

Freddie Woodson, Deputy Superintendent
District/School Operations

SUBJECT: REQUEST THAT THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA, RECEIVE THE REPORT ON THE FEASIBILITY AND COSTS ASSOCIATED WITH THE IMPLEMENTATION OF THE MIAMI CHILDREN'S HOSPITAL PILOT-PROGRAM TO COMBAT CHILDHOOD OBESITY BEGINNING IN THE 2009-2010 SCHOOL YEAR

COMMITTEE: INSTRUCTIONAL EXCELLENCE AND COMMUNITY ENGAGEMENT

**LINK TO DISTRICT
STRATEGIC PLAN: IMPROVE STUDENT HEALTH**

At its August 5, 2009 meeting, the School Board approved Item H-4, proffered by Mr. Renier Diaz de la Portilla, which directed the Superintendent to develop a report on the feasibility and costs associated with the implementation of the Miami Children's Hospital Initiative to Combat Childhood Obesity beginning in the 2009-2010 school year.

Attached please find the feasibility study and associated costs with the Miami Children's Hospital Initiative to Combat Childhood Obesity.

RECOMMENDED: That The School Board of Miami-Dade County, Florida, receive the report on the feasibility and costs associated with the implementation of the Miami Children's Hospital Pilot-Program to Combat Childhood Obesity beginning in the 2009-2010 school year and approve the implementation of the program at a cost not to exceed \$2,800.00.

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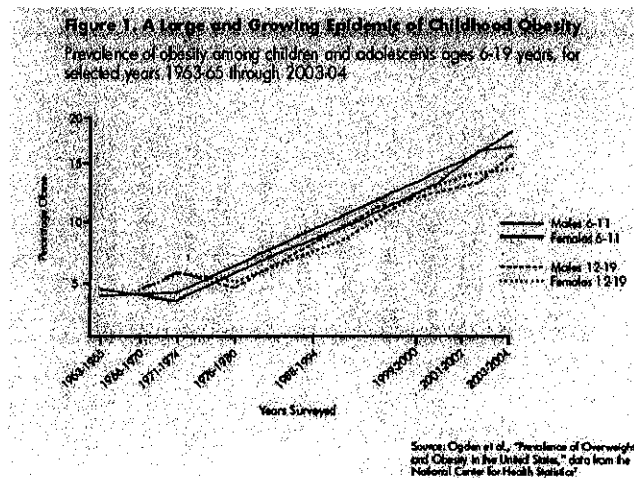
MIAMI CHILDREN'S HOSPITAL PILOT PROGRAM TO COMBAT CHILDHOOD OBESITY

FEASIBILITY STUDY

INTRODUCTION:

The United States is facing a serious childhood obesity epidemic. Today 16.3 percent of children and adolescents ages 2 to 19 are obese, and 31.9 percent are obese or overweight (Ogden, et al., 2008). This translates into 12 million children and adolescents who are obese and more than 23 million who are either obese or overweight (US Census Bureau, 2006). During the past four decades, the obesity rate for children ages 6 to 11 has more than quadrupled (from 4.2 to 17 percent) and more than tripled for adolescents ages 12 to 19 (from 4.6 to 17.6 percent (Ogden, et. al. 2006). Obese and overweight children are likely to suffer health consequences not only during childhood and adolescence, but also throughout their adult lives. They are at greater risk as children and as adults for bone and joint problems, sleep apnea, social and psychological problems (e.g., stigmatization and poor self-esteem), heart disease, type 2 diabetes, stroke, cancer, and osteoarthritis (US Surgeon general, 2009). The childhood obesity epidemic cuts across all categories of race, ethnicity, family income and locale, but some populations are at higher risk than others. Low-income individuals, African Americans, Latinos, Native Americans and those living in the southern part of the United States are among those affected more than their peers (Ogden, et al., 2008).

The U.S. Centers for Disease Control and Prevention (CDC) has *conservatively* estimated that 1 in 3 American children born in 2000 are likely to develop diabetes in their lifetime, with the odds being especially high for minority children. The life expectancy of those who develop diabetes is projected to be 13 years less than the national average. (Narayan, et al, 2003). Thus, 1 in 3 children born in the new millennium can be expected to live substantially shorter lives than those in the previous generation.



