

Goal Setting to Facilitate Provider Management of Pediatric Obesity

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Abstract

Problem: Increasing pediatric obesity rates suggests the need to assess barriers to effective treatment strategies. Primary care providers (PCPs) report low confidence levels to effectively deliver recommended behavior modifications techniques such as goal setting.

Objective: The primary outcome was to increase provider confidence in treating childhood obesity. The secondary outcome was to increase documented obesity-related interventions consisting of laboratory studies, behavioral modification techniques, referrals, and follow-ups.

Methods: A quantitative method design utilizing an action planning educational intervention was used for this quality improvement (QI) project. Scaled surveys were used to assess the providers' confidence levels, and a retrospective chart review was used to evaluate the obesity-related interventions documented by the providers.

Results: The collected data was analyzed using descriptive and inferential statistics. Provider confidence to treat childhood obesity increased post-intervention. There was a post-intervention increase in the frequency of documented laboratory studies, behavioral modifications, and follow-up appointments.

Conclusion: The education of healthcare providers on techniques such as action planning has demonstrated positive outcomes in increasing their confidence in approaching obesity treatment. Notably, goal setting and action planning have been recognized as beneficial techniques for modifying health behaviors, and as such, their incorporation into routine well-child checks is highly recommended. Promoting the utilization of goal setting and action planning in the healthcare setting may prove to be a critical step in tackling the issue of pediatric obesity.

Keywords: pediatric obesity; primary care; goal setting; action planning; obesity toolkit; obesity interventions

Background and Significance

Childhood obesity is a serious health issue that affects over 14 million children and adolescents, with a prevalence rate of over 19% (Center for Disease Control and Prevention [CDC], n.d.). Locally, North Carolina is ranked 18 out of 50 states, with an increased obesity rate of 3.5% from 2016 to 2020 (State of Childhood Obesity, 2020). The CDC has linked childhood obesity to a higher risk of developing adulthood obesity and chronic diseases like heart disease, hypertension, diabetes, asthma, anxiety, and depression (CDC, n.d.).

A continued objective for Healthy People 2030 is to reduce the proportion of children and adolescents with obesity (Healthy People 2030, 2020). Primary care providers (PCPs) are essential in reaching this objective because they serve as behavior-change agents and advocates for healthy lifestyles in their practice setting. These providers often follow children over the long term giving them a unique perspective on preventing chronic conditions like obesity (Daniels et al., 2015). Additionally, providing care over the long term allows patients to build trusting relationships with their PCPs, a necessity for adherence to treatment plans.

The rising pediatric obesity rates reveal the need to assess barriers to effective management. Qualitative studies exploring PCPs attitudes and barriers to effective pediatric obesity treatment report low levels of self-efficacy as a leading cause (Campoverde Reyes et al., 2021; Carrasco et al., 2022). Self-efficacy or confidence was directly related to providers' knowledge level of obesity-related treatment (Sastre et al., 2019; Zamani-Alavijeh et al., 2019; Campoverde Reyes et al., 2021). Providers with less obesity-related knowledge expressed lower levels of confidence in engaging patients in weight management discussions (Zamani-Alavijeh et al., 2019; Campoverde Reyes et al., 2021). Suggested interventions to combat low confidence levels with obesity treatment include education on obesity-specific treatment interventions

(Campoverde Reyes et al., 2021). The American Psychological Association (2018) recommends behavioral intervention strategies such as goal setting, motivational interviewing, stimulus control, and parental modeling to treat obesity in children.

Purpose

The purpose of this QI project was to introduce a sustainable process change that addresses childhood obesity in the primary care setting. The project aimed to assess whether incorporating an action planning intervention, defined as setting specific goals with a plan of action, could enhance healthcare providers' confidence in administering treatment for pediatric obesity. This study utilized a nutritional and physical activity survey, action plan, and treatment algorithm from Healthy Care for Healthy Kids obesity toolkit developed by the National Initiative for Children's Healthcare Quality (NICHQ). The primary outcome was to assess the degree of provider confidence after receiving an action planning education. The secondary outcome was to measure the extent to which providers documented obesity-related interventions, such as laboratory studies, behavioral modification techniques, referrals, and follow-ups; pre- and post-intervention.

