

Project Title: “215-GO!” – A Childhood Obesity Project
Project Number: HTPCP H17MC06711
Project director: Dr. Khudsiya Khan
Grantee Organization: Philadelphia Department of Public Health
Public Health Center #6,
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Project period: 3/1/06 to 2/28/11
Total Amount of Grant awarded: \$250,000.00 over a period of 5 years at \$50,000.00/year

Project Narrative

1. PURPOSE of PROJECT:

Childhood obesity is a public health epidemic affecting more than 9 million children and adolescents in the United States. Obesity-related medical conditions such as diabetes, dyslipidemia and hypertension have also increased in prevalence in children over the last decade. More than 40% of the pediatric patients seeking medical care at Philadelphia Public Health Center #6 are diagnosed as overweight and obese. The prevalence of overweight/obesity is about 25% more than the national average in this population. “215-GO!” clinic was established at Philadelphia Public Health Centers to identify, prevent and treat childhood obesity and related complications by promoting positive lifestyle behavior and motivating patients toward a healthier weight. “215-GO!” is an acronym based on Philly’s zip code and is used for counseling. “2—less than 2 hours of screen time per day”, “1—at least 1 hour of daily physical activity”, “5—5 servings of fiber daily, and “GO—Great Opportunities”.

It is a comprehensive childhood obesity management clinic that has been set up as a chronic disease care model. It was established as a partnership project between the Ambulatory Health Services and the local Maternal and Child Health divisions of the Philadelphia Department of Public Health.

Involvement of Local MCFH: The “215GO!” Clinic is coordinated and supervised by the project director (Dr. Khudsiya Khan) in conjunction with a supervisor from the local MCH division (Ms. Rackell Arum). The nutritionist and the health educator have been contracted through the local MCH department. The PDPH has been designated by the PA- DOH as a Local Title V Agency and provided with MCH Block Grant funding. The PDPH contract with the PA-DOH includes activities in support of the “215-GO!” program, specifically the assignment of health educators and the nutritionists who provide individual and group counseling to patients and families served by “215-GO!”. In addition to “215-GO!”, the local MCH Department has started a new “KIC” program (“KIC-Kids In Control”) that functions as a twin program to “215-GO!”, and focuses on the physical activity component, teaching kids how to combine fun and physical activity in the safety of their environment.

Involvement of AAP PA-Chapter: The PA-Chapter of AAP has identified pediatric obesity as a focus of its advocacy efforts and works to expand resources for addressing obesity in pediatric practices (http://www.paaap.org/adv_obesity.php). The president of the AAP PA-Chapter, Dr. David Turkewitz, has written a letter of support of the program that has been submitted in the original application. I keep him abreast of the development in this program by sharing the abstract of annual report and more details depending on interest and questions.

2. GOALS AND OBJECTIVES:

The project was successful in meeting all stated goals and objectives.

GOAL 1: To provide medical care for overweight and obese children and adolescents seeking care at Philadelphia Public Health Center #6 and help them achieve a healthier weight.

Objective 1: New patient enrollment and retention in “215-GO!” program: We have enrolled 496 patients during this 5-year project, averaging about 100 patients a year with a return rate of 63%. We will continue new patient enrollment and enhance our return rate.

Objective 2: Improvement in weight status: The BMI Z-score Mean change was -0.6 indicating a net weight loss in this population. 6-month post enrollment data in 281 patients with a return visit showed that 60% decreased BMI-percentile and another 2% maintained BMI-percentile. At baseline, 124 patients had severe obesity, defined as BMI-percentile >99%. At follow-up, 30% of these severely obese patients decreased BMI-percentile to below 98%.

GOAL 2: To identify and reduce obesity related medical complications such as type-2 diabetes, hypertension, dyslipidemia and other disorders.

Objective 1: Normalize abnormal blood pressure: 76 of 466 (17%) patients had abnormal BP at baseline; 1-year follow-up data on 33 patients with abnormal BP at baseline showed that 70% of these patients improved BP to a lesser category and 58% normalized blood pressure.

Objective 2: Normalize dyslipidemia: 170 (36%) patients had dyslipidemia at baseline.

Dyslipidemia was defined as total cholesterol \geq 200 mgm/dl, or HDL-C \leq 40 mgm/dl, or LDL-C \geq 110 mgm/dl. 1-year follow-up data on 52 patients with dyslipidemia at baseline showed that 62% of patients had decreased total cholesterol, 58% had decreased LDL and 54% increased HDL compared to their baseline status.

