Let's Motivate: Combating Childhood Obesity

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Abstract

Obesity has become a common health issue that impacts patients throughout their life span, including the pediatric population. A literature review was conducted to identify causes and best evidence-based practices for treating and preventing obesity in pediatric populations, leading to the question of which approach should be developed to address pediatric obesity. Based on the findings, an evidence-based policy and procedure was developed and implemented in a rural health care facility with a concern for its obese pediatric population. The policy and procedure served as a guide for healthcare providers involved in identifying, assessing, and treating weight-associated issues in the pediatric population. A DNP project was developed to determine the effectiveness of implementing the policy and procedure. It focused on how well the healthcare workers could follow the designated job duties defined in the policy and procedure. The project also determined if the policy and procedure would positively impact healthcare providers, practice, and patients. Outcomes using the Plan-Do-Study-Act model showed that an evidenced-based policy and procedure could be easily implemented for all healthcare roles involved in the care of obese pediatric patients. It was also determined that implementing a policy and procedure positively impacts patients, providers, and healthcare settings. Overall, the findings suggest that an evidence-based framework for identifying and treating obesity in childhood can positively impact patients throughout their lifespans.

Keywords: *Childhood obesity, evidence-based practices, policy and procedure, PDSA, lifespan*

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Section I. Introduction

Background

One of the top medical concerns that span the globe continues to be obesity (Gadde et al., 2018). Obesity is understood to be an excessive amount of body weight per a person's height. The Centers for Disease Control and Prevention (CDC, 2021) utilizes Body Mass Index (BMI) as a screening tool to identify a person's body fat percentage. The BMI is calculated as weight in kilograms divided by height in meters squared, [weight(kg)/height $(m)^2$]. The CDC's guidelines define overweight as a BMI between 25-30, moderate obesity as a BMI between 30 and less than 35, and a BMI greater than 35 is considered severe obesity (CDC, 2022). The main concerns associated with obesity are health issues linked to or affected by obesity, such as diabetes type 2 and cardiovascular disease (Gadde et al., 2018).

Americans view obesity as one of the most troubling health concerns in the nation (Rosenthal et al., 2017). A study (Ward et al., 2019) predicted that by 2030, one in two adults would be obese in the United States. The authors further found that the prevalence could be as high as 60 percent in some states and not below 35 percent in all states (Ward et al., 2019).

Obesity is not limited to the adult population; it also affects the pediatric population. Childhood obesity causes the same health concerns as seen in the adult population including Type 2 diabetes, stroke, heart disease, and problems with the growth and development of joints and bones (Pediatric Obesity Overview, 2021). Socio-emotional issues associated with childhood obesity are bullying, low self-esteem, and fatigue (Knopf, 2018). Current strategies to address childhood obesity have not been effective, as childhood obesity continues to increase to epidemic levels (Knopf, 2018).

The pediatric population in North Carolina has shown a rise in obesity. One reported study by the Special Supplemental Nutrition Program for Women, Infants, and Children program (WIC) showed that 15% of children in the two -four-year age group were obese, ranking NC 18th out of 51 states (*State Obesity Data - the state of childhood obesity*, 2021). The National Survey of Children's Health found that in 2019, 19.8% of 10–17-year-olds were obese (*State Obesity Data - the state of childhood obesity*, 2021). This ranks North Carolina 10th out of the 50 states for this age group. Ward et al. (2019) conducted a study utilizing the Behavioral Risk Factor Surveillance Survey, finding that up to 57% of children ages two to 19 years are projected to be obese before turning 35. The statistics for obesity in the pediatric population support the argument that healthcare workers need to establish a standard of practice to improve the current state of care.

In a rural county in Eastern North Carolina (ENC), obesity has been noted as one of the most pervasive health issues. A general health survey of the county conducted in 2019 by the state identified the county as 94th in health outcomes and 90th out of 100 counties statewide in health factors, making the county one of the unhealthiest counties in the state (Buck, 2020). The survey discovered overweight and obesity in adult and pediatric populations as significant health concerns. A driving force for improvement in health for the county is facilitating the goals identified in Healthy People 2030 (Buck, 2020). In Healthy People 2030, a benchmark for obesity in children is "to decrease the proportion of obesity in children and adolescents" (Healthy People 2030, 2021).

A privately owned practice located within an Eastern North Carolina (ENC) County has identified 10 % of their actively seen pediatric population as obese. Actively seen patients are

defined as those seen within the last 12 months. After reviewing the data gained from the overall health status of the county and the identified goal to develop a healthier community, the providers agreed that this percentage for their population was too high. While it is true that 10 percent is a lower percentage of obesity than identified by the state and national reports, the practice agreed that it was time to address the issue by developing and implementing a new policy and procedure addressing the standard of care for obese pediatric patients.

Organizational Needs Statement

The project partner was identified as a privately owned medical practice in rural ENC. The practice's mission statement is to provide up-to-date quality health care over the life span of all people within the surrounding area (The practice my site, 2021). The mission statement implies that health needs and issues will be met for all ages, including obesity. To meet this need, the practice must create a policy and procedure to address childhood obesity. The medical director agreed that this was a shortcoming of their facility and felt the development and implementation of a formal policy would benefit their pediatric population.

Utilizing Healthy People 2030 benchmarks as a guide provides further initiative to decrease childhood obesity. Health care providers can be active members in providing education and encouragement supportive of creating new healthy lifestyles, healthy weight, and optimal growth in the pediatric population, which can be accomplished by developing a policy and procedure based on current evidence-based practice to identify obese pediatric patients correctly and guide their care. The policy and procedure serve as a roadmap for the health care workers involved in their care.

Problem Statement

With the current rise of obesity in the pediatric population seen in a private medical practice, a change in current practices was needed for the healthcare providers. A formal policy and procedure needed to be developed to meet the needs of the obese pediatric population. This created a standard all health care providers may refer to when identifying and treating childhood obesity.

Purpose Statement

This Doctor of Nursing Practice (DNP) project aimed to provide a standard of care by developing a policy and procedure for use in identifying and treating childhood obesity. The standard will be shared with others to help combat the obesity epidemic in the pediatric population.

Section II. Evidence

Literature Review

The DNP student completed a literature review of published work on solutions to pediatric obesity using a literature search log and matrix. Searches used the Cumulative Index to Nursing and Allied Health Literature Database (CINAHL), accessed through the East Carolina University Laupus Health Sciences Library search engine. Medical Subject Headings (MESH) terms used for searching scholarly publications were childhood obesity, interventions for childhood obesity, body mass index for obese children, current guidelines for treating childhood obesity, and ages 2-5, 5-10, 10-15, and 15-18 years. The search resulted in over 409,000 results. The search was narrowed using the following inclusion criteria: publications after 2016, written in English, Levels of Evidence I – V, and peer-reviewed. Thirty publications met the inclusion criteria, with the majority being Levels of Evidence I – III (Melnyk & Fineholt, 2018) (see Appendix A). The result was a total of 30 journal articles left after excluding articles that did not meet at least a Level V and up, with the majority being Level III and above. Due to the overabundance of relevant journals, those focused on identifying, treating, and preventing obesity in the pediatric population were kept leaving seven journal articles for use. The findings within the literature review were compiled to formulate and develop an evidence-based policy and procedure which can be implemented by healthcare providers involved with treating the pediatric population, specifically those patients who are identified as obese.

Current State of Knowledge

The current state of knowledge for identifying, treating, and preventing childhood obesity is based more on best practices versus a set of guidelines for a practitioner to follow (Obesity,

2022). The driving force for most policies is Healthy People 2030. A meta-analysis conducted by Bae & Lee (2021) identified guidelines for educating patients and guardians on the importance of maintaining a healthy weight, risk factors, and health concerns of obese pediatric patients. One can create a healthier lifestyle through education on healthy eating habits, having an active lifestyle, getting proper sleep, and tracking progress throughout the lifespan (Sanyaolu et al., 2019).

Current Approaches to Solving Population Problem(s)

Several approaches to solving the problem of obesity in the pediatric population were found in the literature. The first was to educate on healthy eating habits (Obesity, 2022). Most overweight people have unhealthy eating habits. This can be from poor non-nutritious food choices or not eating appropriate serving sizes (Bae & Lee 2021). Limiting processed, sugary, carb-ridden foods starts decreasing overall caloric intake. It is also good to note that the serving sizes and the number of meals per day can adversely affect weight. One study reviewed pointed out that snacking throughout the day proved to be better at helping facilitate a healthier weight versus having the traditional three meals a day (Bae & Lee 2021).

Another problem identified was the sedentary lifestyle that has become popular with the pediatric population. There is a trend of pediatric patients sitting in front of a television, computer screen, or phone and not participating in physical activity (Atherson & Metcalf, 2005). This can become problematic as the caloric intake is greater than the amount of work produced, thus leaving an overabundance of calories that converts into fat, causing weight gain and obesity. A sedentary lifestyle can be changed by encouraging activities appropriate for each age group and limiting screen time. Local programs offer physical activities for all age groups through

membership or joining activities that provide an organized and accountable means of promoting a more active lifestyle (Atherson & Metcalf, 2005).

One last approach is holding the patient and guardians accountable (Herbenick et al., 2018). Patients that participate in weight management or are monitored under a provider's guidance can experience a more therapeutic relationship with weight control. Developing a therapeutic relationship will aid in decreasing obesity and secondary health concerns associated with poor compliance with the interventions used to reduce obesity in the pediatric population (Herbenick et al., 2018).

After reviewing and presenting current approaches supported by evidenced-based practice by the American Academy of Pediatrics (AAP) on addressing pediatric obesity with the project partner, the DNP student created a policy and procedure. The policy and procedure were based on AAP guidelines for treating pediatric obesity. The project partner agreed with the DNP student that implementing the evidence-based policy and procedure would be the best approach to caring for obese pediatric patients in this private practice. This provided a roadmap for all pediatric providers to follow if a child was identified as obese. The policy included identifying an obese pediatric patient and assessing the patient's current lifestyle, eating habits, access to healthy options, and activity levels. It also included taking a family history that may identify a predisposition to obesity and secondary health issues. The provider was prompted to give an educational handout with tips and ways of finding more information for families. The families were encouraged to become healthier together. Providing the information and supporting the family members and patients promoted a better therapeutic relationship. It influenced beneficial

outcomes for the patient. The project partner felt implementing the policy and procedure was positive for patients and their families.