Review of Current Evidence

A literature review was conducted using the LibGuides database from the Lenoir Rhyne University Rudisill Library website, Google Scholar, and PubMed.

Addressing Health-Related Behaviors

Behavior modification programs are effective methods to address health-related behaviors in preventing and treating obesity. These programs center on strong behavioral theories such as learning, social cognitive, behavioral economics, and social-ecological models (Daniels et al., 2015). The theory most frequently used to design nutrition education and physical

activity programs is the social cognitive theory (SCT) which states self-efficacy as its most crucial construct (Bagherniya et al., 2018). A vast amount of research evaluating the effects of obesity-related interventions employs a comprehensive multidisciplinary approach focusing on physical activity, nutrition, and behavioral factors (Zolotarjova et al., 2018).

Health coaching interventions provide a holistic approach that combines education, health behavior modification, problem-solving, and psychological support (Hill et al., 2015). Clinicians often use health coaching interventions to promote changes in unhealthy behaviors that lead to preventable diseases for many populations and across many domains (Hill et al., 2015). Behavior change techniques from health coaching studies include goal setting, action planning, motivational interviewing, problem-solving, self-monitoring, barrier identification, and stress management (Hill et al., 2015).

Goal-Setting Theory

Goal setting is a motivational interviewing (MI) based collaborative strategy used to influence the implementation of healthy behaviors to reduce chronic disease risk (Ford et al., 2019). Goal setting is focused primarily on motivation, much like the concept of self-efficacy in the SCT (Bagherniya et al., 2018). Planning and achieving set goals leads to mastery experiences that build self-efficacy (Domke et al., 2021). The satisfaction and fulfillment that result from achieving goals are necessary for maintaining health behaviors (Bagherniya et al., 2018).

Setting specific goals with a course of action is called action planning, which involves deciding on a concrete action plan and answering the questions of what, when, where, and how often (Lenzen et al., 2018). Action planning promotes behavior change by facilitating the intention-behavior relationship (Domke et al., 2021). A mental connection is made between

situational cues (what, when, and where) and behavioral response (how) that makes the desired behavioral performance more likely (Domke et al., 2021).

Goal Setting and Action Planning in Primary Care

The steady increase in people living with chronic conditions has resulted in the interest of effective self-management (Lenzen et al., 2018). Shared decision-making is a collaborative approach that increases patient autonomy and better health outcomes (Lenzen et al., 2018). The shared decision-making model is often used in primary care and is required to effectively use goal setting and action planning (Lenzen et al., 2018). Goal setting helps patients and PCPs focus on the most important aspects of their care plan and supports PCPs in delivering patient-centered care (Ford et al., 2019).

Challenges to goal setting in primary care include providers struggling to elicit suitable goals and patients not being prepared to set goals (Ford et al., 2019). PCPs self-report unpreparedness to provide effective obesity treatment citing low confidence levels, time constraints of the patient visit, and lack of obesity training and resources as barriers to addressing weight and lifestyle habits (Welsh et al., 2014; Campoverde Reyes et al., 2021). The readiness of patients to participate in goal setting is a driving factor affecting the action planning process (Ford et al., 2019). Practical, validated tools for goal setting can facilitate overcoming the difficulties PCPs experience (Lenzen et al., 2018).

Provider Confidence

Exploration of confidence to manage pediatric obesity found low confidence levels with PCPs (Campoverde Reyes et al., 2021). A lack of obesity training and the availability of treatment and referral options contribute to low confidence levels (Campoverde Reyes et al., 2021). Suggestions to overcome low confidence levels include enhancing PCPs ability to

effectively address obesity by closing knowledge gaps (Sastre et al., 2019). Education programs to train providers in goal setting promote increased self-efficacy and improves weight-based counseling practices (Welsh et al., 2014; Zamani-Alavijeh et al., 2019; Campoverde Reyes et al., 2021; Carrasco et al., 2022). In addition to increasing confidence, obesity training for providers leads to better familiarity with guidelines, management options, and improved patient outcomes (Campoverde Reyes, 2021; Carrasco et al., 2022). A training intervention and implementation of a brief screening tool for obesogenic behaviors paired with action planning increases provider confidence to assess readiness to change, counsel families on diet, and counsel patients on physical activity (Christison et al., 2016). Providers report increased satisfaction with validated tools and increased confidence to assess readiness and counsel patients on diet and physical activity (Christison et al., 2016).

