

bridging the gap

Research Informing Policies & Practices
for Healthy Youth

Executive Summary

Local Wellness Policies:
Assessing School District Strategies
for Improving Children's Health

2006-2007
2007-2008

SCHOOL YEARS

nationwide
evaluation
results

July 2009



Robert Wood Johnson Foundation

Bridging the Gap is a program of the Robert Wood Johnson Foundation.

About Bridging the Gap

Bridging the Gap is a nationally recognized research program of the Robert Wood Johnson Foundation dedicated to improving the understanding of how policies and environmental factors affect diet, physical activity and obesity among youth, as well as youth tobacco use. The program identifies and tracks information at the state, community and school levels; measures change over time; and shares findings that will help advance effective solutions for reversing the childhood obesity epidemic and preventing young people from smoking. Bridging the Gap is a joint project of the University of Illinois at Chicago's Institute for Health Research and Policy and the University of Michigan's Institute for Social Research. For more information, visit www.bridgingthegapresearch.org.

bridging the gap

Research Informing Policies & Practices
for Healthy Youth

University of Illinois at Chicago
Institute for Health Research and Policy
1747 West Roosevelt Road, 5th floor (M/C 275)
Chicago, IL 60608
(866) 757-4507
www.bridgingthegapresearch.org

This report was written by the Bridging the Gap program at the University of Illinois at Chicago with support from the Robert Wood Johnson Foundation. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of the Foundation.

About the Authors

Jamie Chriqui, Ph.D., M.H.S., Linda Schneider, D.C., M.S., Kristen Ide and Oksana Pugach, M.S. are with the Bridging the Gap program located within the Health Policy Center in the Institute for Health Research and Policy at the University of Illinois at Chicago.

Frank Chaloupka, Ph.D., co-directs the Bridging the Gap program and is a distinguished professor of Economics and director of the Health Policy Center in the Institute for Health Research and Policy at the University of Illinois at Chicago.

This report, or part of, may be reproduced without prior permission provided the following citation is listed:

Suggested Citation:

Chriqui JF, Schneider L, Chaloupka FJ, Ide K and Pugach O. *Local Wellness Policies: Assessing School District Strategies for Improving Children's Health. School Years 2006-07 and 2007-08*. Chicago, IL: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

Copyright 2009 Bridging the Gap

For questions about the content of the report, contact:

Jamie F. Chriqui, Ph.D., M.H.S.
Health Policy Center
Institute for Health Research and Policy
University of Illinois at Chicago
Tel.: (312) 996-6410
E-mail: jchriqui@uic.edu

Support for this publication was provided by the Robert Wood Johnson Foundation.

The Robert Wood Johnson Foundation focuses on the pressing health and health care issues facing our country. As the nation's largest philanthropy devoted exclusively to improving the health and health care of all Americans, the Foundation works with a diverse group of organizations and individuals to identify solutions and achieve comprehensive, meaningful and timely change. For more information, visit www.rwjf.org.



Robert Wood Johnson Foundation

Executive Summary

Over the past four decades, the obesity rate has more than quadrupled for children ages 6 to 11 and more than tripled for adolescents ages 12 to 19.^{1,2} And while obesity has increased in all segments of the population, rates are significantly higher among specific ethnic and racial groups.³ Obese children are at increased risk for serious health problems,⁴ including heart disease, type 2 diabetes and asthma.

Schools play an important role in the lives of our children. Consequently, the relationship between schools and the childhood obesity epidemic must be explored. Research already has shown us that overweight and obese children tend to miss more school,⁵ which may affect academic performance.⁶ In contrast, strong evidence links healthy nutrition and physical activity behaviors with improved academic performance and classroom behavior among school-age children.⁷

Federal Requirement for School District Wellness Policies

Schools serve as a fundamental setting for providing children and adolescents with a healthy environment where they can consume nutritious meals, snacks and beverages; get regular physical activity; and learn about the importance of lifelong healthy behaviors.^{8,9} Recognizing this, Congress included language in the Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265, Section 204) that required school districts^a participating in the National School Lunch Program (NSLP; [42 U.S.C.1751 et seq.]) or other child nutrition programs (42 U.S.C. 1771 et seq.), such as the School

Breakfast Program, to adopt and implement a wellness policy by the first day of the 2006–07 school year.

