

# bridging the gap

Research Informing Policies & Practices  
for Healthy Youth

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

2006-2007  
2007-2008

SCHOOL YEARS

**national  
survey  
results**

July 2009



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Bridging the Gap is a Robert Wood Johnson Foundation-funded nationally recognized research program 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](http://www.bridgingthegapresearch.org).

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# Executive Summary

EXECUTIVE  
SUMMARY



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# Executive Summary

Over the past four decades, the obesity rate more than quadrupled for children ages 6 to 11 and more than tripled for adolescents ages 12 to 19.<sup>1,2</sup> And while obesity has increased in all segments of the population, rates are significantly higher among specific ethnic and racial groups.<sup>3</sup> Obese children are at increased risk for serious health problems,<sup>4</sup> 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,<sup>5</sup> which may affect academic performance.<sup>6</sup> In contrast, strong evidence links healthy nutrition and physical activity behaviors with improved academic performance and classroom behavior among school-age children.<sup>7</sup>

## 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.<sup>8,9</sup> 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<sup>a</sup> 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 the 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 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.

<sup>a</sup>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.

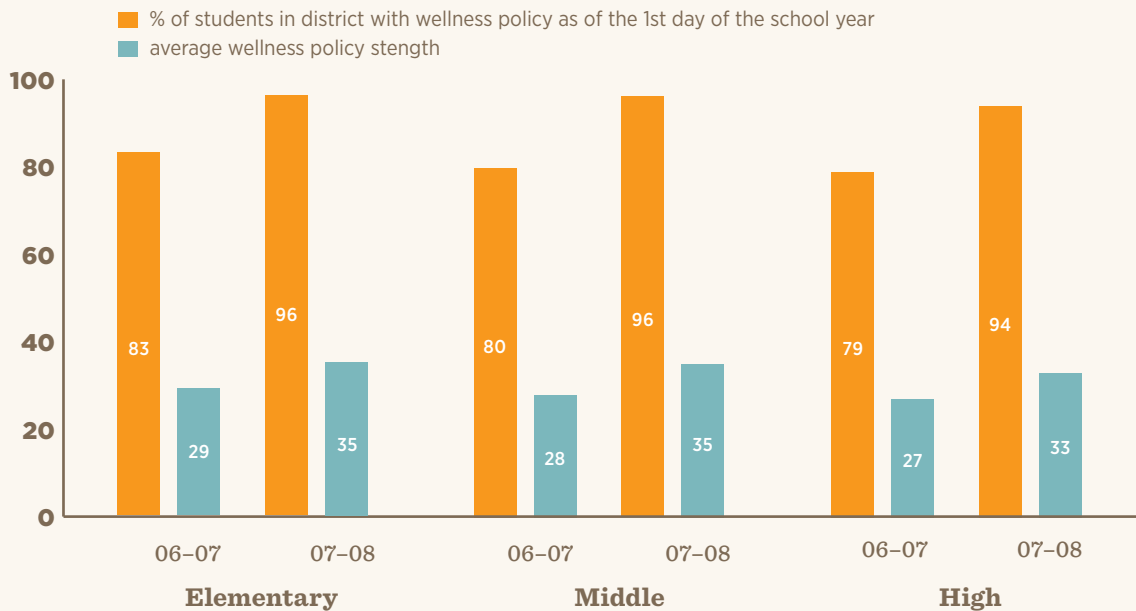
The current report examines policies that were in place at the beginning of the 2006–07 and 2007–08 school years, which were the first two years of the federal wellness policy requirement. Using a nationally representative sample of school districts, the report provides details about the characteristics 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 in 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.  
 Source: Bridging the Gap Program, 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 Finding

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 Opportunity

##### 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 Finding

Most districts established a wellness policy that required the nutritional guidelines for school meals to meet the minimum 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 Opportunity

##### Improve Nutrition 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 level. 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 the school meal programs—in vending machines, à la carte lines and in 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.

##### Include Restrictions for 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 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 policy, the vast majority of students were enrolled in a district that included such provisions in their 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 a policy 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 the National Association for Sport & Physical Education's (NASPE) recommendations 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).<sup>10</sup>

### 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 the 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

#### 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.

#### 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.

## 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 primary and secondary 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 index among U.S. children and adolescents.

## Overview of Study Methods

This study examined written policies from districts in 47 of the 48 contiguous states, 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.<sup>11</sup> 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 only counted for the 2007–08 school year;
- some district policies were revised between the school years; or
- 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 during the 2007–08 school year.

<sup>11</sup>No school districts in the state of Wyoming were randomly selected in sample.

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# Introduction



# Introduction

Over the past few decades, childhood obesity rates in the United States have risen dramatically.<sup>1</sup> The obesity rate for children ages 6 to 11 more than quadrupled (from 4% to 17%), and more than tripled for adolescents ages 12 to 19 (from nearly 5% to nearly 18%) during the past four decades.<sup>2,3</sup> And while the prevalence of obesity has increased in all segments of the population, rates of obesity are significantly higher among specific ethnic and racial groups. For example, data from the 2003–06 National Health and Nutrition Examination Survey (NHANES) indicated that non-Hispanic black girls and Mexican-American boys and girls were significantly more likely to be obese or overweight than were non-Hispanic white children and adolescents.<sup>4</sup>

