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Obesity Surveillance in Childhood

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This is to certify that the doctoral study by

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Abstract

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Project Submitted in Partial Requirement

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Abstract

Current practice behaviors for obesity management have remained refractory. Research has shown that lack of time and poor training/skills by primary care providers has led to poor or absent obesity counseling in practice. The purpose of this intervention was to facilitate obesity counseling in a pediatric office by using an evidence-based model called the 5As model of behavioral change. Lewin's change theory was the framework for this project to help clinicians transition their practice to include the 5As model in practice. The project consisted of a 30-minute power point presentation that included 2 case samples demonstrating how the 5As would be applied to each scenario. A physician and two family nurse practitioners evaluated the program via an open-ended survey on their obesity approach and thoughts on the 5As model. The results showed 100% support for the 5As model. All 3 participants stated they would implement the 5As model into practice and had positive remarks on the simplicity of its application. To help prevent clinical inertia and combat childhood obesity providers' must be made aware of the latest evidence and recommendations available to them. Project such as this one serve to merge research into clinical practice. The long-term social implications of getting the 5As into practice can help the United States meet Healthy People 2020 objectives and promote preventive care.

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Section 1: Nature of the Project

Introduction

Obesity has become an epidemic with devastating health effects. Currently in the United States 36% of adults and 17% of children are considered obese (Center of Control and Disease Prevention [CDC], 2013). If obesity continues at this rate the health care expenditure could reach 861 to 957 billion dollars by 2030, which is about 16% to 18% of U.S. health care expenditures (American Heart Association, 2013). At an individual level, the medical costs associated with childhood obesity over a lifetime totals about $19,000 per child compared with those for a child of normal weight (Finkelstein, Graham, & Malhotra, 2014). These staggering statistics are only made worse with what the research is showing. According to the CDC, "childhood obesity has more than doubled in children and quadrupled in adolescents in the past 30 years" (2013, p. 1). It has been well established that overweight and obese children stay obese into adulthood (World Health Organization, 2014). To combat obesity, preventive efforts must be taken early in life to promote healthy growth and development from infancy to adulthood. The goal of this project was to introduce an evidence-based model into practice to help facilitate the identification of a child's weight status to take action towards prevention or management of obesity.

Problem Statement

Despite the growing recognition of the negative health consequences associated with obesity and the substantial research in this area, the nation has not made any notable progress. Obesity levels continue to rise, along with the chronic illnesses associated with

it. The research and clinical gap in the management of obesity is evident (Bardia, Holtan, Slezak, & Thompson, 2007). Steps must be taken by providers to bring evidence based protocol into practice to help combat obesity. With any public health crisis, prevention is key and action cannot be delayed. Childhood obesity can no longer continue at its current rate. According to Heathy People (2010 p. 1), "obesity increased 54.5% in children aged 6–11 years, from 11% to 17% (objective 19-3a) and 63.6% in adolescents aged 12–19 years, from 11% to 18% (objective 19-3b), moving away from the 2010 targets of 5%. At the same time, Healthy People (2010 p. 1), reported that "the proportion of persons with healthful eating patterns (objectives 19-5 through 19-11) showed little change. These objectives remained well below their 2010 targets" (p. 1). Whether the nation will obtain Healthy People 2020 objectives will depend on successfully implementing interventions that focus on early detection and prevention.

Purpose Statement

Obesity counseling in pediatric offices has not been consistent. Research has shown that lack of time and poor training/skills by primary care providers has led to poor or absent obesity counseling in practice (Gunther, Guo, Singield, Rodgers, & Baker 2012). The 5As model will serve to facilitate obesity counseling. I have introduced the 5As model to a pediatric office to help them identify at risk or obese pediatric patients so that needed nutritional counseling is provided. The goal is that through the introduction of this model, the clinic can help meet Healthy People 2020 objectives: increase the proportion of providers who regularly assess body mass index (BMI), increase the proportion of office visits by children that include counseling about nutrition or diet,

prevent inappropriate weight gain in children aged 2 to 18 years, reduce consumption of calories from solid fats and added sugars and increase the contribution of fruits to the diets of the population aged 2-18 years of age. A pediatric office is the ideal setting to provide preventive care early in life through education on healthy lifestyle changes (Gunther, Guo, Singield, Rodgers, & Baker 2012).

Background

Overweight/obesity can be identified by calculating an individual's BMI. The formula involves the person's weight in kilograms divided by the square of his or her height in meters. A BMI of equal to or greater than 25 is considered overweight. A BMI over 30 or more is considered obese. The BMI is considered an acceptable measure to screen for obesity and its health risk (CDC, 2014). This tool can be used in children as early as 2 years. However, in children aged 2-20years, the BMI number must be plotted on the CDC BMI-for-age growth charts to obtain a percentile ranking according to their age and gender. A percentile in the 5th-85th category is considered healthy weight, the 85th -95th percentile is considered overweight and equal to or greater than the 95th percentile is considered obese (CDC, 2014).

The health consequences of obesity are many. Researchers have shown that a BMI of greater than 25 is associated with diseases that have been ranked as the leading causes of death in America. These diseases include heart disease, cancer, stroke, and diabetes. Poor diet and physical inactivity may soon overtake tobacco as the leading cause of death (Mokdad, Marks, Stroup, & Gerberding, 2004).

Obesity is a multifactorial problem. It has been widely established that obesity is caused by our environment, family history/genetics, age, metabolism, behavior, inactive lifestyle, certain health conditions and/or medicines (National Heart, Lung, and Blood Institute, 2014). Some of these factors are non-modifiable, meaning that they cannot be changed or altered. For those factors that are modifiable such as lifestyle habits, the literature was examined to evaluate what interventions were available that were considered efficient and practical for both the patient and provider.

