be obtained from each health care provider and nurse who chooses to participate. A second email will be sent to those who choose to participate with a link to the pretest survey and a listing of dates and times for educational sessions. Educational sessions will include a session lasting approximately 30 minutes that will be offered on two different dates that can either be attended face to face or via teleconference. Participants only have to attend one session. For those participants who cannot participate face to face or via teleconference, the sessions will be recorded and available via a link to YouTube. Education will be provided via use of Power point presentation, and will provide information on the Transtheoretical Model of Change, 5As, and Motivational Interviewing. It will also include discussion of perceived barriers by providers and nurses to providing weight loss assessment and education, how to assess the stage of change that a patient is in, and how to utilize the 5As and Motivational Interviewing in patient interactions. The educational folder will be reviewed, as will the use of a clinical reminder to assess whether

there is discussion of weight management and whether the patient education folder was given. There will be two brief case scenarios involving theoretical patients at various stages of change, and participants will be asked to role play, with the Project director being a patient (with scripted information and responses), and participants being the provider (without a script). There will be time given at the end of each session for questions, and the Project director will provide participants with a phone number and email address should they have any further questions. After all participants have completed the educational session, which will take place in the first month of implementation of the project, educational folders will be provided in all primary care areas and the clinical reminder will be implemented for participants to complete during patient interactions. For any patient who meets the criteria of being obese or overweight, there will be an alert to complete a clinical reminder on whether a patient education folder was provided.

Implementation of the project will consist of the following:

- May 2015—Project director will develop pre and post-test surveys and patient education folders.
- June 2015—Project director will develop health care provider and nurse education materials and Power point presentation. The Transtheoretical Model will be used as a guide throughout the planning and development process of the project. The Project director will also meet with the Privacy Officer to discuss the project and also obtain data on number of patient enrolled in the MOVE program. IRB application will be submitted to Ball State University. The project director will work with the Clinical Reminder Specialist at VANIHCS to develop the clinical reminder.

- August 2015—The Project director will meet with nursing supervisors and primary care leadership to discuss project aim and goals and provide a detailed timeline. The project will also be discussed briefly at the monthly Patient Aligned Care Team (PACT) meeting. PACT meetings are attended by providers, nurses, patient support assistants and supervisors. An email invitation will be sent out to health care providers and nurses discussing the project and asking for participants. Informed consent will be obtained from participants. The project director will meet with the Information Technology (IT) specialist and secure dates and locations for provider training sessions, and discuss setting up technology needed for the teleconference.
- September 2015—The Project director will send out the pretest survey to health care providers and nurses to complete anonymously via email and will provide a link to survey (Qualtrics). Survey results will be analyzed later in the month.
- October 2015—The Project director will provide health care provider and nurse education sessions. There will be two available sessions face to face or via teleconference. The session will also be recorded and placed on You Tube for viewing by any participant who was unable to attend the sessions. The Project director will meet with any participants individually if they are unable to attend one of the educational sessions and have questions regarding the You Tube presentation or prefer to meet individually. Patient education folders will be placed in clinical exam rooms and nursing stations.
- November- January 2015—The clinical reminder will be active and will alert participants when a patient has a BMI of 26 or greater to offer the patient education folder and check “yes” or “no” if folder was given. An email will be sent out to participants during the first

month encouraging them to use motivational interviewing skills the 5As, and offer patient education folders to patients. The email will also ask participants to contact the Project director with any concerns or suggestions.

- January 2015—The Project director will send the posttest survey to participants via email and will provide a link to the survey. The project director will conduct a review of charts of patients with BMI of 26 or greater seen by project participants three months prior to the education session and again at the end of the project. The Project director will also obtain the number of patients who enrolled in the MOVE program during the intervention and compare with pre-intervention data of number of patients enrolled in MOVE two months prior to the implementation of the clinical reminder.
- February-April 2015—The Project director will write up results and complete a manuscript for submission to a journal for publication consideration.