Studies find that obese children are more likely to become obese adults who suffer from poor health. An obese 4-year-old has a 20 percent chance of becoming

an obese adult, and an obese older teenager has up to an 80 percent chance of becoming an obese adult.<sup>5,6</sup> The health risks associated with obesity in adulthood include heart disease, type 2 diabetes, hypertension and some forms of cancer.<sup>7</sup> And the annual cost of obesity in the United States is estimated at \$117 billion in direct medical costs and indirect costs, such as lost productivity.<sup>8</sup>

There also are academic consequences linked to obesity. Overweight and obese children tend to miss more school,<sup>9</sup> which may serve as a marker for poorer academic performance.<sup>10</sup> In contrast, strong evidence links healthy nutrition and physical activity behaviors with improved academic performance and classroom behavior among school-age children.<sup>11</sup> Experts and advocates recognize that schools serve as a fundamental setting for providing children and adolescents with a

TABLE 1 National School Lunch and Breakfast Program Participation, School Year 2007–08

<b>National School Lunch Program</b>	
Average daily student participation	>31 million
Number of schools participating	101,000
<b>National School Breakfast Program</b>	
Average daily student participation	>10 million
Number of schools participating	>85,000

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
Source: Unpublished data, U.S. Department of Agriculture, Food and Nutrition Service, 2009

healthy environment where they can consume nutritious meals, snacks and beverages; get regular physical activity; and learn about the importance of lifelong healthy behaviors.<sup>12,13</sup>

Legislation passed by Congress indicates that many policy-makers agree. Congress included language in the Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265, Section 204), which required school districts<sup>a</sup> 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. 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.

According to the law, the minimum requirements for each school district’s wellness policy were to:

1. *include goals for nutrition education, physical activity and other school-based activities that are designed to promote student wellness;*
2. *include nutrition guidelines—to promote student health and reduce childhood obesity—for all foods available on campus throughout the school day. The local school district was responsible for selecting the guidelines;*
3. *assure that guidelines for reimbursable school meals meet the minimum federal school meal standards established by the U.S. Department of Agriculture (42 U.S.C.1751 et seq. and 42 U.S.C. 1771 et seq.);*
4. *establish a plan for measuring implementation of the wellness policy, including designating at least one person within the school district or at each school, who is charged with operational responsibility for*

*ensuring that the school meets the wellness policy requirements; and*

5. *involve parents, students and representatives of the school food authority, the school board, school administrators and the public in the development of the wellness policy.*

The wellness policy language in the law provided school districts with wide latitude for determining how extensive they wanted their policy response to be. Not surprisingly, the wellness policy approaches varied tremendously across school districts nationwide.

## Report Overview

This report provides data on the most comprehensive review of wellness policies to date. Data are presented by grade level to show the percentages of students nationwide enrolled in a district with a wellness policy by the first day of the 2006–07 and the 2007–08 school years. This time period represents the first two years of the wellness policy requirement. Data are presented on district policy provisions that address each of the first four requirements noted above. This report also includes data on a number of other related elements that some districts included in their policy to supplement the federal requirement.<sup>b</sup>

The report is organized according to the required wellness policy elements. Chapter 2 provides an overview, including a brief study methodology and descriptive information about the characteristics of the districts that were included in the study for the two-year period. The remaining chapters are organized according to the required components of the wellness policy. The full study methodology is presented in the Appendix.

Notably, we chose to include data on physical education provisions included in the wellness policies—even though they were not a required component of the original wellness policy law. We did so because 1) the

<sup>a</sup>In the United States, public schools are governed by local school districts at the school board, town or district level. Local school districts adopt policies that apply to all schools within their jurisdiction.

<sup>b</sup>Data are not reported on the fifth item (stakeholder involvement), as many districts did not fully document in the policies who was involved in the policy-development process.



majority of school districts nationwide included such information in their policies; and 2) the forthcoming reauthorization of the wellness policy language is likely to include some mention of physical education.

In the chapters that follow, data are presented on the weighted percentages of students nationwide who were enrolled in a district with each policy provision discussed. We chose to present data weighted to the percentage of students nationwide to provide readers with a sense of the relative reach of the policies. Additionally, brief sections are provided within several chapters to highlight selected policy differences by socioeconomic status and race and ethnicity.

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.

The pending reauthorization of the Child Nutrition and WIC Reauthorization Act presents an important opportunity for school districts nationwide to continue to address the childhood obesity epidemic. Each chapter of this report highlights strong and weak wellness policy provisions for components of the Act, as well as some issues that districts were not required to address in their wellness policy. Data from this analysis could help school districts identify opportunities to revise and strengthen existing policies. Additionally, these findings may inform Congress and other policy-makers about the quality of the current policies; areas where districts have exceeded the initial requirements specified by the Act; and opportunities for continued policy enhancement, such as those provisions related to implementation and evaluation.

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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, partial, make an effort to, and try.



# Study Overview





## Study Overview

This chapter summarizes the study methodology and provides descriptive information about districts that were included in this study, as well as students who were enrolled in those districts during the first two years of the wellness policy requirement.

### Brief Study Methodology

This is the first of an ongoing series of reports prepared by the Bridging the Gap program to examine the prevalence and strength of wellness policies for school districts nationwide. Companion reports that will explore the implementation of the wellness policies and provide details about existing policies and practices of primary and secondary schools are forthcoming. These reports

are part of a larger effort by the Robert Wood Johnson Foundation to examine policy and environmental factors that may impact physical activity levels, dietary patterns and body mass index among U.S. children and adolescents.