According to the Act, the wellness policies were required to include:

- *goals for nutrition education;*
- *an assurance that school meal nutrition guidelines meet the minimum federal school meal standards;*
- *guidelines for foods and beverages sold or served outside of school meal programs;*
- *goals for physical activity and other school-based activities; and*
- *implementation plans.*

While no funding for these provisions was authorized, the wellness policy requirement has significant potential for improving school nutrition and physical activity environments—during the 2007–08 school year, more than 31 million students participated in the National School Lunch Program, and more than 10 million students participated in the School Breakfast Program.

Report Overview

This report presents the most comprehensive review of these wellness policies to date. It uses research to set a baseline for examining and ultimately improving these policies. Future reports by Bridging the Gap will continue to examine the refinement of the policies that result from the upcoming reauthorization and innovation at the state and district levels.

^a In the United States, public schools are governed by local districts at the school-board, town or district level. Local education agencies adopt policies that apply to all schools within their jurisdiction.

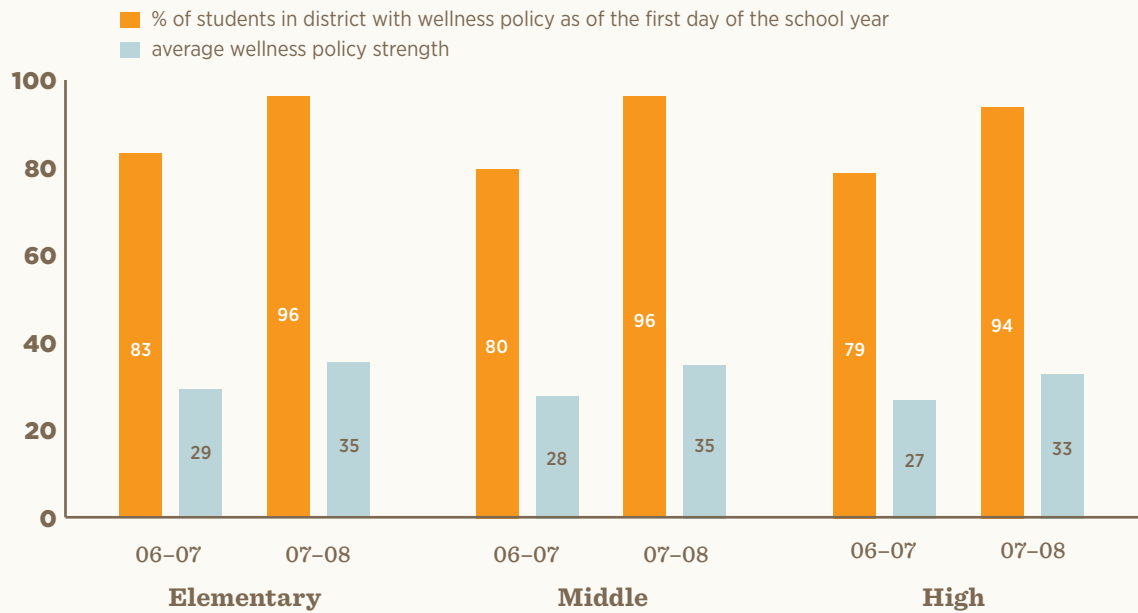
The current report examines policies that were in place at the beginning of the 2006–07 and 2007–08 school years, which were the first two years of the federal wellness policy requirement. Using a nationally representative sample of school districts, the report provides details about the characteristics of these districts and is organized according to the components and provisions of the wellness policies.

These findings are particularly important as Congress works to reauthorize the law governing school district wellness policies and as school districts continue to look for guidance about how to strengthen their policies.

Major Findings

By the beginning of the 2007–08 school year, most students nationwide were enrolled in a district with a wellness policy, which represented a noticeable increase from the beginning of the previous school year. Strikingly, the quality of the policies varied—many were underdeveloped and fragmented, lacking sufficient plans for implementation and monitoring. Although the strength of the policies did increase during the first two years of the requirement, they were still weak overall and did not necessarily require schools to take action.