The project timeline table is as follows (Table 1):

Process Objectives	Responsible Party	Participants	Approximate dates
1. Development of pre and posttest survey and educational training intervention	Project director	Project director and Ball State University Advisor	May 2015
2. Advertise project via Patient Aligned Care Team Monthly meeting and email	Project director	Project director, nursing supervisors, Primary care supervisors, RN and LPNs	August 2015
3. Secure location and dates for educational	Project director	Information Technology department assistant	August 2015

session		and Project director	
4. Obtain data on number of patients who enroll in Move	Project director	Project director, privacy officer	August 2015
5. Administer pretest via email link	Project director	Health care providers and nurses	September 2015
6. Conduct educational sessions	Project director	Health care providers and nurses, Information technology assistant	October 2015
7. Implement clinical reminder and have patient education folders available.	Project director	Health care providers and nurse	November 2015- January 2016
8. Obtain data on number of patients who are provided patient education folder. Send out post-test survey.	Project director	Health care providers and nurses, clinical reminder specialist	January 2016
9. Write up results of project and submit completed manuscript	Project director	Health care providers and nurses	February--April 2016

The pre and posttest surveys will utilize a Likert type scale and confidence ruler to assess perceived barriers and confidence among health care providers and nurses. The VA already utilizes confidence rulers that are available to providers who ask for them and can be used in patient interactions. Thus, the confidence rulers should not be foreign to participants. Evidence based literature will be reviewed and utilized in the educational training sessions, and participants will be provided with rationale based on current, evidence based practices with references provided throughout the Power point presentation.

Data collected during the project will include total number of charts reviewed, number of charts with clinical reminder marked “yes” or “no” regarding whether a patient education folder was given, assessing for documentation of overweight and obesity in the chart, and number of patients enrolled in MOVE program before and during the intervention phase of the project. Pre and posttest survey results will also be documented and reported.

Ethical Issues

The project will involve only health care providers and nurses. Pre and post surveys will be anonymous. No identifiable provider, nurse or patient information will be obtained during the chart audits. All participants will be volunteers who agree to participate in the project, and informed consent will be obtained. Participants will be informed at the onset of the project the time that will be required of them. The educational session will be 30 minutes. It is estimated that the time needed to assess the stage of change that a patient is in, utilize the 5As, and Motivational Interviewing in patient interactions should take no longer than five to ten minutes. Documentation time should be minimal, as they will answer a simple “yes” or “no” clinical reminder when they give the patient an educational folder.

Participant data, such as name, title and email addresses will be kept in a locked box by the Project director. Any electronic data will be stored on a computer that is password protected with a password that is only known by the Project director. There may be an incentive for participants to document their participation in the project in their annual proficiency reviews, which may set them apart from other employees; however, this cannot be guaranteed to make a difference in their performance appraisals. There should be no potential risks or discomfort to participants. Written support for the project will be obtained from Audrey Frison, MHA, RN

Associate Director of Patient Care Services. Mrs. Frison has already been approached regarding this project and has voiced her support, and a follow up will be made in order to obtain written documentation and permission to conduct the project.

There is a potential conflict of interest, as the Project director is an employee at VANIHCS, but leadership will be notified that the Project director will complete the project on days in which she is not working, so that no time is taken away from direct patient care. Surveys will be available online and will be anonymous. There will be no compensation for participation in the project, but thank you cards will be mailed to each participant at the completion of the project. The Project director will be submitting an IRB application for approval prior to starting the project. IRB approval will be obtained through Ball State University, as VANIHCS does not have their own internal IRB.

Study of the Intervention

Study Design

The intended aim of the project is to reduce the barriers to addressing overweight and obesity among patients and to improve competency and self-confidence among health care providers and nurses. The goal is to increase the number of overweight and obese patients who receive evidence based weight management counseling and referrals. The Transtheoretical Model, 5As, and Motivational Interviewing will be utilized to develop and implement an educational program that will decrease barriers, increase confidence, and increase discussion of weight management between health care providers and nurses and patients and increase the number of patients enrolled in the MOVE program.