Objective 3: Normalize blood glucose level: 36 of 290 (12%) patients had hyperglycemia at baseline. Hyperglycemia was defined as FBG \geq 100 mgm/dl. Of these patients, 11 patients returned for fasting glucose at 1 year post-enrollment. Of these, 8 patients (73%) had normalized blood glucose, 1 patient remained hyperglycemic and 1 patient developed type-2 diabetes.

GOAL 3: To motivate patients toward a positive life style change and promote increased physical activity and healthy foods and drinks by employing Motivational Interviewing techniques.

Objective 1: Assessment of “Motivational Stage of Change”: All “215-GO!” patients and their caregivers receive nutrition and physical activity assessment and counseling by the nutritionist and health educator at each visit. Patient’s “Stage of Motivation” towards achieving a healthy weight is documented at each visit as: Stage-1= Pre-Contemplation; 2 = Contemplation; 3 = Preparation; 4 = Action.

Objective 2: Motivate patient to advance to the next Stage of Change: Baseline data on 401 patients showed that 13% were in Pre-contemplation/Contemplation stage (Stage 1 or 2), while 60% were in Preparation (Stage-3) and 27% in Action (Stage-4). Follow-up on 286 patients showed that 63% could be advanced to a higher Stage of Motivation and 70% could be maintained in Stage of Action.

3. METHODOLOGY:

All Health Center Pediatricians have been trained in management of childhood obesity based upon Expert Committee’s Recommendations on Identification, Prevention and Treatment of Child and Adolescent Overweight and Obesity (2007). Patients aged 2 -18 years diagnosed as overweight or obese are referred to the “215GO!” clinic which has been set up as a chronic disease care model. This clinic is staffed with a pediatrician, a nutritionist and a health educator. The patient is seen at each visit by a pediatrician followed by the nutritionist and/or health educator based upon the patient’s needs. After the initial visit, the patient is given an appointment to return within 2 – 4 weeks to assess patient’s understanding and compliance with treatment goals. Appointment reminder calls are made 2-3 days prior to appointment. Follow-

up phone calls are made to patients breaking appointments to identify any barriers, reinforce treatment goals, and set new appointment if desired. The *pediatricians* (0.4FTE – *In-kind contribution of the Philadelphia Department of Public Health*) performs medical examination and counsels the patient about the potential medical complications of obesity, sets goals toward healthy weight and healthy life styles, and orders and assesses labs as needed. The *nutritionist* (0.25 FTE hired thru this grant) performs a detailed intake on nutrition and physical activity, addressing food preferences, eating patterns, and food shopping and cooking practices. The *health educator* (0.3 FTE hired thru this grant) performs a detailed psychosocial intake and assesses patient’s Stage of Motivation towards achieving a healthy weight. She also makes an assessment of any psychological problems associated with obesity, patient’s (and parent’s) attitudes and beliefs toward weight and the family support to the child/adolescent. All providers have been trained in *Motivational interviewing* techniques to help patients set small, achievable goals. We have developed spreadsheet to capture data at each visit on weight, height, blood pressure, BMI, BMI-percentile, and Stage of Motivation. Laboratory data such as blood glucose and lipids is collected at baseline and extracted from charts every six months. We have developed survey forms to assess patient satisfaction and program changes have been made to accommodate patient needs, such as after school appointments, help with transportation, etc. We have developed brochures and flyers in English and Spanish for recruitment of patients from the general pediatric clinic and from local schools and organizations.

4. EVALUATION:

PROCESS EVALUATION: The project director, Dr. Khudsiya Khan is responsible for overall functioning of the project. She supervises the “215-GO!” program in conjunction with a supervisor from the local MCH Division. The project director receives monthly reports from the

project staff regarding new patient enrollment and patient return visits. Surveys have been developed to assess patient satisfaction and needs. The project director reviews the surveys and patient charts periodically. She devotes 0.10 FTE portion of her time to supervise this project and 0.10 FTE toward clinical care of patients (in-kind contribution to this project).

OUTCOMES EVALUATION: Data entry form has been developed to capture data on weight, BMI, BP, blood glucose and blood lipids values, and Motivational Stage of Change to assess the effect of interventional measures. The data is analyzed twice a year. Results are shared with the project staff in the meetings and through posters and presentations with local and national audience.