Barriers to Goal Setting

A common barrier to goal setting in primary care was fitting the process into a 20-minute patient visit (Gutnick et al., 2014; Sastre et al., 2019; Carrasco et al., 2022). The time available to cover the visit components and assessment of obesogenic behaviors is likely insufficient (Sastre et al., 2019). Time constraints limit the providers' ability to follow recommended obesity guidelines properly (Sastre et al., 2019). Increased workload demands and insufficient force are the most critical factors contributing to time barriers (Zamani et al., 2019). Other healthcare team members, like medical assistants and registered dietitians, can be helpful in streamlining the goal-setting process to overcome the time barrier (Gutnick et al., 2014; Sastre et al., 2019). A commonly deployed model uses the front desk clerk or medical assistant to help the patient think about goals by providing a behavioral menu (Gutnick et al., 2014).

The lack of adequate resources and tools for pediatric patients is a significant barrier to obesity management (Campoverde Reyes et al., 2021). A lack of referral services for diet, physical activity, and weight management is a barrier to successful management (Campoverde Reyes et al., 2021). There is limited availability of pediatric obesity-trained providers, especially in rural areas that lack affiliation with teaching entities (Campoverde Reyes et al., 2021). Less than 40% of providers with obesity training certifications treat pediatrics, which is inadequate to meet the demand with increasing obesity rates (Campoverde Reyes et al., 2021).

NICHQ Obesity Toolkit

Toolkits help educate healthcare staff and assist in the implementation of interventions with high rates of uptake and satisfaction (Thomas et al., 2022). The NICHQ obesity toolkit was developed to assist primary care practice teams in providing coordinated, integrated, and multidisciplinary services to prevent obesity and improve care for children who are overweight or at risk of becoming overweight (National Institute for Children's Health Quality, 2014). Positive patient outcomes were seen using this toolkit (Jester et al., 2017; Thomas et al., 2022). While there was no change in body mass index (BMI) or blood pressure, self-reported behavioral measures (fruit and vegetable intake, physical activity, screen time, and sugary drink consumption) showed statistically significant improvements (Jester et al., 2017). Improvement in obesity management through lab work, assessing readiness to change, and acceptability of the toolkit was seen with toolkit use (Thomas et al., 2022).

Theoretical Model

The Ottawa Model of Research Use (OMRU) was the ideal framework for knowledge translation in this QI project. OMRU uses a systematic process of assessing, monitoring, and evaluating (AME) each element in the model. AME identifies potential barriers and facilitators,

provides direction for tailoring implementation strategies, monitors progress, and evaluates the use of innovation and its impact (Logan & Graham, 1998). OMRU is an interactive model where each element influences the decisions and actions of different individuals. Although the model presents linearly, the process is not unidirectional, and all components are influenced by each other (Logan & Graham, 1998).

The first phase of approach was to include an assessment of the training intervention identifying attributes like relative advantage, compatibility, time, complexity, and trialability known to affect the adoption of an intervention (Graham & Logan, 2004). The initial phase's next step also included assessing the PCPs (adopters) and the practice setting (context). Adopter assessment consisted of knowledge, skills, and attitudes toward the action planning training and use in practice (Graham & Logan, 2004). Context assessment identified time, cost, resources, and consistency factors to determine the feasibility of adopting action planning. In addition, the primary investigator (PI) completed assessments using scaled pre-and post-training surveys. The second phase of approach monitored the implementation and use of action planning. The final step was evaluating the efficacy of my innovation using surveys and chart reviews.