Project questions include the following:

1. Does an educational program for health care providers and nurses that incorporates the Transtheoretical Model of Change, Motivational Interviewing and the 5As of behavioral counseling decrease barriers and increase confidence in addressing weight management with patients?
2. Does an educational program that addresses barriers to weight management, and promotes utilization of the Transtheoretical Model, 5As, and Motivational Interviewing increase discussion of weight management among patients and nurses/providers?
3. Does discussion of weight management among patients and nurses/providers increase the number of patients who enroll in the MOVE program?

Program outcome objectives include the following:

1. In the four months following the implementation of a weight management provider/nurse education program, there will be a 50% decrease in perceived barriers to addressing weight loss with patients among providers and nurses.
2. In the four months following the implementation of a weight management provider/nurse education program, there will be a 50% increase in confidence in addressing weight loss with patients among providers and nurses.
3. In the four months following the implementation of a weight management provider/nurse education program, there will be at least a 30% increase in number of obese patients who receive weight management education from the providers and nurses.
4. In the four months following the implementation of a weight management provider/nurse education program there will be a 5% increase in the number of patients who enroll in the MOVE program.

The project fits a quasi-experimental pretest/posttest design. Dependent variables are health care provider and nurse confidence, perceived barriers, and weight management discussion. The independent variable is the educational program. The Transtheoretical Model fits well for the study design, because it incorporates self-efficacy and confidence. The Transtheoretical Model (TTM) has been used in study designs in stress and weight management, smoking cessation, and increasing adherence (Pro-Change behavior systems, Inc., 2014). According to Amirtha and Shalini (2013), “self-efficacy reflects how competent people feel about successfully engaging in behavior” (p. 41). The Transtheoretical Model can be linked to Bandura’s Social Cognitive theory, which reflects that what people believe, think, and feel can affect how they behave (Amirtha & Shalini, 2013). Pre and post-test surveys will be useful in assessing degree of confidence that health care providers and nurses have to address weight management with patients. The TTM will be utilized to decrease barriers, increase confidence, and increase discussion of weight management between health care providers/nurses and patients, as well as increase the number of patients enrolled in the MOVE program.

The pretest/posttest design will be implemented using an anonymous survey that will be emailed to health care providers and nurses who agree to participate in the project with a link; health care providers and nurses will complete the survey before and after the intervention. Questions on both surveys will be the same. Pretest and post-intervention surveys will be used by the project director to determine confidence levels for health care providers and nurses prior to and after the intervention. A chart audit will be performed to determine what weight loss education, if any, was provided by participants to patients prior to the intervention and how many patients enrolled in MOVE. The project director will also audit charts at the completion of the intervention to determine the number of patients who were offered the patient education

folder, assess for documentation of overweight or obesity in the chart, and document how many enrolled in MOVE after the intervention. Comparing the results of the pre-intervention survey (pretest) with the results of the post-intervention survey (posttest) and chart audits of patient encounters before and after the educational sessions take place will allow the project director to determine if the project goal and outcome objectives were achieved.

Internal validity relates to the accuracy of the study design. The level of internal validity is determined by the amount of control exerted over possible extraneous variables. Regarding the project, participant selection could be a threat to internal validity, as participants will be selected based on convenience, and not randomized. Testing effect may also be a threat, because the same surveys will be used both pre and post intervention. Participants may remember their answers from the pre-intervention survey when completing the post-intervention survey. There is also a potential for experimental mortality, or dropout of subjects. External validity refers to generalizability of findings, of how well a study can be generalized to other conditions/settings, or people (Slack & Draugalis, 2001). The project will take place in a relatively short amount of time (approximately four months), so it is doubtful that history could be a threat to internal validity, however, there is always the possibility that events that occur during this time frame would impact results of the project. Regarding external validity, it may be difficult to generalize findings to other settings due to the nature of sampling method, which is a non-random convenience sample. Additionally, the sample size will be small, with approximately 15 providers and nurses. These internal and external validity concerns and small sample size are considered acceptable for quality improvement projects in one clinical setting.