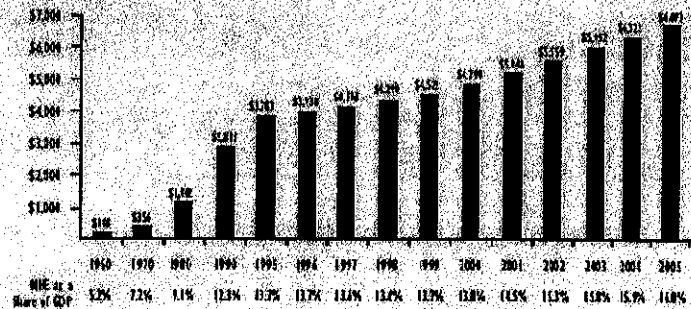
ECONOMIC IMPACT:

Policymakers and education leaders are concerned about the impact of childhood obesity on government budgets at all levels over the long term. Obese children are two to three times more likely to be hospitalized and are about three times more costly to care for and treat than the average insured child. In 2004 alone, the United States spent an estimated \$98 to \$129 billion on direct and indirect health care costs associated with obesity (Institute of Medicine, 2005). With obese children likely to remain as such into adulthood, these costs will continue to persist if not increase over time. Of particular note for governments are the health care costs for obese children. Childhood obesity alone is estimated to cost \$14 billion annually in direct health expenses. Children covered by Medicaid account for \$3 billion of those expenses. Annually, the average health expenses for a child treated for obesity under Medicaid is \$6,730, while the average expenditure for all children on Medicaid is \$2,446. Further, the average health expenses for a child treated for obesity under private insurance is \$3,743, while the average health cost of a child under private insurance is \$1,108 (Thomson Medstat Research Brief, 2006). Thus, childhood obesity places substantial strain on the cost of health care at every level. Since 1970, health care costs have grown on average 2.5 percentage points faster than the U.S. gross domestic product (GDP); by 2005, the health care portion of the GDP was 16 percent (Kaiser Family Foundation, 2007). Overall, the amount spent on health care will continue to rise dramatically as the current generation of children enters adulthood with higher rates of overweight and obesity, increasing the rates of and decreasing the age of onset for heart attacks, strokes, diabetes, hypertension, and cancer.

"This [obesity epidemic] may be the end of the trend toward increased lifespan that we have seen in this country for the last century. And it may in fact actually shorten lifespan by two or three years, which is more than the effect of all cancers combined."

Dr. David Ludwig, Boston
Children's Hospital

Figure 2. The Rising Share of Health Care Costs in the Gross Domestic Product
National health expenditures (NHE) per capita and their share of gross domestic product, 1960-2005



Source: Kaiser Family Foundation²⁴

ACADEMIC IMPACT:

A student's weight status can affect academic performance in a variety of ways, as described below.

Absenteeism: One well-documented impact is obesity's effect on student absenteeism. A recent study of 1,069 students in grades 4 through 6 in nine low-income Philadelphia elementary schools found that on average, obese schoolchildren were absent two school days more than their normal-weight classmates. Furthermore, obesity was a better predictor for absenteeism than any other factor (Geier, et al, 2007). This increase in absenteeism is directly tied to the myriad health issues associated with obesity and overweight that was discussed in the previous section. Thus, overweight and obese children are less likely to be in school regularly, impeding their ability to learn.

Academic Achievement:

Several studies have found positive academic and other gains from implementing policies and practices that promote physical activity and nutrition. Researchers are continually finding that students who are healthy and physically active are more likely to be motivated, attentive, and successful academically (COPEC, 2001 and Grissom, 2005). For example, a national study conducted in 2008 of more than 5,300 elementary school students found a small but significant increase in both math and reading test scores among girls who spent the most amount of time in physical education (P.E.) compared to girls who spent the least amount of time in P.E. (Carlson et al, 2008). Another study conducted in 2005 included a systematic evaluation of the evidence on the effects of physical activity. The study found that physical activity has a positive influence on concentration, memory, and classroom behavior and that the addition of P.E. to the curriculum can result in small positive gains in academic performance (Strong, et al, 2005). Additional studies supporting the correlation between physically fit youth and academics were found in California, Texas (2009), New York, (2009) and Arizona (2009).