The current available effective weight loss interventions include dietary therapy, physical activity, diet and physical activity, behavior therapy, pharmacotherapy, and surgery. An evidenced-based review was conducted by Orazano and Scott in 2004 to provide a resource for primary care physicians that synthesized the evidence and recommendations for the treatment on obesity in a practical manner that could be used in practice. They categorized weight loss treatments in order of their strength of recommendation. A category A, means that the recommendation is consistent and good quality research. It requires substantial numbers of randomized controlled trials (RTCs) involving substantial numbers of participants. Of the available weight loss interventions dietary therapy, physical activity, and diet/physical activity are Category A (Orazano & Scott, 2004). A category B is used "when few RCTs exist, they are small in size, and the trial results are somewhat inconsistent or trials were undertaken in a population that differs from the target population of the recommendation" (Orazano & Scott, 2004, 362). Behavior therapy, pharmacotherapy, and surgery are considered Category B recommendation (Orazano & Scott, 2004). The purpose of this paper is to assess how the

5As model of behavioral change model, a tool to manage obesity, will impact the identification and counseling provided to at risk or obese children.

Project objectives

The goal for the 5As model of behavioral change is to help identify at risk or obese children and offer an intervention that is appropriate for their level of change stage (Canadian Obesity Network, 2014). In this educational intervention, I will provide an evidence-based approach in providing behavioral counseling to at risk children and families. The objectives for this project included:

1. increase staff knowledge on the 5As model of behavioral change mode
2. increase knowledge on the importance of making the diagnosis of overweight and obesity
3. increase knowledge on the importance of formulating a treatment plan for overweight and obese children and
4. increase knowledge on the importance of encouraging healthy behavior to prevent obesity

Framework

In this project, I will use Lewin's change theory's (1950), to help clinicians move through the change process and help them identify the patient's readiness to change. Lewin's model is a 3-step process. The first step is to unfreeze. This means generating motivation for change in the practice. In the step the education provided must convey the message on the crisis of obesity as well as *how* and *why* the practice is not identifying at risk or obese children with its current methods. The "*why"* the practice needs to change

will be communicated clearly to win support from the stakeholders (Nursing Theories, 2011). . The second step is change. In this step, the stakeholders must understand how the 5As model of behavior change will benefit their practice. In this step, education is provided on the evidence that supports this model, the ease and feasibility of application and simple case studies on how it can be applied. Finally, the last step is to refreeze. This occurs when change has become a habit or normal work procedures. (Nursing Theories, 2011). In this project, I will focus on providing support and training, identifying what supports the change and identifying barriers to sustaining the change to provide organizational stability and confidence.

Definition of Terms

The 5As will be defined in this section. The first A in the 5 As model of behavior change stands for *Ask*. The provider must ask the family for permission to discuss weight status of the child and explore readiness to change. Here the provider should ask questions such as: "Are you concerned about your child's health?", "Are you concerned about your child's weight?" or "Would it be alright if we discussed your child weight?"(Canadian Obesity Network, 2014). This will help to create an environment that is nonjudgmental and uses a family centered approach. The 2nd A stands for *Assess*. In this area the provider asses the child BMI/stage, obesity risk and impact, and identifies any root causes of weight gain. According to Freedhoff and Sharma (2010), to assess severity of obesity it can be classified into 4 stages called the Edmonton Obesity Staging System(EOSS). In Stage 0 there is no apparent obesity related risk. This means the physical examinations and labs are within normal range. In Stage1: preclinical risk

factors the patient has one or more obesity related sub clinical risk factors. Examples include elevated blood pressure, impaired fasting sugar, elevated liver enzymes, dyspnea on moderate exertion, mild functional limitation etc. Stage 2 the patient has one or more established obesity related chronic diseases requiring medical treatment. Stage 3 is when a patient has end organ damage such as heart failure, diabetic complications, incapacitating osteoarthritis, myocardial infarction. Finally, stage 4 the patient has severe disabilities from obesity related chronic diseases. This staging helps to determine how aggressive and urgent the treatment for obesity needs to be (Freedhoff & Sharma, 2010). The third A stand for *advise*. Here education is provided to the family on obesity related risk factors, benefits of weight loss, and nutritional and physical activity recommendation. Examples include educating on the importance of reading food labels (Level II evidence), education on obesity and its associated health risk (Level I evidence), and highlight the importance of substituting sedentary activities for low-to moderate intensity physical activity(Level III evidence). The forth A is for *agree*. This step requires setting realistic and achievable terms for modest weight loss 5%-10% of initial body weight (Level III evidence). The fifth A is for *assist*. This steps involves helping patients overcome identified barriers, teaching weight-maintenance skills, such as self-monitoring (Level 1 evidence), reviewing food and physical activity diaries on follow up, provide patients with a list of local community resources (ie gyms, walking groups, and parks) and helping the patient adopt and maintain active lifestyle. (Plourde & Prud'homme, 2012). Appendix A & B provides an example of the 5A model for clinical use.

Nature of the project

In this project, I plan to evaluate whether an educational program on the 5As model of behavioral change increased awareness and acceptance on an evidence-based approach for childhood obesity. The goal was that, with the knowledge acquired, providers would implement the 5As model into practice and serve as a model for other clinics to follow. The project consisted of a 30-minute Power Point presentation with a posttest evaluation on the presentation. This approach permits the practitioners the opportunity to provide feedback based on their knowledge and expertise on the use of the 5As model in their practice.

The educational model consisted of a 30-minute Power Point presentation that highlighted the need for change, the benefits of the 5As model, the objectives of the presentation and ease and feasibility of implementing the 5As into practice. The Power Point included two case samples demonstrating how the 5As would be applied to each scenario. The participants included the staff from a pediatric office which includes the physician and two family nurse practitioners. The data collection consisted of an open-ended questionnaire. Appendix D includes an example of the post-test.