Evidence to Support the Intervention

The increasing percentage of children identified as obese within the pediatric population was the concrete reason interventions were needed to help facilitate healthier weight and lifestyles within the partnered practice's community. Creating a standard of care for the obese population addressed educational deficits related to understanding the health issues associated with obesity, poor eating habits, poor activity habits, and the importance of maintaining a healthier lifestyle (Moxley et al., 2019). The practice identified the need to develop a policy and procedure for the care of pediatric patients. The partner preferred to utilize the current evidence-based practices outlined by the AAP. The primary goal was to promote safe ways of managing a healthy weight that supports a healthy growth pattern (Obesity, 2022). The procedure included identifying obese patients and providing them with an educational handout supporting a healthier lifestyle. It also suggested that those identified as having potential secondary health issues should be evaluated (Obesity, 2022).

Implementing the policy and procedure helped alleviate the question of what to do for an obese pediatric patient. It provided an easy-to-follow plan for any provider involved in the care of the pediatric population, which encouraged healthier weight and lifestyles.

Evidence-Based Practice Framework

Identification of the Framework

The project was conducted in the clinical setting utilizing the Plan-Do-Study-Act (PDSA) format (see Appendix B). Pediatric patients with a BMI greater than 85% were identified as

obese (Kassim et al., 2016). The healthcare provider educated each patient and guardian on the risk factors associated with being obese. The healthcare provider interviewed the patient and guardian to identify any problem areas that placed the patient at higher risk, such as obese parents, sedimentary lifestyles, insufficient sleep, and poor eating habits. The screening was conducted to identify secondary health issues such as elevated lipids, elevated blood pressure, and elevated A1C levels related to obesity (Lobstein & Jackson-Leach, 2016). The nursing staff gave each patient and guardian an educational handout. The handouts were age-specific and contained information on healthy eating habits, exercise habits, and places within the community which allow children to participate in activities based on their specific ages. The handouts also provided information on websites or applications for electronic devices that older pediatric patients may use for healthy weight loss or lifestyle changes. Each patient that permitted monitoring returned in a month for a re-evaluation of weight and an assessment of which lifestyle changes they were using.

During the follow-up visit, the nursing staff and providers interviewed the patients and their guardians to identify any barriers to healthier lifestyle choices impacting healthy weight. The project determined how well the health care providers involved in the care of pediatric patients followed the new policy and procedure created for obese patients. The project's success was determined following the PDSA format and after reviewing the data collected from weekly logs by the DNP student. Data that was collected involved the role of each healthcare provider concerned in the treatment of the pediatric population examples include the chart being flagged by the nurse if the patient had a BMI greater than 85%, all vital signs were taken, an educational handout given, proper assessments completed by the provider and appropriate lab studies ordered

when justified, the scheduler keeps the patient on a two-month return cycle for visits, and if the office manager ran appropriate audits for the DNP student for chart reviews. The DNP student developed a record to determine if each healthcare worker completed the tasks defined for their role by the policy and procedure (see Appendix C). Every two weeks for twelve weeks, each log was collected and reviewed by the DNP student. In addition, the reports ran by the office manager, which identified the number of obese patients who had an appointment, were compared to the information on the logs determining how successful the healthcare facilitators followed the policy and procedure. The findings from the records, the reports, and feedback from the staff were used to identify and adjust any issues found.

Ethical Consideration & Protection of Human Subjects

There were no identified ethical considerations for the DNP project. The intervention for the project was implementing a policy and procedure with the education provided to the healthcare staff detailing how to use it in their practice for those workers who participate in the care of obese pediatric patients. The project evaluated whether the instruction was effective and if the healthcare staff implemented the policy and procedure correctly. The interventions did not harm or take advantage of any age group within the pediatric population. To prepare for the project and to ensure that all ethical considerations were held in the highest regard, the DNP student performed a screening process outlined by IRB standards at her educational institution. The screening determined the project did not meet the criteria for an IRB review. Thus, the final approval process ensured that no harm would be done to anyone involved and the project could be conducted.

Section III. Project Design

Project Site and Population

The project site was at a privately-owned family practice. It is in the southern portion of eastern North Carolina, close to the South Carolina border in a rural area. The project site employs one internal medical doctor, two nurse practitioners, a mental health counselor, four nurses, an x-ray technologist, an ultrasound technician, a medical lab technician, a phlebotomist, and five office staff. The project site has several strengths. The team members work closely together as a family unit and have an initiative-taking approach to improving the community's overall health. The clinic has access to in-house diagnostics; available diagnostics studies are lab studies, EKGs, x-rays, and ultrasounds.

There were barriers identified at the clinic as well. One barrier was even though the staff worked as a close family unit, the clinic had minimal staff, which created a strain when a staff member needed a day off. Another barrier that added to the dilemma of adequate staffing was the heavily loaded schedules for each provider. A four-day workweek was the last barrier that increased the strain on the staff. This caused higher numbers of patients with longer hours on the four days of operation: leading to physical and mental stress for the office staff meeting the needs of the diverse community.

The racial diversity of the patient population in the community the clinic services is 63% Caucasian, 30.6% African American, 3.8% American Indian, 0.5% Asian, 0.1% Hawaiian/Pacific Islander, 5.9% Hispanic, and 1.9% of two or more races (U.S. Census Bureau Quick Facts: North Carolina, 2019). The age breakdown of the population in 2019 was 5.2% under five years, 20.7% under 18 years, and 20.6% 65 years and older (U.S. Census Bureau Quick Facts: North Carolina, 2019). The U.S. Census Bureau reported an average income of

$37,628, placing the county's poverty level at 22.3% (U.S. Census Bureau Quick Facts: North Carolina, 2019). The source reports that 83% of the county received a high school diploma, and 13.8% have received a bachelor's or higher degree (U.S. Census Bureau Quick Facts: North Carolina, 2019). Primary health concerns in the county include heart disease, diabetes, and obesity (Buck, 2020).

The patient population for the clinic consisted of a similar mix as listed above. The payer source was mixed for the office, with the primary sources being Medicaid, Medicare, and private or other commercial insurances. The office allowed a private pay option with a scheduled pay system at a discounted rate. The pediatric population census at the office was around seven hundred, with 10% of the population identified in the 85% or greater percentile per the CDC growth chart, indicating that they are overweight or obese.

Description of the Setting

The clinic was in a small, rural town near the community hospital and health department. It is located approximately two miles from a major highway. The office comprised a waiting area, three hallways, one dedicated to each provider with six rooms each, a lab area, an imaging area (x-ray and ultrasound), an administrative area, and a break room. Two registered nurses and three licensed practical nurses share a nursing station at the front of the hallway areas. The clinical site was described as internal medicine and family practice. Each health care provider averages twenty patients daily. Approximately 66% of the patient population are adults, with 34% being the pediatric population.

Description of the Population

The workforce for the practice is the project population, including an office manager, an insurance biller, two schedulers, and a medical records staff member. The laboratory staff consists of a medical laboratory technician that performs simple diagnostic testing. The laboratory also has a phlebotomist that collects laboratory specimens. The imaging department had one x-ray technician and one ultrasound technician.

There are two registered and three licensed practical nurses employed by the practice. The nurses were responsible for triaging patients, taking patients' vital signs, performing interventions as directed by the providers, and educating patients. Two family nurse practitioners saw patients ages two years and older. The medical doctor specialized in internal medicine and saw adolescents and older patients. The physician was also the medical director and owner of the practice.

Project Team

The project team consisted of the DNP student, two additional health care providers, the nursing staff, the laboratory staff, and the schedulers. The medical doctor was the project site champion, and his role was to ensure everyone was on board with implementing the project. The office manager assisted in gathering data from patient records. In this project, the nursing staff's roles included taking vital signs, identifying patients in the 85 or greater percentile for BMI, providing the patient and guardian with the educational handout, and assessing for any barriers to the patient's health plan. The health care providers' duties included taking a history, performing an assessment, educating the importance of a healthy weight, ordering necessary labs, and

following up with the patient every two months. If needed, the laboratory staff assisted in collecting lab tests.

Project Goals and Outcome Measures

The project's goal was to provide healthcare providers with a policy and procedure to utilize when healthcare staff identified a pediatric patient as overweight or obese (see Appendix D). Another goal was to identify any barriers that might affect the use of the policy and procedure. The outcome was to ensure a consistent, standardized process for all clinic staff in identifying and correctly screening pediatric patients. A long-term goal was the standardization of the process, providing a standard of care that was influential in changing patients' unhealthy lifestyles, which affects their weight.

Description of the Methods and Measurement

Methods used were educating the health care staff on their roles within the project and ensuring fidelity to the policy and procedure. Staff members were given a copy of the policy and procedure explaining their roles in providing care for identified obese pediatric patients. Implementation strategies were discussed with staff, along with the desired outcomes that the policy and procedure might bring for the patient's overall health. The staff was educated on the impact of their adherence to the policy and procedure for their designated role and how the success of the project implementation would be defined. The DNP student reviewed the process for the project with the clinical staff. The DNP student reviewed each educational component with the health care providers to ensure their understanding of the information provided within the handouts.

The procedure's first step was correctly identifying any overweight or obese pediatric patient, which included measuring the patient's weight and height to determine their BMI. If a patient's BMI was 85% or greater per the CDC's growth chart, they were identified as overweight or obese.

Once the patient was identified, the healthcare provider took a detailed history of the patient and the family regarding obesity in the family to identify any mental health, organic, or inorganic health concerns that may cause obesity, such as hypothyroidism, diabetes, depression, and current eating and exercise habits. The nursing staff provided the patient and guardian with the appropriate aged-related educational handout (see Appendix E), which included information on healthy lifestyles, eating, exercises, and local activities beneficial to weight loss for their age group. The nurse alerted the scheduler to make a two-month appointment for a re-evaluation of the patient.