5. RESULTS and OUTCOMES:

The “215-GO!” program has been successful in patient enrollment and retention. We have met our stated goals and objectives successfully.

CHANGE in BMI-percentile: About 100 new patients enrolled during each year of the project to a total of 496 patients. 63% of the patients made return visits. At 1-year post enrollment, 60% of patients decreased BMI-percentile compared to their baseline enrollment status, while another 2% maintained. 124 patients had severe obesity at baseline defined as BMI-percentile >99%. At follow-up, 30% of these severely obese patients had decreased BMI-percentile to below 98%.

CHANGE in BASELINE CO-MORBIDITIES: Significant improvement was seen in obesity associated co-morbidities too. At baseline, abnormal BP was seen in 17 % of patients, dyslipidemia in 36%, and hyperglycemia in 12%. This is a remarkably high prevalence of these co-morbidities in these obese children compared to the prevalence rates in general pediatric population (NHANES data). The prevalence rate is 0.4% for all types of diabetes and 0.2 % for type-2 diabetes; 4.5% for pre-hypertension and hypertension; and 12.6% for dyslipidemia in

general pediatric population. At 1-year post-enrollment follow-up, 70% of patients improved blood pressure to a lesser category, 62% of patients with dyslipidemia improved blood lipids and 73% of patients with pre-diabetes normalized blood glucose. While most patients with co-morbidities at base line showed improvement, some patients with normal glucose and blood pressure at baseline worsened over follow-up period. 16% of patients with normal BP developed pre-hypertension/hypertension, and 12% of patients with normal blood glucose developed hyperglycemia over follow-up period.

CHANGE in MOTIVATION to LOSE WEIGHT: 63% of patients could be advanced to a higher Stage of Motivation to make a change and 70% maintained Stage of Action at follow-up. This is probably an outcome of the *Motivational Interviewing* techniques employed by the nutritionist and health educator. Our ability to motivate the patients towards healthy lifestyle changes probably contributed to the success of this project. Patient satisfaction surveys indicate satisfaction and liking for this program.

There is evidence to suggest that adult obesity, hypertension and coronary artery disease have origins in childhood. The above results exemplify positive outcomes resulting from engagement of patients and families in “215-GO!” clinic and the efficacy of our intervention measures. Our program has demonstrated improvement in childhood obesity associated co-morbid conditions, thus leading to better health outcomes and hopefully, future health costs reduction. It is also obvious that some patients did not improve despite engagement in this program; they may need other support such as better access to healthy foods or safe venues for physical activity, which are beyond the scope of this project.

Table: “215-GO!” STATS: (data on 466 initial enrollees)

Enrollment of new patients					
Total	Year-1	Year-2	Year-3	Year-4	Year-5 (current)
N = 466	97	92	117	75	85
Return Rate	67 (70%)	61 (66%)	567 (67%)	58 (76%)	33 (38%)
Race and Ethnicity					
Total	AA	White	Asian/Other	Hispanic	
466	75 (16%)	10 (2%)	20 (4%)	361 (78%)	
Age and Sex					
Total	2-5 Y/O	6-12 Y/O	13-18 Y/O	Males	Females
466	69 (15%)	230 (50%)	167 (35%)	215 (46%)	251 (54%)
Results/Outcomes					
BMI Status	Baseline N = 458		6-month Follow-up N = 281		
	Baseline Prevalence		Improved/ Maintained	Worsened	
Overweight (BMI 85-94%)	19%		75%	25%	
Obese (BMI 95-98%)	54%		62%	38%	
Severe Obese (BMI =/>99%)	27%		56%	44%	
Comorbidities	1-year Follow-up				
	Baseline Prevalence		Improved	Worsened	
Pre-hypertension/Hypertension	17%		70%	16%	
Pre-diabetes/diabetes (type-2)	13%		73%	13%	
Dyslipidemia	36%		67%	33%	

Unexpected Outcomes: We expected to see a higher prevalence of dyslipidemia and hyperglycemia in patients with severe obesity (BMI>99%) compared with obese (BMI 95% – 98%) individuals, but the prevalence rate for these co-morbidities was about the same in both of these categories. Also, we expected to see improvement in co-morbidities linked to improvement in BMI-percentile and vice-versa, but, we failed to see a definite link between improvement in BMI-percentile to improvement in hyperglycemia or association of worsening in BMI-percentile with worsening in blood glucose value. However, we saw improvement in lab values and in blood pressure without significant improvement in BMI in some patients which we associated with positive life style changes such as healthier diet and increased physical activity.

