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# **CHILDHOOD OVERWEIGHT AND OBESITY**

## **MONROE COUNTY ELEMENTARY SCHOOL READINESS**

Prepared for:  
**Greater Rochester Health Foundation**

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August, 2007

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### SUMMARY

#### Purpose

The Greater Rochester Health Foundation (GRHF) has identified elementary schools as a key venue in which to address childhood overweight and obesity. GRHF hired the Center for Governmental Research (CGR) to conduct a multi-method study of practices, policies and attitudes towards the prevention of overweight and obesity among students in elementary schools. The study consisted of surveys of district and school-level staff in Monroe County, and an analysis of national best practices. The study goal was to expand GRHF's knowledge of existing school-based initiatives, as well as its understanding of the readiness of schools in Monroe County to implement overweight and obesity programs.

#### Methodology

Schools are complex organizations. CGR created three surveys in order to capture the different organizational levels within school districts, and to examine the differences that might exist between policies created at the district level, and awareness and perception of such policies at the school level. The three surveys are:

- 1) Policy survey – The Policy Survey was intended to allow GRHF to understand the extent to which school districts in Monroe County have implemented policies, guidelines, and practices that address childhood overweight and obesity. The survey assessed the content and implementation of Local Wellness Policies, activities related to nutrition and physical activity, and practices related to body mass index screening. The survey was distributed to 20

superintendents and was completed by ten, for a 50% response rate.

- 2) District-level attitude survey – The District Level Attitude Survey was designed to assess attitudes towards childhood overweight and obesity prevention activities among district level leaders and staff. The survey was distributed to 19 school board presidents and to 59 staff, such as Directors of Physical Education and Wellness Coordinators that serve an entire district. Twenty-six surveys were completed, for a 33% response rate.
- 3) School-level attitude survey – The School Level Attitude Survey was designed to assess attitudes towards childhood overweight and obesity prevention activities among building staff. The survey was distributed to 4,302 building level staff, including principals and teachers, and was completed by 386 for a 9% response rate.

While a significant portion of this report is devoted to frequency analysis from these individual surveys, in terms of the study goal, three other analyses are more important: (1) results across organizational levels; (2) results across districts; and (3) national case studies of effective practice.

## Results across Organizational Levels

The analysis across organizational levels looked at how policies related to nutrition and physical activity cross district and school boundaries. This analysis helped to identify key elements in district and school efforts to address childhood overweight and obesity. These include:

- ❖ The degree to which overweight and obesity is seen as a significant problem

The survey results indicate that in general, stakeholders at the district and school levels do not see childhood overweight and obesity as a significant problem. This perception is a potential barrier to successfully implementing activities aimed at preventing overweight and obesity.

- ❖ Whether schools are seen as an appropriate venue in which to address this problem

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The majority of respondents feel that schools are an appropriate venue in which to address childhood overweight and obesity, in partnership with other entities.

- ❖ Whether schools have adequate resources to address this problem

The majority of respondents feel their district or school does not have adequate resources to address childhood overweight and obesity.

- ❖ The consistency of awareness of nutrition and physical activity policies across the district and down through the schools

The development of a district-level policy on nutrition or physical activity does not lead directly to the effective implementation at the school level of the practices supported by district policy. District-level leadership is important, but so is communication to ensure awareness of the policy -- why the issue is important, what practices are being put in place, and the anticipated results. Survey questions on how policies are communicated to staff at both the district and school level suggest this is one area for improvement. A third of policy level respondents indicated that they have not done anything to familiarize their staff with their Local Wellness Policy, with distributing a memo being the most common form of communication, cited by 40% of the respondents. At the school level, 47% of respondents are not aware of anything the school has done to familiarize staff with the policies, and 57% of respondents indicated that they are not aware of anything that has been done to familiarize parents with policies and guidelines related to nutrition and physical activity.

- ❖ The level of support for nutrition and physical activity initiatives and the extent to which nutrition and physical activity initiatives are engrained in everyday practice

School-level respondents were asked the extent to which they agreed or disagreed with a series of statements describing the culture of their school in regard to student nutrition and

physical activity. For both sets of initiatives, a majority either agreed or strongly agreed with items related to school leadership and staff support for the initiatives, but disagreed with items related to behavior necessary to ensure successful implementation (e.g., input from teachers, parents and students into the design and implementation of school's initiatives; professional development related to the initiatives). These findings indicate that enthusiasm for an issue is not always consistent with actual practices addressing the issue. Effective implementation requires attention to the practicalities of change management. School staff must be given the resources (e.g., training, time) needed to engage in the behaviors that characterize a successful implementation.

- ❖ How well nutrition and physical activity initiatives are integrated into the district and school culture

Communication, support and attention to the necessities of implementation are each likely to affect the level to which nutrition, physical activity and education initiatives are integrated into the district and school culture. As a consequence, the degree of integration of new practices at both the district and school levels can be seen as a measure of the effectiveness of the implementation effort. The analysis across organizational levels indicates that while the specific level of integration varies according to the initiative, the overall level of integration is moderate. At the district level, the initiative reported as being most highly-integrated into the district culture – improving the nutritional value of foods and beverages available at elementary school meals – had 39% of respondents view it as highly integrated and 48% of respondents view it as somewhat integrated into the district culture. At the school level, the initiative reported as being most highly-integrated into the school culture – educating students about the nutrition and physical activity – had 26% of respondents view it as highly integrated and 51% of respondents view it as somewhat integrated into the school culture.

- ❖ The perceived difficulty of implementing nutrition and physical activity initiatives and the specific initiatives seen as likely to have the greatest impact

From a change management perspective, initial investments are best made in initiatives that are likely to have a high impact and varying degrees of difficulty (low difficulty initiatives will produce quick wins, while initiatives at higher levels of difficulty will take time to succeed). District-level and school-level staff have varying perceptions of the importance of certain activities, and of the difficulty involved in implementing activities. Specific areas that emerged as having a high perceived impact, and varying degrees of perceived difficulty, are the nutritional value of school meals, educating students about nutrition, educating students' families about nutrition and increasing opportunities for physical activity.

## Results across Districts

- ❖ One desired outcome from this research was the identification of criteria for determining which districts would make “good” targets for investment. CGR used the key elements described above as the basis for an analysis across districts. The district analysis was performed on those districts with at least a 10% response rate to the school attitude survey. The analysis revealed variation across districts on the key elements in district and school efforts to address childhood overweight and obesity. This variation is evident the school-level staff responses to individual elements, as well as the pattern of responses to all of the elements.<sup>1</sup>

For GRHF, the implication is the need to allow for customization of any investment to address the issue of childhood overweight and obesity. Districts should be given the flexibility to build on their strengths and/or address their weaknesses in enhancing their efforts to address childhood overweight and obesity.

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<sup>1</sup> To ensure the confidentiality promised to respondents, the district analysis is not included in this web report .

## National Effective Practice

Any nutrition and/or physical activity initiative is as an exercise in change management. CGR used a set of national case studies to present examples of exemplary program content and to identify some of the elements of change management that contributed to the success of these initiatives. Important lessons learned from the case studies include the importance of the following factors:

- ❖ Involvement of multiple stakeholders -- Case studies suggest that the creation, implementation and integration of policies and guidelines require the involvement of multiple stakeholders.
- ❖ Staff Commitment and Leadership -- Case studies suggest that the dedication and commitment of a single staff member can result in significant changes in behavior, attitudes and practice.
- ❖ Awareness -- In the case studies, the issue champion often had to find creative ways to communicate with other stakeholders in order to increase awareness of the issues.
- ❖ Integrating the message -- The case studies illustrate that successful change requires a consistent message and multiple approaches.
- ❖ Partnerships -- The case studies also highlight the importance of partnerships between districts, schools and other entities. Schools and districts highlighted in the case studies took advantage of multiple partnership opportunities, including obtaining funding through grants, obtaining free materials from outside agencies, and accessing the expertise of health care organizations. Such partnerships can make changes possible even in districts and schools with limited resources.

## Recommendations

CGR recommends that GRHF focus on three areas that are critical to the success of an organizational change effort: awareness, implementation and evaluation. In addition, in order to promote buy-in from various stakeholders, we recommend focusing on activities that have a high level of perceived importance. Finally, we recommend that the Foundation target activities that are perceived as relatively easy to accomplish, in order to create opportunities for early successes, as well as

activities perceived to be more difficult, in order to affect longer-term change.



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## ACKNOWLEDGMENTS

CGR would like to thank the administrators and staff from the 19 school districts in Monroe County, as well as the Diocese of Rochester that took the time to complete the surveys that are the foundation for the majority of this report. We hope that this research ultimately makes their difficult jobs a little easier and the rewards a little clearer.

CGR would also like to extend our gratitude to the staff at the Greater Rochester Health Foundation for both the opportunity to conduct this research and for serving as much as a research partner as a client and funder.

## Staff Team

Stephen M. Mitchell served as project director. He contributed to framing the project, designing the surveys, and the writing of the report. Steve also served as liaison to GRHF and RCSD.

Maria Ayoob had primary responsibility for the daily research and analysis operations. She drafted the surveys, identified and conducted the case studies, directed the interns that assisted in survey administration and data analysis, and drafted the report.

David Cohen assisted in survey administration and data analysis. David Landry assisted in the data analysis and writing. Sergey Zinger assisted in data analysis.

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## INTRODUCTION

The Greater Rochester Health Foundation (GRHF) has identified elementary schools as a key venue in which to address childhood overweight and obesity. In its strategic plan, *The Prevention of Childhood Obesity in Monroe County, New York*, the Foundation outlines activities that can be implemented in elementary schools as part of two major strategies: increasing physical activity and improving nutrition.

GRHF hired the Center for Governmental Research (CGR) to conduct a multi-method study of practices, policies and attitudes towards the prevention of overweight and obesity among students in elementary schools. The study consisted of surveys at the district and school levels staff in Monroe County, and an analysis of best practices.

## SURVEY METHODOLOGY

CGR created three surveys in order to capture the different organizational levels within school districts, and to examine the differences that might exist between policies created at the district level, and awareness and perception of such policies at the school level. Because of the organizational complexity of school districts, we assumed that the presence of a policy at the district level would not necessarily signal the existence of a particular practice at the school level. Changing the environment within districts and schools in regard to nutrition and physical will presumably require the integration of new practices at both the district and school levels.

A policy survey was distributed to superintendents in 19 school districts in Monroe County, as well as the Diocese of Rochester. This survey was intended to capture information about policies aimed at preventing childhood overweight and obesity, activities that school districts have engaged in related to nutrition and

physical activity, as well as practices pertaining to body mass index (BMI) screening.

A district level survey was distributed to school board presidents, and to staff that hold positions pertaining to student health and wellness at the district level, including food service directors, wellness coordinators, and directors of physical education. This survey was intended to assess attitudes and beliefs of staff towards issues related to childhood overweight and obesity, knowledge of policies that have been established around these issues, and perceptions of district efforts to implement initiatives aimed at preventing childhood overweight and obesity.