Methods of Evaluation-Process Objectives

Process objectives have been listed in detail with approximate dates of completion in Table 1. The project director will monitor process objectives to determine if completed as planned and/or if revision in any aspect of the process is needed during the project. Process objectives include the following:

- Development of pre and posttest survey and educational training intervention.
- Advertise project via Patient Aligned Care Team (PACT) monthly meeting and email.
- Secure location and dates for educational session.
- Obtain data on number of patients who enroll in MOVE.
- Obtain data on documentation of overweight or obesity by participants in the chart.
- Administer pretest via email link.
- Conduct educational sessions.
- Implement clinical reminder and have patient education folders available.
- Obtain data on number of patients who are provided patient education folder. Send out posttest survey to participants
- Write up results of project and submit completed manuscript.

Methods of Evaluation-Outcome Objectives

Data on the number of patients enrolled in the MOVE program for the months of July through September (pre-intervention) and again for October through December (post-intervention) will be obtained from the IT Clinical Reminder Specialist at VANIHCS. The project director will conduct a random audit of charts of patients with BMI greater than 26 seen by project participants in July through September for documentation of discussion of weight management. Approximately ten charts will be audited per participant, which should be a total of

around 150 charts. Charts will also be audited of participants for the month of October through December to determine number of patients offered the patient education folder and for any discussion of weight management for patients with a BMI greater than 26.

Pre and post-intervention surveys will be sent via email with a link to Qualtrics. The surveys will be anonymous, and will utilize a ten point Likert type scale adapted from the Confidence Ruler and the Academic Behavioral Confidence (ABC) scale. The ABC scale has been utilized in studies assessing academic behavioral confidence in students (Amirtha & Shalini, 2013). The ABC scale has been found to be valid and reliable. It was developed specifically for teaching and learning of United Kingdom psychology students (Sander, 2009; Sander & Sanders, 2009), but has also been translated to Spanish and utilized in assessing psychology students in Mexico as well (Ochoa & Sander, 2012).

There is much practical application for Motivational Interviewing, 5As, and the Transtheoretical Model in the clinical setting. Assessment of motivation is regularly used to help tailor therapeutic approaches, and can be readily used as a rapid assessment in the primary care setting. Confidence and Motivational rulers have become helpful and popular tools used in the clinical setting. They do not require scoring, take a short time to complete, and are familiar to patients, as they are similar to scales used to assess pain. The Confidence Ruler has been used in studies, such as smoking cessation, and found to be associated with smoking behavior change ($p < 0.001$) and found to have both construct validity and predictive validity. This supports the literature that self-efficacy/confidence in one's capability to change is a dominant predictor of change (Boudreaux et al., 2012).

Surveys will be completed in September and January, respectively. Surveys will include one demographic question, which is what type of health care provider (MD, NP, RN, or LPN), the participant is. The pre-education survey will assess baseline perceived barriers to addressing weight loss and confidence levels in addressing weight loss. The post-education survey will use the same questions to assess for changes in confidence levels. Confidence will be assessed using questions that begin with “how confident are you that you....?” with 0 being not at all, and 10 being 100% confident.

The first and second outcome objectives relate to a decrease in perceived barriers and an increase in confidence in addressing weight loss with patients among providers and nurses in the four months following the implementation of a weight management provider/nurse education program. Outcome indicators are perceived barriers and confidence. Pre and post survey questions will be formulated to correlate with common perceived barriers, such as time, and lack of available resources. There will also be one open ended question in the survey, where health care providers and nurses can type in other barriers which they feel are important. Confidence will be measured utilizing questions geared in Likert scale format.

The third outcome objective relates to an increase in number of obese patients who receive weight management education from health care providers and nurses in the ~~four~~ three months following the implementation of a weight management provider/nurse education program. This will be obtained by chart audits of patients seen by the participants who are involved in the program through the development of a clinical reminder. The number of patients with a BMI greater than 26 who are offered patient education folders will be obtained on approximately ten charts for each participant, for a total of 150 charts audited after the education

program from November through January. The project director will obtain this information from the IT Clinical Reminder Specialist.