FIGURE 1.1 Wellness Policy Reach vs. Wellness Policy Strength



Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year. Due to rounding, some bars may not sum to exactly 100. Exact numbers are available at www.bridgingthegapresearch.org. Source: Bridging the Gap, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

This figure compares the percentages of students nationwide enrolled in a school district with a policy in place at the beginning of school years 2006–07 and 2007–08 with the average overall wellness policy strength score. The overall wellness policy strength score is based on a scale of 0 to 100, and reflects the average policy strength for policy components related to nutrition education, school meals, competitive foods and beverages, physical activity and physical education, and implementation. We defined **STRONG POLICY PROVISIONS** as those that were definitively required and specified an implementation plan or strategy for the given policy component. Strong policy provisions included language such as *shall, must, will, require, comply and enforce*.

Nutrition-Related Findings

Nutrition Education

Key Findings

While the majority of students were in a district that included nutrition education goals in its wellness policy, there was great inconsistency in the specific provisions. For example, many students were enrolled in a district with a policy that only suggested a nutrition education curriculum, while others were enrolled in a district that did not define or indicate whether nutrition education was a component of the health education curriculum. The majority of students were enrolled in a district with a policy that did not address integrating nutrition education into core subjects.

Policy Opportunities

Ensure That Nutrition Education Is a Core Component of a Comprehensive Health Education Program

Given the variability in the nutrition education components of the wellness policies, attention might be given to ensuring that nutrition-specific elements are included in health education curricula requirements.

School Meals

Key Findings

Most districts established a wellness policy that required the nutritional guidelines for school meals to meet the minimum U.S. Department of Agriculture (USDA) school meal standards, which are based on the outdated 1995 Dietary Guidelines for Americans and do not reflect current nutrition science. However, in many cases, the wellness policies went beyond the federal school meal requirements. More than 50 percent of all students nationwide were enrolled in a district with a policy that clearly required the school meal standards to meet or exceed the more stringent 2005 Dietary Guidelines.

Policy Opportunities

Improve Nutritional Quality of School Meals

Given the wide variation in school meal provisions included in the wellness policies, Congress and school

districts have the opportunity to strengthen school meal requirements so they meet or exceed current nutrition science, such as information reflected by the 2005 Dietary Guidelines.

Competitive Foods and Beverages

Key Findings

The majority of students were enrolled in a district that addressed the sale of competitive foods and beverages in its wellness policy. However, policy provisions related to the accessibility and content of competitive foods and beverages were relatively weak, especially at the middle- and high-school levels. About 25 percent of students were enrolled in a district with a policy that discouraged or prohibited the marketing of unhealthy foods and beverages in schools, although this provision was not required by law to be included in the wellness policy.

Policy Opportunities

Update Standards for Foods and Beverages Sold Outside of School Meal Programs

Standards for foods and beverages sold outside of school meal programs—in vending machines, à la carte lines and school stores—are out of date. Some districts have exceeded these standards by prohibiting the sale of all competitive foods during the school day, while other districts have restricted the types and content of foods and beverages sold through competitive venues. Congress, states and school districts could consider these strategies as they review and refine competitive food and beverage policies.

Expand Competitive Food and Beverage Standards Across All Grade Levels

Because there is wide variability in competitive food and beverage standards across grade levels, districts have the opportunity to implement consistent provisions.

Restrict Food Marketing and Advertising

There are no national restrictions on the marketing of competitive foods and beverages on school campuses. Wellness policies may provide a vehicle for addressing this issue.

Physical Activity and Physical Education

Key Findings

The majority of students were enrolled in a district with a policy that suggested or required providing physical activity outside of physical education for every grade level, but the strength and quality of the policy provisions varied greatly. For example, the majority of schools districts did not require physical activity breaks throughout the school day, and only 18 percent of elementary-school students were enrolled in a district with a strong policy that required daily recess.

Although federal law did not require districts to include provisions related to physical education in their wellness policies, the vast majority of students were enrolled in a district that included such provisions in its policy, but the quality and strength of the provisions varied greatly. For instance, policies did not meet evidence-based recommendations for time devoted to moderate-to-vigorous physical activity.