Methods

Ethical Considerations

Project plans were submitted to Lenoir Rhyne University's Institutional Review Board for approval. The project coordinator completed formal training on ethical conduct and obtained certification. Data collected from chart abstraction and written surveys were coded into Intellectus statistical software for analysis. All participants and patients remained anonymous and were given a numerical identification assignment. Data was stored using a password-

protected personal computer only accessed by the PI and deleted after completion of the project. Paper surveys were secured in a locked cabinet.

Context

This four-month quantitative method QI project focused on implementation in a rural family medicine clinic in western North Carolina. The clinic provides primary and episodic care to adults and pediatric patients ages five and older.

Participants

Participants of the project are PCPs treating children in a family ambulatory, outpatient setting. The only inclusion criterion was the participant had to provide care to pediatric patients. There were no exclusion criteria. Participation in the project was voluntary. The stakeholders and the clinic director voiced full support for this project.

Project Implementation

The QI project was implemented in the setting of a rural primary care practice in North Carolina. All PCPs working at the implementation site were eligible and invited to participate in the project. This project started with participants completing a pre-intervention 0-10 scaled confidence survey (Appendix A). Following the survey was a one-hour educational luncheon where the PI introduced elements from the NICHQ's obesity toolkit to the participants. Although shown in its entirety, the toolkit education focused on the Physical Activity and Nutrition Survey (Appendix B), the action plan (Appendix C), and the obesity treatment algorithm (Appendix D). A digital template of the action plan that was embedded in the electronic medical record (EMR) was presented during the education session. A free weight loss management institute referral process was introduced during the education. Referral appointments for this weight loss institute were scheduled using an online booking site that was created with the assistance of the PI.

On the day of the patient visit, the medical assistant gave patients and their families a printed copy of the Physical Activity and Nutrition Survey and action plan after weigh-in. Only patients with a BMI greater than the 95th percentile were given the document. The medical assistant instructed the patient and family to complete the survey while waiting for the provider to begin the visit. During the patient visit, the provider reviewed the completed survey to identify modifiable obesogenic behaviors and willingness to change. The patient and family developed and wrote an action plan that contained SMART (specific, measurable, attainable, relevant, and time-based) goals, readiness to change level, and a time frame for follow-up. The provider completed the action planning template in the patient's EMR. The patient and family retained the written survey and action plan for future reference. A free referral to the weight loss institute for dietary and physical activity counseling services was offered to every patient and family that participated in the action planning activity. The provider confidence surveys were administered to project participants post-intervention (Appendix A).

Study of the Interventions

This project aimed to assess the degree of provider confidence in treating childhood obesity with an action planning education. The primary outcome was to improve provider confidence. The secondary outcome was to improve the use of obesity treatment interventions by PCPs, such as laboratory studies, behavior modification techniques, follow-up appointments, and referrals. The impact of the training intervention was assessed with pre- and post-intervention confidence surveys and chart reviews. The chart reviews consisted of patient charts with the exclusion criteria of patients under the age of five years and a BMI < 95th percentile. The providers used the EMR template as the preferred method to integrate the action plan into the

medical record. Documenting in the EMR reduced workflow interruption and promoted ease of use.

Measures

Patient Demographics

Ten scheduled patients met the criteria for inclusion with a BMI greater than the 95th percentile and an age between 5-18 years. All ten patients received the action planning intervention. The demographics collected included age, gender, and BMI. For confidentiality, all collected information was de-identified and entered directly into a secure password-protected laptop.

Provider Confidence

Participants were asked to complete pen-and-paper surveys of self-perceived confidence. The survey was administered pre- and post-intervention with ratings assigned either a yes/no or a numerical value (0-10).

Chart Review

The secondary outcome assessment consisted of pre- and post-intervention chart reviews. Patient charts with a documented age between five and 18 years and a BMI greater than the 95th percentile were reviewed. Data collected included demographics and obesity treatment interventions used by the providers, including laboratory studies, referrals, behavior modification techniques, and follow-up visits. Direct access into the EMR system was password protected and granted to the PI by the medical director.