Assumptions

One assumption that I made in this project was that increased knowledge on the 5As would result in the implementation of the model into practice. There is no way of telling whether the office will successfully implement the 5As into practice. The goal is that that the office will see the need for change and see how the 5As can benefit their

clinic. The end result is that they will be made aware of an evidence based model that can help prevent and treat childhood obesity.

Scope and Delimitations

The focus of the project was to introduce an evidence-based model that would assist in identifying healthy growth development and creating an appropriate treatment plan. The project is intended for health care providers which include nurse practitioners and a pediatrician. The goal is to familiarize providers with how the 5As model would be used in clinical practice to provide them with the confidence needed to counsel families and children on obesity prevention and management. This project will not focus on a specific diet. It will direct providers to promote healthier life style choices recommended by the American Academy of Pediatrics (2010). These recommendations include breastfeeding, introduction of cereal, serving sizes, recommended activity level, and appropriate prompt referral to specialist when deemed necessary.

Limitations

Education on the 5As model occurred in a pediatric office with a staff of three health care providers. This made the sample size small therefore, results cannot be generalized. However, this sample size was representative of how most pediatric clinics operate. The 5As model focuses on delivering vital nonbiased information to make a clinic aware of evidence based model available to them for approaching childhood obesity.

Significance

Nurses have the opportunity to be leaders and advocates for prevention and treatment of childhood obesity. The 5As model is an evidence-based approach that can be utilized in clinical practice (Canadian Obesity Network, 2014). Nurses can take action and introduce and implement the 5As into practice to help meet Healthy People 2020 objectives. This model is an efficient and feasible approach for any clinical practice from infancy to adulthood.

Plourde and Prud'homme (2012) also suggested that the 5As model include a sixth A for *advocate*. This would involve advocating for environmental and policy changes to support healthy eating and physical activity. These policies can be nationwide and/or local ones. This would include policies on school meals, food labels, creating of parks/recreation areas, promoting farmers markets and media control on advertisement of unhealthy food products. Another potential area is to help push for organizational support and need for continuing educational hours to overcome barriers identified in previous research studies (Plourde & Prud'homme, 2012). The 5As model would be great to be implemented at a larger scale for an opportunity for continuing educational hours.

This educational intervention may not seem significant. However, to solve a problem such as obesity, nurses must raise awareness on the issue and then generate support for change. This will occur through education. Providers must be made aware on the impact obesity is having on society and how they play a role in preventing and promoting healthy growth development through early intervention.

Summary

Current practice behaviors for obesity management have remained refractory due to current barriers that exist. Studies continue to show that time constraints and lack of training in obesity management have led to clinical inertia. The 5As model for behavior change offers a time efficient evidence based model to address and intervene in childhood obesity with prevention being priority. The key is to educate provider on the existence and ease of utilizing the 5As in practice for prevention and management of childhood obesity.

Clinicians are in need of an evidence based approach in the treatment and management of childhood obesity. The 5As is a model supported by the literature for clinical use in the prevention and treatment of obesity. This model helps to eliminate the barriers identified by the literature. In section 2, I describe the evidence that supports the need for this project and the impact it will have in practice.

Section 2: Review of Literature and Theoretical and Conceptual Framework

In order to intervene or prevent obesity a provider must first identify the issue and formulate a plan. This is a straightforward concept that practices should be following to help meet Healthy People 2020 objective. According to Bardia, Holtan, Slezak, and Thompson (2007), most obese patients did not have a diagnosis of obesity or an obesity management plan made by their primary care provider. This is a significant finding demonstrating a gap in practice and research. The same study found that 1 in 5 obese patients were identified with a diagnosis and treatment plan. It also demonstrated that diagnosis of obesity was the strongest predictor of formulation of an obesity plan. I conducted a literature review in order to identify how to facilitate evidence based guidelines implementation for the treatment and management of childhood obesity into clinical practice.

Literature Search Strategy

The literature search strategy that I used was Google, PubMed and CINAHL as search engines. The key terms that I searched included: *childhood obesity, 5A behavioral model, 5As model and childhood obesity, treatment for childhood obesity, prevention of obesity, interventions for childhood obesity, recommendation for treatment of obesity, obesity counseling, and primary care and obesity management.* The literature search went back 10 years to allow for original studies done on childhood obesity and tools used in this project. The 5As model use on pediatric population is fairly new. There are few studies that were used the 5As on the pediatric population. It was initially for smoking cessation and transferred over to adult management of obesity and now children

Review of literature

Most recently, Hansen, Duncan, Tarasenko, Yan, and Zhnag (2014), found that parents are unable to tell when their children have a weight problem. This is a significant finding that perpetuates the obesity literature. Parental inability to perceive a child as overweight or obese will hinder their role in seeking help or making necessary lifestyle modifications (Hansen, Duncan, Tarasenko, Yan, & Zhnag 2014). With this new knowledge the role of the pediatrician is crucial in recognizing and educating parents about their child's weight status and necessary steps that need to be taken.