The fourth outcome objective relates to an increase in the number of patients who enroll in the MOVE program in the three months following the implementation of a weight management provider/nurse education program. This information will be obtained through the Computerized Patient Record System (CPRS), which the VA utilizes. Number of patients who are scheduled into MOVE education groups will be obtained. Only the number of patients scheduled will be obtained—not the number of patients who attend the sessions. This will present as a limitation in interpreting results, because there do tend to be no-shows for these sessions.

Use of email with a link to Qualtrics will facilitate reduced expense, as this is free. Throughout the timeframe of the project, the project director will send emails to participants, asking for feedback, etc. To address the potential for dropout, the project director will provide small incentives for completion of the posttest survey, such as a small book related to Motivational Interviewing and the VA/DOD OBE CPG Pocket Card, which is a card developed by the VA and DOD for clinicians that is helpful in diagnosing and treating overweight and obese patients.

Regarding data collection and evaluation, the project director will allot time each week for review of project data, and will consult with the Ball State University statistician regarding how to properly enter data, and what statistical tests are most appropriate. Sample size and any loss of participants will be documented. The project director will collect and store data from the surveys and chart audits on a computer that is password protected with a password that is only

known by the Project director. Any other written data will be stored in a locked box that only the project director will have a key to open. The project director will obtain any required HIPAA approval. Chart audits will not contain any personal health or patient-identifiable information; however, the project director will be in contact the VA privacy officer in the summer before the start of the project to ensure that she is aware of any information that will be obtained from the chart reviews.

Methods of Data Analysis

The project will incorporate use of descriptive and inferential statistics in analysis of data from pre and posttest surveys and data obtained from chart reviews. As the VA does not have a statistician on staff, the Ball State University statistician will be utilized for assistance regarding utilizing specific statistical tests most suited for the project, interpretation, and evaluation of data. It is hoped that sample size will be at least 15 health care providers and nurses.

Health care providers and nurses who are confident in their ability to address patient concerns, problem solve, and perform their duties well are exhibiting high self-efficacy. “Self-efficacy reflects how competent people feel about successfully engaging in behavior” (Mary & Shalini, 2013, p. 41). The surveys will be scored by taking the mean response of each question prior to the intervention and after the intervention to determine to what degree outcome objective parameters of a 50% decrease in perceived barriers and 50% increase in confidence were met. Participants who score above the median will symbolize confidence in their ability to address weight management among patients. The mean, median and standard deviation will be calculated for each of the participant’s responses to the survey questions. A t test will be addressed for type of provider and survey scores. The t test is useful in quasi-experimental designs, and is a method

for comparing differences between two groups (Munro, 2005). In this project, the t test will be used to compare the differences in scores between the pretest and posttest surveys.

The type of health care provider is the only demographic data that will be included in the survey. There are 23 physicians and 16 nurse practitioners involved in primary care at VANIHCS, as well as approximately 80 nurses (LPNs and RNs). Using a sample size calculator, with a population of approximately 119 health care providers and nurses and a 95% confidence level, a calculated confidence interval would be 23.76, and the necessary sample size needed is 15 (Creative Research Systems, 2012). Given the small sample size, there is the possibility that the project findings may not detect significant differences between pre-intervention and post-intervention data. Effect size is “the magnitude of the effect of an independent variable on the dependent variable” (Munro, 2005, p. 100). It is hoped that the educational training session will ~~show~~ result in an increase in health care provider and nurse confidence and a decrease in perceived barriers, as well as increase in weight management counseling and referrals.