A number of districts had policies that required a specific amount of time for physical activity, but not for physical education. In this way, some district policies actually encouraged schools to fall below recommendations of the National Association for Sport & Physical Education (NASPE) for time spent in physical education (i.e., 150 minutes of physical education per week at the elementary level and 225 minutes per week at the middle- and high-school levels).¹⁰

Policy Opportunities

Continue to Strengthen Physical Activity Provisions

Districts could identify additional ways to include strategies in their wellness policies that specifically address physical activity during the school day.

Expand Policies to Address Physical Education

Congress and school districts can encourage and support efforts to ensure that physical education remains a priority, and to establish specific goals that are more closely aligned with evidence-based guidelines, such as those recommended by NASPE.

Implementation and Evaluation of Wellness Policies

Key Findings

Only 5 percent to 6 percent of students were enrolled in a district that identified a potential source of funding to support implementation of its wellness policy. Additionally, the vast majority of students were enrolled in a district that did not require evaluation of the implementation or effectiveness of its wellness policy or any provisions for reviewing and revising the wellness policy.

Policy Opportunities

Provide Adequate Funding to Support Wellness Policy Implementation

Funding for implementation of the policies, which has been cited as a barrier by school districts, will continue to be a key issue during the reauthorization of federal legislation and subsequent implementation by school districts.

Ensure That Implementation and Evaluation Are a High Priority

Despite the fact that the majority of districts have wellness policies, there is great variation across districts as to implementation and evaluation. Decision-makers at all levels could evaluate how the policies are being implemented and assess their effectiveness.

Next Steps

This report is the first in an ongoing series of reports prepared by the Bridging the Gap program to examine school district wellness policies nationwide. Future reports will highlight continued policy progress and district-level innovations following the reauthorization of the wellness policy requirement. Companion reports will explore the implementation of the wellness policies and related practices in elementary and secondary (middle and high) schools nationwide. These reports are part of a larger effort by the Robert Wood Johnson Foundation to identify and evaluate policies and environmental factors that affect physical activity levels, dietary patterns and body mass indices among U.S. children and adolescents.

Summary of Wellness Policy Data

This table summarizes data that are included in the full report. All data are weighted to reflect the percentage of elementary-, middle- and high-school students nationwide who were enrolled in a district with the given policy provision. These data reflect policies in place by the first day of the 2007–08 school year. More details and data from the 2006–07 school year are presented in the full report and on the Bridging the Gap Web site.

We defined **STRONG POLICY PROVISIONS** as those that required action and specified an implementation plan or strategy. They included language such as *shall, must, will, require, comply* and *enforce*. Weak policy provisions offered suggestions or recommendations, and some required action, but only for certain grade levels or times of day. They included language such as *should, might, encourage, some, make an effort to, partial* and *try*.

TABLE 1.1 Summary of Wellness Policy Data by Grade Level, School Year 2007–08

Policies Governing Nutrition Education	Responses	ES [†]	MS [†]	HS [†]
Nutrition education goals (Required wellness policy element)	No goal/policy	6%	7%	9%
	Weak policy	2%	3%	2%
	Strong policy	92%	90%	89%
Nutrition education curriculum	No goal/policy	28%	32%	33%
	Weak policy	34%	33%	33%
	Strong policy	38%	36%	34%
Nutrition education integrated into other subjects	No goal/policy	49%	52%	53%
	Weak policy	22%	21%	20%
	Strong policy	28%	27%	27%
Nutrition education required to teach behavior-focused skills	No goal/policy	23%	24%	24%
	Weak policy	30%	31%	31%
	Strong policy	47%	45%	45%

Policies Governing School Meals	Responses	ES [†]	MS [†]	HS [†]
School meal nutritional guidelines meet the federal school meal requirements (Required wellness policy element)	No goal/policy	11%	12%	14%
	Weak policy	2%	2%	2%
	Strong policy	87%	86%	84%
Nutritional guidelines for school meals that met or exceeded the 2005 Dietary Guidelines	No goal/policy	47%	49%	47%
	Weak policy	35%	33%	33%
	Strong policy	18%	19%	20%
Adequate time to eat meals (at least 20 minutes for lunch; at least 10 minutes for breakfast)	No goal/policy	37%	38%	39%
	Weak policy	51%	52%	52%
	Strong policy	11%	9%	9%
Nutritional information for school meals	No goal/policy	72%	72%	72%
	Weak policy	9%	9%	8%
	Strong policy	19%	19%	20%
School Breakfast Program	No goal/policy	28%	29%	31%
	Weak policy	19%	18%	16%
	Strong policy	53%	53%	52%

[†] Grade levels were computed as Elementary School (ES, Grades 1–5), Middle School (MS, Grades 6–8), and High School (HS, Grades 9–12).