Patients identified as overweight or obese were asked to return to the clinic for reassessment every two months. Upon their return, the nurse would reassess the patient's vital signs and assess for any barriers to suggestions given in the educational handouts. Parents or other caregivers receive a reminder contact 48 hours before each appointment. The office manager generated monthly reports for each provider to identify patients considered overweight or obese. Using the list of the identified patients, the DNP student reviewed the charts to ensure the policy and procedure were implemented for each designated role. This ensured the healthcare team implemented the policy and procedure for each identified patient.

The student evaluated data collected from bi-monthly logs to make changes using the Plan- Do-Study- Act method. The checklist used by the staff member had a simple yes or no

format for each person's role in the project. After two weeks of implementation, the DNP student reviewed each area identified on the checklist to determine whether goals were met. After reviewing the data, the DNP student made any necessary changes to improve the utilization of the project. Problems identified by the DNP student were shared with the clinical staff involved to make appropriate adjustments. Each time the process was completed, it became more enhanced, and the standardization of care was created.

Discussion of the Data Collection Process

The DNP student collected data utilizing the electronic patient charting system, which was password protected. The checklist with the roles of each clinical staff member was created on a password-protected computer with only one person able to access it. The DNP student used the electronic charting system to create a list of pediatric patients diagnosed as overweight or obese. The list was created by reviewing pediatric patients' upcoming schedules for the following week. The chart would then be examined to identify patients with a previously recorded BMI of 85% or greater. The DNP student would compare the list with the patients seen at the practice the following week to make the final list of charts to be reviewed for data collection. The DNP student reviewed the checklist with each person's role in the procedure to determine if all jobs designated for each healthcare role were met in two-week intervals. The information was compiled and utilized to identify any issues with the process by the DNP student. Any identified issues were reviewed and discussed with the clinical staff. The DNP student collected staff feedback on why a problem occurred. After receiving and reviewing the feedback, adjustments were made to the process by the DNP student. The DNP student provided education to those who

did not fully understand their role in the policy, increasing the facilitation of the policy and procedure implementation.

Implementation Plan

The plan was implemented over three months, from mid-January to the beginning of May 2022. The process was based on the PDSA method. The initial meeting was with all the clinical staff involved in the project. The healthcare providers were given a copy of the policy and procedure, educational handouts, and a review of what role they were to have in the project. The nursing staff was given a copy of the policy and procedure, the educational handouts, and a description of their role and duties. The exact process was repeated for the administrative and laboratory staff.

The project implementation started on the following clinical day after the staff was educated on the policy and procedure and their roles. The first step in the process was for the nurse to assess each pediatric patient for their vital signs, including their weight and height; this information was used to calculate their BMI. The nursing staff notified the provider if the patient's BMI was 85% or greater.

The provider took a detailed history which included any medical conditions within the family that could place the patient at elevated risk for obesity. The provider performed a head-to-toe physical assessment of the patient. Appropriate labs were ordered for any identifiable concerns, such as the possibility of diabetes, hypertension, thyroid disease, or cardiac disease. The provider discussed the importance of maintaining a healthy weight which promotes healthy growth. The provider would define to the patient and caregiver what a healthy weight was for the

patient's age, explain how it was essential for healthy growth, and how it is necessary for overall health. The education provided was based on the AAP standards.

The nurse then provided patients and guardians the appropriate educational handouts based on age group. The nurse also explained the need for the patient to return for reassessment every two months. The patient was scheduled on a two-month interval by the scheduler. The scheduler reminded the patient and guardian of the upcoming appointment 48 hours before each appointment. The office manager collected the data monthly and shared it with the project manager. The data was reviewed and redistributed during a meeting before the start of each two-week cycle. At the end of the three months, all data was reviewed, and problems and solutions were identified to ensure the regularity of the policy and procedure.

Timeline

The project's timeline started with the initial brainstorming and developmental stage from May 2021 through July 2021, after which the DNP student conducted a literature search on obesity in the pediatric population was reviewed from August 2021 until October 2021. After appropriate evidence-based practice was identified, a policy and procedure utilizing the most current information were created to identify and treat obesity in the pediatric population. After gaining proper approval, the project was implemented over three months. This occurred from mid-January 2022 until the beginning of May 2022. After implementation, the data were collected, the findings were summarized, and the results were disseminated.

Section IV. Results and Findings

Results

The result of this project was tabulated using a bimonthly survey log completed after reviewing the pediatric charts identified for the study. The DNP student collected the survey logs between mid-February and May 2022. The survey addressed how well the staff followed the steps in the policy and procedure specific to their role. The results were placed in an Excel spreadsheet. The DNP student created a graph showing how well the policy could be implemented (see Appendix F). A post-survey was given to the staff members to determine if they felt the policy and procedure was beneficial to the practice, the healthcare providers, and the patients (see Appendix G). The DNP student collected the post-survey from all participants, and the findings were compiled. The results were placed in an excel spreadsheet, and a graph of the findings was made (see Appendix H).

Discussion of Major Findings

It took four weeks to ensure that the staff followed all steps in the policy and procedure. During the first two weeks, the problem areas identified were ensuring that each patient and their guardian received the educational handout. The cause was simply the nurse reported they were not used to distributing this handout. In the first two weeks, the nurse passed out the leaflet to 50 % of the patients, increasing to 75 % in the following two weeks and reaching 100 % by the third survey. The other area that seemed challenging to gain 100 % capture was the scheduling area; this was later determined due to the nurse not meeting the need to notify the scheduling staff. The scheduling department did its part 100 % of the time. However, for the first four weeks, it looked as if only 50 to 75 % were done as directed. This

data supports that the nurse's role is crucial for the other healthcare providers to meet their part. If all their roles were not fulfilled, it caused a decrease in the efficiency of the different team members' roles not being completed as well.

Even though it took the first four weeks of the policy and procedure to be in place before it was a seamless process, it was a welcomed change. The staff was receptive to a roadmap to help facilitate a better outcome for the obese pediatric population. On return visits, patients were asked how they felt regarding the innovative approach to managing their weight during their health assessment. Some of the comments shared by the patients and their guardians were: they were happy to have the educational handout as a resource, they felt their healthcare was being managed in a more initiative-taking approach versus a reactive approach, and they felt their needs were being met in a more respectful and caring manner.

Section V. Interpretation and Implications

Cost and Resource Management

Financial Cost

Implementing the policy and procedure was cost-effective for the practice. Since the policy and procedure did not create an increase in the workforce or work hours, it did not add costs for the facility in these areas. The overall cost resulted from the reproduction of educational material given to patients and their families, the paper copies of the policy and procedure for the staff, and the paper used to print the surveys.

Personnel

The personnel cost included the salaries of the staff involved in the direct care of the pediatric population. The policy required a more in-depth initial patient assessment. This required a routine appointment designated as a 20-minute visit to be increased to a 45-minute visit. This can tie up the staff making it more challenging to address other office issues.

Supplies

The supplies used to implement the policy and procedure were publishing supplies for the educational handouts, paper copies of the policy and procedure for the staff, and data logs. The publishing supplies include the cost of paper and toner for each leaflet as designated above. The office manager agreed to have the copies made in the office, which minimized the cost of creating the documents. The price averaged out to approximately $0.05 per copy. At the current numbers, the office manager felt it was cost-effective to keep it in-house; however, if numbers increase, they will send it to the publishers to decrease the overhead.

The policy and procedure documents were copied by the DNP student and distributed to each team member, costing approximately $0.25 for all copies. A master copy of the policy and procedure document was kept in the clinical site's office policy and procedure manual. The DNP student gave an electronic document copy to the office manager to keep on file.

Time

Meetings were held during the staff's lunch hour to facilitate time management. The sessions were used to introduce the policy and procedure and for feedback from the team after logs were reviewed. The lunch hour was chosen to facilitate the meetings since the staff has lunch provided daily by outside sources at no cost to the office. Therefore, using the lunch hour did not create an extra cost to the student or the office.

Initially, the increased time needed for the initial visit created a scheduling issue. The visit was determined to need a 45-minute slot; this decreased the number of patients scheduled for that day, impacting the daily revenue for the clinic. However, costs were offset by the inclusion of related diagnosis codes for comorbidities, which allowed the practitioner to bill at a higher level of care.

At the end of the 12-week, project reimbursement was not calculated because reimbursement was not received for all payer sources during this time. The office manager did express, "based on projected reimbursement, the project did not cause any financial hardship for the practice." The office manager also felt if reimbursement for the extended visits and associated comorbidity charges were fully compensated, it would positively impact the practice's finances.

Implications of the Findings

The project's influence

The project made a difference in the staffing population and the patient population. The project developed a more trusting and productive relationship between the patient and their healthcare provider. It also led to a better outcome for the pediatric population, which was identified in the greater than 85 percentiles for weight based on their BMI. Parents expressed to the staff that it became easier to talk about weight issues and concerns, knowing it would be met professionally. During follow-up visits, parents were more open in discussing their concerns for their children. They also reported the educational handouts were insightful and provided them with sources to help change unhealthy habits. Positive impacts seen for patients were healthy weight loss evidenced by decreased weight and the ability to identify healthier lifestyle choices when interviewed during follow-up appointments.

The staff benefited from guidelines on caring for the overweight and obese pediatric population. The implemented practices in the policy and procedure were supported through current literature based on the American Academy of Pediatrics. The goal was to increase the ability of the staff members to implement a plan to identify overweight or obese pediatric patients and to integrate treatment approaches that will explore causes. The policy and procedure also included the implementation of an educational leaflet that provided sources to treat or encourage patients' healthier lifestyles. Providing the staff with the education to accurately perform their roles gave them confidence and autonomy for this to occur in a safe environment. The post-survey results supported this. The data concluded that 83.3% of the staff strongly agreed that the policy and procedure was beneficial.