There is a legitimate concern on obesity interventions on pediatric population. However, statistics for obesity in children are staggering. What we have been observing is rise in obesity rates with notable health disparities. The CDC states that obesity has more than doubled in children and quadrupled in adolescents in the past 30 years (2015). In 2005 Olshansky, Passaro, Hershow, Layden, Carnes, and Brody, estimated that life expectancy in the United States would be reduced by one third to three fourths of a year if obesity was not reduced. "This reduction in life expectancy is not trivial — it is larger than the negative effect of all accidental deaths combined (e.g., accidents, homicide, and suicide),40 and there is reason to believe that it will rapidly approach and could exceed the negative effect that ischemic heart disease or cancer has on life expectancy" (Olshansky, et al, 2005, p. 1141). The health of our children depends on preventive strategies that halt the progression of obesity. Studies have found that problematic adiposity rebound occurs as early as 3 years of life and is associated with an increase in metabolic diseases such as diabetes (Perrin, Finkle, & Benjamin, 2007). With required

well child visit providers who observe a child's BMI starting to trend upward can offer early interventions and open a dialogue on healthy weight trajectories. Appropriate interventions in the pediatric cohort include promoting breastfeeding, limiting television, increasing physical activity and reducing sugar sweetened beverages. The evidence is growing in supporting providers offering counseling about healthy weight management in the pediatric population (Perrin, Finkle, & Benjamin, 2007).

The best way to affect the prevalence of obesity is by preventing it (American Academy of Pediatrics, 2010). It is recommended that providers educate the child and family on the consequences of obesity and appropriate lifestyle changes at well child visits (Moran, 1999). Teaching healthy behaviors at a young age will help guide their food choices during childhood and into adulthood (Teach Nutrition, 2014). Healthy eating is a cornerstone in preventing obesity. If healthy foods are introduced early in life this becomes their dietary preference. In fact, research has shown familiarization can not only help children come to accept healthy food but actually prefer it (Birch & Anzaman-Frasca, 2011). The 5As model permits the provider to educate the child and family on the consequences of obesity and help motivate families to make lifestyle changes necessary to foster healthy growth development. This approach supports the recommendation of the American Academy of Pediatrics (Committee of Nutrition, 2003).

Gunther, Guo, Singield, Rodgers and Baker (2012), examined why providers were not adopting the National Institute of Health and Clinical Excellence (NICE) obesity guidelines into practice. Gunther e tal (2012), identified barriers involving patients, providers, and support services for providers. These barriers identified by providers in

implementing evidence-based guidelines for the management of obesity included: a lack of time, lack of counselling skills, lack of consistency of approach across the practice, and limited support and education on the issue. For the patients' barriers consisted of: cost, previous failures, denial about being obese, self-blame, and they saw the practice as a last resort. Enabler to adopt evidence-based protocol into practice included: trust between the practitioner and patients, practitioners with skill and confidence to raise the issue of obesity, and having practice based procedures and weight management services (Gunther, GUO, Sinfield, Rogers, &Baker, 2012).

In another study, Muo, Sacajiu, Kunins, and Deluca, (2013) examined weather BMI chart reminders improved the diagnosis and management of obesity and overweight patients. These authors found that BMI chart reminder had no significant difference in documentation of weight diagnosis and weight management plans. They attributed this finding with incomplete documentation, lack of time, lack of training or confidence in weight management (Muo, et al, 2013). Again, themes of lack of time and knowledge skills emerge as barriers for the management of obesity. In this study Muo et al. (2013), recommended the need for practical interventions in promoting physician recognition and management of overweight and obesity.

Recommendations for training and organizational support for obesity management are also a recurrent theme in research articles. This Brown, Stride, Psarou, Brewins and Thompson, (2007) examined nurses' practices, beliefs and attitudes in managing obesity in primary care. The nurses in this study reported they lacked of training in obesity management and felt that they did not have organizational support

(Brown, et al, 2007). This study adds the need for possible continuing education hours in obesity management and the importance of organizational support.

Interventions have been proven to be effective treatment for obesity in primary care behavioral counseling was found to be safe and effective. LeBlanc, O'Connor, Whitlock, Patnode, and Kapka, (2011), conducted a systemic evidence review to summarize effectiveness and harms of primary care relevant weight loss intervention in primary care. The results showed that behaviorally based treatment resulted in 3-kg greater weight loss when compared to control participants that received minimal intervention (LeBlanc, O'Connor, et al, 2011).

The 5As model was initially used for addiction management such as smoking in Europe. The lessoned learned from the application of the 5As in smoking cessations are now being applied in obesity management. In smoking cessation, the 5As intervention helped motivate smoking cessation, referral to more intensive behavioral support and improved medication prescription to assist in smoking cessation (Lewis, Joly, Adab, daley, Jebb, et al, 2013). The success the 5As had with smoking cessation is now being applied to provide quality counseling to obese patients.

The 5As model was developed by the Canadian Obesity Network (2014), to provide clinicians with a theory driven approach to talk with their patients about their weight an efficient method to manage obesity and support behavior change. Research conducted on the implementation of the 5As into practice has shown a two fold increase in the initiation of obesity management and a statistically significant increase in the perceived follow-up/coordination efforts (Rueda-Clausen, Benterud, Bond, Olszowka,

Vallis, & Sharma, 2013). Rueda-Causen, et al. (2013) pilot study demonstrated that the 5As facilitated weight management in primary care by "promoting physician-patient communication, medical assessment of obesity and plans for follow up care" (p 39).

Jay, Gillespie, Schlair, Sherman and Kalet, (2010), looked to describe the quality of physicians' obesity counseling and to determine association between the quality of counseling and obese patients' motivation and intentions to lose weight. This study found that patients who received more 5As counseling techniques had higher levels of motivation and intentions to lose weight. It also found that patient center care was positively associated with intentions to eat better and exercise (Jay, Gillespie, Schlair, Sherman and Kalet, 2010).