A third survey assessed similar issues at the school level. Principals and teachers were surveyed on their attitudes towards overweight and obesity in their schools and perceptions about prevention activities being implemented in their schools.

## **SURVEY RESULTS**

### **Policy Survey**

The policy survey was intended to allow GRHF to understand the extent to which school districts in Monroe County have implemented policies, guidelines, and practices that address childhood overweight and obesity. The survey assessed the content and implementation of Local Wellness Policies, activities related to nutrition and physical activity, and practices related to body mass index screening. The survey was distributed to 20 superintendents and was completed by ten.

### **Policies and Guidelines**

Respondents were asked to describe the extent to which policies or guidelines related to childhood overweight and obesity had been adopted by their district. The majority of respondents indicated that policies or guidelines have been established in the

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following areas, either separately from, or as a part of the Local Wellness Policy:<sup>2</sup>

- ❖ Guidelines or policies related to integrating nutrition education into other areas of the curriculum (100%)
- ❖ Guidelines or policies pertaining to the amount and content of physical education received by students (100%)
- ❖ Guidelines or policies related to opportunities for physical activity throughout the school day (100%)
- ❖ Nutrition guidelines for foods available at school mealtimes (90%)
- ❖ Nutrition guidelines for foods available in vending machines (80%)

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<sup>2</sup> Although we requested copies of Local Wellness Policies or other written guidelines from survey respondents, we received only one such document. Because of this, we are not able to describe the content of the policies that exist, rather we can only report on the presence of such policies based on survey responses.

While half of the respondents indicated that their district has established nutrition guidelines for foods served at school functions, at classroom parties, or for fundraisers, 40% indicated they had not established any such policies. Half of the respondents indicated that no guidelines had been established regulating food-related advertising in school or the use of recreational media in school for their school district.

<b>Has your district established guidelines or policies that address any of the following:</b>					
	Yes, included in Local Wellness Policy	Yes, separate from Local Wellness Policy	No	Don't Know	Total
Nutrition guidelines for foods available at school mealtimes	6 60%	3 30%	1 10%	0 0%	10 100%
Nutrition guidelines for foods available in vending machines	5 50%	3 30%	2 20%	0 0%	10 100%
Nutrition guidelines for foods served at school functions, at classroom parties and/or for food sold as part of fundraisers	4 40%	1 10%	4 40%	1 10%	10 100%
Guidelines or policies pertaining to food-related advertising allowed in schools	2 20%	2 20%	5 50%	1 10%	10 100%
Guidelines or policies related to integration of nutrition education into other areas of the curriculum	8 80%	2 20%	0 0%	0 0%	10 100%
Guidelines or policies pertaining to the amount and content of physical education received by students	5 50%	5 50%	0 0%	0 0%	10 100%
Guidelines or policies related to opportunities for physical activity throughout the school day	5 50%	5 50%	0 0%	0 0%	10 100%
Guidelines or policies related to the use of recreational media in schools	1 10%	1 10%	5 50%	3 30%	10 100%

### *Policy Implementation*

When asked to identify the positions that compose their district's Local Wellness Policy implementation team or committee, all respondents identified the school nurse and a food service director/staff person as members. Nine out of the ten respondents also identified Physical Education instructors and parents as members. 70% of respondents identified the "Other" choice, with "Administrator" being the most frequent write-in.

**Please identify the positions that compose the team or committee designated to implement the Local Wellness Policy in your district  
(Please check all that apply)**

	Frequency	Percent
School Nurse	10	100%
Food Service Director or Staff Person	10	100%
Physical Education Director or Instructor	9	90%
Classroom Teacher	7	70%
Parent	9	90%
Other	7	70%

Respondents were asked to identify whether membership on the committee or team described above is voluntary, assigned, or a combination of both. A majority of respondents (60%) reported that some positions are voluntary and others assigned. The remaining respondents indicated that all positions are voluntary. No respondents reported that all positions are assigned.

**Is membership on the team or committee described above voluntary, assigned, or a combination of both?**

	Frequency	Percent
All positions are voluntary	4	40%
All positions are assigned	0	0%
Some positions are voluntary and some are assigned	6	60%
<b>Total</b>	<b>10</b>	<b>100%</b>

Respondents were asked how the district has familiarized staff with the Local Wellness Policy. Memos, meetings, and “Other” methods were the most popular approaches, being identified by

**What has your district done to familiarize staff with your Local Wellness Policy? (Check all that apply)**

	Frequency	Percent
Distributed a memo describing the policy	4	40%
Held meetings to explain policy	3	30%
Held special trainings to familiarize staff with the policy	1	10%
We have not done anything to familiarize staff with the policy	3	30%
Other	3	30%



40%, 30%, and 30% of respondents, respectively. 30% of respondents indicated that nothing has been done to familiarize staff with the policy.

<b>Has your district developed an evaluation/measurement plan to assess the effects of the Local Wellness Policy</b>		
	Frequency	Percent
Yes	1	10%
In Process	6	60%
No	3	30%
Total	10	100%

When asked to indicate whether an evaluation plan of the effects of the Local Wellness Policy had been implemented, a majority of respondents (60%) stated that their district is in the process of developing such a plan, while 30% of respondents indicated that no such plan is in place. Only one respondent (10%) stated that an evaluation plan is in place.

Respondents were asked to identify the extent to which elementary schools in their district have assessed and developed plans to strengthen policies relating to child obesity. With respect to both nutrition and physical activity, 40% of respondents indicated that all elementary schools in their district had completed assessments of their policies and also had developed plans to strengthen those policies. For the same questions, 30% of respondents indicated that only some elementary schools had carried out these measures, with the exception of developing plans to strengthen policies and programs related to nutrition, which was identified by 40% of respondents. 10% to 20% of

<b>Have the elementary schools in your district:</b>					
	Yes, all elementary schools	Yes, some elementary schools	No	Don't Know	Total
Completed assessments of their policies and programs related to nutrition?	4 40%	3 30%	1 10%	2 20%	10 100%
Developed plans to strengthen their policies and programs related to nutrition?	4 40%	4 40%	0 0%	2 20%	10 100%
Completed assessments of their policies and programs related to physical activity?	4 40%	3 30%	2 20%	1 10%	10 100%
Developed plans to strengthen their policies and programs related to physical activity?	4 40%	3 30%	2 20%	1 10%	10 100%

respondents identified “No” or “Don’t Know” for each question.

### *School Environment*

Respondents were asked to evaluate the extent to which elementary schools in their district have adopted several policies related to childhood obesity. The majority of respondents (78%) indicated that all elementary schools in their district have prohibited the sale of unhealthy foods and/or provided more healthy foods both in their cafeteria and vending machines. A third of respondents indicated that all elementary schools in their district have reduced the use of unhealthy food as a reward in the classroom, while 44% of respondents said that only some elementary schools have adopted such measures and 22% indicated that no such measures have been adopted. A third of respondents indicated that all elementary schools in their district had prohibited the sale of unhealthy foods for fundraisers, while 44% said no such provisions had been made. All nine respondents indicated that educational programs on nutrition and/or physical activity have been implemented in all elementary schools in their districts. A majority (67%) of respondents reported that nutrition education had been integrated into the regular classroom curriculum. A smaller majority (56%) indicated that no elementary schools in their district had participated in any community-based programs/partnerships aimed at preventing childhood overweight and obesity. Finally, 67% of respondents indicated that they did not know if the use of recreational media had been reduced in their districts' elementary schools.

**Have elementary schools in your district engaged in any of the following activities related to nutrition and physical activity?**

	Yes, all elementary schools	Yes, some elementary schools	No	Don't Know	Total
Prohibited the sale of foods and beverages of minimal nutritional value in the school cafeteria and/or increased the availability of healthier snacks and beverages in the school cafeteria	7	1	1	0	9
	78%	11%	11%	0%	100%
Prohibited the sale of foods and beverages of minimal nutritional value in vending machines and/or increased the availability of healthier foods and beverages in vending machines	7	1	1	0	9
	78%	11%	11%	0%	100%
Reduced the use of unhealthy food as a reward in the classroom	3	4	2	0	9
	33%	44%	22%	0%	100%
Prohibited the sale of foods of minimal nutritional value for fundraisers	3	2	4	0	9
	33%	22%	44%	0%	100%
Implemented programs to educate students about nutrition and/or physical activity	9	0	0	0	9
	100%	0	0	0	100
Implemented programs to educate students' families about nutrition and/or physical activity	4	3	1	1	9
	44%	33%	11%	11%	100%
Implemented nutrition and/or physical activity programs for staff	4	3	2	0	9
	44%	33%	22%	0%	100%
Implemented programs to increase opportunities for physical activity during the school day	3	3	3	0	9
	33%	33%	33%	0%	100
Implemented extra-curricular activities/after-school programs that promote physical activity	3	4	1	1	9
	33%	44%	11%	11%	100%
Integrated nutrition education into the regular classroom curriculum	6	1	1	1	9
	67%	11%	11%	11%	100%
Participated in any community-based programs/partnerships aimed at preventing childhood overweight and obesity	2	1	5	1	9
	22%	11%	56%	11%	100%
Reduced the use of recreational media in schools	1	0	2	6	9
	11%	0%	22%	67%	100%

When asked to rate the difficulty involved in implementing various changes in elementary schools, only a third of respondents indicated that implementing the Local Wellness Policy is “Not at all difficult,” while the remainder (67%) of respondents indicated that it is “Somewhat difficult” or “Very difficult.” More than half

<b>Please rate the difficulty of the following:</b>					
	Not at all difficult	Somewhat difficult	Very difficult	Don't know	Total
Implementing the Local Wellness Policy	3 33%	5 56%	1 11%	0 0%	9 100%
Implementing other policies or programs aimed at preventing childhood overweight and obesity	3 33%	4 44%	1 11%	1 11%	9 100%
Obtaining staff support for nutrition policy changes	5 56%	4 44%	0 0%	0 0%	9 100%
Obtaining staff support for increasing opportunities for physical activity	2 22%	4 44%	1 11%	2 22%	9 100%
Obtaining funding for nutrition policy changes	1 11%	1 11%	2 22%	5 56%	9 100%
Obtaining funding for physical activity policy changes	2 22%	2 22%	2 22%	3 33%	9 100%

of respondents indicated that obtaining staff support for nutrition policy changes is not difficult at all; only 22% said the same for obtaining staff support for increasing opportunities for physical activity. Over half of respondents indicated they don't know how difficult it would be to obtain funding for nutrition policy changes.

### *Body Mass Index (BMI) Screening*

Of the ten respondents to the policy survey, only two indicated that elementary schools in their district screened students for Body Mass Index (BMI), with five respondents reporting that students are not screened for BMI and three reporting that they did not know whether elementary schools in their district screened students for BMI. Of those whose districts do screen for BMI, one indicated that a specialized scale is utilized that computes BMI automatically. The other said that BMI records were calculated using height and weight measures by school staff. Of these two, one reported that height and weight measures are taken by the school nurse, while the other respondent indicated that such measures are taken by the child's physician. One respondent

indicated that BMI is calculated by the Physical Education Director, while the other indicated it is calculated by someone other than the school nurse, the physical education director or the child’s physician. In addition, one of these respondents indicated that BMI screenings are performed annually, while the other noted that they were done “at grade levels where physicals are required.” One respondent reported that schools store BMI information in “separate paper-based files,” and the other said that “the health software program computes the BMI.” Finally, one of these respondents indicated that BMI information is not currently being used, while the other reported that the information is used “as data to gauge the problem for our students.”