Due to rounding, some percentages may not sum to exactly 100. Exact numbers are available at www.bridgingthegapresearch.org.
Source: Bridging the Gap, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

TABLE 1.1, CONTINUED

Policies Related to Competitive Foods and Beverages	Responses	ES [†]	MS [†]	HS [†]
Nutrition guidelines for competitive foods and beverages (Required wellness policy element)	No goal/policy	7%	8%	11%
	Weak policy	28%	30%	30%
	Strong policy	65%	62%	59%
ACCESS RESTRICTIONS				
Vending machine restrictions during the school day	No goal/policy	17%	20%	22%
	Weak policy	33%	51%	55%
	Strong policy	50%	29%	23%
À la carte restrictions during meal times	No goal/policy	19%	21%	24%
	Weak policy	45%	51%	54%
	Strong policy	36%	28%	22%
School store restrictions during the school day	No goal/policy	26%	28%	30%
	Weak policy	32%	46%	49%
	Strong policy	42%	26%	21%
Policies governing classroom parties at the elementary-school level*	No goal/policy	35%		
	Weak policy	59%		
	Strong policy	6%		
Policies governing food as a reward at the elementary-school level*	No goal/policy	64%		
	Weak policy	28%		
	Strong policy	8%		
CONTENT RESTRICTIONS (FOOD STANDARDS)				
Sugar content of competitive foods	No goal/policy	45%	49%	54%
	Weak policy	29%	28%	28%
	Strong policy	26%	23%	18%
Fat content of competitive foods	No goal/policy	29%	32%	34%
	Weak policy	30%	30%	32%
	Strong policy	42%	38%	34%
Calorie content per serving of competitive foods	No goal/policy	73%	77%	79%
	Weak policy	9%	9%	9%
	Strong policy	18%	14%	12%
Nutritional information provided for competitive foods	No goal/policy	84%	84%	82%
	Weak policy	5%	4%	5%
	Strong policy	12%	12%	13%
CONTENT RESTRICTIONS (BEVERAGE STANDARDS)				
Limits on the sale of regular soda	No goal/policy	33%	35%	42%
	Weak policy	14%	16%	30%
	Strong policy	54%	50%	28%
Limits on the sale of all other sugar-sweetened beverages	No goal/policy	49%	70%	76%
	Weak policy	30%	17%	22%
	Strong policy	20%	13%	2%
Calorie content of competitive beverages	No goal/policy	89%	91%	94%
	Weak policy	7%	9%	5%
	Strong policy	4%	1%	1%
Fat content of milk	No goal/policy	57%	60%	62%
	Weak policy	30%	28%	26%
	Strong policy	13%	12%	12%

[†] Grade levels were computed as Elementary School (ES, Grades 1–5), Middle School (MS, Grades 6–8), and High School (HS, Grades 9–12).

* Middle- and high-school level data are available at www.bridgingthegapresearch.org.

Due to rounding, some percentages may not sum to exactly 100. Exact numbers are available at www.bridgingthegapresearch.org.
Source: Bridging the Gap, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

TABLE 1.1, CONTINUED

Policies Related to Competitive Foods and Beverages (CONTINUED)	Responses	ES [†]	MS [†]	HS [†]
CONTENT RESTRICTIONS (BEVERAGE STANDARDS) (CONTINUED)				
Caffeine content of beverages	No goal/policy	48%	70%	74%
	Weak policy	13%	11%	12%
	Strong policy	38%	18%	13%
Availability of free drinking water throughout the school day	No goal/policy	87%	88%	89%
	Weak policy	4%	4%	4%
	Strong policy	8%	8%	8%
ADVERTISING AND MARKETING OF FOODS AND BEVERAGES IN SCHOOLS				
Promotion of healthy foods and beverages	No goal/policy	76%	77%	77%
	Weak policy	15%	14%	14%
	Strong policy	9%	9%	9%
Restrictions on marketing of unhealthy foods and beverages	No goal/policy	75%	75%	73%
	Weak policy	9%	8%	10%
	Strong policy	16%	17%	17%