Data Analysis

Descriptive statistics were used to report pre- and post-intervention provider confidence ratings and patient demographics. Descriptive statistics were also used to report pre- and post-

intervention behavior modification documentation from the chart review. A McNemar test was used to assess the relative frequencies of pre- and post-intervention documentation of laboratory studies, follow-up appointments, and referrals from the chart review data.

Results

Patient Demographics

Descriptive statistics were used to examine gender, age, and BMI of patients that met the criteria for the study. The results showed there were an equal number of male ($n = 5$) and female ($n = 5$) patients. The median age of the patients was 9.8 years, with a range from 5 to 15 years. The median BMI was 98.32 percentile (range: 95.10-99.80), which suggests that the study included patients who were all classified as obese (see Table 1).

Table 1

Descriptive Statistics of Patient Demographics

Variable	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SEM</i>	Min	Max	Skewness	Kurtosis
Age	9.80	2.70	10	0.85	5.00	15.00	0.26	0.07
BMI_percentile	98.32	1.60	10	0.51	95.10	99.80	-0.97	-0.42

Note. *M* and *SD* represent mean and standard deviation, respectively.

Provider Confidence

The study used descriptive statistics to evaluate participant pre- and post-intervention provider confidence survey results. The results showed that the mean confidence rating in using behavior modification techniques increased from pre-intervention ($M = 6.50$) to post-intervention ($M = 7.50$) (see Table 2). The mean confidence rating that behavior modification techniques were a successful approach to obesity treatment also increased between pre-intervention ($M = 6.50$) and post-intervention ($M = 7.50$). The mean confidence rating that behavior modification techniques can be properly executed within the time constraints of the visit increased between pre-intervention ($M = 5.00$) and post-intervention ($M = 5.50$). The mean confidence rating to

recommend health behavior modification techniques in practice increased from pre-intervention ($M = 8.00$) to post-intervention ($M = 8.50$). However, there was no change in the mean confidence rating of having adequate referral resources for obesity treatment pre-intervention ($M = 2.00$) versus post-intervention ($M = 2.00$). Overall, the results suggest that the intervention positively affected the providers' confidence in treating childhood obesity using behavior modification techniques.

Table 2

Descriptive Statistics of Provider Confidence

Variable	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SEM</i>	Min	Max	Skewness	Kurtosis
Pre_Q2	6.50	0.71	2	0.50	6.00	7.00	0.00	-2.00
Post_Q2	7.50	0.71	2	0.50	7.00	8.00	0.00	-2.00
Pre_Q3	7.00	0.00	2	0.00	7.00	7.00	-	-
Post_Q3	7.50	0.71	2	0.50	7.00	8.00	0.00	-2.00
Pre_Q4	5.00	0.00	2	0.00	5.00	5.00	-	-
Post_Q4	5.50	0.71	2	0.50	5.00	6.00	0.00	-2.00
Pre_Q5	2.00	0.00	2	0.00	2.00	2.00	-	-
Post_Q5	2.00	0.00	2	0.00	2.00	2.00	-	-
Pre_Q6	8.00	0.00	2	0.00	8.00	8.00	-	-
Post_Q6	8.50	0.71	2	0.50	8.00	9.00	0.00	-2.00

Note. '-' indicates the statistic is undefined due to constant data or an insufficient sample size.

Chart Review

Descriptive and inferential statistics were used to evaluate the obesity-related interventions documented by the providers in the patient charts. Descriptive statistics were used to examine the frequency of pre- and post-intervention behavior modification documentation. The results indicated an increase in the frequency of post-intervention behavior modification documentation, with a 100% frequency, compared to 30% pre-intervention (see Table 3).

Table 3

Descriptive Statistics of Behavioral Modifications

Variable	<i>n</i>	%
pre_Behavioral_Modifications		
no	7	70.00
yes	3	30.00
post_Behavioral_Modifications		
yes	10	100.00
no	0	0.00

Note: *n* represents the documented frequency of each variable in the pre- and post-intervention periods.

Inferential statistics were used to analyze the frequency of pre- and post-intervention documentation of laboratory studies, follow-up appointments, and referrals. McNemar's Chi-square of laboratory studies showed an increased frequency of pre-intervention yes ($n = 5$) versus post-intervention yes ($n = 9$), but these findings were not significant based on an alpha value of $.05$, $p = .157$ (see Table 4).