## District Level Attitudes Survey

The District Level Attitudes Survey was designed to assess attitudes towards childhood overweight and obesity prevention activities among district level leaders and staff. The survey was distributed to 19 school board presidents and to 59 staff, such as Directors of Physical Education and Wellness Coordinators that serve an entire district. See Appendix A for further details on respondents to the District Level Survey.

### *Overweight and Obesity in Elementary Schools*

Respondents were asked to indicate the extent to which overweight and obesity among elementary students is a problem in their district. The majority of respondents (65%) indicated that overweight and obesity among elementary school students in their district is somewhat of a problem. Less than a fifth (15%) of

<b>Overweight and obesity among elementary school students in district</b>		
	Frequency	Percentage
A significant problem	4	15%
Somewhat of a problem	17	65%
Not a problem at all	3	12%
Don't Know	2	8%
<b>Total</b>	<b>26</b>	<b>100%</b>

respondents feel it is a significant problem, and a little more than a tenth (11%) feel it is not a problem at all.

Respondents were asked whether they feel that schools are an appropriate venues in which to address childhood overweight and obesity. A large majority (81%) of respondents at the district level felt that schools are an appropriate venue to address childhood obesity in partnership with other entities.

<b>Schools are an appropriate venue to address childhood overweight and obesity</b>		
	Frequency	Percentage
Yes	2	8%
Yes, in partnership with other entities	21	81%
No	2	8%
Don't Know	1	4%
Total	26	100%

Suggested partners included parents/family (11 respondents), government agencies (3 respondents), community organizations (11 respondents), and the medical community (12 respondents).

When asked about resources available to address childhood overweight and obesity, just over half (54%) of respondents responded that their district does not have adequate resources to address childhood overweight and obesity. Just over a quarter of respondents (37%) do feel the district has adequate resources, and the remainder (18%) indicated they did not know.

<b>Do you feel your district has adequate resources to address childhood overweight and obesity?</b>		
	Frequency	Percentage
Yes	7	27%
No	14	54%
Don't Know	5	19%
Total	26	100%

Respondents were asked to indicate what resources their district would need in order to address childhood overweight and obesity. Respondents could select more than one type of resource. Nearly all (86%) of the 14 respondents who answered the question indicated they would need financial resources. More than half of

the 14 respondents indicated a need for staff time (79%), support from staff (57%), or support from administration (57%). Half of the respondents indicated some other type of resource, including transportation for after school programs, adequate nursing staff, parental support, community partnerships and media support.

Recognizing that districts and schools have many issues that compete for attention and resources, and that academic proficiency is a primary focus for administrators and staff, respondents were asked to rank several items in terms of their impact on students' ability to reach a desired level of academic proficiency. School safety was the item that received the most "Highest Impact" responses. Non-academic enrichment received the most "Lowest Impact" responses. More than half of respondents (56%) ranked "Student nutrition" as a 1 (Highest Impact) or 2. Nearly half (46%) ranked "Students' physical activity" as a 1 or a 2.

<b>Rank the following in terms of the impact they have on students' ability to reach a desired level of academic proficiency</b>						
	Highest Impact	2	3	4	Lowest Impact	Total
Students' Physical Activity Levels	4 17%	7 29%	8 33%	3 13%	2 8%	24 100%
Parental Communication	7 32%	3 14%	4 18%	6 27%	2 9%	22 100%
Student Nutrition	4 17%	9 39%	6 26%	3 13%	1 4%	23 100%
School Safety	9 39%	2 9%	2 9%	4 17%	6 26%	23 100%
Non-Academic Enrichment	1 4%	3 12%	4 16%	7 28%	10 40%	25 100%

### *Policy and Practice*

Respondents were asked to describe the extent to which policies or guidelines related to childhood overweight and obesity had been adopted and integrated into district culture. For all except one area of policy, a large majority of respondents indicated that their districts do have policies and guidelines addressing various aspects of overweight and obesity prevention. The exception was policies and guidelines related to reducing the use of recreational media in elementary schools, which only 33% of respondents indicated their districts have adopted.

Items most often described as well-integrated or somewhat integrated were “improving the nutritional value of foods and beverages available at elementary school meals” (87%), “educating students about nutrition and physical activity,” (82%) and

<b>Has your district created policies or guidelines that address childhood overweight and obesity, and if so, how would you describe the extent to which they have been integrated into the culture of your district?</b>					
	Yes, and they are well integrated into the district culture	Yes, and they are somewhat integrated into the district culture	Yes, but they are not integrated into the district culture	I am not aware of any policies or guidelines related to this issue	Total
Improving the nutritional value of foods and beverages available at elementary school meals	9 39%	11 48%	2 9%	1 4%	23 100%
Improving the nutritional value of foods and beverages available in vending machines	5 22%	13 57%	3 13%	2 9%	23 100%
Improving the nutritional value of foods and beverages available at school functions, classroom parties, and fundraisers	1 4%	10 43%	9 39%	3 13%	23 100%
Reducing the use of unhealthy foods as a reward in the classroom	2 9%	8 36%	7 32%	5 23%	22 100%
Integrating nutrition education into other areas of the curriculum	3 14%	13 59%	4 18%	2 9%	22 100%
Educating students about nutrition and physical activity	9 39%	10 43%	2 9%	2 9%	23 100%
Educating students' families about nutrition and physical activity	1 4%	7 30%	11 48%	4 17%	23 100%
Modifying the amount or content of physical education received by students	1 5%	7 32%	7 32%	7 32%	22 100%
Increasing opportunities for physical activity	4 19%	8 38%	5 24%	4 19%	21 100%
Reducing the use of recreational media in elementary schools	0 0%	1 5%	6 29%	14 67%	21 100%

“improving the nutritional value of foods and beverages available



in vending machines” (79%). The three items least frequently described as well integrated or somewhat integrated were “reducing the use of recreational media in elementary schools” (6%), “educating students’ families about nutrition and physical activity” (34%) and “modifying the amount or content of physical education received by students” (37%). The items for which respondents most frequently indicated they were not aware of policies were “reducing the use of recreational media” (67%), “modifying the amount or content of physical education” (32%) and “reducing the use of unhealthy foods as a reward in the classroom” (23%).

Respondents were asked to describe the level of difficulty associated with implementing various activities related to overweight and obesity prevention in their districts. With the exception of “educating students about nutrition and physical activity,” the majority of respondents indicated that implementing activities related to obesity and overweight would be, or has been, somewhat difficult or very difficult. The items most often described as somewhat or very difficult were “improving the nutritional value of foods and beverages available at school functions, classroom parties, and fundraisers” (91%), “reducing the use of unhealthy foods as a reward in the classroom” (78%), and “educating students’ families about nutrition and physical activity” (78%). The items most often described as “not difficult at all” were “Educating students about nutrition and physical activity,” (57%) “improving the nutritional value of foods and beverages available at elementary school meals” (35%), “integrating nutrition education into other areas of the curriculum” (35%), and “implementing after-school programs to promote physical activity” (35%).

<b>How difficult do you feel it would be/has been to implement the following activities in your district?</b>					
	Not difficult at all	Somewhat difficult	Very difficult	Don't Know	Total
Improving the nutritional value of foods and beverages available at elementary school meals	8 35%	9 39%	4 17%	2 9%	23 100%
Improving the nutritional value of foods and beverages available in vending machines	7 30%	10 43%	4 17%	2 9%	23 100%
Improving the nutritional value of foods and beverages available at school functions, classroom parties, and fundraisers	2 9%	10 43%	11 48%	0 0%	23 100%
Reducing the use of unhealthy foods as a rewards in the classroom	4 17%	9 39%	9 39%	1 4%	23 100%
Integrating nutrition education into other areas of the curriculum	8 35%	13 57%	1 4%	1 4%	23 100%
Educating students about nutrition and physical activity	13 57%	9 39%	0 0%	1 4%	23 100%
Educating students' families about nutrition and physical activity	4 17%	11 48%	7 30%	1 4%	23 100%
Modifying the amount or content of physical education received by students	4 17%	9 39%	7 30%	3 13%	23 100%
Increasing opportunities for physical activity	7 30%	11 48%	5 22%	0 0%	23 100%
Reducing the use of recreational media in elementary schools	2 9%	8 35%	2 9%	11 48%	23 100%
Implementing nutrition and physical activity programs for staff	4 18%	10 45%	4 18%	4 18%	22 100%
Implementing after-school programs to promote physical activity	8 35%	8 35%	5 22%	2 9%	23 100%

District level survey respondents were asked to choose the three most important activities, from a list of 12, that they feel school districts can engage in to prevent childhood overweight and obesity. Of 24 district level staff, 15 (63%) chose "educating student's families about nutrition and physical activity" as one of the three most important activities. More than half of the 24 respondents selected "increasing opportunities for physical activity" (58%). Other frequently selected activities were "educating students about nutrition and physical activity" (46%) and "improving the nutritional value of foods and beverages available at school meals" (42%). No district level staff selected reducing the use of recreational media in classrooms or implementing nutrition and physical activity programs for staff.

<b>Please choose the three most important activities you feel school districts can engage in to prevent childhood overweight and obesity.</b>		
	Number of respondents selecting item as one of three most important	Percent of total respondents (n=24)
Improving the nutritional value of foods and beverages available at elementary school meals	10	42%
Improving the nutritional value of foods and beverages available in vending machines	3	13%
Improving the nutritional value of foods and beverages available at school functions, classroom parties, and fundraisers	6	25%
Reducing the use of unhealthy foods as a rewards in the classroom	2	8%
Integrating nutrition education into other areas of the curriculum	6	25%
Educating students about nutrition and physical activity	11	46%
Educating students' families about nutrition and physical activity	15	63%
Modifying the amount or content of physical education received by students	5	21%
Increasing opportunities for physical activity	13	54%
Reducing the use of recreational media in elementary schools	0	0%
Implementing nutrition and physical activity programs for staff	0	0%
Implementing after-school programs to promote physical activity	1	4%

## **School Level Attitudes Survey**

The School Level Attitudes Survey was designed to assess attitudes towards childhood overweight and obesity prevention activities among building staff. The survey was distributed to 4,302 building level staff, including principals and teachers, and was completed by 386. See Appendix A for further details on respondents to the School Level Survey.

### *Overweight and Obesity in Elementary Schools*

Respondents were asked to describe the extent of the overweight and obesity problem among elementary students in their school. A significant majority (74%) indicated that overweight and obesity among elementary students in their school is “somewhat of a problem.” 20% of respondents indicated that it was “a significant problem.”