This initial study represents the most comprehensive analysis to date of district wellness policy provisions for students across the nation for the first two years of the wellness policy requirement. Future studies will continue to monitor wellness policy activity, progress and impact to help inform future policy action.

This study examined policies from districts in 47 states,<sup>c</sup> and included a nationally representative sample of 579 and 641 districts with policies in place by the

For purposes of this study, **WELLNESS “POLICY”** was defined to include: **1)** the actual district wellness policy; **2)** the associated administrative policies including the implementation regulations, rules, procedures or administrative guidelines; and **3)** any district policies that were embedded into the wellness policy or administrative documents by reference.<sup>d</sup> Additionally, in many instances, districts indicated that they followed existing state laws, state regulations and rules, and/or state curriculum frameworks, benchmarks or standards (e.g., health education curriculum framework, physical education benchmarks). In such cases, districts were given credit for the state laws, state regulations and rules, and/or state frameworks, benchmarks or standards as part of the evaluation of the given district’s policy. Likewise, a number of districts followed model wellness policies created by their State Association of School Boards or other organizations such as the National Alliance for Nutrition and Activity (NANA). Some districts also followed voluntary national standards for physical education that were created by the National Association for Sport & Physical Education (NASPE). In all such instances, districts were given full credit in the analysis of their policy for the associated model policy embedded into their policy.

<sup>c</sup>Districts from Alaska, Hawaii and Wyoming were not included in this analysis.

<sup>d</sup>For example, the wellness policy or administrative procedure for a given district may indicate that the district follows the district’s food services policy regarding the sale of competitive foods without repeating the language of the food services’ policy in the wellness policy or administrative procedure document. In such cases, the wellness policy, administrative procedure, and the cross-referenced food services’ policy were all coded as reflective of the given district’s wellness “policy.”

first day of the 2006–07 and 2007–08 school years, respectively. All of the policies were collected between April 2007 and June 2008, with a 94 percent response rate achieved for both study years.

Selected wellness policy data compiled for this study are presented in the chapters that follow. The items chosen for inclusion in this report were intended to highlight the range of policy content across the required wellness policy elements, as well as a few supplemental areas. We also reviewed and analyzed the language of each district wellness policy to illustrate the variability in policy strength among the nationally representative sample. Aggregate data for all of the topics analyzed for this study, including the report items, are provided on our Web site at [www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org). All data were coded using an adaptation of a valid and reliable ordinal coding scheme developed by Schwartz et al.<sup>14</sup> Each policy provision was double-coded by two independent reviewers as follows: 0 (no policy/no provision), 1 (weak policy provision) or 2 (strong policy provision). The detailed coding scheme that explains the coding for each study item and coding level also is available at [www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org).

Throughout this report and online at [www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org), data are presented by grade level using the following assumptions: elementary (grades 1 to 5), middle school (grades 6 to 8) and high school (grades 9 to 12). Further, in order to illustrate the relative “exposure” of students nationwide to varied district wellness policy provisions, district-level data were adjusted to reflect the percentage of students nationwide enrolled in a district with a specified wellness policy provision. For example, readers will be able to identify the percentage of students in each grade level nationwide who were enrolled in a district that banned the sale of regular soda or required schools to provide all students with physical activity opportunities throughout the school day. Ultimately, 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 during the 2007–08 school year.

A complete discussion of the study methodology is provided in the report Appendix.

## Characteristics of the Districts

Table 1 summarizes the characteristics of the districts and students included in this study. Data show the percentages of students who were enrolled in a district with a wellness policy, as well as demographic, geographic, size and resource characteristics of the districts. A brief summary of each category follows.

Ultimately, these findings are based on analyses of wellness policy data representing approximately 41.7 million students during the 2006–07 school year, and approximately 45.3 million students during the 2007–08 school year.

TABLE 2.1 Characteristics of the Study Population\* by Grade Level and School Year†

Characteristic	Elementary		Middle		High	
	06-07	07-08	06-07	07-08	06-07	07-08
Number of students in millions	16.7	18.1	10.9	11.5	14.1	15.7
% students in district with wellness policy	97%	98%	97%	97%	95%	95%
<b>Race/Ethnicity</b>						
% students in majority White (>66%) districts	50%	41%	49%	41%	51%	42%
% students in majority African American (>50%) districts	7%	8%	8%	10%	7%	12%
% students in majority Latino (>50%) districts	16%	18%	17%	17%	14%	15%
% students in Diverse districts	27%	33%	25%	32%	27%	32%
<b>Socioeconomic Status</b>						
% students in low SES districts	36%	38%	38%	39%	34%	38%
% students in medium SES districts	35%	34%	34%	33%	36%	34%
% students in high SES districts	29%	28%	28%	28%	30%	28%
<b>Region</b>						
% students in districts located in the West	23%	25%	22%	23%	25%	25%
% students in districts located in the Midwest	21%	19%	21%	19%	23%	20%
% students in districts located in the South	38%	39%	37%	38%	34%	34%
% students in districts located in the Northeast	18%	17%	20%	20%	18%	21%
<b>Locale</b>						
% students in districts located in cities	31%	36%	32%	37%	28%	36%
% students in districts located in suburbs	37%	38%	35%	36%	40%	39%
% students in districts located in rural areas	19%	16%	20%	16%	19%	15%
% students in districts located in townships	13%	10%	13%	11%	13%	10%
<b>District size and resources</b>						
Mean # schools	44	72	42	68	40	64
Mean # teachers	945	2071	745	1504	711	1438
Mean instruction \$/pupil	\$5,410	\$5,456	\$5,416	\$5,486	\$5,479	\$5,470

Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year.

Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago based on data from the National Center for Education Statistics Common Core of Data.

\* For purposes of this study, all data are weighted to the student level using data on the number of students enrolled in school districts using data from the National Center for Education Statistics' Common Core of Data for school years 2004–05 and 2006–07.

† Grade levels were computed as Elementary School (Grades 1–5), Middle School (Grades 6–8) and High School (Grades 9–12)

## Wellness Policy Status

More than 95 percent of all students were enrolled in a district that had adopted a wellness policy during the two-year study period.

## Demographic Characteristics

In Table 2.1 and in selected chapters that follow, data are provided that highlight selected policy differences by socioeconomic status (SES) and race and ethnicity. Following the approach used by O'Malley et al. in their analysis of school characteristics associated with secondary student obesity rates,<sup>15</sup> data on the proportion of students that were white, black or Latino were computed to identify whether the student population was: majority white (>66% white), majority black (>50% black) or majority Latino (>50% Latino). Districts with diverse student populations represented the remaining districts.

Throughout this report, free and reduced-price lunch (FRL) participation has been used as a proxy for SES within districts. FRL is based on verified family income or categorical eligibility based on household participation in other federal assistance programs, including the Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families.<sup>16</sup> The groupings were computed as: low SES (>47% FRL participation), medium SES (>28% to 47% FRL participation) and high SES (0 to 28% FRL participation).

This report highlights only SES and racial and ethnic variations that were different in analyses after controlling for other district-level factors (e.g., total instruction dollars per pupil, region and locale).

## Race and Ethnicity

Across both school years, approximately one-half of all students were enrolled in a district with a predominantly white student population. Approximately one-third of all students were enrolled in a district with a diverse student population. The remaining students were enrolled in predominantly Latino or predominantly black school districts.

## Socioeconomic Status

Students were fairly evenly distributed across SES status levels during both study years; however, the percentage of students in low-SES districts was slightly higher than the percentage of students in middle- or high-SES districts.

## Geographic Characteristics

The districts included in the study also varied by geographic region and locale.

### Region

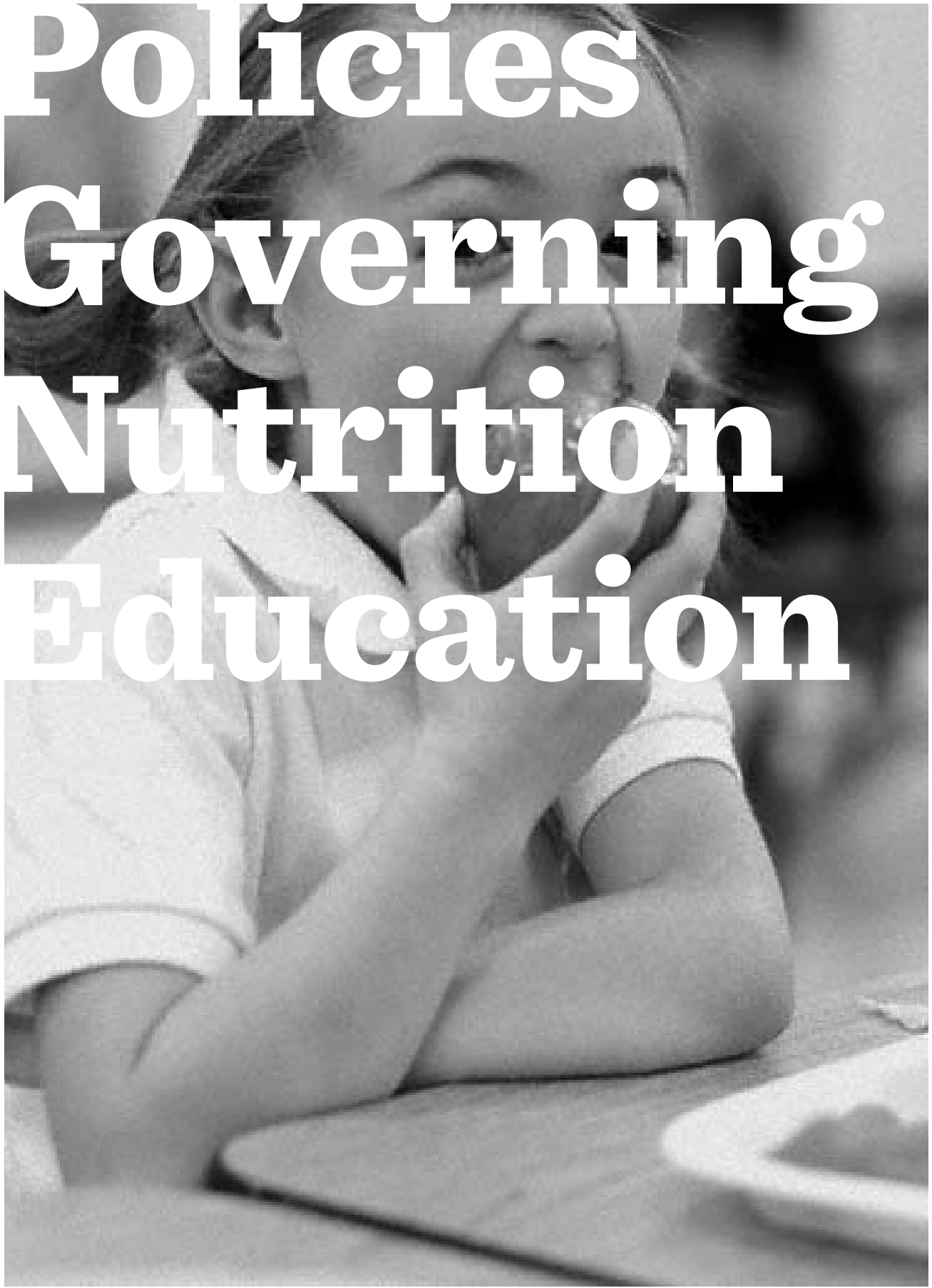
More than one-third of all students were enrolled in a district that was located in the South across both study years. Approximately one-quarter of students were enrolled in a district that was located in the West; slightly lower percentages of students were enrolled in a district that was located in the Midwest or Northeast.