Policies Governing Physical Activity and Physical Education	Responses	ES [†]	MS [†]	HS [†]
PHYSICAL ACTIVITY POLICIES				
Physical activity goals (Required wellness policy element)	No goal/policy	9%	10%	12%
	Weak policy	2%	2%	2%
	Strong policy	89%	88%	86%
Physical activity outside of physical education for every grade level	No goal/policy	35%	40%	45%
	Weak policy	28%	26%	24%
	Strong policy	37%	34%	31%
Physical activity throughout the school day	No goal/policy	44%	45%	46%
	Weak policy	45%	46%	45%
	Strong policy	10%	9%	8%
Using or withholding physical activity as punishment	No goal/policy	64%	67%	68%
	Weak policy	20%	19%	18%
	Strong policy	16%	14%	14%
Daily recess requirements for elementary-school students	No goal/policy	60%	N/A	N/A
	Weak policy	22%		
	Strong policy	18%		
PHYSICAL EDUCATION POLICIES				
Physical education provisions	Not mentioned/ no policy	11%	11%	13%
	Definitively addressed	89%	89%	87%
Physical education time requirements: · at least 150 minutes/week (elementary school) · at least 225 minutes/week (middle, high school)	No goal/policy	61%	66%	73%
	Weak policy	35%	31%	23%
	Strong policy	4%	3%	4%
Physical education required to teach about a physically active lifestyle	No goal/policy	31%	31%	31%
	Weak policy	12%	9%	7%
	Strong policy	57%	60%	62%

[†] Grade levels were computed as Elementary School (ES, Grades 1–5), Middle School (MS, Grades 6–8), and High School (HS, Grades 9–12).

Due to rounding, some percentages may not sum to exactly 100. Exact numbers are available at www.bridgingthegapresearch.org.

Source: Bridging the Gap, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

TABLE 1.1, CONTINUED

Policies Governing Physical Activity and Physical Educations (CONTINUED)	Responses	ES [†]	MS [†]	HS [†]
PHYSICAL EDUCATION POLICIES (CONTINUED)				
Physical education time devoted to moderate-to-vigorous physical activity	No goal/policy	64%	65%	65%
	Weak policy	28%	28%	29%
	Strong policy	7%	7%	6%
Required physical education to be taught by a state-authorized physical educator	No goal/policy	59%	59%	58%
	Weak policy	17%	18%	18%
	Strong policy	24%	23%	24%

Requirements for Wellness Policy Implementation and Evaluation	Responses	ES [†]	MS [†]	HS [†]
Plans for implementation (Required wellness policy element)	No goal/policy	15%	15%	18%
	Weak policy	7%	7%	7%
	Strong policy	78%	78%	75%
Health advisory committee	No goal/policy	37%	37%	38%
	Weak policy	14%	13%	12%
	Strong policy	49%	50%	50%
Plans for evaluation	No goal/policy	45%	44%	46%
	Weak policy	44%	46%	44%
	Strong policy	10%	10%	10%
Body mass index screening	No goal/policy	73%	73%	73%
	Weak policy	26%	26%	26%
	Strong policy: BMI required without reporting	1%	0%	0%
	Strong policy: BMI required with reporting	0%	1%	0%
Reporting on policy compliance and/or implementation	No goal/policy	43%	43%	44%
	Weak policy	26%	28%	28%
	Strong policy	31%	29%	28%
Plan for policy revision	No goal/policy	62%	63%	65%
	Weak policy	8%	8%	7%
	Strong policy	30%	29%	28%
Funding for policy implementation	No goal/policy	94%	94%	95%
	Weak policy	4%	5%	4%
	Strong policy	1%	1%	1%

[†] Grade levels were computed as Elementary School (ES, Grades 1–5), Middle School (MS, Grades 6–8), and High School (HS, Grades 9–12).