<b>Would you say that overweight and obesity among elementary students in your school is:</b>		
	Frequency	Percentage
A significant problem	77	20%
Somewhat of a problem	280	74%
Not a problem at all	19	5%
Total	376	100%

When asked whether they believed that schools are the appropriate venue to address childhood overweight and obesity, a majority of respondents (70%) indicated that schools are indeed appropriate venues to address childhood overweight and obesity, but as part of a joint “partnership with other entities.” Furthermore, 22% of respondents indicated that schools are appropriate independent venues to address childhood overweight and obesity and 5% indicated that schools are not an appropriate venue to address this issue.

<b>Do you feel that schools are an appropriate venue to address childhood overweight and obesity?</b>		
	Frequency	Percentage
Yes	84	22%
Yes, in partnership with other entities	262	70%
No	19	5%
Don't know	11	3%
Total	376	100%

Of the respondents who elaborated on the types of entities that schools should partner with, the majority felt that parents and physicians or other health care professionals or organizations are appropriate partners. Other potential partners listed by respondents are included in the adjacent table.

<b>Please indicate the types of entities:</b>		
	Frequency	n = 249
Parents/Family	163	65%
Medical Professionals or Health Care Organizations	160	64%
Community Organizations and Programs	67	27%
Nutritionist/Dietitian	26	10%
Local Stores and Restaurants	26	10%
Media	18	7%
Clubs/After School Programs	16	6%
Food Services	15	6%
Churches/Religious Organizations	13	5%
Government Agencies	11	4%
Day Care Providers	11	4%
Local Sports Teams	10	4%
School Nurse	6	2%
Fitness Instructors	5	2%
Health Insurance Companies	4	2%
Physical Education Instructors	3	1%

Respondents were asked whether they thought their school has adequate resources to address childhood overweight and obesity in elementary students. A majority of respondents (56%) indicated that their school had inadequate resources to address overweight and obesity in elementary students. 24% believed resources were adequate, and 20% did not know.

<b>Do you feel that your school has adequate resources to address childhood overweight and obesity in elementary students?</b>		
	Frequency	Percentage
Yes	89	24%
No	211	56%
Don't know	76	20%
Total	376	100%

Respondents were asked to identify the resources that they thought were needed to address childhood overweight and obesity. 23% indicated that staff time is needed, and 18% indicated that financial resources are needed. 45% of respondents reported that “Other” resources are needed to address childhood overweight and obesity in their schools. Of those who selected the “Other” option, 36% said that two or more of the resources listed in the question (Financial, Staff time, Support from staff, Support from Administration) were needed.

<b>What resources do you feel your school needs to address childhood overweight and obesity?</b>		
	Frequency	Percentage
Financial resources	37	18%
Staff time	48	23%
Support from staff	14	7%
Support from administration	16	8%
Other	96	45%
Total	211	100%

<b>Other Resources Needed</b>		
	Frequency	Percentage (n=89)
Two or more of resources listed	32	36%
Changes to Menus and Foods Allowed/Available	20	22%
Training and Resources for Staff	15	17%
Family Awareness and Involvement	9	10%
Curriculum and Materials	7	8%
Time for Physical Activity/Education	6	7%
Additional Time to Integrate Activities/Curriculum	6	7%
Partnerships/Outside Expertise	5	6%
Collaboration with Health Care Professionals	4	4%
Collaboration with Government Agencies	2	2%

Respondents were asked to rank five different factors with their respect to their importance on a student’s ability to reach a desired level of academic proficiency. Nearly half (46%) of respondents indicated that parental communication has the highest impact on students’ ability to reach a desired level of academic proficiency. About half (51%) of respondents indicated that non-academic enrichment programs have the least impact. Student nutrition was

Please rank the following in terms of the impact they have on students' ability to reach a desired level of academic proficiency.						
	Highest Impact	2	3	4	Lowest Impact	Total
Student's Physical Activity Levels	35 11%	68 21%	104 32%	91 28%	30 9%	328 100%
Parental Communication	155 46%	65 19%	47 14%	32 9%	40 12%	339 100%
Student Nutrition	47 14%	98 29%	105 32%	63 19%	20 6%	333 100%
School Safety	79 22%	88 25%	53 15%	82 23%	50 14%	352 100%
Non-Academic Enrichment Programs	39 11%	38 11%	41 11%	58 16%	184 51%	360 100%

ranked as having the highest or second highest level of impact by 43% of respondents. Student's physical activity levels was ranked as having the highest or second highest level of impact by 32% of respondents; a larger proportion (37%) ranked it as the lowest of second lowest impact.

### *Childhood Overweight and Obesity Policy and Practice*

Respondents were asked whether policies or guidelines that address childhood overweight and obesity were in place in their schools, and if so, the extent to which those policies and guidelines have been integrated into the culture of their school.

More than half of respondents indicated that the policies or guidelines related to the following areas had been created in their schools:

- ❖ Educating students about nutrition and physical activity (91%)
- ❖ Integrating nutrition education into other areas of the curriculum (76%)
- ❖ Increasing opportunities for physical activity (73%)
- ❖ Improving the nutritional value of foods and beverages available at elementary school meals (68%)

- ❖ Modifying the amount or content of physical education received by students (64%)
- ❖ Reducing the use of unhealthy foods as a reward in the classroom (58%)

About half of respondents indicated that policies or guidelines had been created concerning “Educating students’ families about nutrition and physical activity” (53%), “improving the nutritional value of foods and beverages available at school functions, classroom parties or sold in fundraises” (52%) and “improving the nutritional value of foods and beverages available in vending machines” (49%). Slightly less than half reported policies or guidelines related to “improving the nutritional value of foods and beverages available in vending machines” (49%) and “reducing the use of recreational media” (45%).

The three items for which the most respondents indicated they were not aware of any policies or guidelines were “Reducing the use of recreational media in elementary schools” (56%), “improving the nutritional value of foods and beverages available in vending machines” (51%) and “improving the nutritional value of foods and beverages available at elementary school functions, classroom parties, or sold in fundraises”(48%).<sup>3</sup>

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<sup>3</sup> Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. A principal components factor analysis with varimax rotation produced two factors for this set of survey items: one factor related to nutrition (the first four items in the list) and a second factor related to physical activity (the last three items in the list). The remaining items in the list related to education were a part of both factors.



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**Has your school created policies or guidelines that address childhood overweight and obesity, and if so, how would you describe the extent to which these policies or guidelines have been integrated into the culture of your school?**

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	Yes, and they are well-integrated into the school culture	Yes, and they are somewhat integrated into the school culture	Yes, but they are not integrated into the school culture	I am not aware of any policies or guidelines related to this issue	Total
Improving the nutritional value of foods and beverages available at elementary school meals	54 15%	113 32%	74 21%	108 31%	349 100%
Improving the nutritional value of foods and beverages available in vending machines	56 17%	72 21%	37 11%	174 51%	339 100%
Improving the nutritional value of foods and beverages available at elementary school functions, classroom parties or sold in fundraisers	34 10%	77 22%	70 20%	169 48%	350 100%
Reducing the use of unhealthy foods as a reward in the classroom	58 17%	80 23%	64 18%	148 42%	350 100%
Integrating nutrition education into other areas of the curriculum	47 13%	133 38%	86 25%	84 24%	350 100%
Educating students about nutrition and physical activity	89 26%	176 51%	49 14%	34 10%	348 100%
Educating students' families about nutrition and physical activity	23 7%	74 21%	88 25%	163 47%	348 100%
Modifying the amount or content of physical education received by students	73 21%	106 30%	44 13%	127 36%	350 100%
Increasing opportunities for physical activity	67 19%	111 32%	76 22%	96 27%	350 100%
Reducing the use of recreational media in elementary schools	30 9%	69 20%	55 16%	196 56%	350 100%

Respondents were asked to identify the means by which their school has familiarized parents with policies and guidelines related to nutrition and physical activity. A majority of respondents reported that they are not aware of any such means. 36% indicated that a memo was distributed to describe the policies to parents. Of the 47 who indicated that other means have been used to familiarize parents, 30% reported that a newsletter had been sent home. In addition, respondents reported special events, presentations or meetings for parents (30%).

<b>What has your school done to familiarize parents with policies and guidelines related to nutrition and physical activity?</b>		
	Frequency	Percent of Total
Distributed a memo describing the policies	126	36%
Held meetings to explain the policies	41	12%
I am not aware of anything the school has done to familiarize parents with the policies	199	57%
Other	47	13%

Respondents were asked to identify means by which their school has familiarized staff with policies and guidelines related to nutrition and physical activity. 47% of respondents reported that they are not aware of any such means. 37% indicated that a memo was distributed to describe the policies to staff. Only 4% indicated that “special trainings” are held to familiarize staff with policies and guidelines related to nutrition and physical activity. Of those indicating other means were used to familiarize staff, 2 respondents reported that the issues are covered in the curriculum, 4 cited wellness programs for staff, and 7 reported that

<b>What has your school done to familiarize staff with policies and guidelines related to nutrition and physical activity?</b>		
	Frequency	Percent of Total
Distributed a memo describing the policies	128	37%
Held meetings to explain the policies	94	27%
Held special trainings	14	4%
I am not aware of anything the school has done to familiarize staff with the policies	164	47%
Other	31	9%

information has been discussed during faculty meetings or other meetings or presentations.

### *School Environment*

Respondents were asked to indicate the degree to which various statements regarding student nutrition describe their respective schools. There was a discrepancy in the responses between the questions dealing with enthusiasm for activities involving nutrition, and actual practices aimed at improving nutrition. While more than half of respondents (55%) agreed or strongly agreed that “school leadership champions the school’s nutrition initiatives” and that “staff enthusiastically support the school’s nutrition initiatives” (58%), for the remainder of the statements, the majority of respondents either disagreed or strongly disagreed that the statement describes their school’s culture.

<b>For each statement below, please indicate the degree to which you agree or disagree that the statement described your school's culture in regard to student nutrition:</b>					
	Strongly disagree	Disagree	Agree	Strongly agree	Total
School leadership champions the school's nutrition initiatives	38 12%	112 34%	145 44%	35 11%	330 100%
Staff enthusiastically support the school's nutrition initiatives	24 7%	114 35%	177 54%	14 4%	329 100%
Parents enthusiastically support the school's nutrition initiatives	40 12%	161 49%	121 37%	7 2%	329 100%
Students enthusiastically support the school's nutrition initiatives	41 13%	177 54%	102 31%	8 2%	328 100%
Student nutrition is a strong focus area for the building and district leaders	62 19%	172 52%	86 26%	11 3%	331 100%
Teachers have access to professional development opportunities related to student nutrition	77 23%	197 60%	52 16%	3 1%	329 100%
Teachers take advantage of existing opportunities for professional development related to student nutrition	71 22%	212 66%	36 11%	1 0%	320 100%
Teachers have input into the design and implementation of the school's nutrition initiatives	92 28%	142 43%	91 28%	4 1%	329 100%
Parents have input into the design and implementation of the school's nutrition initiatives	88 27%	161 49%	75 23%	4 1%	328 100%
Students are key to the design and implementation of the school's student nutrition initiatives	78 24%	128 39%	104 32%	18 5%	328 100%
Teachers and staff rely on data to inform student nutrition initiatives	66 20%	151 46%	101 31%	7 2%	325 100%
Students are involved in tracking their own progress related to nutrition	99 30%	181 56%	44 14%	1 0%	325 100%
"Messaging" throughout the building supports nutrition initiatives	78 24%	162 50%	75 23%	8 2%	323 100%

Respondents were asked to gauge the degree to which various statements regarding student physical activity describe their respective schools. As with the question regarding nutrition, there was a difference between responses regarding enthusiasm for initiatives and practices related to physical activity. Unlike responses to the nutrition question, here the majority agreed or strongly agreed that parents and students enthusiastically support initiatives.