### Locale

Most students were enrolled in a district that was located in a large- to mid-size city or suburban area; fewer students were enrolled in a district that was located in a rural area or township.

## District Size and Resources

The size and resources of the districts included in the study increased between school years 2006–07 and 2007–08. On average, districts spent more than \$5,400 on instruction per pupil across both study years.



# Policies Governing Nutrition Education





## Policies Governing Nutrition Education

According to the Centers for Disease Control and Prevention (CDC), nutrition education is a critical component of a comprehensive health education program. The CDC defines health education as “a planned, sequential K–12 curriculum that addresses the physical, mental, emotional, and social dimensions of health. The curriculum is designed to motivate and assist students to maintain and improve their health, prevent disease, and reduce health-related risk behaviors. It allows students to develop and demonstrate increasingly sophisticated health-related knowledge, attitudes, skills, and practices.”<sup>17</sup> However, the CDC Task Force on Community Preventive Services has found insufficient evidence to determine the effectiveness of multi-component school-based nutrition education on changing dietary behavior and intake (e.g., of fresh fruits and vegetables, fat, saturated fat) among children in grades 1 to 12.<sup>18</sup>

Data from the CDC’s School Health Policies and Programs Study (SHPPS) revealed that more than 57 percent of all schools required health education instruction as part of a specific course or class during the 2006–07 school year. Among those schools, more than 82 percent specified that a nutrition and dietary behavior component be included as part of the health education curriculum, yet the median number of hours dedicated to nutrition and dietary behavior instruction during the entire 2006–07 school year was limited to only 3.4, 4.2 and 5.9 hours for elementary, middle and high school classes, respectively.<sup>19</sup> Research has demonstrated that relatively few hours (e.g., 10 hours) of health education instruction increased students’ knowledge, but behaviors did not change until students received approximately 40 to 50 classroom hours per year.<sup>20</sup>

Studies have identified several school-related barriers to the successful implementation of nutrition edu-

cation initiatives, including conflicting food service policies and practices (e.g., the availability of unhealthy competitive foods in schools); priority given to state-mandated academic proficiency examinations; lack of funding, time and parental support; insufficient communication among teachers, health educators and food service staff; and mass media messages and advertising of unhealthy foods and beverages on school campuses.<sup>21,22</sup>

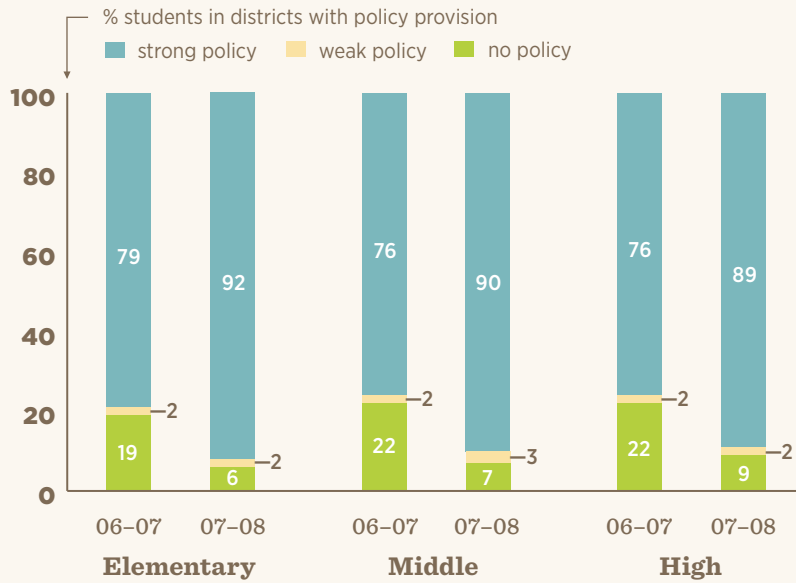
The Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265, Section 204) required that each school district’s wellness policy include goals for nutrition education. This chapter includes data showing the percentages of students enrolled in districts nationwide that met this requirement by the first day of the 2006–07 and 2007–08 school years, which were the first two years of the wellness policy requirement. It also provides examples of specific nutrition education provisions that were or were not incorporated into the district wellness policies for those school years.

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.

## Nutrition Education Goals

- By the first day of the 2007-08 school year, approximately 90 percent of all students were enrolled in a district with a strong policy that included goals for nutrition education.
  - During the two-year period, the percentage of students enrolled in a district with such a policy increased by more than 16 percent in elementary schools, almost 19 percent in middle schools and 18 percent in high schools.