Due to rounding, some percentages may not sum to exactly 100. Exact numbers are available at www.bridgingthegapresearch.org.
Source: Bridging the Gap, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

Overview of Study Methods

This study examined written policies from districts in 47 of the 48 contiguous states,^b and included a nationally representative sample of 579 and 641 districts with policies in place by the first day of the 2006–07 and 2007–08 school years, respectively. All of the written policies were collected between April 2007 and June 2008, with a 94 percent response rate achieved for both study years.

For purposes of this study, **WELLNESS POLICY** was defined to include: 1) the actual district wellness policy; 2) the associated administrative policies, including implementation regulations, rules, procedures or administrative guidelines; and 3) any district, state or model policies that were referenced within the wellness policy or administrative documents.

All policies were analyzed by two trained analysts using an adaptation of a wellness policy coding scheme developed by Schwartz et al.¹¹ For each policy provision described, data are presented on the percentage of students in a district with: 1) a strong policy; 2) a weak policy; or 3) no policy. We defined **STRONG POLICY PROVISIONS** as those that were definitely required and specified an implementation plan or strategy. Strong policy provisions included language such as *shall, must, will, require, comply* and *enforce*. We defined **WEAK POLICY PROVISIONS** as those that included vague terms, suggestions or recommendations, as well as those that required action, but noted exceptions for certain grade levels or certain times of day. Weak policy provisions included language such as *should, might, encourage, some, make an effort to, partial* and *try*.

Changes in policy strength between the first and second years of the policy requirement can be explained by the following:

- Not all district policies were in place by the first day of the 2006–07 school year—these policies were counted for only the 2007–08 school year.
- Some district policies were revised between the school years.
- Many policies included delayed effective dates, particularly for the competitive food and beverage restrictions, which did not take full effect until the 2007–08 school year.

Data are presented on the weighted percentages of students nationwide who were enrolled in districts with each policy provision discussed. Data are presented on the percentage of students nationwide to provide readers with a sense of the relative reach of the policies. Findings presented in this report are based on analyses of wellness policy data representing approximately 41.7 million students for the 2006–07 school year, and approximately 45.3 million students for the 2007–08 school year.

References

1. Ogden C, Flegal K, Carroll M, et al. "Prevalence and Trends in Overweight among U.S. Children and Adolescents, 1999-2000." *JAMA: The Journal of the American Medical Association*, 288(14): 1728-1732, October 2002.
2. Ogden C, Carroll M and Flegal K. "High Body Mass Index for Age among U.S. Children and Adolescents, 2003-2006." *JAMA: The Journal of the American Medical Association*, 299(20): 2401-2405, May 2008.
3. Ibid.
4. *Overweight and Obesity, Health Consequences*. Centers for Disease Control and Prevention, 2009. Available at www.cdc.gov/obesity/causes/health.html (accessed June 2009)
5. Geier A, Foster G, Womble L, et al. "The Relationship Between Relative Weight and School Attendance Among Elementary Schoolchildren." *Obesity*, 15(8): 2157-2161, August 2007.
6. Story M, Kaphingst K and French S. "The Role of Schools in Obesity Prevention." *The Future of Children*, 16(1): 109-142, 2006.
7. Ibid.
8. Institute of Medicine. *Progress in Preventing Childhood Obesity*. Washington, DC: National Academies Press, 2007.
9. Institute of Medicine. *Preventing Childhood Obesity: Health in the Balance*. Washington, DC: National Academies Press, 2005.
10. *Moving into the Future: National Standards for Physical Education, 2nd Edition*. Reston, VA: National Association for Sport & Physical Education, 2004.
11. Schwartz M, Lund A, Grow H, et al. "A Comprehensive Coding System to Measure the Quality of School Wellness Policies." *Journal of the American Dietetic Association*, 109(7): 1256-1262, July 2009.

^bNo school districts in the state of Wyoming were randomly selected in the sample.

bridging the gap

Research Informing Policies & Practices
for Healthy Youth

— www.bridgingthegapresearch.org