<b>For each statement below, please indicate the degree to which you agree or disagree that the statement described your school's culture in regard to student physical activity:</b>					
	Strongly disagree	Disagree	Agree	Strongly agree	Total
School leadership champions the school's physical activity initiatives	24 8%	64 22%	171 58%	35 12%	294 100%
Staff enthusiastically support the school's physical activity initiatives	13 4%	63 22%	193 66%	23 8%	292 100%
Parents enthusiastically support the school's physical activity initiatives	24 8%	85 29%	171 58%	13 4%	293 100%
Students enthusiastically support the school's physical activity initiatives	20 7%	63 22%	160 55%	49 17%	292 100%
Student physical activity is a strong focus area for the building and district leaders	45 15%	115 40%	118 41%	13 4%	291 100%
Teachers have access to professional development opportunities related to student physical activity	62 21%	152 52%	73 25%	4 1%	291 100%
Teachers take advantage of existing opportunities for professional development related to student physical activity	54 19%	170 59%	60 21%	3 1%	287 100%
Teachers have input into the design and implementation of the school's physical activity initiatives	58 20%	120 41%	105 36%	9 3%	292 100%
Parents have input into the design and implementation of the school's physical activity initiatives	63 22%	157 54%	69 24%	4 1%	293 100%
Students are key to the design and implementation of the school's student physical activity initiatives	50 17%	119 41%	109 37%	15 5%	293 100%
Teachers and staff rely on data to inform student physical activity initiatives	50 17%	131 45%	102 35%	5 2%	288 100%
Students are involved in tracking their own progress related to physical activity	54 19%	143 49%	82 28%	11 4%	290 100%
"Messaging" throughout the building supports physical activity initiatives	52 18%	119 41%	109 38%	8 3%	288 100%

Separate factor analysis of the two lists of school environment items, one related to nutrition and the second related to physical activity, suggests that stakeholder support for nutrition and/or physical activity initiatives (the first four items on each list) is separate from practices that support the implementation of these initiatives (the last eight items on each list). Focus is a part of both

factors. The implication is that it is not enough to obtain support for an initiative; one must also put in place the practices that lead to implementation.

### *Overweight and Obesity Prevention Activities*

Respondents were asked to gauge how difficult it has been to implement various activities relating to nutrition and physical activity. The three items most often described as “not difficult at all” were “educating students about nutrition and physical activity” (66%), “improving the nutritional value of foods and beverages available in their elementary schools’ vending machines” (49%), and “integrating nutrition education into other areas of the curriculum” (43%). While fewer than 20% of respondents described any activity as “very difficult,” the following items were most often described as somewhat difficult or very difficult:

- ❖ Educating students’ families about nutrition and physical activity (63%)
- ❖ Improving the nutritional value of foods and beverages available at school functions, classroom parties, or sold in fundraisers (61%)
- ❖ Modifying the amount or content of physical education received by students (61%)

<b>How difficult do you feel it would be/has been to implement the following activities in your school?</b>					
	Not difficult at all	Somewhat difficult	Very difficult	Don't Know	Total Responses
Improving the nutritional value of foods and beverages available at elementary school meals	80 34%	87 37%	38 16%	31 13%	236 100%
Improving the nutritional value of foods and beverages available in vending machines	115 49%	50 21%	13 6%	55 24%	233 100%
Improving the nutritional value of foods and beverages available at elementary school functions, classroom	81 34%	110 46%	36 15%	10 4%	237 100%
Reducing the use of unhealthy foods as a reward in the classroom	124 41%	119 39%	46 15%	13 4%	302 100%
Integrating nutrition education into other areas of the curriculum	128 43%	115 38%	20 7%	38 13%	301 100%
Educating students about nutrition and physical activity	199 66%	77 25%	19 6%	8 3%	303 100%
Educating students' families about nutrition and physical activity	98 32%	140 46%	50 17%	15 5%	303 100%
Modifying the amount or content of physical education received by students	98 33%	126 42%	57 19%	20 7%	301 100%
Increasing opportunities for physical activity	126 42%	129 43%	38 13%	10 3%	303 100%
Reducing the use of recreational media in elementary schools	119 40%	112 38%	30 10%	37 12%	298 100%
Implementing nutrition and physical activity programs for staff	121 40%	118 39%	43 14%	20 7%	302 100%
Implementing after-school programs to promote physical activity	103 34%	122 40%	52 17%	25 8%	302 100%

A factor analysis of the school staff's ratings of how difficult it has been to implement various activities related to nutrition and physical activity educational activities produced four distinct factors: the first relates to education and includes integrating nutrition education into other areas of the curriculum, educating students about nutrition and physical activity, educating students' families about nutrition and physical activity, and implementing nutrition and physical activity programs for staff; the second deals with physical activity initiatives over which the district/school can exercise control and includes modifying the amount or content of physical education received by students, increasing opportunities for physical activity and implementing after-school programs to promote physical activity; the third deals with nutrition activities over which the district/school can exercise control and includes improving the nutrition value of foods and beverages available at elementary school meals and improving the nutritional value of foods and beverages available in vending machines; the fourth factor relates to nutrition activities over which the district/school exercises minimal control and includes improving the nutritional value of foods and beverages available at elementary school

functions, classroom parties or sold at fundraisers, reducing the use of unhealthy foods as a reward in the classroom, and reducing the use of recreational media in elementary schools.

Respondents were asked to identify the top three most important activities they felt schools can engage in to prevent childhood overweight and obesity. The three most frequently selected items were: improving the nutritional value of foods and beverages available at elementary school meals (70%), educating students about nutrition and physical activity (52%) and increasing opportunities for physical activity (49%). The three least frequently selected items were: improving the nutritional value of foods and beverages available in vending machines (4%), implementing nutrition and physical activity programs for staff (3%) and reducing the use of recreational media in elementary schools (2%).

<b>Please choose the three most important activities you feel schools can engage in to prevent childhood overweight and obesity.</b>		
	Frequency	Percent of Total
Improving the nutritional value of foods and beverages available at elementary school meals	211	70%
Improving the nutritional value of foods and beverages available in vending machines	13	4%
Improving the nutritional value of foods and beverages available at elementary school functions, classroom parties or sold in fundraisers	53	17%
Reducing the use of unhealthy foods as a reward in the classroom	56	18%
Integrating nutrition education into other areas of the curriculum	59	19%
Educating students about nutrition and physical activity	158	52%
Educating students' families about nutrition and physical activity	134	44%
Modifying the amount or content of physical education received by students	38	13%
Increasing opportunities for physical activity	147	49%
Reducing the use of recreational media in elementary schools	5	2%
Implementing nutrition and physical activity programs for staff	9	3%
Implementing after-school programs to promote physical activity	59	19%
Other	12	4%

School level survey respondents were given the opportunity to provide additional information about efforts in their schools to address childhood overweight and obesity.

Several themes emerged from the 139 responses to this question. The most commonly raised issue was that more nutritious choices need to be implemented in the cafeteria, with 17 respondents (roughly 12%) mentioning this. Some of the respondents in this section stated that even though there were healthy options, students were forgoing these for high calorie snacks. In contrast, 12 (9%) said that progress is being made through better cafeteria options. With the exception of the respondent who cited both topics, there were no cases of contradictory responses coming from the same school.

Another theme was that parents of students are undermining nutrition efforts by the schools by practicing poor nutrition at home. 15 respondents (11%) felt this way. Fourteen (10%) said the school took little or no effort, with half of these responses coming from a single district. Ten respondents (7%) cited that their school had implemented a general fitness program, while 6 (4%) said that they had implemented fitness programs targeted at overweight students. Another strategy was limiting food for in-class parties, which was cited by 9 (6%) respondents. Seven respondents indicated that core educational needs outweigh teaching nutrition. An equal number stated that physical education teachers are handling nutrition/weight issues in their classes. Recess was another topic mentioned, with 4 (3%) stating that recess was an effective tool, and 2 (1.4%) saying that there was not enough recess. In addition, three respondents (2%), all from different school districts, mentioned a program involving pedometers to track movement throughout the day.

## **Differences and Similarities Across Organizational Levels**

Schools are complex organizations. The development of a district-level policy on nutrition or physical activity does not lead directly to the effective implementation at the school level of the practices supported by district policy. District-level leadership is important, but so is communication to ensure awareness of the policy -- why the issue is important, what practices are being put in place, and the anticipated results. Ideally, there will be a consistency of



awareness and supportive attitudes across the district and down through the schools.

But awareness and support are necessary but not sufficient. Effective implementation requires attention to the practicalities of change management. School staff must be given the resources (e.g., training, time) needed to engage in the behaviors that characterize a successful implementation. The degree of integration of new practices at both the district and school levels becomes the measure of the effectiveness of the implementation effort.

CGR created three surveys in order to capture the different organizational levels within school districts, and to examine the differences that might exist between policies created at the district level, and awareness, perception and implementation of such policies at the school level. This section of the report will look at how policies related to nutrition and physical activity cross district and school boundaries.

## *Nutrition*

Nutrition is one of the keys to preventing childhood overweight and obesity, and has been identified as a focus by GRHF for addressing childhood overweight and obesity in Monroe County. Specifically, GRHF has identified the following areas of intervention for schools:

- ❖ Integrate the value of nutrition across the curriculum
- ❖ Use the CDC's School Health Index for Physical Activity and Healthy Eating as a baseline for nutrition
- ❖ In school cafeterias, increase the availability of nutritious foods and beverages, and decrease the amount of sodas, juices, and non-nutritious snacks sold in vending machines
- ❖ Implement correct portion sizes of healthy foods in cafeteria servings
- ❖ Create healthy fundraisers, and eliminate fundraisers that sell unhealthy foods and beverages

- ❖ Offer educational training sessions for parents and families to improve nutrition in home settings, which could lead to improved coordinated efforts between schools and families
- ❖ Involve students to help plan specific initiatives

### *Cafeteria Meals and Vending Machines*

The majority of respondents to the policy survey indicated that policies have been created at the district level to prohibit the sale of foods of low nutritional value and provide access to more healthy foods and beverages in the cafeteria (90%). This is reflected in the district level responses as well; 96% of these respondents indicated that the district has policies or guidelines related to nutrition at school meals.