Other Outcomes: Collaborative Partnerships

We have developed several partnerships at local and state level due to this project. The local partnerships are thriving even after the HTPCP funding for this program ended. Our local partners are MCH department, Department of Behavioral Health and Mental Retardation Services and the School District of Philadelphia. The School District of Philadelphia (SDP) has establish procedures and policies for referral of patients needing medical home to the Public Health Centers and also policies are being developed for data sharing between PDPH and SDP. The project Director has developed collaboration with the SDP for referral of pregnant/parenting teens to the “Cradle to Class” program.

6. PUBLICATIONS and PRODUCTS:

Following is a list of Products from this project:

Patient education handouts: healthy foods, healthy drinks, physical activity and emotional issues.

Brochure: “215-GO!” (English and Spanish)

Flyers: “215-GO!” (School Nurse Flyer and Patient Information Flyer)

Psychosocial Intake Form: For use by a Health educator to assess body image, self esteem, weight perception and motivation to lose weight, family support, etc.

Nutrition Intake Form: For use by a Nutritionist to assess current level of physical activity and nutritional practices and counsel patient about changes needed for a healthy weight.

Data Entry Spreadsheet: To capture the data to assess the effects of intervention such as weight, height, blood pressure, motivation to change lifestyle, and lab data (glucose and blood lipids).

Protocols and Guidelines for the Diagnosis and Management of Childhood Obesity: Initially developed in 2004; Revised: June 2006; June 2007; July 2008 – for physicians

Patient Satisfaction Survey: A form to assess patient satisfaction of clinic and any problems encountered by patient during the visit, including transportation

Patient Follow-up Survey: Made by phone call to the patient after Initial Visit to assess compliance with treatment plan and reminder for next visit.

Following is a list of Posters and Presentations from this project:

Poster: “Translating Research into Practice at Philadelphia Public Health Care Centers - The National obesity Forum, Bethesda, Maryland –June 2006 (Dr. Khan)

Panel Presentation: Pediatric Obesity: Moving from National Recommendations to Local Protocols for Prevention and Management –Washington, D.C., July 2006 (Dr. Robbins, Dr. Khan, Dr. Lisi, Dr. Laguerre, and Ms. Edwards).

Poster: “215-GO!” – A Model of Public Health Center-Based Treatment for Childhood Obesity Pennsylvania Public Health Association, October 2006 (Dr. Khan).

Panel Presentation: “Making Sense of the New Childhood Obesity Recommendations - Translating Expert Information into Practice - NICHQ: Sixth Annual Forum, Exploratorium - March 19, 2007 (Dr. Khan, Ms. Lazin & Ms. Edwards).

Panelist: Addressing Obesity from Inner City Perspective - PPHA Annual conference 2007 (Dr. Khan).

Motivational Interviewing Techniques for Management of childhood Obesity - CME conference, Philadelphia Department of Public Health, October 2007 (Ms. Edwards and Ms. Lazin).

“215-GO!” : A Childhood Obesity Intervention Program at a Public Health Center– Presented at HTPC Annual Grantees Meeting, Chicago, August 2008 (Dr. Khan)

“215-GO!” – A working Model for Combating Childhood Obesity in a Public Health Care

Clinic : Oral presentation, APHA, November 2009. (Khudsiya Khan, Karen Rendulich, Brenda Lazin, Diane Edwards, Kadian McLean-Stewart, Susan Robbins and Jessica Robbins)

7. DISSEMINATION / UTILIZATION of RESULTS:

These results have been shared locally with physicians working for the Philadelphia Department of Public health and peers at other institutions through meetings and conferences. The successful outcomes of the “215-GO!” clinic have also been shared with national audience through posters and oral presentations at state and national meetings. The results of this project were taken into consideration by the PA-DOH in the formulation of the childhood obesity PA Medical Assistance Bulletin 99-07-19. “215-GO!” program has now been expanded to four of the eight Philadelphia Public Health Centers based on these excellent outcomes. Texas Department of Health has consulted with Dr. Khan and our local MCH Department to implement this model in Texas with minor adaptations. Now they have a hybrid model of “215-GO!” in several counties of Texas.