FIGURE 3.1 Nutrition Education Goals\*



By the first day of the 2007-08 school year, approximately 90 percent of all students were enrolled in a district with a strong policy that included nutrition education goals.

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.

\*Required wellness policy element

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

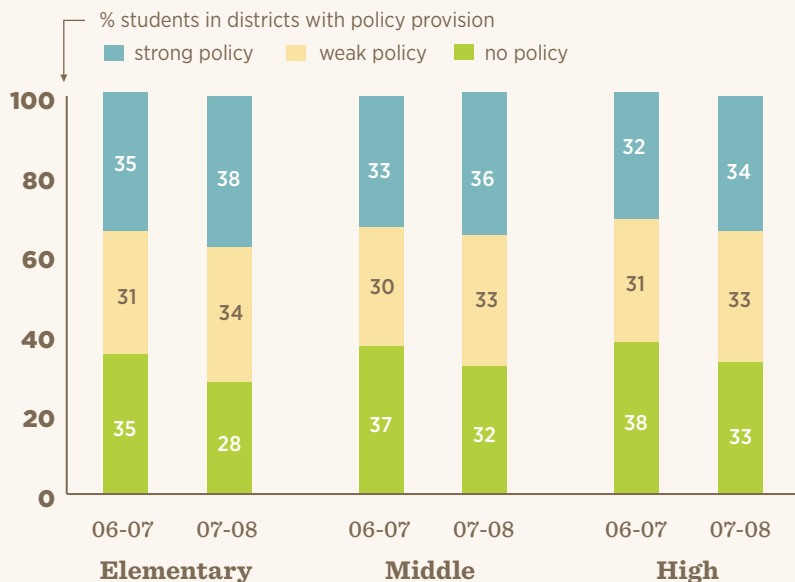


## Nutrition Education Curriculum

Many states have developed health and/or nutrition education standards, indicators, and/or grade-level benchmarks that school districts can use as a framework to create instructional curricula. Nationwide, 83 percent, 81 percent and 89 percent of all elementary, middle and high schools, respectively, followed national, state or district health education guidelines, such as content standards and benchmarks for health education, during the 2006–07 school year. In some schools, health education was required, but not at all grade levels.<sup>23</sup> Including nutrition education curricula guidelines is one strategy that some districts used to address the nutrition education goal requirement in their wellness policy.

- By the first day of the 2007–08 school year, approximately one-third of all students were enrolled in a district that did not address a nutrition education curriculum in their policy. About one-third of all students were enrolled in a district with a *weak* policy that suggested a nutrition education curriculum or required a curriculum but not for all grade levels. The same proportion of students was enrolled in a district with a *strong* policy that clearly required a nutrition education curriculum for all grade levels.
  - Some students were enrolled in a district with a *weak* policy that addressed health education, but did not define or indicate whether nutrition education was a component of the health education curriculum. As such, it is possible that students in these districts also had a nutrition education curriculum.
  - Additionally, many students were enrolled in a district that followed state-mandated nutrition education-related curricula, but did not include the state standards in their wellness policy. These state standards were broadly defined, and included 1) integrating nutrition-related lessons into other subject areas; 2) integrating specific nutrition components in the curriculum; and 3) integrating nutrition-related learning opportunities outside of the classroom (e.g., in the cafeteria and community-based efforts).

FIGURE 3.2 Nutrition Education Curriculum



Many students were enrolled in a district that followed state-mandated nutrition education-related curricula rather than developing their own curricula.

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

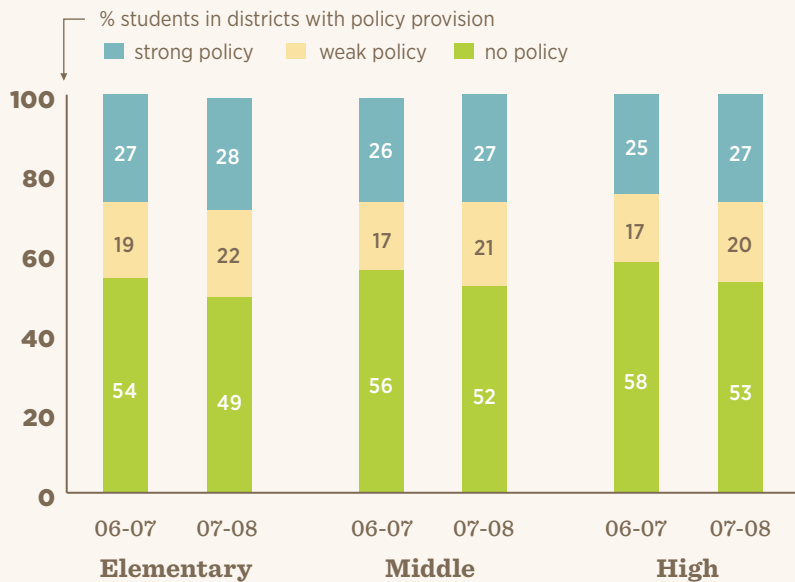
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## Nutrition Education Integrated into Other Subjects

In addition to teaching nutrition as part of the health education curriculum, several interventions have evaluated the effectiveness of integrating nutrition into the broader core curriculum of reading, writing, mathematics, science and social studies. For instance, nutrition can be integrated into science, where students learn about the botanical functions of plant leaves and their nutritional value for good health.<sup>24</sup> Two recent studies at the elementary level found school-based interventions that included integrating nutrition education into other subjects were associated with significant shifts in body mass index to a healthy range; better academic achievement; improved nutrition-related behaviors (e.g., increased fruit and vegetable intake, acceptance of skim or low-fat milk); and improved nutrition-related knowledge (e.g., food guide pyramid, fat in foods).<sup>25,26</sup> Some districts included provisions that suggested or required nutrition education opportunities to be integrated with other subjects as another strategy to address the nutrition education goal requirement in their wellness policy.