Table 4McNemar's Test for Laboratory Studies

	Labs_post				
Labs_pre	yes	no	χ^2	<i>df</i>	<i>p</i>
yes	5	0	2.00	1	.157
no	2	3			

Note: *p*-value of $.157$ suggests the proportions of each outcome were not significantly different

Similarly, there was an increase in the frequency of post-intervention "yes" documentation of follow-up appointments. The analysis revealed an increased frequency of yes ($n = 4$) pre-intervention versus yes ($n = 9$) post-intervention, but these findings were not significant based on an alpha value of $.05$, $p = .102$ (see Table 5).

Table 5McNemar's Test for Follow-ups

	Follow_up_post				
Follow_up_pre	yes	no	χ^2	<i>df</i>	<i>p</i>
yes	4	1	2.67	1	.102
no	5	0			

Note: *p*-value of .102 suggests the proportions of each outcome were not significantly different.

Observed frequencies of accepted referrals showed decreased pre-intervention yes ($n = 2$) versus post-intervention yes ($n = 1$). The difference was significant based on an alpha value of .05, $p = 0.02$ (see Table 6).

Table 6

McNemar's Chi-square Test for Referrals

	Referrals_post				
Referrals_pre	yes	no	χ^2	<i>df</i>	<i>p</i>
no	0	8	5.44	1	.020
yes	1	1			

Note: *p*-value of .020 represents significant test results that suggest unequal proportions of each outcome.

Discussion

Summary

This QI project found that implementing an action planning intervention improved outcomes for PCPs who treat childhood obesity. The education intervention served as a reminder of MI-based communications skills and techniques and obesity treatments for the providers. The intervention positively impacted patient outcomes, evident by improved documentation of obesity-related interventions by the providers. The project demonstrated the importance of implementing user-friendly interventions that fit into the provider's workflow to encourage adoption and adherence.

Interpretations

Overall, the primary outcome to improve provider confidence in implementing behavior modification techniques was successful. Half of the participants felt more confident that techniques like action planning could be successfully executed within the time constraints of the patient visit. Half the participants were more likely to recommend that behavior modification techniques be used in practice. Using an action planning education intervention and EMR action plan template reduced interruptions to provider workflow and positively impacted outcomes. These findings are consistent with previous studies that suggest training opportunities, knowledge, and awareness about childhood obesity positively impact provider attitudes and beliefs (Lowenstein et al., 2013; Zamani-Alavijeh et al., 2019; Carrasco et al., 2022).

The secondary outcome was successful with increased documentation of obesity-related interventions by the providers. Laboratory studies, behavior modification techniques, and follow-up appointment frequency increased post-intervention. The QI project yielded a noteworthy discovery: behavior modification frequency increased by 70%, with 30% documentation pre-intervention and 100% post-intervention.

The change in pre- and post-intervention laboratory studies and follow-up did increase, although not found to be statistically significant. Laboratory studies increased from 50% to 70% post-intervention. Follow-up frequency increased by 40% from 50% pre-intervention to 90% post-intervention. These findings align with those reported in the Lowenstein et al. (2013) study that increased provider self-efficacy yields increased obesity counseling. Pre- and post-intervention referrals decreased by 10%, from 20% to 10%. Providers noted the two most frequently given reasons for the decline of the referral were transportation issues and scheduling conflicts.

The Physical Activity and Nutrition survey and the action plan were useful resources for providers to engage families and help guide difficult weight-related discussions. The survey helped identify obesogenic behaviors before starting the visit, which allowed for time to develop the action plan. Pairing obesogenic screenings and health behavior action plans effectively increases provider confidence in their effectiveness in influencing patient health behaviors (Christison et al., 2016).

Limitations

One limitation of the project was the small sample size. Future research could expand this project by including a larger sample size. The implementation site was a rural family medicine office with three providers. One provider chose not to participate in the study. The office treats a limited number of pediatric patients contributing to the small number of patients that met the inclusion criteria. This limitation could affect the generalizability of the study to other primary care clinics.