8. SUSTAINABILITY:

Both Divisions of the Philadelphia Department of Public Health (Ambulatory Health Services and Maternal and Child Health) have interests in this program and have agreed to fully support this project. If more funds become available, this project will probably be expanded to the other four Philadelphia Public Health Centers lacking this program. As the Philadelphia Public Health Centers are a safety net for the most vulnerable children with minimum to no health insurance, all services provided are sustained through a combination of city’s budget, federal and state funding, and reimbursable costs from the insured patient encounters. The number of insured pediatric patients increased from 45% in 2005 to 65% in 2010, thus enhancing our revenue.

Each Health Center has Benefits Counselor(s) and Benefits Assistant(s), who counsel all eligible patients (parents) and help them initiate applications to S-CHIP or MA. They make every attempt to see every child without medical insurance, verify eligibility and assist the family with Medicaid or S-CHIP application on a case-by-case basis. This process has dual benefit: (1) help a child procure medical insurance, (2) enhance our revenue generation capacity by billing the insurance provider, contributing to the sustainability of the project. This project will continue in the foreseeable future at all the four Philadelphia Public Health Centers where it is currently operational.

FINAL ABSTRACT:

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Grantee Organization: Philadelphia Department of Public Health

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Project period: 3/1/06 to 2/28/11

Total Amount of Grant awarded: \$250,000.00 over a period of 5 years at \$50,000.00/year

1. PURPOSE of the PROJECT: Childhood obesity is a public health epidemic affecting more than 9 million children and adolescents in the United States. Obesity-related medical conditions such as diabetes, dyslipidemia and hypertension have also increased in children over the last decade. More than 40% of the pediatric patients seeking medical care at Philadelphia Public Health Centers are overweight or obese. "215-GO!" clinic was established at Philadelphia Public Health Centers to identify, prevent and treat childhood obesity and related complications in partnership with local Maternal and Child Health division.

2. GOALS AND OBJECTIVES: We have met all stated goals and objectives.

GOAL 1: To provide medical care for overweight and obese children and adolescents seeking care at Philadelphia Public Health Center #6 and help them achieve a healthier weight.

496 patients enrolled during this 5-year project, averaging about 100 patients a year with a return rate of 63%. The BMI Z-score Mean change was -0.6 indicating a net weight loss in this population. At 6-month follow-up, 62% decreased or maintained BMI%.

GOAL 2: To identify and reduce obesity related medical complications such as type-2 diabetes, hypertension, dyslipidemia and other disorders.

Improve/Normalize obesity related co-morbid conditions: 17% patients had abnormal BP, 36% of patients had dyslipidemia and 12% of patients had hyperglycemia at baseline. At 1-year post-

enrollment follow-up, 70% of these patients had improved BP to a lesser category and 58% normalized blood pressure, 62% of patients had improved blood lipids and 73% had normalized blood glucose, while 13% of patients remained hyperglycemic.

GOAL 3: To motivate patients toward a positive life style change and to achieve healthy weight by employing Motivational Interviewing techniques.

Assess and document patient's "Motivational Stage of Change" at each visit as: Stage-1= Pre-Contemplation; 2 = Contemplation; 3 = Preparation; 4 = Action. 63% of patients could be motivated to the next level of change and 70% could be maintained in Stage of Action.

3. METHODOLOGY: All Health Center Pediatricians have been trained in Assessment, Prevention, and Treatment of Childhood Obesity (Expert Committee Recommendations, 2007). Patients aged 2 -18 years diagnosed as overweight or obese are referred to the "215GO!" clinic. "215GO!" is a comprehensive childhood obesity clinic staffed with a pediatrician, a nutritionist and a health educator. The pediatrician performs medical management, and sets goal for a healthy weight. The nutritionist performs physical activity and nutrition assessment and counseling. The health educator performs a detailed psychosocial intake of the patient's and parent's attitudes and beliefs toward weight and family's support. "Motivational Interviewing" techniques are employed by the "215-GO!" staff to set small, achievable and realistic goals with frequent follow-up. Patient satisfaction is assessed through survey forms. Demographic, anthropometrical and lab data are collected and analyzed annually to assess project outcomes.