Literature Review Related to Method

The literature review provided evidence of an approach a provider can take to deal with weight status with their patients. This 5As model has research supporting its use in clinical practice to help eliminate barriers identified. Currently the research is demonstrating a lack of skills, knowledge, and times are inhibiting providers from taking proactive measure to prevent childhood obesity (Gunther, GUO, Sinfield, Rogers, &Baker, 2012). The 5As model has been proven to be successful initially in smoking cessation and has now made its way in managing weight status. Initial, studies focused on adult but now more studies are being conducted on the 5As on managing childhood obesity. This approach is appropriate for use in a pediatric office because there is no specific diet that is recommended. It advises on making healthier lifestyle choices such as

breastfeeding, consumptions of fruits and vegetables, limiting TV time, increasing physical activity, reducing simple sugars etc. The literature review focused on limitation for providers in providing obesity counseling, level of support for 5As model and evidence based recommendations for childhood obesity.

The 5As model is endorsed by Centers of Medicare and Medicaid Services (CMS) & the US preventive Services Task Force (USPSTF). Acknowledging that barriers such as lack of confidence in managing obesity and lack of time are evident in clinical practice, the USPSTF adopted the five As construct to help clinicians deliver an evidence based approach in behavioral counseling interventions. This model permits the provider to "asses risk and readiness to change, advise specific behavioral changes, agree on specific goals in a collaborative manner, assist via addressing barriers(motivational interviewing) and arrange to follow up or refer the patient to further treatment" (Schlair, Moore, McMacken & Melanie, 2014). Practitioners now have a framework to provide an evidence based approach to the management and prevention of obesity. This model will be used as a framework to approach childhood obesity management in clinical practice.

Background and Context

The educational intervention on the 5As model will be for a pediatric office that is located in a small community in Alton, Texas. The population is mainly Mexican American children from day 1 of life to 18 years. In Texas, obesity is a serious topic. Currently, 66.7% of Texans are overweight or clinically obese. Texas children aged 10-17 have an obesity rate of 20.4% compared to 16.4 % of all US children (Combs, 2014). Obesity is not affecting everyone equally. An obesity disparity exists. Currently in Texas,

higher rates are associated with being Hispanic/black, having lower educational attainment/ income, and living in rural counties (Combs,2014). The county where my project will be conducted in is Hidalgo. This area is known as one of the top ten fattest metro areas that "pays more than 400 million in unnecessary health care cost each year because of its obesity rate" (Bryner, 2012).

It helps to be familiar with the environment and food preferences when creating a treatment plan for the prevention and treatment of childhood obesity. Culture plays an important role when considering advising patients on lifestyle modifications. I grew up in the Rio Grande Valley and am familiar with the lifestyle and environment for this population. I have done clinical hours in the pediatric office where the project will occur and identified potential facilitators and barriers for implementing the 5As into practice.

Summary

The 5As model will help to provide evidence based care towards the treatment and management of obesity. This model will allow for the provider to take in account readiness to change, cultural sensitivities, improves communication and provides for follow up. This model has the evidence to support it and has been implemented successfully in clinical practice (Rueda-Clausen, Benterud, Bond, Olszowka, Vallis, & Sharma, 2013).

Section 3: Methodology

The 5As model educational intervention will help bridge research into practice. A study done in 2007 by Bardia, Holtan, Slezak, and Thompson, showed that physicians are not making the diagnosis of obesity. This is a significant finding because what has been established is that there is a strong correlation between making the diagnosis and formulating a plan (Bardia, Holtan, Slezak, & Thompson, 2007). The 5As offers a simple and efficient method to recognize and a child weight status and provide appropriate intervention.

Approach and Rationale

The 5As model can be used in any clinical practice for any age group. However, this project is for a pediatric office. This population was chosen because the best treatment for obesity is prevention. The American Academy of Pediatrics recommends starting at an early age and teaching parents about eating nutritious food and age appropriate physical activities that can help promote healthy growth development. Research shows that, "physical, social and emotional habits are developed during the early years and continue into adulthood; thus these habits can be improved in early childhood to prevent and reduce obesity and a range of chronic diseases." (American Academy of Pediatrics, 2010, p. 11). If parents can be made aware of risk factors that contribute to overweight and obesity we can intervene to stop the progression of obesity.

This project was not a research study. It was research translation project for an education intervention for a pediatric clinic on an evidence-based method, the 5As model, for the treatment and management of obesity. The participants included the staff from a

pediatric clinic. The staff includes 2 family nurse practitioners and 1 physician. The family nurse practitioners worked independently in a pediatric clinic, as did the pediatrician. Although, the sample size was small this was a typical representation of how a pediatric office operates. I purchased the image of the 5As checklist (see appendix B) to use for educational purpose the model. The 5As of Obesity Management was licensed under a Creative Commons Attribution-NonCommercial –ShareAlike License. This allows users permission to copy, share, transmit and remix/adapt the work so long as it is not sold or used for commercial purposes.

Evaluation of the program consisted of an open-ended post-test that I created. The posttest was piloted by a group of 7 expert nurses across the country to test for clarity, relevance and appropriate knowledge level. Information collected was kept confidential including the names of the participants. Any hard data collected that came from the posttest had no identifiers and only I had access to the data. The information was collwcted on paper and stored in a locked filing cabin. My evaluation included an assessment aimed at the increased knowledge/skills on obesity management and if they would be willing to implement the 5As into clinical practice.

Evaluation Plan

The posttest evaluation consisted of 5 open ended questions. The post evaluation questions are attached in appendix D. I posed these questions to assess if the providers felt there was a need for change in their treatment of childhood obesity and how they rated their current confidence in providing obesity counseling. The results showed that providers were eager and enthusiastic about implementing the 5As into practice.