The patients benefited in several ways. The first benefit was confidence in their providers, knowing they are practicing the most current practices for identifying and treating pediatric obesity. This was supported by feedback received during the follow-up assessment on subsequent visits. The providers asked the patient and guardian how they felt about the innovative approach regarding weight issues. Guardians and patients old enough to express themselves shared that their weight issues were being addressed more effectively. One parent said she did not think obesity was an issue in childhood. The second benefit was providing families with education and empowerment to make healthier life choices. Providing the patients and their guardians with the concerns associated with their weight, educating them on the probable causes which can impact their current and future health, and providing education on how to improve their weight and lifestyles gave them a more active role in their care. Adolescent patients expressed how having a resource helped them develop healthier eating and lifestyle choices. Another patient said they did not realize how much they ate until keeping a food journal which the healthcare provider suggested. Educating the patient and guardian held them more accountable for their role in their health status. Guardians expressed that knowing how to make the appropriate changes to help their children's health also influenced some of their health choices. Patients that are provided the knowledge of the importance of their compliance in their health care plans lead to better outcomes for the patient.

Implication for continued impact on health and wellness

After reviewing the staff's comments, the project was determined as something that should be continued within the practice. One provider stated, "It made it easier to know what to do for my obese pediatric patients." The post-survey also correlated the positive impact for the

providers, with 25% strongly agreeing and 58.3% agreeing the policy and procedure was beneficial to help guide the care of their obese pediatric patients. Each provider stated, "the policy positively impacted the team, giving each member autonomy to do their job." The nursing staff said, "the policy let me know how I could positively address pediatric obesity." All healthcare team members felt the most significant impact was on the pediatric population, creating an environment for healthier patient outcomes. The concept of early identification and assessment for obesity in the pediatric population can influence health over the lifespan (Pediatric Obesity Overview, 2021). Creating a guideline based on evidence-based practice to guide the treatment of obesity in childhood can decrease the development of co-morbidities associated with obesity, such as diabetes and coronary disease (Moxley et al., 2019). The idea was to start the program early, creating a ripple effect on other family members and future generations.

Impacts of the Policy and Procedure

The data collected through post surveys and comments made by patients and their guardians supported implementing a policy and procedure that positively impacted the pediatric population, which addressed obesity using an insightful and encouraging approach. This is met first by the identification of any issues that could be contributory to patients' current weight status. Weight issues can be related to an organic problem such as hypothyroidism, not just unhealthy eating and poor exercise habits. Understanding these issues must be identified and treated before making any treatment plans is essential. Not having access to healthy food sources, knowledge of healthy eating habits, and exercise can impact a patient's weight. Several

causes may influence a person's weight; for the provider to have enough time to complete a thorough assessment, the length of time for the visit needed to be expanded. Based on guidelines given by the AAP, the policy and procedure permitted a more extended visit time scheduled, allowing the provider enough time to assess each probable cause a patient may have for their current weight status.

The policy and procedure also encouraged healthier lifestyles. Lifestyle changes can be taught by healthcare providers to guardians and patients, impacting the patient and others within their family. Changing the thought process of what is healthy and what is not can create a healthier environment for all in contact with the pediatric patient. As the younger patient is taught, it will allow for healthier lifestyles to be followed, which can change health habits throughout the lifespan. So, it has the ability not just to impact those involved currently but to impact generations to come.

Implications

The DNP student identified several implications related to this project. The first of which is understanding the phenomenon of obesity. Defining what obesity is and how impactful it is nationally and locally for the pediatric population. Once the how and why obesity can occur or why it is such an issue creates a need to know how to treat this issue. Providers need to develop education that promotes a healthier lifestyle for safe weight management in this population. This can only be done if there is an evidence-based guideline in place to serve as a roadmap. Providing a Policy and Procedure that answers this need allows for promoting healthier lifestyles for healthier weight in the pediatric population.

Impact on Healthcare System(s)

The impact of creating a reproducible policy and procedure allows other providers to utilize a proven guide for obese pediatrics. This, again, can lead to an easy transition of care that creates a healthier lifestyle. This will allow others to be involved in creating an environment of change that will impact throughout the lifespan.

Sustainability

The policy and procedure will easily be sustainable for any clinic to keep in place. It would follow the same policies and procedures with updates based on the latest information supported by evidence-based practice supported by the AAP. There is a yearly review of all policies in the clinic's current practice. Each area of specialty, based on the policy, ensures the policy is up to date. Therefore, the lead pediatric provider will be responsible for any updates that need to be made to the policy and procedure based on new evidence-based practices. The lead pediatric provider will provide the pediatric staff with the latest updates to the policy and procedure. The lead pediatric provider is also responsible for educating on new practices or changes in each staff member's roles involved with pediatric care.

Dissemination Plan

The project was first disseminated at East Carolina University at the College of Nursing by the DNP student in charge of the project. The method used to convey the information gained from the project was a poster presentation to students, faculty, and others invited to attend. The project was published in The ScholarShip for East Carolina.

The DNP student disseminated the findings from the project to the current clinic. The DNP will later approach the local health department and other local practices to share the

information gained through this project. If they are receptive, the information will be shared. The project is appropriate for presentation at pediatric conferences and publication in journals for pediatric and family practitioners. However, there are no current plans to have it published.

Section VI. Conclusion

Limitations and Facilitators

Limitations

There were a few limitations identified in the project. The first obstacle was identifying a time when the staff could attend an educational session without disrupting their workflow. After observation of their daily routine, a lunchtime educational session was proposed, to which the staff agreed.

Another critical limitation was communication. Communication was important in defining each staff member's role, what information to assess or share, and how to follow the policy and procedure. Having an open line of communication was essential in conducting this project. This was the most frequently identified barrier in the first four weeks, preventing a 100 percent policy follow-through.

The last issue was the response from the patient and their parents. The policy and procedure was met with some reserve from some patients. Reservations occurred due to a lack of education, or they felt the provider was picking on the patient and/or family for being obese. This was discovered during assessments performed by the practitioners and nurses during the initial and follow-up visits. The practitioner addressed each of these concerns with the patient and guardians. The DNP student educated the staff on the findings and provided further education for each area during the bi-monthly follow-up. The last issue identified was having the patient return for reassessment and updates. Even though missing an appointment was seen as a limitation, it frequently occurs within the pediatric population as they depend on an adult to bring them to their appointments.

Facilitators

There were two main facilitators identified through this process. The first facilitator was the willingness of the project partner was to make this vital change. They saw it as a positive change for the care providers, most notably the pediatric population. This addressed a need the clinic identified as an impactful cause.

The second facilitator was the staff's eagerness to learn the new evidence-based practice for the care of overweight and obese pediatric patients. They were excited to have a guide to address this issue. It also gave them a means of gaining confidence in addressing this issue in the pediatric population.

Recommendations for Others

Several recommendations were identified throughout this project's implementation, which should be passed along to others. The first is to study your current population and know how impactful this can be for everyone. The second recommendation is to review your current scheduling process and ensure accommodations can be made once the policy is in place. This provides enough time utilized to implement the policy and procedures fully. Another important recommendation is to ensure that all guidelines are current before implementing the policy.

Overall, this is a project that can be quickly disseminated to those that are involved with pediatric care. Sustainability is efficiently conducted once implemented. Designating a policy champion to update the care process based on updated evidence-based practices is essential. This can be done yearly, as most policies are reviewed at this time. This process can start in the pediatric population and could be transitioned to all age groups throughout the lifespan.

Recommendations Further Study

The policy and procedure can be easily placed in any practice for the obese pediatric population. The policy can be expanded to include those who fall in the overweight BMI or those who identify as a considerable risk of being obese. Another recommendation could be to utilize the information for a healthier lifestyle to be shared with the adult population with the same weight issues.

Further studies should include how well patients and their families use the information. The analysis should consider how well these changes have helped with the healthy weight management needed for healthy growth patterns. Further out, it could be studied to see the longevity of knowledge and lifestyle changes that follow throughout the lifespan. This can be an impactful change creating a ripple effect for patients, family members, and future generations.

Final Thoughts

Unfortunately, obesity is a health issue that is seen throughout the lifespan. It is a concern that impacts health and leads to severe complications for other comorbidities. The difficulties associated with unmanaged obesity have created a strain on healthcare. It opens the door to increased costs to providers and patients, which are not always monetary. Providers need to have a standard that is easily accessible that can serve as a guide to combat this health issue for all life spans, but it is essential for the care of overweight and obese pediatric patients.

The adult population is not the only population that is plagued by obesity. Studies have proven that obesity is also on the rise in the pediatric population. It has also correlated with increased comorbidities associated with obesity, such as diabetes, hypertension, elevated lipids, and fatty livers. The comorbidities are issues most do not associate with pediatrics, but due to the

increase in weight, providers face these issues daily. The evidence is a cry for change. Pediatric obesity should not be acceptable. This is a problem, and through proper assessments and identification of weight-related issues, treatment plans can help stop this issue. Providers can use evidence-based practice to develop an influential, life-changing environment. Providers should meet barriers associated with pediatric obesity head-on. Providers are armed with evidence-based knowledge that provides a way to knock down any issue in childhood obesity. Providers should always promote and encourage a healthier lifestyle creating healthier weight and growth for pediatric patients.

If providers successfully manage overweight and obesity in the pediatric population, consider the impact it will have on future generations, as this will become a practice for all to maintain a healthy weight. Please think of how it can affect future health outcomes for our current pediatric population as they grow into adulthood. Comorbidities linked to obesity can be avoided when healthier lifestyles are adopted at a younger age, making it easier not to have to change years of unhealthy habits. This will add quantity and quality to this population's health and lifespan.