4. EVALUATION: The project director closely supervises the project team in collaboration with a supervisor from MCH. Patient Surveys are utilized to assess patients' satisfaction and patient feed back information is used in making program changes. Data is collected at each patient visit regarding weight, height, blood pressure, BMI, BMI %, motivational stage of

change, and lab data such as blood glucose, lipids, etc. Data is analyzed by the epidemiologist twice a year to assess the impact of intervention on clinical outcomes.

5. RESULTS and OUTCOMES: The “215-GO!” project has been successful in its stated goals with high patient enrollment and retention rate and improvement in obesity and its co-morbidities (see Table below). About 100 new patients enrolled each year with 63% return rate. At 1-year post-enrollment, 62% decreased or maintained BMI%. High levels of co-morbidities were prevalent at baseline in this population compared to general pediatric population - 17% had abnormal blood pressure compared to 4.5%; 36% had dyslipidemia compared to 12.6%; 12% had hyperglycemia compared to 0.2%. On follow-up, although some patients worsened, 75% improved blood pressure, 67% improved lipids and 73% normalized blood glucose. 63% of patients could be motivated to advance to the next level of change and 70% could be maintained in Stage of Action. More than 60% return rate to clinic demonstrates patients’ willingness to participate in this program. Patient satisfaction surveys indicate satisfaction with process. We focus on change toward healthy life style rather than weight loss. Some patients did not improve despite engagement in this program as they may have other needs that are beyond the scope of this project. Based on its success and simplicity, the clinic has been expanded to four Philadelphia Public Health Centers. Texas Department of Health has also consulted with us to implement this model in Texas with minor adaptations.

6. PUBLICATIONS and PRODUCTS: Following is a concise report:

Products include a brochure and flyer, “Psychosocial Intake Form”, “Nutrition Intake Form”, patient education hand-outs, and guidelines for management of childhood obesity.

National and State Presentations: The National obesity Forum, Bethesda, Maryland (June 2006);

Panel Presentation: Pediatric Obesity: Washington, D.C. (July 2006); Panel Presentation:

NICHQ: Sixth Annual Forum, (March, 2007); HTPC Annual Grantees Meeting, Chicago (August 2008); APHA (November 2009); PPHA (October 2006 and 2007).

7. **DISSEMINATION / UTILIZATION of RESULTS:** These results have been disseminated through meetings and conferences via posters and oral presentations. The results of this project were taken into consideration by the PA-DOH in the formulation of the childhood obesity PA Medical Assistance Bulletin 99-07-19. “215-GO!” program has now been expanded to four of the eight Philadelphia Public Health Centers based on these excellent outcomes. Texas Department of Health consulted us to implement this model in Texas with minor adaptations.

8. **SUSTAINABILITY:** Both Divisions of the Philadelphia Department of Public Health (Ambulatory Health Services and Maternal and Child Health) have interests in this program and have agreed to fully support this project. If more funds become available, this project will probably be expanded to other four Philadelphia Public Health Centers lacking this program.

Table: “215-GO!” STATS: (data on 466 initial enrollees)

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Race and Ethnicity					
Total	AA	White	Asian/Other	Hispanic	
466	75 (16%)	10 (2%)	20 (4%)	361 (78%)	
Age and Sex					
Total	2-5 Y/O	6-12 Y/O	13-18 Y/O	Males	Females
466	69 (15%)	230 (50%)	167 (35%)	215 (46%)	251 (54%)
Results/Outcomes					
BMI Status	Baseline N = 458		6-month Follow-up N = 281		
	Baseline Prevalence		Improved/ Maintained	Worsened	
Overweight (BMI 85-94%)	19%		75%	25%	
Obese (BMI 95-98%)	54%		62%	38%	
Severe Obese (BMI \geq 99%)	27%		56%	44%	
1-year Follow-up					
Comorbidities	Baseline Prevalence		Improved	Worsened	
Pre-hypertension/Hypertension	17%		70%	16%	
Pre-diabetes/diabetes (type-2)	13%		73%	13%	
Dyslipidemia	36%		67%	33%	

Annotation:

“215-GO!” is a comprehensive childhood obesity clinic at the Philadelphia Public Health Centers with a goal to prevent and treat childhood obesity and related complications by promoting positive lifestyle behavior and motivating patients toward a healthier weight. It is set up as a chronic disease care model and is staffed with a pediatrician, nutritionist and a health educator. It has been successful in its goal as 64% of enrolled patients maintained or reduced BMI-percentile and 65-70% of patients with baseline abnormalities improved blood pressure, blood glucose and lipids. Brochures and flyers are used for recruitment of overweight and obese children and adolescents from the general pediatric clinic and from local schools. Survey forms indicate patient’s satisfaction with the program.