However, similar to the finding in Gunther, Guo, Singield, Rodgers and Baker (2012), time constraints and knowledge on how to provide counseling were a big concern for providers. Although, the 5As model is a simple and time efficient model providers' were concerned that their office was a busy practice and they did not want to spend more than 15 minutes in providing nutritional counseling. I offered reassurance that effective 15 minutes counseling could be provided to patients and families so that neither party was overwhelmed with information. I also reminded providers that Texas Medicaid reimburses weekly obesity counseling visit for the first month and every other week for months two through six. If patients lose at least 6.6 pounds, they also get a monthly visit for months 7 through 12 (Digate, 2012). So, providers could decide what topic to tackle based on the patients nutritional education throughout scheduled visits.

As for their concern on providing obesity counseling providers were reminded about the REAP (rapid eating and activity assessment for participants) tool. This tool is used to quickly assess a patient's diet and physical activity and facilitates brief counselling by a primary care provider. This tool was found to be user friendly, reliable and valid for use in nutritional assessment (Gans, Risica, Wylie-Ross, Strolla, McMurray & Eaton, 2006). It consists of 31 questions that are answered by a patient using a bubble answer sheet. This tool includes a key that aids in discussing the patient's answers and counseling them appropriately. The counseling can take up to 1-9 minutes depending of the patients' health priorities (Gans, Risica, Wylie-Ross, Strolla, McMurray & Eaton, 2003). The REAP tool along with 24-hour recalls, food records, and food frequency questionnaires are approved for pediatric population (Krebs, Himes, Jacobson, Nicklas,

Guilday, &Styne, 2007). Parental resistance was another issue brought up. This issue was not found in the literature. However, there was a consensus among attendees that parents were not taking responsibility and blame the child for their eating habits. I offered reassurance to providers and they agreed that through education parents could take the necessary responsibility and actions to help the child make long term lifestyle changes.

These findings confirmed what the literature has demonstrated. Health care providers are concerned with time constraints needed to provide obesity counseling. Again, this reinforces the need to have effective counseling models in practice and continual educational service provided to practitioners to reassure and encourage preventive counseling in practice. Practitioners are willing to implement change however; they need information and reassurance provided to them on the benefits and effectiveness of the intervention.

Summary

The 5As model is an evidence based approach for treatment and management of childhood obesity. It provides an efficient method for assessing a child's weight status to provided need intervention to promote healthy growth development. The barriers identified by the literature and in practice can be diminished through educational in-services that reassure providers on their skills and knowledge to succeed in implementing evidence based guidelines.

Section 4: Finding, Discussion and Implementation

The purpose of this intervention was to close the research and clinical gap noted in the management of childhood obesity. The objectives where to increase knowledge on the use of the 5As model, emphasize to practitioners the importance of making the diagnosis of obesity and formulating a treatment plan for overweight and obese children and finally, to increase education provided to children on healthy behavior to help prevent obesity. I delivered a 30-minute presentation on the 5As model to a pediatric office that demonstrated practitioner's acceptance of the model into practice. The results showed that providers were willing to implement evidence-based guidelines into practice but require education and reassurance to make it happen.

Practice Implications

Practice implications associated with these results indicate the need for continuing education hours in the area of preventive care. If, a discipline such as nursing, supports and encourages preventive care then nurses need to produce and encourage continuing educational hours in areas such as obesity counseling. Providers did not feel they were adequately trained to provide appropriate nutritional counseling. When a quick search was done on NetCE, a big continuing education provider for nurse practitioners, it did not have obesity counseling education offered. There was one coarse under pediatric obesity that mainly focused on prevalence, cost, etiology, diagnosis and complications of obesity. It briefly touched on topic to address under obesity counseling, but no structural unified method was provided for practitioners to utilize.

Research Implications

Based on this research, I recommend more pilot studies on the 5As in a busy practice, and further exploration into the impact of educational in-services on behavioral counseling have on obesity. To get more buy in from practitioners on using the 5As in practice, more pilot studies need to demonstrate success in a busy practice. Most pediatric clinics see 60-100 patients a day. It is crucial that studies implement the 5As in a practice that see that many patients a day, and show the ease and feasibility in its implementation. Providers need to hear how a busy practice succeeded in implementing an obesity counseling model into practice. Finally, research needs to be conducted on the impact continuing educational hours or in-services on behavioral counseling models have on obesity. By producing studies that demonstrate the impact these programs have on social issues such as obesity support can be gained in mandating educational hours for preventive care.

Project strength and limitations

The project strength was that it demonstrated that providers are eager to implement and try evidence-based methods for the treatment and management of obesity. Providing education to providers is essential to get them to accept and implement evidence into practice. The limitation of this project was its small sample size however, this allowed for open dialogue. Future, recommendations are to provide the educational intervention to a larger audience to have results that are significant and accurate.

Analysis of Self

This project helps to reinforce the role of a scholarly practitioner. Not only was a research gap identified but an evidence based solution was found. There is a need for project that have clinical relevance to be produced and introduced into practice to help improve health outcomes and cut health care expenditures. Clinical practice is need of scholarly practitioners that help implement evidence based findings into practice. This actions help prepare a nurse for leadership positions and command respect from other disciplines. This project helped me grow as a scholarly practitioner by being an expert clinician in evidence based methods for the treatment and management of childhood obesity and disseminating that knowledge to other clinicians.

Summary

Obesity is a complex and multifactorial disorder. In order to prevent and halt it progression we need to have evidence based approaches in practice. This project demonstrated that providers are willing to learn and implement strategies that help in the treatment and management of obesity. However, education and reassurance is key in having providers bring evidence into practice. By introducing evidence based model such as the 5As into practice, practitioners can help the nation meet Healthy people 2020 objectives and prevent the negative health sequelae of obesity.

Section 5: Scholarly Product

Evidence based knowledge on the treatment, management and prevention of childhood obesity was disseminated to a group of pediatric health care providers. The final product delivered a comprehensive and effective model for providing obesity counseling. The 5As model was received well by clinicians and will help merge research into clinical practice.