- By the first day of the 2007-08 school year, more than one-half of all students were enrolled in a district with a policy that did not address integrating nutrition education into core subjects.
- Among districts that did address integrating nutrition education into core subjects by the beginning of the 2007-08 school year, students were more likely to be enrolled in a district with a strong policy that clearly required this provision rather than a weak one that only suggested or encouraged it.
  - By the first day of the 2007-08 school year, more than 27 percent of all students were enrolled in a district with a strong policy that required nutrition education to be integrated into other subjects—a 5 percent to 6 percent increase from the beginning of the 2006-07 school year.
  - From 20 percent to 22 percent of all students were enrolled in a district with a weak policy that suggested or encouraged nutrition education to be integrated into other subjects at the beginning of the 2007-08 school year. This represented an increase of 18 percent to 19 percent across all grade levels during the two-year period.

FIGURE 3.3 Nutrition Education Integrated Into Other Subjects



The majority of students were enrolled in a district with a policy that did not address integrating nutrition education into core subjects.

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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.

## Nutrition Education Teaches Behavior-focused Skills

Behavior-focused nutrition education skills include those that demonstrate an understanding of caloric balance and energy expenditure; food groups and the food pyramid; food labels; and industry efforts to promote food and beverage products through targeted advertisements.

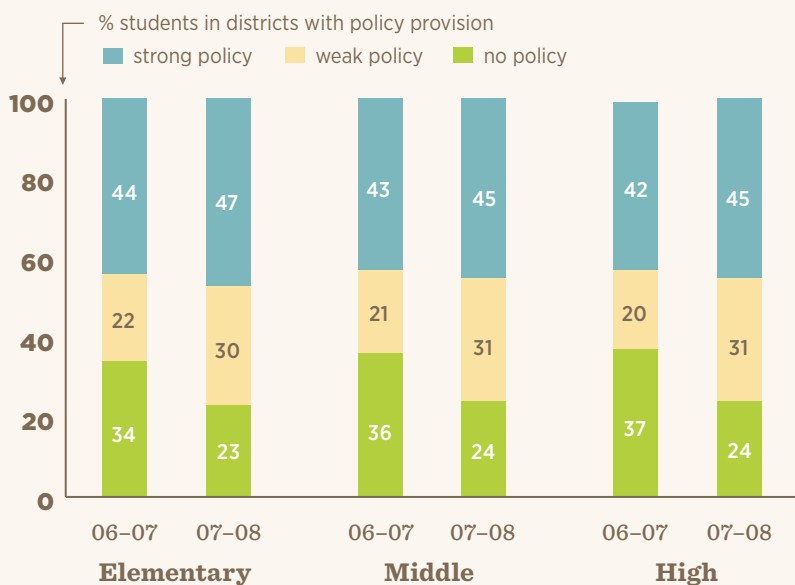
Several short-term, elementary school-based interventions have linked behavior-focused nutrition education with improved nutrition knowledge; increased self-efficacy (e.g., greater confidence regarding food preparation); lower rates of overweight and obesity; and increased fruit and vegetable consumption, particularly in elementary schools with a high proportion of students who are eligible for free and reduced-price lunch.<sup>27-30</sup> Hands-on food preparation and tasting experiences also have been shown to be effective teaching methods for changing attitudes and for increasing knowledge and self-efficacy related to nutrition at the elementary level.<sup>31</sup> Studies also found that nutrition education involving a school garden was linked with increased produce intake and willingness to taste fruits and vegetables among elementary students, but empirical evidence in this area is limited.<sup>32</sup>

Relatively few nutrition education behavior-related studies have been conducted at the middle and high school levels. Findings from a week-long study that involved teaching Florida teenagers about obesity, nutrition, healthy behaviors and eating disorders demonstrated improved nutrition knowledge and positive behavior intentions (e.g., intentions to eat fewer fried foods and sweets, intentions to read food labels, intentions to limit TV time) following the intervention. It is unknown whether such interventions are sustainable over time.<sup>33</sup>

Some districts included behavior-focused skills training as part of the nutrition education curriculum to address the nutrition education goal in their wellness policy.

- By the first day of the 2007-08 school year, more than three-quarters of all students were enrolled in a district with a strong or weak policy that addressed teaching behavior-focused skills as part of nutrition education. This represented nearly a 33 percent increase during the two-year period.
  - More than 45 percent of all students were enrolled in a district with a strong policy that specifically required schools to teach behavior-focused skills (e.g., reading nutrition fact labels, understanding different types of fats) as part of nutrition education.
  - More than 30 percent of students were enrolled in a district with a weak policy that encouraged or suggested behavior-focused skills as part of nutrition education. Most of the policy changes during the two-year period were attributed to those that encouraged such provisions.