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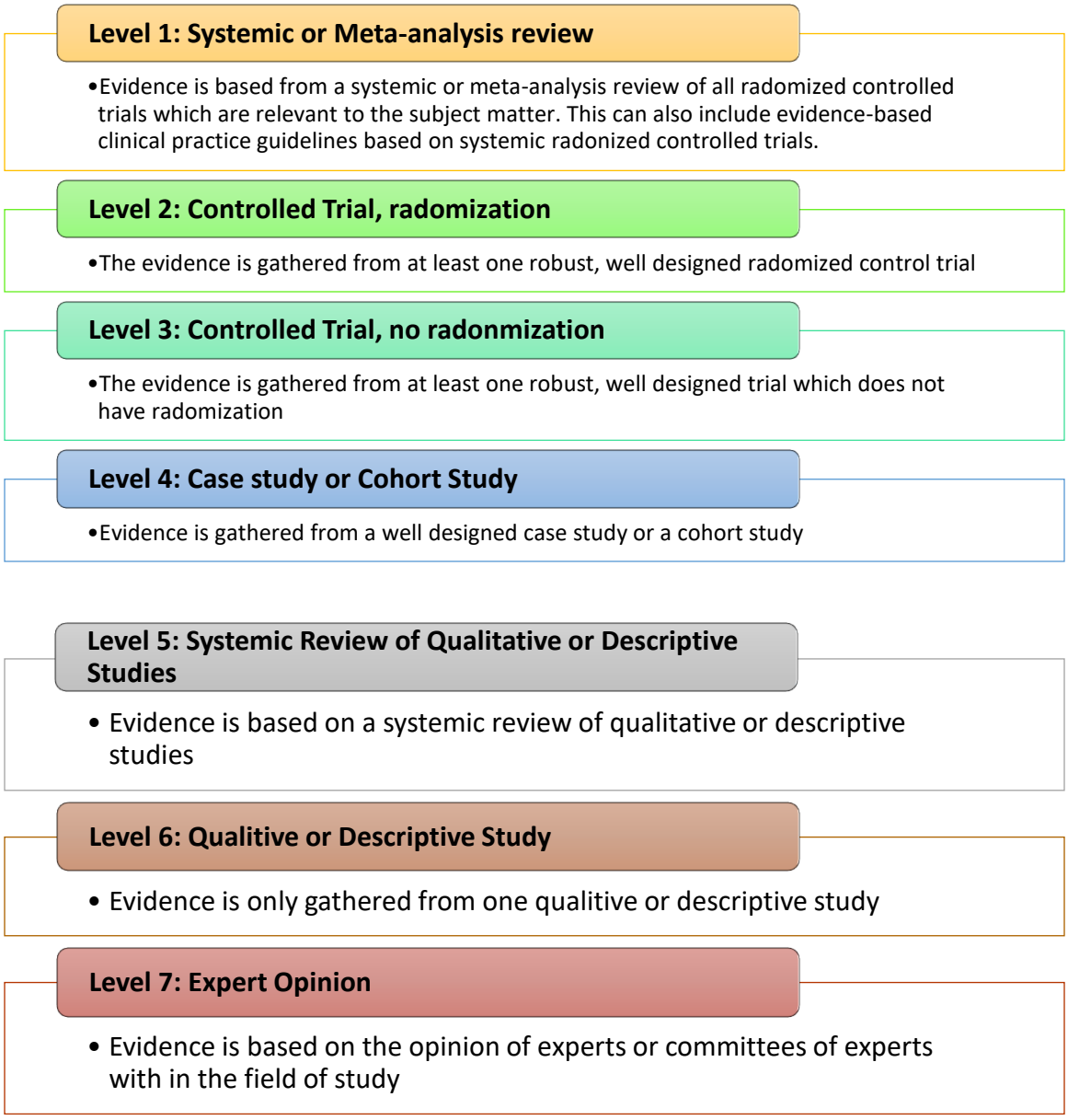
Appendix A

Levels of Evidence for Evidence-Based Practice in Nursing and Healthcare



Reference

(Bernadette Mazurek Melnyk; Ellen Fineout-Overholt & Bernadette Mazurek Melnyk; Ellen Fineout-Overholt, 2018, Box 1.3

Appendix B

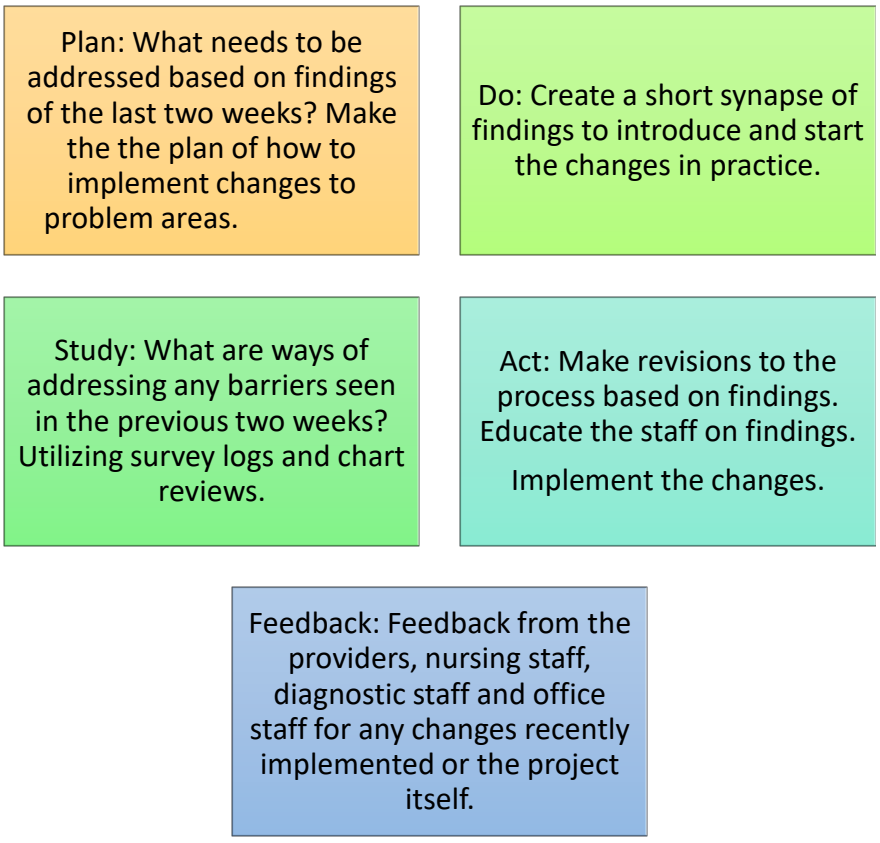
Plan, Study, Do, Act (PDSA)

- **Plan:** Plan the change and observation.
- **Do:** Try the change on a small scale.
- **Study:** Analyze the data and determine what was learned.
- **Act:** Refine the change based on what was learned and repeat the testing.

Action is based on the probability the change will improve the outcome. It must have external evidence to support the improvement, or the PDSA cannot be considered 100 percent.

Reference

(Bernadette Mazurek Melnyk; Ellen Fineout-Overholt & Bernadette Mazurek Melnyk; Ellen Fineout-Overholt, 2018, Box 4.1)



Appendix C

Policy and Procedure Adherence Log (PDSA Data Sheet)

Questions for Data	**1st Bi-Monthly Review** **February 14th -25th**	**2nd Bi-Monthly Review** **February 28th - March 11th**	**3rd Bi-Monthly Review** **March 14th - March 25th**	**4th Bi-Monthly Review** **March 28th – April 8th**	**5th Bi-Monthly Review** **April 11th-April 22nd**	**6th Bi-Monthly Review** **April 25th -May 6th**
Did the nurse take vital signs for all pediatric patients seen?						
Did the nurse identify/flag chart for pediatric patients with 85% or higher BMI on the growth chart?						
Did the nurse select the appropriate education pamphlet?						
Did the provider perform an appropriate assessment and history and order necessary labs?						
Did the laboratory technician/phlebotomist perform appropriate lab draws as ordered?						
Did the nurse notify the scheduler of placing the patient on a regular reoccurring appointment every two months for weight monitoring?						
Did the scheduler place the patient on the schedule every two months?						
Did the scheduler provide a reminder for the patient for their upcoming appointment within 48 hours of their appointment?						
Did the nurse recheck vitals and assess if there were any barriers to suggestions for a healthier lifestyle?						
*Did the provider follow up with barriers or other health concerns related to overweight/obesity**?***						
Did the office manager create a report for patients identified that included their initial BMI and current BMI?						

Appendix D

Policy and Procedure

Eastern North Carolina Family Medical — Policy Procedure Manual

Document Number:	001
Document Name:	Overweight and Obese Pediatric Population
Effective Date:	1/2022
Document Status:	Current
References:	CDC, American Academy of Pediatrics, Institute for Healthy Childhood Weight AAP

Purpose

To Identify overweight and obese patients of the pediatric population. Provides a guideline for the identification, assessment, education, monitoring, and treatment plans set forth by the CDC and the American Academy of Pediatrics guidelines.

II. Scope

This policy is directed to all clinical staff members involved with the pediatric population's care.

III. Definition of Terms

1. Clinical Staff- refers to all providers and nursing staff employed at the clinic.
2. Pediatric Population- any pediatric patient between the ages of 2 and 18 is seen in the clinic.
3. Office Staff includes appointment staff and the office manager.

IV. Responsibility/Requirements

A. The primary work obligations of a full or part-time clinical staff.

B. Providers (identified as medical doctors, nurse practitioners, or physician assistants) Providers will identify pediatric patients who are 85% or higher on the CDC growth chart for BMI (Body Mass Index). The provider will then start eh following steps for appropriate treatment.
   1. Will inform nursing staff to provide an appropriate educational handout that explains its use to the guardian and patient based on their age. The nurse will educate the guardian and patient about the health problems associated with being overweight or obese.
   2. Perform a health history for the patient and family to the identification of any health issues which could influence weight, including current eating and exercise habits, any barriers to accessing healthy food sources, and family history.
   3. The provider will perform a comprehensive head-to-toe assessment of the patient and note any pertinent findings on the physical evaluation.
   4. Health history or physical assessment findings will determine if any diagnostic studies should be considered. (CBC, Lipids, A1C, Thyroid Function studies, and Vitamin D levels.
   5. The Provider will create a patient-specific treatment plan based on the health history, physical assessment, and diagnostic lab study findings.