However, some discrepancies emerge at the school level. Despite the large majority of policy survey respondents (89%) who indicate that all or some elementary schools have prohibited the sale of foods and beverages of minimal nutritional value and/or increased the availability of healthier snacks and beverages in the school cafeteria, a smaller majority (68%) of school respondents indicate that policies related to school meals are in place in their schools.

While 87% of district level respondents say such policies are well integrated or somewhat integrated into the district culture, only 47% of school respondents said the same about their school culture. Nearly a third of school level respondents were unaware of policies related to school meals.

The perceived importance of improving the nutritional value of foods and beverages available at school meals also varied between the district level and the school level, with only 42% of district respondents choosing this activity as one of the top three most important activities that districts can engage in, and 70% of school respondents selecting it.

In terms of the difficulty of implementing activities around the nutritional value of foods and beverages available at school meals, similar proportions of district and school level respondents felt

this activity would be somewhat difficult or very difficult (56% at the district level and 53% at the school level).

The majority of policy level respondents (80%) indicate that policies or guidelines have been created at the district level in regard to improving the nutritional value of foods available in vending machines, and (79%) indicate that all elementary schools are engaged in such activities. Nearly 80% of district level respondents indicate that such policies exist in their district and are well integrated or somewhat integrated into district culture. However, only 38% of school level respondents feel such policies or guidelines are well-integrated or somewhat integrated into school culture, and 51% are not aware of such policies or guidelines at the school level. Only 13% of district level and 4% of school level respondents chose “improving the nutritional value of foods and beverages available in vending machines” as one of the most important activities districts or schools can engage in to prevent overweight and obesity. In our review of literature on best practices for school nutrition, some sources indicated that the elementary schools in question do not have vending machines. Although we did not ask respondents whether their elementary schools had vending machines, this may explain the perception that foods available in vending machines are not as important as foods available in other school settings. Also, district level policies may exist that only affect middle or high schools that do have vending machines.

*Fundraisers, Classroom Parties and School Functions*

Half of the policy survey respondents indicate that policies have been established at the district level in regard to the nutritional value of foods and beverages available at classroom parties, fundraisers, and at school functions. Only 33% of policy survey respondents indicate that all elementary school are engaging in activities around this issue. The majority (86%) of district level staff indicate that such policies have been established at the district level. However, only 52% of school level respondents are aware of such policies at the school level. These activities are seen as very difficult by 48% of district level respondents but only 15% of

school level respondents. Small percentages of both district level and school level respondents selected activities in this area as one of the top three most important activities that districts or schools can engage in to prevent childhood overweight and obesity (25% at the district level, 17% at the school level).

### *Food as a Reward*

The majority of district level respondents (86%) indicate that policies or guidelines have been established relating to the use of food as a reward. 58% of school level respondents indicate that this is the case at the school level. A similar proportion of both groups (45% at the district level, 40% at the school level) feel that these policies are well or somewhat integrated into the culture at their district or school. This issue was rated as one of the top three most important activities by small proportions of both groups – 8% of the district level and 18% at the school level.

### *Nutrition Education*

All of the policy survey respondents indicate that policies exist at the district level in regard to integrating nutrition education into the curriculum, and 78% indicate that all elementary schools are engaged in such activities. Large proportions of both district and school groups say that their district or school has established policies or guidelines related to integrating nutrition education into the curriculum (91% of district level respondents and 76% of school level respondents.). Nearly three-quarters (73%) of the district level respondents indicate that these policies are well integrated or somewhat integrated into the culture of their district, while 51% of school level respondents indicate these policies are well integrated or somewhat integrated into the school culture.

Integrating nutrition education into other areas of the curriculum was selected as one of three most important activities by a relatively small proportion of the district level and school level groups (25% of district level respondents and 19% of school level respondents). Only 4% of district level respondents think this activity is very difficult to implement, and only 7% of school level respondents think it is very difficult.

All of the policy survey respondents indicated that all elementary schools in their districts are educating students about nutrition and physical activity. In both the district level and school level groups, 91% of respondents indicated that their district or school has created policies or guidelines about this area. A larger proportion of district level respondents than school level respondents feel these policies are well integrated into the district culture (39% at the district level, and 26% at the school level). About half of both the district level and school level groups selected ‘educating students about nutrition and physical activity’ as one of the three most important activities that schools can engage in to prevent childhood overweight and obesity.

Educating students about nutrition and physical activity was also seen by a majority of respondents as not difficult at all to implement - 57% in the district level group, and 66% in the school level group.

Another component to nutrition education is educating parents and families. More than three-quarters of policy survey respondents (77%) indicate that all or some elementary schools in their district have implemented programs to educate students’ families about nutrition and or physical activity. However, only 34% of district level and 28% of school level respondents say that guidelines have been established and are well or somewhat integrated into the district or school culture

The majority of district level respondents chose educating student’s families as one of the top three most important activities districts should engage in to prevent childhood overweight and obesity, and this item was the fourth most frequently selected by school level respondents. Also, many respondents at the school level feel that parents are an important partner for schools in preventing obesity and overweight. 78% of district level respondents and 63% of school level respondents feel this activity is somewhat or very difficult to implement.

### *Culture in Relation to Nutrition*

In addition to the question of how well-integrated policies are at the school level, school level respondents were asked the extent to which they agreed or disagreed with a series of statements describing the culture of their school in regard to student nutrition. The only two items with which a majority either agreed or strongly agreed were “School leadership champions the school’s nutrition initiatives,” (55%) and “Staff enthusiastically support the school’s nutrition initiatives” (58%). These findings indicate that enthusiasm for an issue is not always consistent with actual practices addressing the issue. For example, most school level respondents disagreed or strongly disagreed with statements pertaining to input from teachers, parents and students into the design and implementation of school’s nutrition initiatives.

### **Physical Activity**

Increasing physical activity is the other major focus for GRHF’s strategic plan to address childhood overweight and obesity in Monroe County. Specifically, GRHF sees the following as critical areas for interventions in elementary schools:

- ❖ Increase the amount of time for physical activity in the classroom, at recess and in the nature and frequency of organized physical education activities
- ❖ Use the CDC’s School Health Index for Physical Activity and Healthy Eating as a baseline for physical activity
- ❖ Obtain BMIs for each child at the start of the school year and monitor and evaluate this data to inform school programs, evaluate interventions and to make available to public health agencies for the purpose of evaluating changes in the epidemic
- ❖ Eliminate the use of recreational television as a ‘reward’ in the classroom
- ❖ Offer education training sessions for parents and families to increase family recreational physical activities
- ❖ Involve students in planning specific initiatives to increase physical activity

All the policy survey respondents indicated that their districts have created guidelines or policies related to the amount or content of physical education received by students and related to opportunities for physical activity throughout the school day. While the majority of the district and school level respondents are aware of policies or guidelines related to the amount or content of physical education, only 37% of district level respondents feel these are well or somewhat integrated into the district culture. At the school level, 21% of respondents feel these policies are well integrated and 30% feel they are somewhat integrated.

Only 21% of district level staff and 13% of school level staff chose this area as one of the top three most important activities districts or schools can engage in to prevent childhood overweight and obesity. 69% of district level respondents and 61% of school level respondents felt this activity would be somewhat or very difficult to implement.

Similarly, all policy survey respondents indicated that policies or guidelines have been established in regard to opportunities for physical activity throughout the school day. Two thirds say that all or some elementary schools are engaging in activities to increase opportunities for physical activity throughout the school day. At the district level, 81% of respondents are aware of policies related to this activity, and 57% say they are either well or somewhat integrated into the district culture. At the school level, 73% are aware of such policies, and 51% say they are either well or somewhat integrated.

At both the school level and the district level, increasing opportunities for physical activity was one of the most frequently selected as one of the most important activities that districts or schools can engage in to prevent childhood overweight and obesity. About half of both groups selected this as one of the top three activities. 70% of district level and 56% of school level

respondents feel this activity is somewhat or very difficult to implement.

Limiting the use of recreational media was one area that seems to be receiving almost no attention in districts and schools surveyed. Only 2 of the 10 policy survey respondents said that their district had established policies or guidelines related to this topic. One indicated that all elementary schools in their district have reduced the use of recreational media in their schools. While 34% of district level respondents were aware of such policies, none of them indicated that such policies are well integrated into the district culture. At the school level, 45% of respondents were aware of policies related to recreational media, but only 29% said these policies were well or somewhat integrated into this culture. Not surprisingly, none of the district level respondents and only 2% of school level respondents ranked reducing the use of recreational media in school as one of the three most important activities that districts and schools can engage in to prevent overweight and obesity among students. Less than half of respondents to either the district level and school level surveys felt this activity would be somewhat or very difficult to implement.

### *Culture in Relation to Physical Activity*

Respondents at the school level were asked to indicate the extent to which they agreed or disagreed with a series of statements about the culture of their schools in regard to physical activity. The majority of respondents agreed or strongly agreed that school leadership champions the school's physical activity initiatives, and that staff, parents and students enthusiastically support the school's physical activity initiatives. For the remainder of the statements (see table on page 31), the majority disagreed or strongly disagreed.

### **Additional Issues**

**Perception of Problem and the Role of Schools.** Small numbers of respondents at both the district and school level feel that overweight and obesity is a significant problem (15% at the district level, 20% at the school level). However, the majority feel that it is somewhat of a problem (65% at the district level and 74% at the school level).



The majority of respondents feel that schools are an appropriate venue in which to address childhood overweight and obesity, in partnership with other entities (81% at the district level and 70% at the school level).

**Resources.** The majority of respondents feel their district or school does not have adequate resources to address childhood overweight and obesity (54% of district respondents and 56% of school respondents). In terms of the resources they need, the majority of district level respondents cited staff time, support from staff, and support from administration. At the school level, with the exception of the “other” category, staff time was the type of resource most frequently selected.

**Communication.** A third of policy level respondents indicated that they have not done anything to familiarize their staff with their Local Wellness Policy. The remainder have distributed a memo (40%), held meetings (30%), held trainings (1 respondent), published the policy (1 respondent), reviewed the policy at a public meeting (1 respondent) and distributed a brochure (1 respondent.)

At the school level, 57% of respondents indicated that they are not aware of anything that has been done to familiarize parents with policies and guidelines related to nutrition and physical activity; 47% of respondents are not aware of anything the school has done to familiarize staff with the policies.