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Appendix A: Agency Letter of Support for Project

Appendix B: Participant Recruitment Letter

8/1/2015

Andrea Bearden
VA Northern IN Healthcare System
2121 Lake Avenue
Fort Wayne, IN 46805

Greetings,

My name is Andrea Bearden. I am a nurse practitioner in Primary Care at the Fort Wayne Campus of VA Northern Indiana Healthcare System. I am also a DNP student at Ball State University. I will be conducting a capstone project during the Fall 2015 and Spring 2016 entitled, *Overcoming Barriers and Increasing Confidence of Providers and Nurses in Addressing Overweight and Obesity*. This project will take place at the Fort Wayne campus of VA Northern Indiana Healthcare System. As a provider or nurse at VANIHC, you are invited to participate in this quality improvement project. The project will include a 30 minute educational session provided by myself. This educational session can also be attended by dialing in to a VANTS line during the scheduled time that it is available. If you are unable to attend the session, a You Tube presentation can be viewed at your convenience. You will also be asked to complete an anonymous pre and post-intervention survey, and a clinical reminder on whether a patient educational folder on weight management was offered to overweight/obese patients. Additionally, 10 charts per participant will be audited to document whether weight management counseling was provided.

No patient identifiable data will be obtained during this project, and healthcare provider and nurse surveys will be anonymous. Furthermore, no data from the chart audits will be recorded that would identify specific providers, nurses or patients.

If you would like to participate in this project, please reply via email (andrea.bearden@va.gov) or contact me via phone at 260-402-1987.

Sincerely,

Andrea Bearden, FNP-C, DNP student at Ball State University
VA Northern IN Healthcare System

Appendix C: Informed Consent Provider Document

Informed Consent to Participate in a Project

Project Title: Overcoming Barriers and Increasing Confidence of Providers and Nurses in Addressing Overweight and Obesity

Project Director: Andrea Bearden, FNP-C, DNP student at Ball State University

This project is being conducted for a capstone project as part of the requirements of the project director's Doctorate of Nursing Practice program. The project director is not conducting the project as an employee of VA Northern Indiana Healthcare System.

Introduction

As a provider or nurse at VA Northern Indiana Healthcare System, you are invited to participate in a quality improvement project focusing on overcoming barriers and increasing confidence among providers and nurses in addressing weight management with their patients. As a potential participant you need to know that:

- Taking part is totally voluntary.
- You can withdraw at any time without penalty.
- Your participation is confidential.

What is the purpose of this project? The purpose of this project is to improve weight loss management by decreasing barriers and increasing provider and nurse confidence in addressing overweight and obesity with patients.

Why was I asked to be included in the study of the outcomes of this project? Health care providers and nurses are in key roles to address the issue of overweight and obesity with patients, as well as to promote healthy lifestyle choices. Because you are a provider or nurse at the VA Northern Indiana Healthcare System, you are being asked to participate in this project. You are eligible to participate if you are at least 18 years of age and a physician, nurse practitioner, physician, or staff nurse providing direct patient at VA Northern Indiana Healthcare System.

What will I be asked to do to be part of the project and how long will it last? Please read the informed consent and then decide if you would like to participate in this project. As a participant in the project, you will be asked to:

1. Complete an anonymous 20 question pre-intervention online survey. The link to the survey is provided in the invitation email asking for participants. The survey will take approximately 20 minutes to complete.
2. Participate in a 30 minute educational session that will be provided at the Fort Wayne VA campus with availability to dial in via Tele health or VANTS line. For those who cannot attend the session, a link to a You Tube presentation will be sent via email.

3. Complete an anonymous 20 question post-intervention online survey after the educational session. The link to the post-intervention survey will be sent via email after completion of the educational session. The survey will take approximately 20 minutes to complete.
4. Offer overweight/obese patients a patient education folder and complete a clinical reminder during the three months following the educational session. The clinical reminder will be created to document if the patient was offered a patient education folder. The number of consults placed to the MOVE program will also be audited by the project director to assess if more patients are enrolled in the MOVE program after the educational session. MOVE is a weight management program that was introduced by the Veterans Health Administration (VHA) in 2006 to provide services for the nearly six million veterans who are served by the VA system.
5. Consent to have your charts audited for the presence or absence of documentation regarding overweight/obesity, discussion of weight loss management with patients, and provision of educational materials on weight loss.