C. Nursing Staff will complete the following tasks for each pediatric patient.
   1. Collect vital signs (weight, height, blood pressure, heart rate, BMI).
   2. Flag the chart of any patient whose BMI is greater than 85% on the growth chart for monitoring.
   3. The nursing staff will provide the guardian and patient with an educational handout with explanations for use.

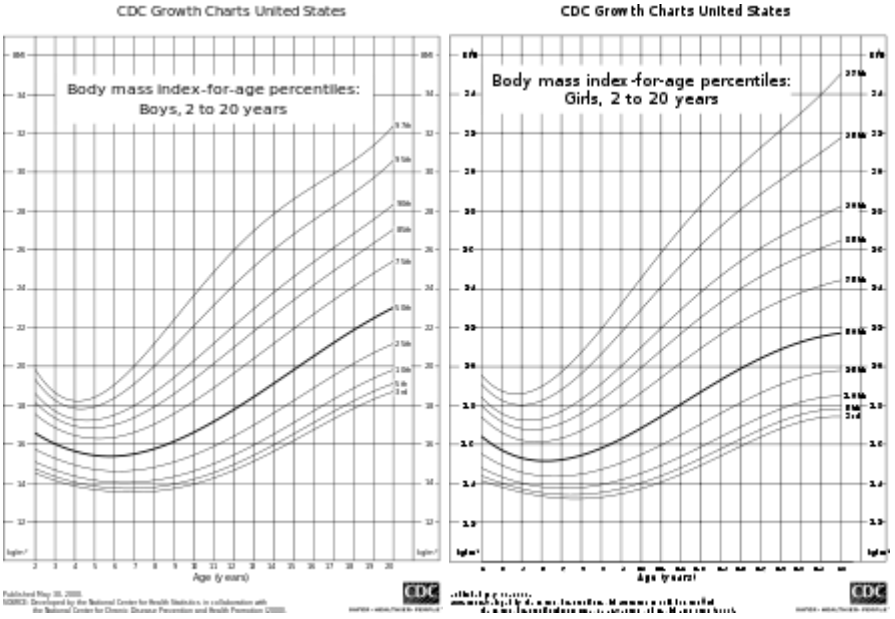
4. The nursing staff will explain to the guardian and patient healthy eating habits, exercise, and the need for monitoring growth more closely than the standard intervals for well-checks. Intervals will change based on the patient's needs.
5. The Nursing staff will have the appointment staff schedule the patient every two months to monitor vital signs and interview the guardian and patient for healthy habits. The nurse will also inquire if there are any barriers to the patient for a healthier lifestyle. The nurse will notate the patient's chart and inform the provider.

D. Laboratory staff will review diagnostic study orders and collect the appropriate samples needed for the studies as directed.
E. Office Staff will complete the following tasks for each identified pediatric patient.
   1. The appointment staff will schedule each identified patient every two months as directed. They will send out notifications of appointments 48 hours before upcoming appointments.
   2. The office manager will pull reports monthly for the identified patients utilizing the diagnosis codes E66.1 and E66.9 for each provider.

V. Policy Owner

The policy owner is defined as the primary pediatric provider of the clinic.

1.0 Exhibits / Appendices / Forms



2.0 Supporting Information

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/clinical-supports-for-obesity-prevention/

https://www.cdc.gov/obesity/childhood/

Appendix E

Educational Handouts

Other Resources to Help with Maintaining a Healthy Weight

There are websites that help as well. Some websites help to identify healthy lifestyle choices, food choices, meal plans, and exercise.

Examples include

https://www.myplate.gov/

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/parent-and-patient-resources-for-healthy-childhood-weight/

Reference

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/clinical-supports-for-obesity-prevention/

https://www.cdc.gov/obesity/childhood/

https://www.myplate.gov/

CC Department of Parks and Recreation

Healthy Habits...Healthy Weight

A Guide for Ages 2 to 5 years

https://www.cdc.gov/obesity/childhood/Other Resources to Help with Maintaining a Healthy Weight

There are websites that help as well. On some websites, you can find information to identify healthy lifestyle choices, food choices, meal plans, and exercise.

Examples include

https://www.myplate.gov/

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/parent-and-patient-resources-for-healthy-childhood-weight/

References

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/clinical-supports-for-obesity-prevention/

https://www.cdc.gov/obesity/childhood/

https://www.myplate.gov/

CC Department of Parks and Recreation

Healthy Habits...Healthy Weight

A Guide for Ages 6 to 10 years

Other Resources to Help with Maintaining a Healthy Weight

There are websites that help as well. Some websites help to identify healthy lifestyle choices, food choices, meal plans, and exercise.

Examples include

https://www.myplate.gov/

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/parent-and-patient-resources-for-healthy-childhood-weight/

References

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/clinical-supports-for-obesity-prevention/

https://www.cdc.gov/obesity/childhood/

https://www.myplate.gov/

CC Department of Parks and Recreation

Healthy Habits...Healthy Weight

A Guide for Ages 11 to 15 years

Other Resources to Help with Maintaining a Healthy Weight

There are several apps that you can access for free on your app store. There are apps directed toward activity, eating, and physical and mental wellbeing.

Examples include

Fooducate, Habit Tracker, MyFitnessPal, Mealime Meal Plans & Grocery List.

There are websites that help as well. Some websites help to identify healthy lifestyle choices, food choices, meal plans, and exercise.

Examples include

https://www.myplate.gov/

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/parent-and-patient-resources-for-healthy-childhood-weight/

References

https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/clinical-supports-for-obesity-prevention/

https://www.cdc.gov/obesity/childhood/

https://www.myplate.gov/

CC Department of Parks and Recreation

Healthy Habits...Healthy Weight

A Guide for Ages 16 to 18 years

Reference
https://creativecommons.org/licenses/by-sa/3.0/

https://www.myplate.gov/resources/print-materials

What Are Healthy Activities?

There are several activities which can be healthy for you. The most important thing to remember is to find those that are fun for you to do.

If it's fun to do, it isn't work!

What are healthy activities I can do at home?

Some things you can do at home are:

- Find activities you can include other family members both inside and outside.
- Outside examples include running, walking, jump rope, playing sports like kickball, basketball, volleyball, baseball, and swimming. Another fun activity is planning and caring for a garden full of healthy foods.
- Inside examples include Limiting your screen time, getting together to plan healthy meals, preparing healthy meals and snacks, and playing games together.

What activities can I do in my community?

- Several parks arere free to visit for everyone. Some have playgrounds, basketball courts, tennis courts, baseball fields, football fields, and soccer fields. Some have walking trails. There are natural water resources to enjoy water sports. There are organized sports teams for several sports based on the season.

What is a Healthy Weight?

Defining Weight

A healthy weight is defined as a BMI (Body Mass Index) between 5 and 84 % on the growth chart for your age group. This means you are at a healthy weight for your height.

Why is it Important?

It is essential to maintain a healthy weight to help lower your chance of developing other health problems such as diabetes, high blood pressure, or high cholesterol.

How can it be healthy?

This can be achieved by selecting healthy food choices from all food groups. Make sure to eat the appropriate serving size, stay active, and limit your screen time. You should also keep your well checkup visits.

What Are Healthy Habits?

What are other habits that encourage a healthier lifestyle?

There are several activities that are both health choices and can be fun. Most activities are free to enjoy as well. There are several things you can do to help you become healthier.

So Where Can I Go?

Lucky for you there are several places in our county in which you can find fun things to do.

You can contact the CC Department of Parks and Recreation for all the fun places you can explore near you...but here are some:

- There are 10 playgrounds that offer plenty of fun.
- There are 10 recreational fields where you can play basketball, baseball, and softball.
- There are several rivers and two lakes that offer water fun and trails to explore.
- There is a State Park that offers you places to enjoy fun times with family and friends and the chance to learn and explore.
- There are organized team sports throughout the year
- There are classes throughout the year in which you can participate such as Zumba.
- There is an inside play park that offers plenty of safe fun as well.

What Are Healthy Eating Habits?

Developing eating habits influences a healthy weight.

You should eat from all the 5 food groups.

You should eat appropriate serving sizes for each food group.

You should limit any processed foods, fried foods, or sugary snacks and drinks.

You should make sure you drink plenty of water.