Key Words:

Obesity
Nutrition Counseling
Healthy Tomorrows Partnership for Children
Child Nutrition
Adolescent Nutrition
Adolescent Health services
Well Child Exams
MCH Services
Public Health Services
Physical Activity

IV. Project Description on Experience to Date

A. Project Description

1. Problem (maximum 300 characters):

Prevalence of childhood obesity and related conditions such as diabetes, dyslipidemia, and hypertension have greatly increased in children, especially in urban population. "215-GO!" is a childhood obesity clinic established to identify, prevent and treat childhood obesity and related complications by promoting positive lifestyle behavior.

2. Goals and Objectives: (maximum characters for Goal is 200, for Objective is 300): List up to 5 major goals and time-framed objectives per goal for the project.

Goal 1: To provide comprehensive care for overweight and obese children and adolescents seeking care at Health Care Center #6 and help them achieve a healthier weight.

Objective 1: New patient enrollment and retention in "215-GO!" program: We have enrolled 496 patients during this 5-year project, averaging about 100 patients a year with a return rate of 63%. We will continue new patient enrollment and enhance our return rate.

Objective 2: Improvement in weight status: The BMI Z-score Mean change was -0.6 indicating a net weight loss in this population. Data in 281 patients with a return visit 6-month post enrollment showed that 60% decreased BMI and 2% maintained. 30% of patients with severe obesity decreased BMI to below 98%.

Goal 2: To identify, prevent and reduce obesity related medical complications such as dyslipidemia, hypertension, type-2 diabetes, and other disorders.

Objective 1: Normalize abnormal blood pressure: 76 of 466 (17%) patients had abnormal BP at baseline; 1-year follow-up data on 33 patients with abnormal BP at baseline showed that 70% of these patients improved BP to a lesser category and 58% normalized blood pressure.

Objective 2: Normalize dyslipidemia: 169 (36%) patients had dyslipidemia at baseline; 1-year follow-up data on 52 patients with dyslipidemia at baseline showed that 62% decreased total cholesterol, 58% decreased LDL and 54% increased HDL at 1-year follow-up compared to baseline.

Objective 3: Normalize blood glucose level: 36 of 290 (12%) patients had hyperglycemia at baseline; of these, 11 patients returned for fasting glucose after 1 year. 8(73%) patients had normalized blood glucose, 1 patient remained hyperglycemic and 1 patient developed type-2 diabetes.

Goal 3: To motivate patients toward a positive life style change and promote increased physical activity and healthy foods and drinks by employing Motivational Interviewing techniques.

Objective 1: Assess Patient's motivation: All 215GO patients receive nutrition and physical activity counseling by nutritionist and health educator employing motivational interviewing techniques. Stage of Motivation is documented as: Stage-1= Pre-Contemplation; 2 = Contemplation; 3 = Preparation; 4 = Action

Objective 2: Motivate patient to advance to the next Stage of Change: At baseline, data on 401 patients showed 13% were in Stage I or II of Change, 60% were in Stage-III and 27% in Stage IV. Follow-up on 286 patients showed that 63% could be advanced to a higher Stage and 70% maintained in Stage of Action.

3. Activities/Methodology planned to meet project goals (maximum 1500 characters):

All Health Center Pediatricians have been trained in Assessment, Prevention, and Treatment of Childhood Obesity (Expert Committee Recommendations, 2007). Patients aged 2 -18 years diagnosed with rapid weight gain, overweight (BMI>85%) or obese (BMI>95%) are referred to the "215GO!" clinic. "215GO!" is a comprehensive childhood obesity clinic staffed with a pediatrician, a nutritionist and a health educator. The pediatrician performs medical examination, counsels the patient about the potential medical complications of obesity and sets goal for a healthy weight. The nutritionist performs physical activity and nutrition assessment involving food preferences, eating patterns, food shopping and cooking. The health educator performs psychosocial intake of patient's and parent's attitudes and beliefs toward weight and family's support. "Motivational Interviewing" techniques are employed by the "215-GO!" staff to motivate patient toward healthy lifestyle changes. Small, achievable and realistic goals are set with frequent follow-up. Late afternoon appointments are available for school going children. Brochures and flyers have been developed in English and Spanish and are used for recruitment from

the general pediatric clinic and from local schools and organizations. Patient satisfaction is assessed through survey forms and changes have been made to accommodate patient needs. Demographic, anthropometrical and lab data are collected and analyzed annually to assess project outcomes.