OBJECTIVE:

Miami Children's Hospital

In recent years, the obesity pandemic has swept the nation affecting thousands of children. Although there have been a variety of studies conducted and programs implemented, there is no specific prevention or treatment model for children with obesity or those considered to be "at risk." In a society driven to develop evidence-based medicine, Miami Children's Hospital has developed a prevention and treatment model that is unique. It uses research analysis, behavioral therapy, physical therapy, clinical screening mechanisms, and ground-breaking technology to engage children who are 85% or above in body mass index (BMI) and moreover, will ultimately lead to the prevention of obesity in other children who are at risk.

According to the American Academy of Pediatrics, Overweight has been defined as a BMI greater than the 95th percentile for age on the growth curves provided by the Center for Disease Control. Children whose BMI's fall between the 85th and 95th percentile for age are said to be "at risk" for becoming overweight. Overweight or obese children and adolescents are at risk for many health problems and can cause a variety of serious chronic health conditions. These include Type 2 Diabetes, high blood pressure, high cholesterol, sleep apnea, asthma, skin conditions, orthopedic problems, and Hepatic steatosis (fatty liver disease (FLD) (Miami Children's Hospital Proposal, 2009).

METHODOLOGY:

The Miami Children's Hospital study will focus on children of Hispanic descent, as research has shown that compared to white non-Hispanic children, Hispanics are more likely to be overweight or obese. In recent years, statistics have shown that 18.5% - 23.4% of all Hispanic children in the US are considered obese. The National Council of La Raza has recently indicated that 23.7% of Hispanic children ages 6-11 are obese and 39.3% are overweight. The same study indicates that 23.4% of Hispanic children ages 12-19 are obese and 43.8% are overweight. We are specifically seeking to research interventions for obesity in children between the ages of 5-18. Choosing an area predominantly populated by Hispanics is essential to the success of this study. City of Hialeah Mayor Julio Robaina, who is a champion of obesity prevention, has graciously offered his community for the research. The physical activity component of this program will be conducted in Goodlet Park.

Miami Children's Hospital has asked that students be tested for BMI, height and weight, during physical education classes within the first three weeks of the 2009-2010 school year. Staff from Miami Children's Hospital will be available to assist the District's physical education teachers with this task: Children's BMI will be calculated using the CDC's Youth BMI Calculator/formula.

The program will be conducted Monday through Thursday, from 3:30 to 6:30 p.m., and will be implemented by staff from Miami Children's Hospital, the City of Hialeah Parks and Recreation Department, and Florida International University, Department of Athletics. Students participating in the study will be required to participate in weekly weigh-ins, quarterly BMI screens, and strict adherence to the MCH program. These activities will be conducted at Goodlet Park by Miami Children's Hospital staff.

Active parental consent will be required for all students participating in the study/program. It is requested that the program be conducted for a minimum of two (2) years.

SUBJECTS:

Two hundred and fifty students from Meadowlane Elementary School, Mae Walters Elementary School, Palm Springs Middle School, and Westland Senior High School will be selected to participate in this program.

PARTNERSHIPS:

To successfully implement the program, Miami Children's Hospital has partnered with the City of Hialeah Parks and Recreation Department, and Florida International University, Department of Athletics.

BUDGET:

The initial proposal presented by Miami Children's Hospital stated that there would be no cost to Miami-Dade County Public Schools. However, Miami Children's Hospital has requested that M-DCPS assist with funding transportation for students from only Palm Springs Middle School to Goodlet Park. The cost of transportation, calculated at \$35 per bus, four days per week, for a 20 week program, would be approximately \$2,800 for year one.

PROPOSAL TO THE M-DCPS OFFICE OF EVALUATION:

The Miami Dade County Public Schools' Office of Program Evaluation approved the Miami Children's Hospital's Pilot Program to Combat Childhood Obesity based on the proposal's benefits to students and the District. Dr. Tarek Chebbi, Chairperson, Research Review Committee, Office of Program Evaluation, specifically cited the proposals: 1. Use of technology and electronics to get the students off the couch and on their feet; 2. Competitive sports in collaboration with city parks and recreation; and 3. Educational programs about healthy food and beverage choices, as reasons for his approval of the proposal.

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