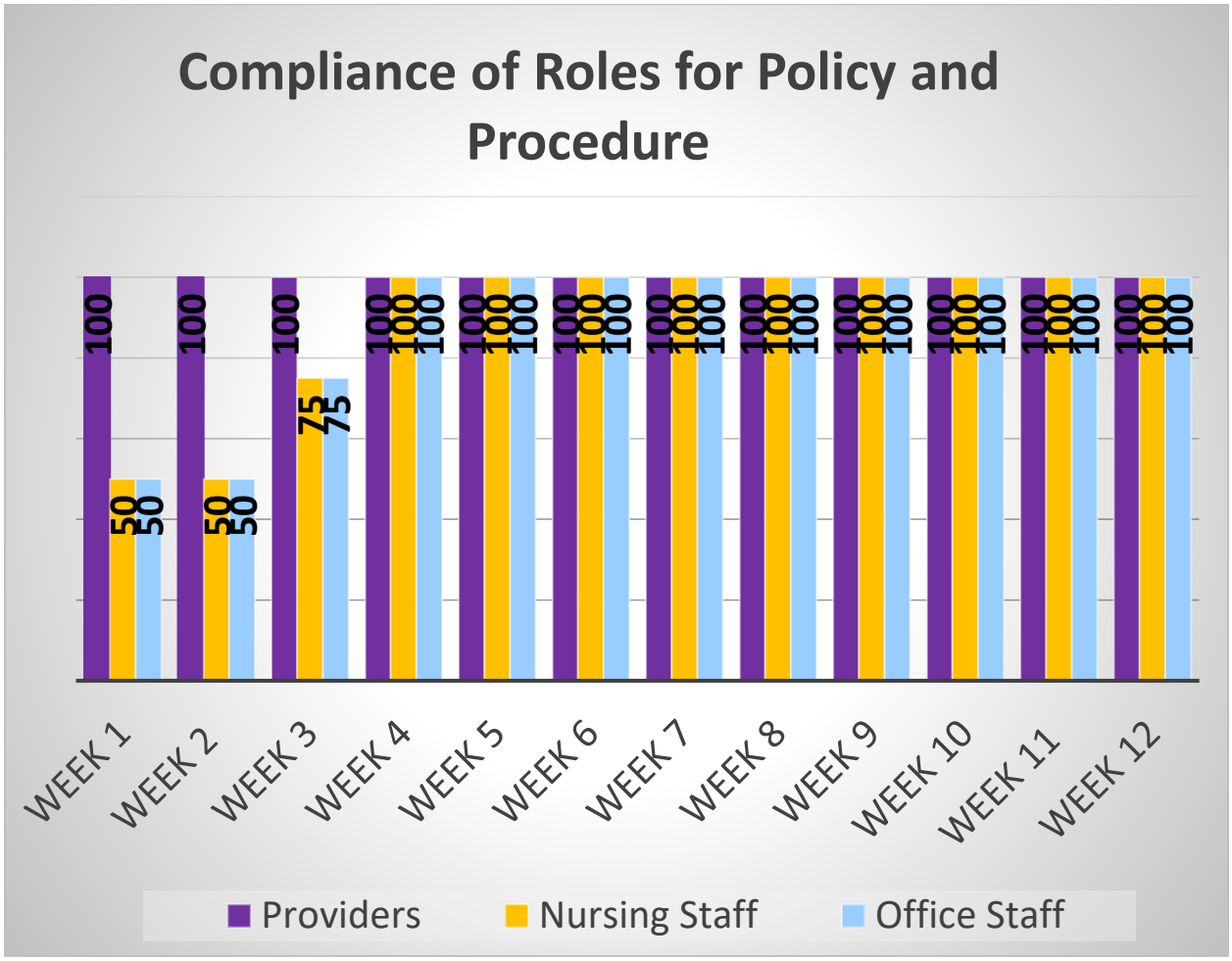
Try to eat fresh fruits and vegetables.

Limit your trips through the drive-throughs.

Make time to sit down and enjoy your meals, don't eat in a rush.

Appendix F

Compliance of Roles Graph



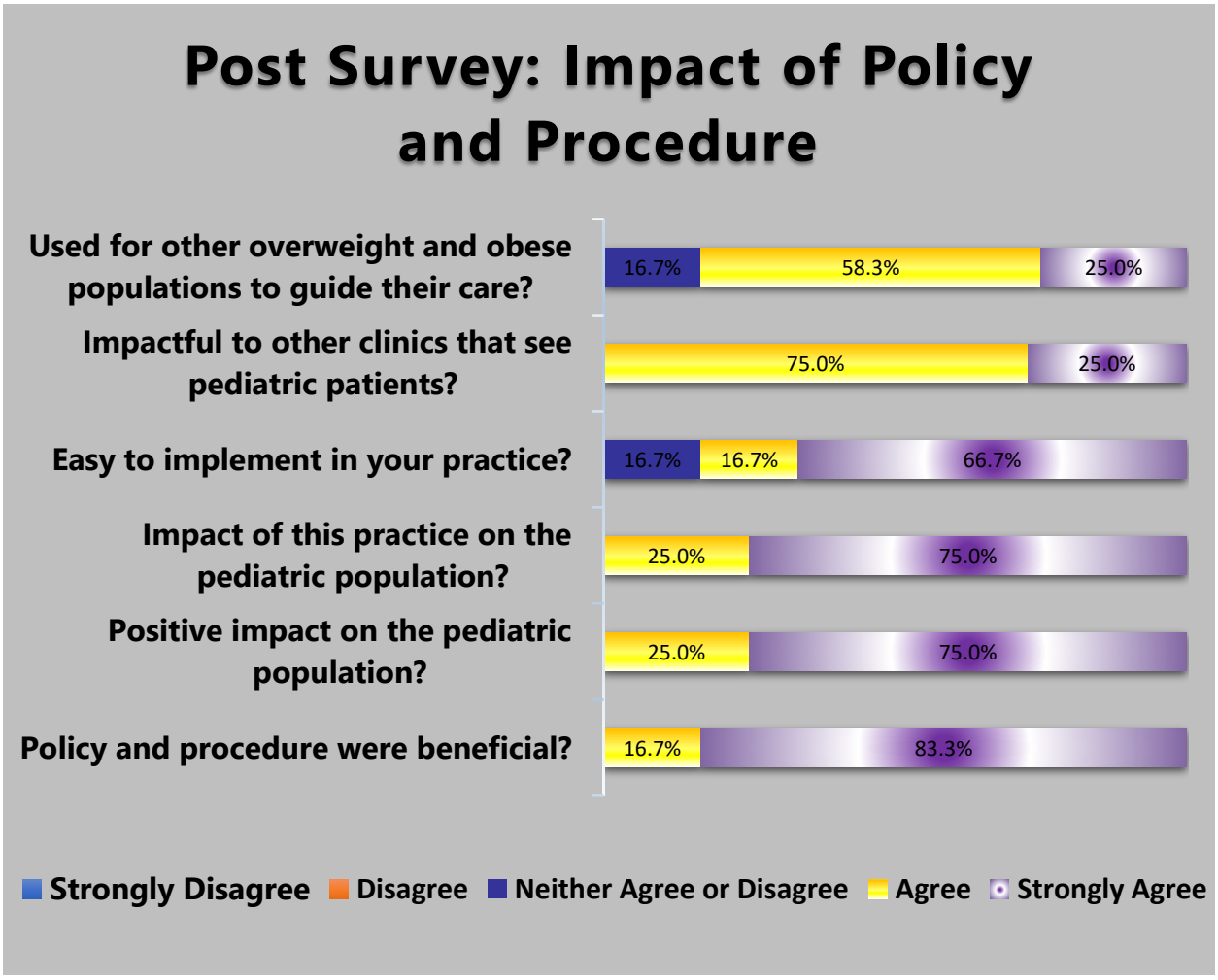
Appendix G

Post Survey for Healthcare Workers

Post Survey: Value of the Policy and Procedure			
Question	Yes	No	Comments or Suggestions
1. Do you feel the policy and procedure were beneficial?			
2. Do you feel this policy and procedure will positively impact the pediatric population?			
3. Do you feel the policy and procedure will impact this practice for the pediatric population?			
4. Was the policy and procedure easy to implement in your practice?			
5. Do you feel this policy and procedure could impact other clinics that see pediatric patients?			
6. Do you feel this policy and procedure could be used for other overweight and obese populations to guide their care?			

Appendix H

Post Survey Results Graph



Project Budget

Project Tool	Items Used to make the tool	Description of Items	Cost
Educational Handouts for Patients	Paper Toner	One pack of standard copying paper (100 sheets) Toner (office manager states this is included in their maintenance program) unsure what it would be per copy, Research showed an average cost for the printer would be approximately 150.00 *This project did not utilize a full toner drum for its copies. Hand out is composed of two sheets of paper for a total of 0.0092 rounded to 0.01 per copy + cost of toner, so this project's purpose will set the price at 0.05 cents per copy.	**One box of paper (5000 sheets) is 23.00** **Therefore 23.00/5000=0.0046 per sheet.** **100 sheets cost 0.46** **50 copies x.05= 2.50**
Paper Copy of Policy and Procedure for each staff member (13)	Paper Toner	The Paper used equal to 39 sheets in total Toner (office manager states this is included in their maintenance program) unsure what it would be per copy	**0.0046x39 sheets=0.18** ***0.18 for all thirteen copies, + the cost of toner, so it will round up to 0.24 for the total cost**
Bi-Weekly Survey **(13/survey)**	Paper Toner	One page/copy x 13 copies x six surveys equal 78 sheets of paper Toner (office manager states this is included in their maintenance program) unsure what it would be per copy	**0.0046x78 sheets=0.36** **Will round due to toner to 0.40 total cost**
End of Project Survey (13)	Paper Toner	One page/copy x 13 copies equal 13 sheets Toner (office manager states this is included in their maintenance program) unsure what it would be per copy	**0.0046x 13 sheets =0.06** **Will round to 0.10 due to toner**
Total cost for the project	Paper Toner	Toner (office manager states this is included in their maintenance program) unsure what it would be per copy, Research showed an average cost for the printer would be approximately 150.00 *This project did not utilize a full toner drum for its copies.	**0.46+0.18+0.36+0.06= 1.06 for paper used** ***Estimated cost with toner is 2.50+0.24+0.40+0.10= 3.24**

Doctor of Nursing Practice Essentials

	Description	Demonstration of Knowledge
Essential I ***Scientific Underpinning for Practice***	**Competency** – Analyzes and uses the information to develop practice **Competency** -Integrates knowledge from humanities and science into the context of nursing **Competency** -Translates research to improve practice **Competency** -Integrates research, theory, and practice to develop new approaches toward improved practice and outcomes	This project analyzed the current state of obesity seen in pediatric patients. It integrated evidence-based practices to formulate and implement a policy and procedure to address obesity in pediatric patients. The policy and procedure provide health care providers with a guideline to competently provide care and develop personalized care plans for the pediatric population. Overall, it will improve practice for providers and have healthier outcomes for pediatric patients.
Essential II ***Organizational & Systems Leadership for Quality Improvement & Systems Thinking***	**Competency** –Develops and evaluates practice based on science and integrates policy and humanities **Competency** –Assumes and ensures accountability for quality care and patient safety **Competency** -Demonstrates critical and reflective thinking **Competency** -Advocates for improved quality, access, and cost of health care; monitors costs and budgets **Competency** -Develops and implements innovations incorporating principles of change **Competency** - Effectively communicates practice knowledge in writing and orally to improve quality **Competency** - Develops and evaluates strategies to manage ethical dilemmas in patient care and within health care delivery systems	A policy and procedure were developed based on evidence-based practices for obese pediatric patients. The policy was implemented, which changed the treatment guidelines for obese pediatric patients. It held health care providers accountable for addressing obesity in pediatric patients.
Essential III ***Clinical Scholarship & Analytical Methods for Evidence-Based Practice***	**Competency** - Critically analyzes literature to determine best practices **Competency** - Implements evaluation processes to measure process and patient outcomes **Competency** - Designs and implements quality improvement strategies to promote safety, efficiency, and equitable quality care for patients **Competency** - Applies knowledge to develop practice guidelines **Competency** - Uses informatics to identify, analyze, and predict best practices and patient outcomes	The basis for the policy and procedure was created after researching and analyzing current evidence-based practices used to treat pediatric patients. The policy and procedure were then implemented in a rural clinic. Implementing the new policy and procedure provided data to support the need to have the policy and procedure in place, creating an environment for healthier outcomes for patients and confidence in practice for providers.