4. The first three *Healthy People 2010* objectives which this project addresses are listed below.

(1). Related to Objective 16.23. Increase the proportion of Territories and States that have service systems for Children with Special Health Care Needs to 100 percent.

(2). Related to Objective 16.23: Increase the proportion of States and jurisdictions that have service systems for children with or at risk for chronic and disabling conditions as required by Public Law 101-239.

(3). Related to Objective 23.11 (Developmental) Increase the proportion of State and local public health agencies that meet national performance standards for essential public health services.

(4). Related to Objective 23.15 (Developmental) Increase the proportion of Federal, Tribal, State, and local jurisdictions that review and evaluate the extent to which their statutes, ordinances, and bylaws assure the delivery of essential public health services.

5. Coordination (maximum 500 characters): List the State, local health agencies or other organizations involved project and their roles.

"215GO!" Clinic is coordinated and supervised by the project director and a supervisor from the local MCH division. The MCH supervisor supervises nutritionist and the health educator. The project director conducts meetings with the staff and receives monthly reports. The project epidemiologist analyses data every 6 months. In addition, the project director shares annual report with the president of PA-AAP chapter, who is supportive of the project activities.

6. Evaluation (maximum 500 characters): briefly describe the methods which will be used to determine whether process and outcome objectives are met.

Process Evaluation: The project director is responsible for overall functioning of the program. She receives monthly reports about new patient enrollment and return visits. Surveys have been developed to assess patient satisfaction and compliance. **Outcomes Evaluation:** We have developed data entry form to capture data on weight, BMI,

BP, blood glucose and blood lipids values, and Motivational Stage of Change to assess the effect of interventional measures and analyze data twice a year.

B. Continuing Grants ONLY (pasted from July 2010 – needs changes)

1. Experience to Date (maximum 1500 characters):

The “215-GO!” project has been successful in its stated goals with high patient enrollment and retention rate and improvement in obesity and its co-morbidities. About 100 new patients enrolled each year with 63% making return visits. At 1-year post-enrollment, 62% decreased or maintained BMI%. 29% of patients diagnosed with severe obesity reduced BMI% to <98%. High levels of co-morbidities were prevalent at baseline in this population compared to general pediatric population - 17% abnormal BP compared to 4.5%; 36% for dyslipidemia compared to 12.6%; 12%-hyperglycemia compared to 0.2%. On follow-up, although some patients worsened, 75% improved BP, 67% improved lipids and 73% normalized blood glucose. 63% of patients could be motivated to advance to the next level of change and 70% maintained in Stage of Action. More than 60% return rate demonstrates patients’ willingness to participate in this program. Patient satisfaction surveys indicate satisfaction with process. We focus on change toward healthy life style rather than weight loss. Some patients did not improve despite engagement in this program as they may have other needs such as inadequate access to healthy foods or need safe venues for physical activity, which are beyond the scope of this project. Based on its success and simplicity, the clinic has been expanded to four Philadelphia Public Health Centers. Texas Department of Health also consulted with us to implement this model in Texas with minor adaptations.

Annotation: (750) 744

“215-GO!” is a comprehensive childhood obesity clinic at the Philadelphia Public Health Centers with a goal to prevent and treat childhood obesity and its related complications by promoting positive lifestyle behavior and motivating patients toward a healthier weight. It is set up as a chronic disease care model and is staffed with a pediatrician, nutritionist and a health educator. Brochures and flyers are used for recruitment of patients from the general pediatric clinic and from local schools. It has been successful in its goal as 64% of enrolled patients maintained or reduced BMI-percentile, and 70% of

patients improved blood pressure, and blood glucose and lipids. Survey forms indicate patient's satisfaction with the program.

Key Words:

Obesity

Nutrition Counseling

Healthy Tomorrows Partnership for Children

Child Nutrition

Adolescent Nutrition

Adolescent Health services

Well Child Exams

MCH Services

Public Health Services

Physical Activity