The project director will audit approximately 10 of each participant's charts of patients seen who have a body mass index (BMI) of 26 or greater pre and post intervention. No data from the chart audit will be recorded that would identify specific providers, nurses or patients. The chart audit data will include the following:

1. Did the health care provider/nurse document overweight or obesity as a diagnosis?
2. Did the health care provider/nurse address overweight or obesity in the progress note or nurse's note?
3. What was the patient's body mass index (BMI)?
4. Were patient education materials provided to the patient?
5. Was a consult placed to the MOVE program?

The information that you provide on the survey will be anonymous; there will be no way to identify you. Data collected from the chart audits will not include any identifying information on health care providers, nurses, or patients.

You do not have to participate in this project. If you decide not to participate, there is no penalty. You are welcome to view the educational presentation and use the patient education folder without completing any surveys.

What are the risks and discomforts? There are no known risks for the participants. Your participation will be confidential and only the project director will be reviewing charts.

What are the benefits of being part of this project? There will be no direct benefits to you for participating in this project.

Who will see the information that is obtained? No provider, nurse or patient names or identifying data will be obtained from the charts. Your information will be kept confidential and only the project director will be reviewing charts and collecting data. Participant data, such as name, title and email addresses will be kept in a locked box by the Project director. Any electronic data will be stored on a computer that is password protected with a password that is

only known by the project director. All paper and electronic data will be destroyed within one year after the project is completed. The results of this project may be published and or discussed in an educational setting; no provider or nurses' names will be identified in any of the written materials used in this project.

Will I receive any rewards for taking part in this study? There is no monetary reward or cost for being part of this project. Participants will be provided an obesity pocket card as well as a small paperback book on Motivational Interviewing.

What if I have questions? For any questions or concerns, please feel free to call the project director, Andrea Bearden at 260-402-1987, andrea.bearden@va.gov or alternate email: abearden@bsu.edu . Faculty Advisor is Beth Kelsey, EdD, APRN, WHNP-BC at Ball State University, Muncie, IN, 304-940-9022, bkelsey@bsu.edu. If you have any questions about your rights as a volunteer in this project, contact the Office of Research Integrity, Ball State University, Muncie, IN 47306, 765-285-5070.

Consent

I have read the above information and have been given the opportunity to ask questions. By signing this form, I am consenting to participate in the study of the outcomes of the project:
Overcoming Barriers and Increasing Confidence of Providers and Nurses in Addressing
Overweight and Obesity

I have received a copy of this consent form for my own records.

Participant Name: _____

Please print

Participant Signature: _____ Date: _____

Project Director Name: Andrea Bearden

Project Director Signature: _____ Date: _____

Appendix D: Chart Audit Checklist

Chart audit tool:

1. Did the health care provider/nurse document overweight or obesity as a diagnosis?
2. Did the provider address overweight or obesity in the nurse's note or progress note?
3. What was the patient's body mass index (BMI)?
4. Were patient education materials provided to the patient?
5. Was a consult placed to the MOVE program?

Appendix E: Participant Survey (Pre-intervention)

This survey is designed to assess provider and nurse confidence and perceived barriers in providing weight management counseling for overweight and obese patients. Your opinions and/or individual preferences are important. This survey is anonymous. Thank you for sharing your time in completing this survey.

On a scale of 0 to 10 with 0 being not confident at all, and 10 being extremely confident, please answer the following questions:

1. How confident are you in using motivational interviewing to help a patient to lose weight?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

2. How confident are you in utilizing the 5As (assess, advise, agree, assist, arrange) as a counseling strategy to assist a patient with weight loss management?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

3. How confident are you that you can ascertain a patient's readiness and ability to work on weight loss based on stage of readiness for change?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

4. How confident are you that you can provide a brief counseling intervention to help a patient to lose weight?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

5. How confident are you that you can prescribe a plan for weight management for your patient?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

6. How confident are you that you can obtain a diet history and assess for unhealthy behaviors in your patient?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

7. How confident are you that you can respond to a patient's questions regarding weight management?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

8. How confident are you that you can assist a patient in setting realistic goals and making lifestyle changes for weight loss?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

9. How confident are you that you can collaborate and refer patients to other providers, such as dietitians when appropriate?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

Rate yourself by circling the response which most closely applies to you.