	Competency - Collaborate in research and disseminate findings	
Essential IV ***Information Systems – Technology & Patient Care Technology for the Improvement & Transformation of Health Care***	**Competency** - Design/select and utilize software to analyze practice and consumer information systems that can improve the delivery & quality of care **Competency** - Analyze and operationalize patient care technologies **Competency** - Evaluate technology regarding ethics, efficiency, and accuracy **Competency** - Evaluates systems of care using health information technologies	Data collected were kept utilizing an excel spreadsheet. The data was interpreted and used to make changes as needed. Electronic charts were reviewed to identify patients and ensure the policy and procedure steps were followed.
	Description	**Demonstration of Knowledge**
Essential V ***Health Care Policy of Advocacy in Health Care***	**Competency**- Analyzes health policy from the perspective of patients, nursing, and other stakeholders **Competency** – Provides leadership in developing and implementing health policy **Competency** –Influences policymakers, formally and informally, in local and global settings **Competency** – Educates stakeholders regarding policy **Competency** – Advocates for nursing within the policy arena **Competency**- Participates in policy agendas that assist with finance, regulation, and health care delivery **Competency** – Advocates for equitable and ethical health care	The policy and procedure were reviewed with the health care providers for their insights and if it was beneficial. The facility's owner felt the policy and procedure added value to the clinic and the providers. The policy and procedure were ethical for the patients, providers, and stakeholders.
Essential VI ***Interprofessional Collaboration for Improving Patient & Population Health Outcomes***	**Competency**- Uses effective collaboration and communication to develop and implement the practice, policy, standards of care, and scholarship **Competency** – Provide leadership to interprofessional care teams **Competency** – Consult intraprofessionally and interprofessionally to develop systems of care in complex settings	Biweekly meetings with the health care providers (nursing, office staff, practitioners, and MD) allowed for communication and collaboration for the development and implementation of the policy and procedure to be created and implemented.
Essential VII ***Clinical Prevention & Population Health for Improving the Nation's Health***	**Competency**- Integrates epidemiology, biostatistics, and data to facilitate individual and population health care delivery **Competency** – Synthesizes information & cultural competency to develop & use health promotion/disease prevention strategies to address gaps in care **Competency** – Evaluates, and implements change strategies of models of health care delivery to improve quality and address diversity	The policy and procedure utilized biostatistics, epidemiology, and data for the obese pediatric population. It was defined as having a BMI greater than 85%. When developing an educational handout, the information and practices identified via evidence-based methods were utilized to promote healthier life choices. It also allowed practitioners to further evaluated the underlying cause of obesity and other associated comorbidities. This allows the health care team a different approach adding quality and ways of developing a

		guideline to establish further prevention strategies for obesity and comorbidities associated with obesity.
Essential VIII ***Advanced Nursing Practice***	**Competency**- Melds diversity & cultural sensitivity to conduct a systematic assessment of health parameters in varied settings **Competency** – Design, implement & evaluate nursing interventions to promote quality **Competency** – Develop & maintain patient relationships **Competency** –Demonstrate advanced clinical judgment and systematic thoughts to improve patient outcomes **Competency** – Mentor and support fellow nurses **Competency**- Provide support for individuals and systems experiencing change and transitions **Competency** –Use systems analysis to evaluate practice efficiency, care delivery, fiscal responsibility, ethical responsibility, and quality outcomes measures	The policy and procedure created helped providers to have more confidence in addressing pediatric obesity. It gave the healthcare providers a guide that allowed a better line of communication between the patient and their guardians. It also provided a means of autonomy for each role by defining the role of each health care member. Outcomes for patients were positive as well with their adapting to healthier lifestyles, gaining knowledge, and providing the information respectfully, which empowers them to understand the importance of their active role and accountability for their lifestyle choices which can impact their overall health. Data collected for the policy and procedure impactfulness were strongly agreed upon for practice, health care teams, and patients. It was also suggestive that it would be impactful for any clinic that provides care for pediatric patients and thought to be something that could be adapted and used for all age groups.

Project Timeline

Dates	Explanation of Events for DNP Project
Summer Session 2021 May 14 - August 2, 2021	DNP I: Introduction to DNP Project, brainstorming, creating a general idea of the project, research problem for DNP project, collecting data, meetings with the instructor, and with a site that agrees to be in partnership for the project.
Fall Semester 2021 August 23 - December 15, 2021	DNP II: Finalize DNP Project Plan, develop procedures for DNP project, collect information for research for an identified problem that supports DNP Project, gain formal approval for DNP Project and approval for the site.
Week of January 6, 2021	Review all information. Make necessary changes for the implementation of the DNP project for final approval to move to the project's implementation stage.
Spring Semester 2022 January 10 - May 9, 2022	DNP III: Implementation stage of the project. It consists of scheduled meetings, gathering data, and utilizing PDSA to evaluate the project.
February 13, 2022	Meet with the project site. Will disseminate the final purpose of the project, introduce the policy/procedure for obese pediatric patients, explain roles for each team member involved, explain the data collection process for the project, review educational materials, and have a question-and-answer session.
Feb 14thth - 25th	The first two weeks of implementation of the project. Pediatric patients qualify as overweight and obese by dx codes E66.1 and E66.9 (patients in the 85th percentile or higher on CDC's growth chart). Each team member will be responsible for following the steps in the procedure provided. At the end of the 2 weeks, a PDSA evaluation will be performed to evaluate the data collected and how effectively each team member performed their role. After review, the process is reviewed and changed based on need.
February 28, 2022	Results are shared with team members with suggestions for improvements. This will begin in the next two weeks for project implementation. Discuss with instructor progress with implementation of the DNP project.
February 28th- March 11th	This begins the second cycle of two weeks of implementing project's policy/procedure as previously defined, with identified improvements. At the end of the day on the 15th, the information will be collected per use of PDSA. Data will be reviewed again based on information the project may be modified.

Marc.h 14, 2022	Results are shared with team members with suggestions for improvements. This will begin in the next two weeks for project implementation. Discuss with instructor progress with implementation of the DNP project.
March 14th - March 25th	This begins the third cycle for two weeks of implementing of the project's policy/procedure as previously defined, with identified improvements. At the end of the day on the 15th, the information will be collected per use of PDSA. Data will be reviewed again based on information the project may be modified.
March 28, 2022	Results are shared with team members with suggestions for improvements. This will begin in the next two weeks for project implementation. Discuss with instructor progress with implementation of the DNP project
March 28th- April 8th	This begins the third cycle for two weeks of implementing of the project's policy/procedure as previously defined, with identified improvements. At the end of the day on the 15th, the information will be collected per use of PDSA. Data will be reviewed again based on information; the project may be modified.
April 11, 2022	Results are shared with team members with suggestions for improvements. This will begin in the next two weeks for project implementation. Discuss with instructor progress with implementation of the DNP project
April 11th- April 22nd	This begins the fourth cycle for two weeks of implementing of the project's policy/procedure as previously defined, with identified improvements. At the end of the day on the 15th, the information will be collected per use of PDSA. Data will be reviewed again based on information; the project may be modified.
April 25, 2022	Results are shared with team members with suggestions for improvements. This will begin in the next two weeks for project implementation. Discuss with instructor progress with implementation of the DNP project
April 25th -May 6th	This begins the fifth cycle for two weeks of implementing of the project's policy/procedure as previously defined, with identified improvements. At the end of the day on the 15th, the information will be collected per use of PDSA. Data will be reviewed, again based on information; the project may be modified.
May 9th- May 20th	This begins the sixth cycle for two weeks of implementing of the project's policy/procedure as previously defined, with identified improvements. At the end of the day on the 15th, the information will be collected per use of PDSA. Data will be reviewed.
May 13th through August 1, 2022	DNP IV: Last semester for completion of DNP. This semester will consist of finalizing information and results for dissemination and presentation.

Week of May 13th through May 20th	Meet with the DNP instructor to discuss progress, expectations, and revisions. Will meet with the clinical site, review their final findings, and get their feedback on policy/procedure. Will record their thoughts to use to find shortcomings, et cetera.
May 23rd	This will be the final week of data gathering. Discuss with instructor progress with implementation of the DNP project. Will begin the process of getting all data together to present to office members and instructors and to disseminate the findings.
May 23, 2022	Review suggestions for dissemination. Start preparing for the last semester of DNP.
Week of May 23rd through May 30th	Continue to make revisions based on the guidance of the instructor/feedback.
Week of June 1st through June 8th	Meet with DNP Instructor to report revisions, progress, and expectations.
Week of June 8th through June 15th	Continue to make revisions based on the guidance of the instructor/feedback. Start creating a poster for dissemination.
Week of June 16th through June 23rd	Meet with DNP Instructor to report revisions, progress, and expectations.
June 24th through July 15th	Finalize poster, gain approval, present DNP project/findings/paper/poster for final approval to begin the dissemination of information process
July 15th through July 25th	Prepare for presentation. Present on Campus on designated Day