## VARIATION ACROSS DISTRICTS

The analysis to this point in the report has been based on the survey results for all of the districts in Monroe County. It has helped to identify key elements in district and school efforts to address childhood overweight and obesity. These include:

- ❖ The degree to which overweight and obesity is seen as a significant problem

- ❖ Whether schools are seen as an appropriate venue in which to address this problem
- ❖ Whether schools have adequate resources to address this problem
- ❖ How well nutrition, physical activity and education initiatives are integrated into the district and school culture
- ❖ The level of support for nutrition and physical activity initiatives
- ❖ The extent to which nutrition and physical activity initiatives are engrained in everyday practice
- ❖ The perceived difficulty of implementing nutrition, physical activity and education initiatives
- ❖ The specific initiatives seen as likely to have the greatest impact

However, treating Monroe County as a single district it does not tell us anything about the conditions in any specific district or the extent to which conditions and attitudes vary across districts. Yet many of GRHF's future investments in this area are likely to be targeted at individual districts. Thus one research outcome GRHF hoped to achieve was the identification of specific districts that would make "good" targets for investment. This section of the report will present a district analysis that starts to answer this question by looking at the variation across five districts on the key elements identified above.<sup>4</sup>

## Summary

The district analysis has shown that there is indeed variation across districts on the key elements in district and school efforts to address childhood overweight and obesity. This variation is evident the school-level staff responses to individual elements, as well as the pattern of responses to all of the elements. For GRHF, the implication is the need to allow for customization of any

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<sup>4</sup> The results of the district analysis are not included in this web report to ensure the confidentiality promised to respondents and participating districts.

investment to address the issue of childhood overweight and obesity. Districts should be given the flexibility to build on their strengths and/or address their weaknesses in enhancing their efforts to address childhood overweight and obesity.

## NATIONAL CASE STUDIES

The review of differences and similarities across organizational levels reinforces the need to consider any nutrition and/or physical activity initiative as an exercise in change management. There must be champions for the initiative, as well as resources for implementation and a clear work plan that engages the necessary individuals and enables them to perform the behaviors needed for success. This section of the report will review some national case studies to present some exemplary program content and to identify some of the elements of change management that contributed to the success of these initiatives.

### **Case Study 1 – Austin Independent School District**

The Austin Independent School District (AISD) has received a great deal of publicity for its comprehensive approach to child health. Spurred on by state legislation requiring all school districts to adopt a coordinated school health plan, AISD has implemented a number of comprehensive changes to school menus, vending machines, and curriculum in order to promote the health of its students.

Legislation passed in Texas in 2001 and 2005 requires school districts in the state to implement an approved coordinated health program to address obesity, cardiovascular disease, and diabetes. In addition, the Texas Department of Agriculture has created a new policy for nutrition in public schools which requires schools to limit the availability of foods of minimal nutritional value and establishes new nutrition standards for foods offered on school campuses.

Spurred on by this legislation, in 2002 AISD created a School Health Advisory Council (SHAC) made up of parents, students,

community members and school staff. The SHAC has assisted the AISD in developing guidelines for vending machine foods, helping develop the district's wellness policy, has made recommendations about physical education and nutrition education, and has reviewed health and physical education textbooks.

More recently, the SHAC was charged with recommending one of four approved coordinated child health programs for the district to implement, as required by law. As a result of the recommendation, the district has implemented the Coordinated Approach to Child Health, or CATCH program. CATCH is an evidence based, "coordinated school health program which builds an alliance of parents, teachers, child nutrition personnel, school staff, and community partners to teach children and their families how to be healthy for a lifetime." (<http://www.sph.uth.tmc.edu/catch/about.htm>). CATCH has four components: Physical Education, Health Education, Nutrition and Parental/Community Involvement. These components will be implemented across AISD campuses in 2007 and 2008. Leading the implementation is the district's Coordinator of School Health, Tracy Lunoff. Implementation includes the formation of Campus Wellness Committees which will be in charge of implementation at the campus level. The Campus Wellness Committee consists of an administrator, a classroom teacher, PE teacher, food services, and a parent or parent support specialist. During the 2007-2008 school years, campuses will be using CATCH materials to integrate nutrition and fitness education into the health curriculum, comply with state laws pertaining to the amount of physical education required, comply with state laws pertaining to school nutrition, and plan events to involve parents in school health program.

### *Keys to Success*

#### ❖ Using Available Resources

Since the legislative mandates were unfunded, the AISD focused on finding systems-level solutions that would not incur an extra

cost. For example, they modified school lunch menus to incorporate aspects of the CATCH program, including ideas for activities that combine fitness and learning such as “do twenty jumping jacks while saying your multiplication tables.” The menus also spotlight a different vegetable every month. Since the menus already get mailed to thousands of households in the district, a simple change to the menu template was a way to bring an educational tool to a significant population.

❖ **Gaining Acceptance for Changes**

*One thing at a time:* Tracy Lunoff, AISD’s School Health Coordinator, suggests that schools or districts pick one change to implement per year. At AISD, one year the SHAC targeted school menus for overhaul. Another year was devoted to overhauling vending machines, to eliminate foods that were high in sodium or contained trans fats. Another year the district eliminated fryers from their kitchens. Lunoff says this approach makes it easier to gain acceptance for desired changes.

*Involve students:* AISD has students participate in taste tests to determine which menu changes to go ahead with. These taste tests lead to modifications such as using “white whole wheat” flour rather than whole wheat in order to ensure that students will eat the healthier offerings in school cafeterias.

*Know your audience:* Recognizing that principals and superintendents have multiple issues competing for their attention, the SHAC drafted reader-friendly, one page bulleted documents to keep administrators informed about CATCH implementation activities. This made the information easily accessible for busy administrators.

*Legislation:* Texas state laws were a major impetus for action at AISD. Ms. Lunoff says that changes that might not be accepted by administrators otherwise are possible when they are required by law.

*Staffing:* Having a staff person dedicated to health and/or wellness also helps, especially if that person is dedicated to district wellness and is familiar with principles of prevention and systems level thinking.

*Partnerships:* Community partnerships are critical, especially when resources are scarce. Ms. Lunoff says there are a host of resources available that district staff may not be aware of. In the case of AISD, the Texas Department of Agriculture as well as local health departments have educational resources such as magnets and posters that schools can access.

Being able to secure grant funding has also been critical for the success of CATCH implementation at AISD. This funding allowed AISD to purchase the CATCH kits required for implementation of the program.

*Parental involvement:* Parents have played a critical role in the changes that have been made at AISD.

## **Case Study 2 – Highland Elementary School**

Cindy Hess, a physical education teacher at Highland Elementary School in the Ephrata Area School District in Lancaster County, PA, helped the school go from no physical education for kindergartners to daily physical education for all students in kindergarten through second grade. With an interest in the connection between physical education and learning ability, Ms. Hess introduced a program she called SMART to kindergarten classes at the school. SMART used a series of stations to teach kinesthetic skills such as balance, coordination, spatial awareness, directionality and visual literacy. These skills in turn enhance children's ability to learn and succeed academically. The structured nature of the SMART program allowed the school to double the number of students in each session, thus making it possible for every kindergartner to receive physical education. Over a period of three years, Ms. Hess expanded the program to include 1<sup>st</sup> and 2<sup>nd</sup> graders.

Ms. Hess also sought out opportunities to gain publicity for her program, involve school and district leadership, and seek out partnerships to further develop the program of physical education offered in the school. She met Jean Blaydes Madigan, a physical education teacher from Texas, who had independently created a program similar to the SMART program. The two partnered to create Action Based Learning, which further developed the idea of stations that emphasize kinesthetic skills, providing opportunities for physical education while enhancing skills that students need for academic success.

Highland Elementary School and the Ephrata Area School District are now working on expanding the integration of physical activity and healthy eating throughout the school and the district. The school has used FitnessGram, a tool that can be used to communicate results of fitness testing to students and parents, for fifteen years. The school has also received a grant to create the Fit Kids Club, which will target students in 3<sup>rd</sup> and 4<sup>th</sup> grade who are at high risk for overweight or obesity.

### *Keys to Success*

- ❖ Support from administrators. Ms. Hess found ways of showing her principal and superintendent the value of her program and their support was key in expanding the program.
- ❖ Get teachers involved. Once teachers saw for themselves that the SMART program resulted in improved behavior among their students, they began to spread the word about the value of the program.
- ❖ Publicity. Ms. Hess went out of her way to attend national workshops, partner with others and use the web and newspapers to spread awareness about the program outside of the school and district. The school hosts visitors who observe the program, and videos about the program are available online.
- ❖ Make healthy behaviors a way of life. Through daily physical education, providing plenty of options so all kids feel they can participate, incorporating health concepts throughout the curriculum, and making physical education fun, Highland

### **Case Study 3 – Thomas Jefferson Magnet School**

Elementary has been able to promote physical activity as a way of life.

When Helen Robinson, a physical education teacher, joined the staff at Thomas Jefferson Magnet School in Utica, NY, she was shocked at the amount of obesity she saw among the students. She measured BMI for students in grades K-6 and found that 21% of kids in kindergarten and first grade were at high risk for overweight or obesity. After the school completed the School Health Index, the team responsible decided that the focus for the first year would be nutrition and physical activity.

Ms. Robinson introduced a number of programs to get kids excited about healthy behaviors. First, she redesigned the physical education curriculum to change the focus from athletics to activities that would appeal to more students and could become part of a healthy lifestyle. She has focused on making sure there is “something for everyone.” For example, she introduced students to both snowshoeing and cross country skiing. In addition to a more accessible physical education curriculum, Ms. Robinson also worked to integrate physical activity and nutrition throughout the school. She teamed up with classroom teachers to coordinate their curriculum with hers; for example, a rainforest team would include classroom lessons and “turning the gym into a rainforest.” Language arts lessons might focus on vocabulary related to physical fitness. An obstacle course could be created in the gym with components representing different parts of the anatomy of the heart. A walking program has been implemented school wide, with lunch monitors taking students on walks, creating a walking route inside, and making sure sidewalks are plowed to encourage outdoor walking, and with punch cards for students to track how far they’ve walked. She won an award from the Dole 5-a-Day program for the ways she has encouraged students to eat 5 to 9 servings of fruits every day. The school has also involved parents. By partnering with a local health insurer and a local hospital, the school is able to create a nutrition program for parents to teach



them about reading labels, what to look for in the grocery store and even offering a cooking class.

### *Keys to Success*

- ❖ Creating a program that is integrated throughout the school. By involving classroom teachers, administrators, students and parents, the school has been able to create programs that are valued by multiple stakeholders.
- ❖ Taking advantage of outside programs and partnerships. The school has actively sought out grant opportunities and existing programs in order to sustain and continue to develop its focus on healthy behaviors.
- ❖ Strong leadership. Ms. Robinson's commitment and leadership has been critical in creating changes in the school.

### **Other National Case Studies**

Several agencies and organizations across the country have compiled case studies of schools and districts that have made changes related to nutrition and physical activity. Some of the lessons learned from these case studies are presented below.

A collaboration between the Los Angeles Unified School District Nutrition Network and the UCLA School of Public Health resulted in a set of criteria that would allow schools to be certified as "Nutrition Friendly." The criteria were created using input from multiple stakeholders, and use the Coordinated School Health Model as a foundation. A list of the 15 criteria appears in Appendix B. More information about the Nutrition Friendly effort can be found at:

[http://www.ph.ucla.edu/chs/nfsc/Projects%20and%20Facts/Case\\_Studies\\_Final2.pdf](http://www.ph.ucla.edu/chs/nfsc/Projects%20and%20Facts/Case_Studies_Final2.pdf)

The UCLA School of Public Health was funded by the CDC to conduct a pilot study of the NFSC certification process in ten elementary schools in the district. The lessons learned from these pilot studies included the following:

- ❖ Support from the administration in each school was critical to allowing the model to become part of the school culture

- ❖ One person sparks interest, but a team is needed to implement and sustain changes
- ❖ Changes can be made with limited funding
- ❖ Partnerships with local agencies helped schools access services without using a lot of resources
- ❖ While it is difficult for schools to focus on nutrition and physical activity due to competing priorities, a commitment to the issues can result in changes in schools
- ❖ Some areas are more difficult to affect. For example, in LAUSD, most school meals are prepared offsite, at a central kitchen, so it has been difficult for schools to have input into nutrition at school meals.