10. Weight loss counseling and management is difficult.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

11. It is difficult to find the time to address weight management with my patients while in clinic.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

12. I have a thorough knowledge of weight loss management and feel qualified to treat overweight/obese patients.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

13. I am usually successful in helping overweight/obese patients lose weight.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

14. Patients are likely to benefit from weight loss counseling while being seen in primary care.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

15. Obesity is a condition that is treatable.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

16. Most obese patients will not lose a significant amount of weight.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

17. I feel uncomfortable addressing weight loss with patients.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

18. Changing patient behavior is futile.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

Please write two barriers that you believe are important in hindering discussion of weight loss with patients:

- 1.
- 2.

Appendix F: Participant Survey (Post-intervention)

This survey is designed to assess provider and nurse confidence and perceived barriers in providing weight management counseling for overweight and obese patients. Your opinions and/or individual preferences are important. This survey is anonymous. Thank you for sharing your time in completing this survey.

On a scale of 0 to 10 with 0 being not confident at all, and 10 being extremely confident, please answer the following questions:

1. How confident are you in using motivational interviewing to help a patient to lose weight?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

2. How confident are you in utilizing the 5As (assess, advise, agree, assist, arrange) as a counseling strategy to assist a patient with weight loss management?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

3. How confident are you that you can ascertain a patient's readiness and ability to work on weight loss based on stage of readiness for change?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

4. How confident are you that you can provide a brief counseling intervention to help a patient to lose weight?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

5. How confident are you that you can prescribe a plan for weight management for your patient?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

6. How confident are you that you can obtain a diet history and assess for unhealthy behaviors in your patient?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

7. How confident are you that you can respond to a patient's questions regarding weight management?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

8. How confident are you that you can assist a patient in setting realistic goals and making lifestyle changes for weight loss?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

9. How confident are you that you can collaborate and refer patients to other providers, such as dietitians when appropriate?

Not confident at all ----0----1----2----3----4----5----6----7----8----9----10----Extremely Confident

Rate yourself by circling the response which most closely applies to you.

10. Weight loss counseling and management is difficult.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

11. It is difficult to find the time to address weight management with my patients while in clinic.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

12. I have a thorough knowledge of weight loss management and feel qualified to treat overweight/obese patients.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

13. I am usually successful in helping overweight/obese patients lose weight.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

14. Patients are likely to benefit from weight loss counseling while being seen in primary care.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

15. Obesity is a condition that is treatable.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

16. Most obese patients will not lose a significant amount of weight.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

17. I feel uncomfortable addressing weight loss with patients.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

18. Changing patient behavior is futile.

(Strongly Disagree) (Disagree) (Uncertain) (Agree) (Strongly Agree)

Please write two barriers that you believe are important in hindering discussion of weight loss with patients:

- 1.
- 2.

Appendix G: Project Timeframe Table

Process Objectives	Responsible Party	Participants	Approximate dates
1. Development of pre and posttest survey and educational training intervention	Project director	Project director and Ball State University Advisor	May 2015
2. Advertise project via Patient Aligned Care Team Monthly meeting and email	Project director	Project director, nursing supervisors, Primary care supervisors, RN and LPNs	August 2015
3. Secure location and dates for educational session	Project director	Information Technology department assistant and Project director	August 2015
4. Obtain data on number of patients who enroll in Move	Project director	Project director, privacy officer	August 2015
5. Administer pretest via email link	Project director	Health care providers and nurses	September 2015
6. Conduct educational sessions	Project director	Health care providers and nurses, Information technology assistant	October 2015
7. Implement clinical reminder and have patient education folders available.	Project director	Health care providers and nurse	November 2105 – January 2016
8. Obtain data on number of patients who are provided patient education folder. Send out post-test survey.	Project director	Health care providers and nurses, clinical reminder specialist	January 2016
9. Write up results of project and submit completed manuscript	Project director	Health care providers and nurses	February- April 2016