Program Evaluation

The DNP final project was delivered to a pediatric office via a power point presentation. This location was chosen because of the high prevalence of obesity. The project discovered similar finding as the literature review for barriers in implementing evidence based recommendation for prevention and management of childhood obesity. These barriers consisted of time constraints and limited knowledge and skills for providing obesity counseling. After, the project was implemented feedback from the post evaluation questionnaire was positive. The providers felt that they could implement the 5As model into practice in a time efficient manner and provide adequate counseling to prevent and treat childhood obesity. All 3 participants stated they would be implementing the 5As into practice because of its simplicity yet effective method to provide obesity counseling in children.

Conclusion

In conclusion, this project was conducted to merge research into clinical practice. This project serves a foundation to support the need for educational programs on obesity counseling for health care providers. This project demonstrates that providers are eager

and enthusiastic about providing evidence based care however, they need the support and education. An education program, such as this one, helps to bring knowledge and reassurance to clinicians so that the best care is delivered to our patients. A larger scale educational intervention will help to get more clinicians on board and help bring research findings into practice.

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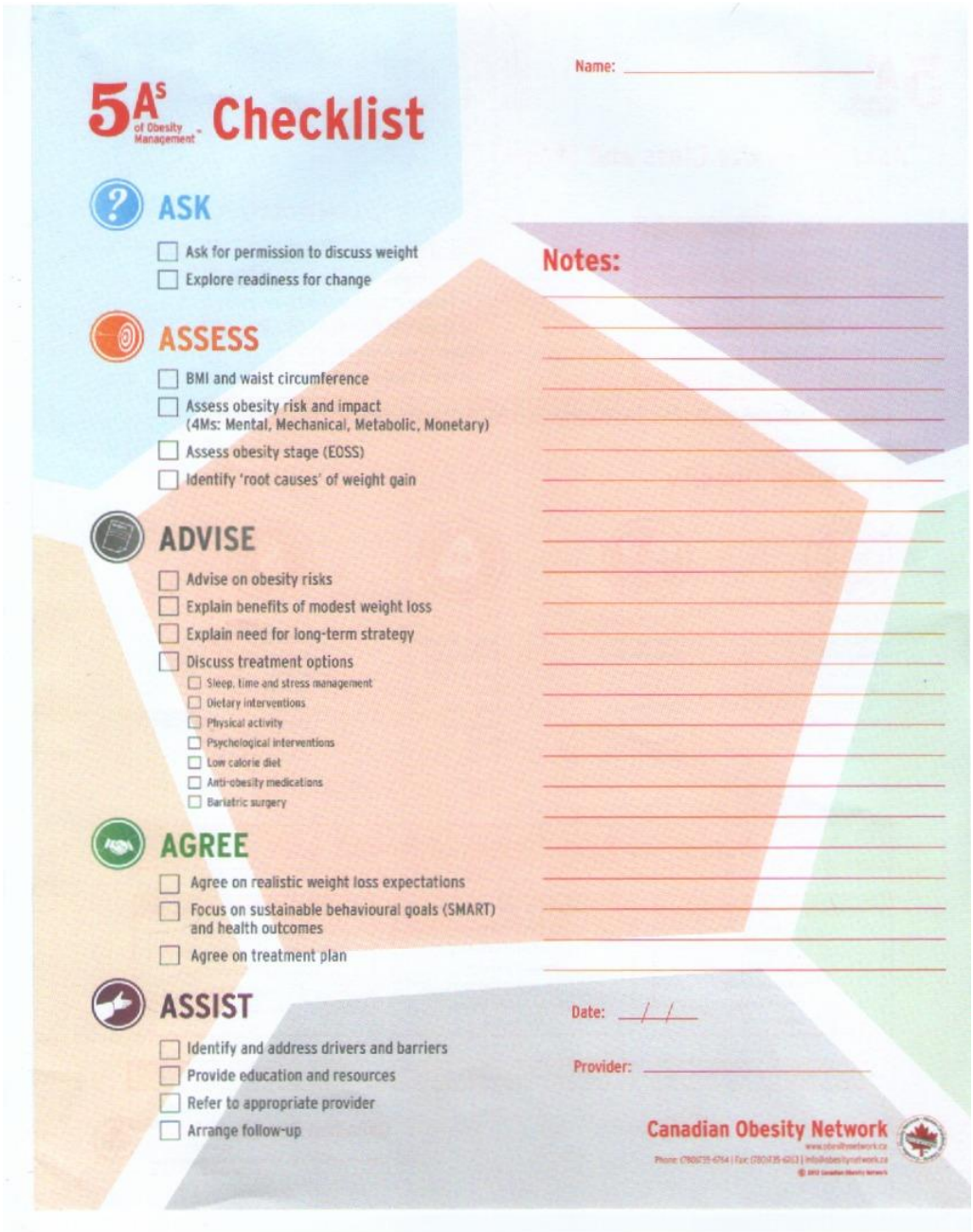
Appendix A: 5As checklist front view



5As of Obesity Management Checklist

Name: _____

ASK

- ☐ Ask for permission to discuss weight
- ☐ Explore readiness for change

ASSESS

- ☐ BMI and waist circumference
- ☐ Assess obesity risk and impact (4Ms: Mental, Mechanical, Metabolic, Monetary)
- ☐ Assess obesity stage (EOSS)
- ☐ Identify 'root causes' of weight gain

ADVISE

- ☐ Advise on obesity risks
- ☐ Explain benefits of modest weight loss
- ☐ Explain need for long-term strategy
- ☐ Discuss treatment options
  - ☐ Sleep, time and stress management
  - ☐ Dietary interventions
  - ☐ Physical activity
  - ☐ Psychological interventions
  - ☐ Low calorie diet
  - ☐ Anti-obesity medications
  - ☐ Bariatric surgery