*Making it Happen!*

*Making it Happen!* is a partnership between the Food and Nutrition Service of the United States Department of Agriculture, the Division of Adolescent and School Health of the Centers for Disease Control and Prevention, the Department of Health and Human Services, and the United States Department of Education. More information can be found at

<http://apps.nccd.cdc.gov/MIH/MainPage.aspx>.

As a result of 32 case studies of schools and districts across the country, the following themes emerged:

- ❖ “One champion, such as a parent, foodservice manager, or school principal, is usually the driving force behind the change.
- ❖ Improving school nutrition involves multiple steps; teams with diverse skills and backgrounds are well-positioned to undertake such change.
- ❖ A useful starting point is to assess the current nutrition environment of the school to identify strengths and weaknesses.

- ❖ Attention to the change process is important in order to help sustain the change.
- ❖ Improvements are occurring, but more data are needed to document their impact.
- ❖ Change is occurring at all levels: school, school district, State, and national.”

## CONCLUSIONS AND RECOMMENDATIONS

School districts are complex organizations. As illustrated by the survey findings, policies or guidelines at the district level do not necessarily result in changes in practice at the school level. Perceptions of the importance of particular activities and the difficulty involved in implementing changes also vary between the district and school levels. The roles occupied by district staff and by teachers presumably affect these perceptions; for example staff in close contact with parents may be better able to judge the difficulty involved in educating families about nutrition and physical activity than staff that have less contact with parents. Below we highlight some of the issues that have emerged as most relevant to the implementation of activities aimed at childhood overweight and obesity in Monroe County schools. We conclude with some recommendations for issues for GRHF to consider in making future investment to address the issue of childhood overweight and obesity.

### *Involvement of multiple stakeholders*

District-level and school-level staff have varying perceptions of the importance of certain activities, and of the difficulty involved in implementing activities. Case studies suggest that the creation and implementation and integration of policies and guidelines require the involvement of multiple stakeholders. Considering the differences in perception that have been illustrated by the survey results, it seems especially important that both district level staff and school level staff be involved in prevention activities, in order to lend their unique perspectives to the process of changing behaviors and practices. Not only was there a certain degree of

agreement that educating families is important, parents were also cited as important partners, and open-ended survey responses revealed the attitude that activities in school can only be successful if students are getting nutritious foods and opportunities for physical activity at home.

Districts and schools with mechanisms in place for multiple stakeholders to participate in policy implementation may have more success in changing behaviors and practice.

### *Staff Commitment and Leadership*

Case studies suggest that the dedication and commitment of a single staff member can result in significant changes in behavior, attitudes and practice. Since the majority of survey respondents indicate that there is enthusiasm among staff for activities that address nutrition and physical activity, it is possible that this commitment and dedication exists in schools. However, there is less evidence that schools are adequately supporting staff and creating professional development possibilities for staff that do have an interest in affecting change in their schools. Those schools that can provide opportunities for professional development and for staff input into initiatives may be better prepared for successful change.

### *Awareness*

In the case studies, the issue champion often had to find creative ways to communicate with other stakeholders in order to increase awareness of the issues. Although many survey respondents felt that overweight and obesity in their district or schools are somewhat of a problem, fewer feel it is a significant problem. Raising awareness of the problem may be an important step in setting the stage for change. Districts and schools in which staff see the problem as significant may be better prepared to implement changes.

### *Integrating the message*

The case studies illustrate that successful change requires a consistent message and multiple approaches. While integrating nutrition education into the curriculum was seen as relatively unimportant by district and school staff, those districts and schools that are committed to creating an integrated message that

students will be exposed to in the classroom, at school functions, and during meals may be more successful in creating sustained changes.

### *Partnerships*

The case studies also highlight the importance of partnerships between districts, schools and other entities. This is consistent with the fact that so many survey respondents felt that schools are an appropriate venue in which to address overweight and obesity, in partnership with other entities. Schools and districts highlighted in the case studies took advantage of multiple partnership opportunities, including obtaining funding through grants, obtaining free materials from outside agencies, and accessing the expertise of health care organizations. Such partnerships can make changes possible even in districts and schools with limited resources.

## **Recommendations**

CGR recommends that GRHF focus on three areas that are critical to the success of an organizational change effort: awareness, implementation and evaluation. In addition, in order to promote buy-in from various stakeholders, we recommend focusing on activities that have a high level of perceived importance. Finally, we recommend that the Foundation target activities that are perceived as relatively easy to accomplish, in order to create opportunities for early successes, as well as activities perceived to be more difficult, in order to affect longer-term change.

### *Raising Awareness*

The survey results indicate that in general, stakeholders at the district and school levels do not see childhood overweight and obesity as a significant problem. This perception is a potential barrier to successfully implementing activities aimed at preventing overweight and obesity. As mentioned earlier, raising awareness of the problem was an important factor in the success of the programs highlighted in the case studies. In order to overcome this barrier in Monroe County, a possible focus for GRHF will be to create a marketing campaign to raise awareness of childhood overweight and obesity as a significant problem, as well as of the importance of schools as a venue for addressing the issue. There

may be opportunities to partner with local organizations and businesses to create and implement such a campaign, including grocery chains, local restaurants, community agencies, and health care organizations. A marketing campaign can target multiple stakeholders who may become potential partners or even champions for a change effort.

### *Implementation*

In determining the focus of GRHF's investment strategy, we recommend targeting those activities that the survey revealed as having the highest perceived impact on childhood overweight and obesity. A two-pronged approach would target both activities perceived as relatively easy to implement as well as those perceived as more difficult. This will allow GRHF and the districts and schools targeted to create early successes, which can create stakeholder buy-in and drive further action, while also working towards longer-term, sustainable changes. Through an RFP process, GRHF could identify districts or schools that have taken steps (e.g. created a policy) in these areas and that demonstrate creative and sustainable ways to move forward in the implementation process. A particular focus should be on activities that promote changes in behavior and practice, as these are the major areas of weakness that emerged in responses to the survey questions regarding school culture. This includes opportunities for professional development, finding ways of soliciting input from teachers, parents, and students, and using data to inform initiatives and track progress. Specific areas that emerged as having a high perceived impact, and varying degrees of perceived difficulty, are the nutritional value of school meals, educating students about nutrition, educating students' families about nutrition and increasing opportunities for physical activity.

### *Evaluation*

As highlighted in the CDC's *Making it Happen!* case studies, evaluation efforts are necessary in order to sustain change by allowing for examination of the change process, and contributing to body of evidence about the impact of interventions. Only one of the ten policy survey respondents reported that their district has developed an evaluation/measurement plan to assess the effects of

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their Local Wellness Policy. While the survey did not include other questions regarding evaluation, we may assume that initiatives aimed at overweight and obesity are not being consistently evaluated. Including evaluation plans in any projects initiated in Monroe County districts and schools will increase the sustainability of efforts aimed at reducing overweight and obesity by providing data on both process and outcome measures to inform further efforts.

## APPENDIX A – SURVEY RESPONDENT CHARACTERISTICS

### District Level Attitudes Survey

26 respondents completed the District Level Attitudes Survey, representing 17 school districts. The table below presents characteristics of district level respondents.

<b>Respondent Characteristics</b>			
<b>Gender</b>			
Male	7	29%	
Female	17	71%	
Total	24	100%	
<b>Age</b>			
25-34	2	8%	
45-54	6	25%	
55-64	11	46%	
65 or over	5	21%	
Total	24	100%	
<b>Tenure</b>			
1 - 5 years	12	52%	
6 - 10 years	6	26%	
10 - 20 years	5	22%	
Total	23	100%	
<b>Position/Department</b>			
Athletics	7	27%	
Food Service/Nutrition	7	27%	
Pupil Services	3	12%	
Nurse/Nurse Coordinator	2	8%	
School Board President	5	19%	
Community Wellness Coordinator	1	4%	
Supervisor of District Security, Safety and Environmental Health	1	4%	
Total	26	100%	

### School Level Survey Responses

Characteristics of school level survey respondents are presented in the table below.



<b>Respondent Characteristics</b>		
	Frequency	Percentage
<b>Gender</b>		
Male	43	14%
Female	259	86%
Total	302	100%
<b>Age</b>		
<25	12	4%
25-34	84	28%
35-44	95	32%
45-54	76	25%
55-64	34	11%
Total	301	100%
<b>Tenure</b>		
1-5 years	103	34%
6-10 years	112	37%
11-20 years	74	25%
More than 20 years	12	4%
Total	301	100%
<b>Position</b>		
Classroom Teacher	181	60%
Special Education Teacher	26	9%
Non-Academic Subject Area Teacher	14	5%
Nurse	12	4%
Physical Education	10	3%
Reading Teacher/Specialist	10	3%
Administrator/Principal	8	3%
Psychologist/Social Worker	7	2%
Physical/Occupational/Speech Therapist	5	2%
Enrichment Teacher/Specialist	4	1%
ESL	4	1%
Music Teacher	4	1%
Other	4	1%
Cook Manager/Food Service Manager	3	1%
Librarian	3	1%
Counselor	2	1%
Teacher Aide	2	1%
Curriculum Support Teacher	1	0.3%
Health Aide	1	0.3%
Total	301	100%

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## APPENDIX B – NUTRITION FRIENDLY SCHOOLS – CERTIFICATION CRITERIA

1. The school has written physical activity and nutrition policies that are followed.
2. The school administration supports efforts to promote healthy eating and physical activity among all school community stakeholders including staff, students, and families.
3. There is a collaboration throughout the school community (including parents, teachers, school food service, school health services, students, administrators, and school psychosocial services) regarding nutrition and physical education.
4. The school has a standardized nutrition education curriculum that is integrated into other school subjects including language arts, math, science, and social studies.
5. School food service provides healthy foods that adhere to USDA recommendations specifically for fat, saturated fat, sodium, and cholesterol for breakfast, lunch and snacks.
6. The school staff and students have input into school meal planning.
7. The school has a physical education curriculum/program that is adhered to by a minimum of 80% of eligible staff.
8. A minimum of 85% of classrooms participate in a minimum of 20 minutes of moderate to vigorous daily physical activity.
9. The school has one nurse for every 750 students.
10. School health services identifies and refers students with nutrition and physical activity issues within five days of initial contact
11. The school has a staff wellness program that is offered to all staff that promotes healthy eating and physical activity.

12. The school staff is committed to serve role models for healthy behavior.

13. The school includes family and community members in nutrition education and physical education

14. Family and community members actively promote healthy eating and physical activity

15. School psychosocial services supports healthy eating and physical activity.