Another project limitation was the lack of referral sites for pediatric obesity treatment. There were no pediatric obesity treatment centers in the city where the practice is located. The weight loss institute was the closest pediatric obesity referral site accessible via a 30-minute drive. The project showed that 90% of patients and their families declined the free referral citing transportation issues and scheduling as reasoning. The referral site had the ability to schedule in-person and telehealth appointments via an online portal but had limited monthly availability.

Conclusion

Overall, implementing an action planning education intervention positively impacted provider confidence in using health behavior modification techniques for childhood obesity treatment. The project showed increased documentation of obesity-related interventions,

including laboratory studies, behavior modification techniques, and follow-up appointments. However, future studies with larger sample sizes are recommended to lend insight into overall generalizability. It would be beneficial to increase referral site options for pediatric obesity treatment, specifically sites with telemedicine capabilities to combat transportation issues. Goal setting and action planning are key health behavior modification techniques and should be completed at all well-child checks. Educating providers on techniques like action planning has beneficial effects on increasing confidence to approach obesity treatment.

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Appendix A

Confidence Survey

1. Have you used health behavior modifications techniques such as goal setting or motivational interviewing in practice?

Yes

No

2. How confident are you that health behavior modification techniques are a successful approach to obesity treatment?

1 2 3 4 5 6 7 8 9 10

Less likely

More likely

3. How confident are you to use health behavior modification techniques in practice?

1 2 3 4 5 6 7 8 9 10

Less likely

More likely

4. How confident are you that behavior modification techniques can be properly executed within the time constraints of the patient visit?

1 2 3 4 5 6 7 8 9 10

Less likely

More likely

5. Do you feel you have adequate referral resources for obesity treatment?

1 2 3 4 5 6 7 8 9 10

Less likely

More likely

6. How likely are you to recommend health behavior modification techniques in practice?

1 2 3 4 5 6 7 8 9 10

Less likely

More likely

Appendix B

A Menu for Action - Physical Activity and Nutrition Survey Management Plan**Page 1***While you are waiting to see the doctor please take a moment to answer questions 1-10*

1. Do you eat **5 or more** fruits and vegetables *per day*? YES NO
2. Do you have a **favorite fruit or vegetable** that you would eat *everyday*? YES NO
3. Do you eat **breakfast everyday**? YES NO
4. Do you watch **TV, videos or play computer games for no more than 2 hours** per day? YES NO
5. Do you take gym class or participate in sports or dance **in or outside of school more times per week**? YES NO
6. Do you have a **favorite sport or physical activity** that you love to do? YES NO
7. Do you eat dinner **at the table with your family** at least once a week? YES NO
8. Do you have a TV in **your bedroom**? YES NO
9. Do you eat **in front of the TV**? YES NO
10. Do you drink soda, juice, or other **sugar sweetened drinks** one or more times a day? YES NO

Would you like to talk to your doctor about making changes to improve your health?YES NO *(if yes, continue to page 2)*

Adapted from the Jump Up & Go! Physical Activity and Nutrition Survey and the
Maine Center for Public Health Keep Me Healthy Goal Setting Worksheet



Appendix C

1 Increasing Physical Activity
 ___ Take a walk everyday
 ___ Pedometer 10,000 steps

2 Decreasing TV & Screen Time
 ___ Plan TV time
 ___ Take the TV out of my bed room

Decreasing Portion Sizes

Decreasing Soft Drinks and Juices
 ___ Cut down
 ___ NO soda

5 Increasing Fruits and Vegetables
 ___ Try one new veg or fruit
 ___ Add fruit to my cereal

OTHER

On a scale of 0 (not ready) to 10 (very ready)
 How ready are you (please circle appropriate number) to consider making a change?
 0---1---2---3---4---5---6---7---8---9---10

When I / my child reach goal I / my child will be rewarded by: (a special privilege, special activity etc.)

Patient Signature _____ Clinician Signature _____

Guardian Signature _____ Phone _____ Visit Date _____

Appendix D