AGREE

- ☐ Agree on realistic weight loss expectations
- ☐ Focus on sustainable behavioural goals (SMART) and health outcomes
- ☐ Agree on treatment plan

ASSIST

- ☐ Identify and address drivers and barriers
- ☐ Provide education and resources
- ☐ Refer to appropriate provider
- ☐ Arrange follow-up

Notes:

Date: __/__/__

Provider: _____

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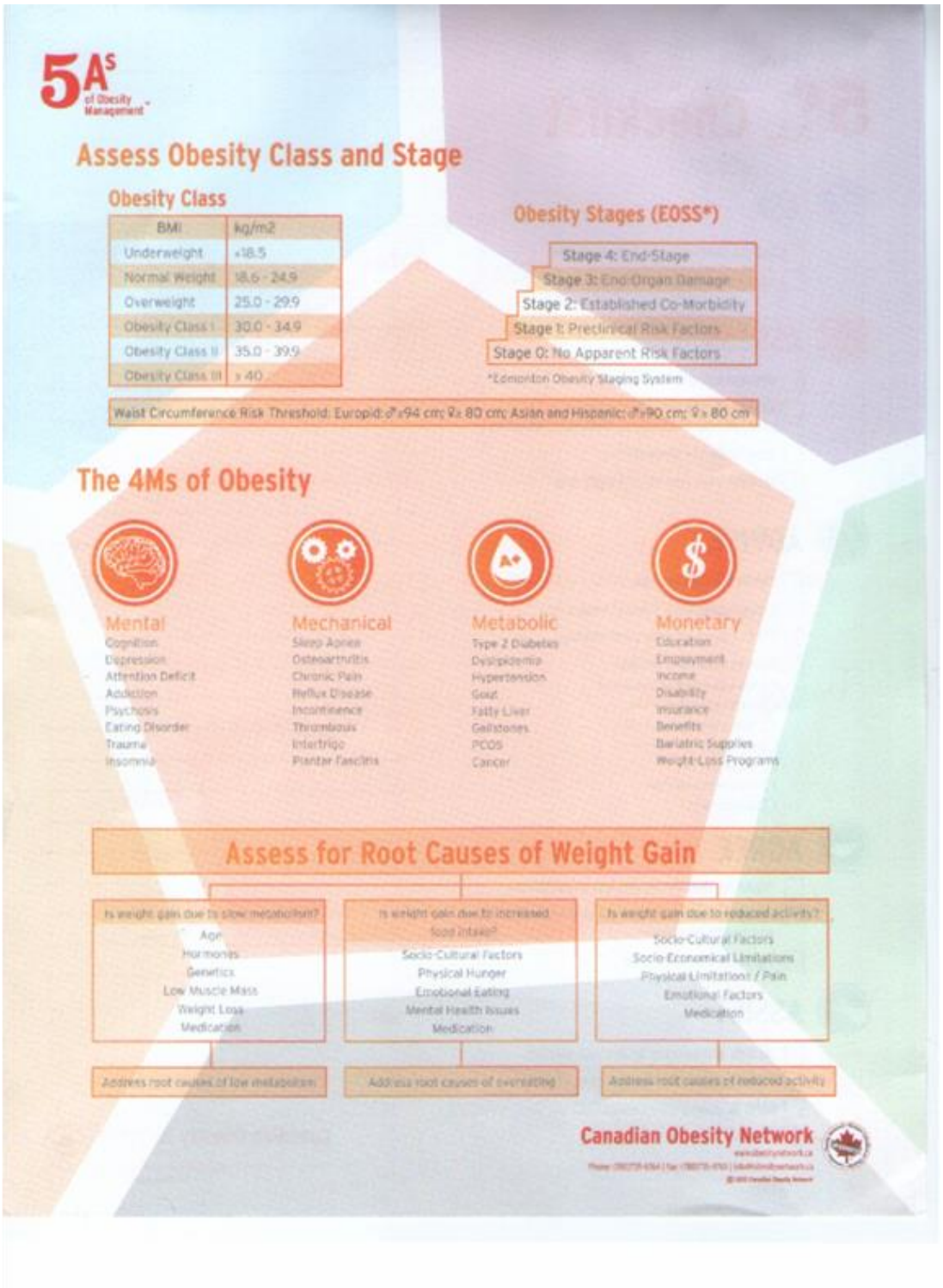
Appendix B 5As checklist back view



Appendix C: Clinical Direction

Mission Statement

To provide evidence based care for the prevention and treatment of childhood obesity with special focus on lifestyle changes as a family unit.

Goals

Increase the identification of at risk and obese children

Increase nutritional/physical activity counseling

To encourage preventive care in normal weight status children

Objectives

To increase staff knowledge on the 5 A model of behavioral change model by 100%

To increase knowledge on the importance of making the diagnosis of overweight and obesity on all pediatric patients by 100%

To increase knowledge on the importance of formulating a treatment plan for overweight and obese children

To increase knowledge on the importance of encouraging healthy behavior to prevent overweight/obesity

Appendix D: Post-Test Questions

1. Please share your thoughts about your clinic's current management and treatment of childhood obesity.

_____
_____
_____
_____

2. Please share your thoughts about the 5As model. Particularly the benefits, if any to your practice.

_____
_____
_____
_____
_____

3. Please share the potential barriers or issues of implementing the 5As into your practice?

_____
_____
_____
_____
_____

4. Please share your thoughts on implementation of the 5As model into your practice?

_____
_____
_____

5. Any additional comments/concerns with the 5As model?

_____

_____