FIGURE 3.4 Nutrition Education Taught Behavior-Focused Skills



By the first day of the 2007-08 school year, the majority of students were enrolled in a district with a policy that addressed teaching behavior-focused skills as part of nutrition education.

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Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year. Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

## Summary

Across all grade levels there was great inconsistency in how districts addressed nutrition education in their wellness policy, which was likely because the federal legislation required that wellness policies include general goals—but not specific requirements—for nutrition education. Unlike some of the other district wellness policy components, nutrition education provisions did not differ markedly by grade level or, in many cases, did not distinguish among grade levels. By the first day of the 2007–08 school year, approximately 90 percent of all students were enrolled in a district that included nutrition education goals in their wellness policy. In many instances, districts specified goals for nutrition education but deferred to the state nutrition education curricula requirements without addressing the subject further in their district policy.

# Policies Governing School Meals



## 4

## CHAPTER

## Policies Governing School Meals

The National School Lunch Program and the School Breakfast Program provided more than 31 million lunches and more than 10 million breakfasts to schoolchildren during the school year 2007 (Unpublished data, U.S. Department of Agriculture, Food and Nutrition Service, 2009). Both programs require that meals sold and served meet the school meal guidelines set forth by the U.S. Department of Agriculture (USDA). These guidelines include 1) the nutritional recommendations of the 1995 Dietary Guidelines for Americans,<sup>34</sup> which limit the amount of calories from fat to no more than 30 percent and limit calories from saturated fat to fewer than 10 percent; and 2) applicable Recommended Dietary Allowances (RDAs) for calories, protein, calcium, iron, Vitamin A and Vitamin C.<sup>35,36</sup>

Most schools met the 1995 Dietary Guidelines recommendations for protein, vitamins and minerals during the 2004–05 school year, according to nationally representative data from the third School Nutrition Dietary Assessment Study (SNDA-III). The study also found that more than three-quarters of schools met the total fat and saturated fat standards for school breakfasts, but fewer than one-third met the fat standards for school lunches.<sup>37</sup> Analyses of SNDA-III data provided insight about these findings. Researchers identified two major sources of saturated fat in the school lunch menus: whole milk was offered by 31 percent of schools, and 2% milk was offered by 58 percent of schools.<sup>38</sup> In addition, commercially prepared products, such as pizza, burritos, breaded chicken nuggets and other processed commodities accounted for 40 percent of the available lunch entrees and were major sources of fat, sodium and calories in the lunches.<sup>39</sup>

Analyses of SNDA-III data also found that more than 90 percent of schools surveyed did offer students low-

fat items and low-fat lunch options, yet most students selected items that were high in fat.<sup>40</sup> The analyses confirmed that National School Lunch Program participants were more likely to consume milk, fruit and vegetables and *less* likely to consume snacks, desserts and sugar-sweetened beverages than were non-participants.<sup>41</sup>

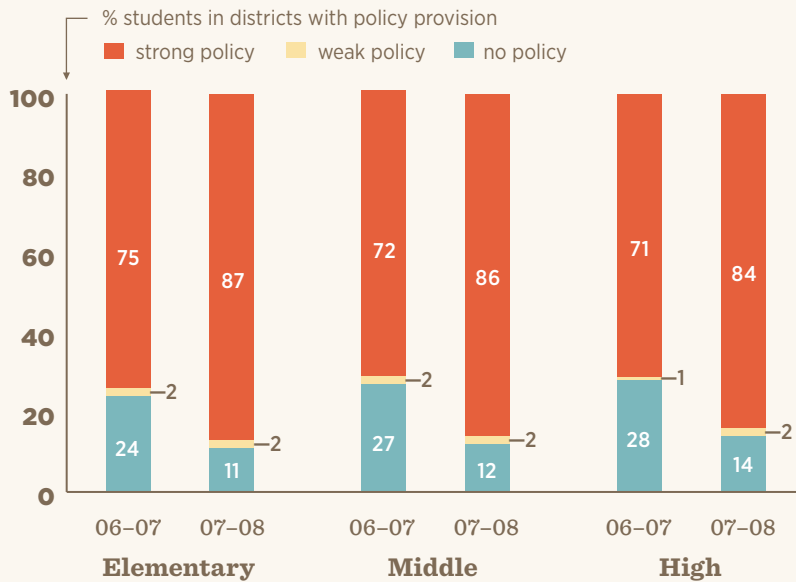
The Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265, Section 204) required that each school district's wellness policy include an assurance that the nutritional guidelines for reimbursable school meals meet the minimum federal school meal standards established by the USDA. This chapter includes data showing the percentages of students enrolled in districts nationwide that met this requirement by the first day of the 2006–07 and 2007–08 school years, which were the first two years of the wellness policy requirement. It also provides examples of specific school meal-related items included in the district policies for those years.

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.

## Policies Requiring that School Meal Nutritional Guidelines Meet the Federal School Meal Requirements

- By the first day of the 2007-08 school year, more than 84 percent of students across all grade levels were enrolled in a district with a *strong* policy that explicitly required the guidelines for school meals to meet the minimum federal school meal standards.
  - The proportion of students in a district with this policy requirement increased by more than 17 percent across all grade levels during the two-year period.

FIGURE 4.1 Policies Required that School Meal Nutritional Guidelines Meet the Federal School Meal Requirements\*



Most districts established a wellness policy requiring that the nutritional guidelines for school meals meet the minimum USDA school meal standards.

\*Required wellness policy element

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year. Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

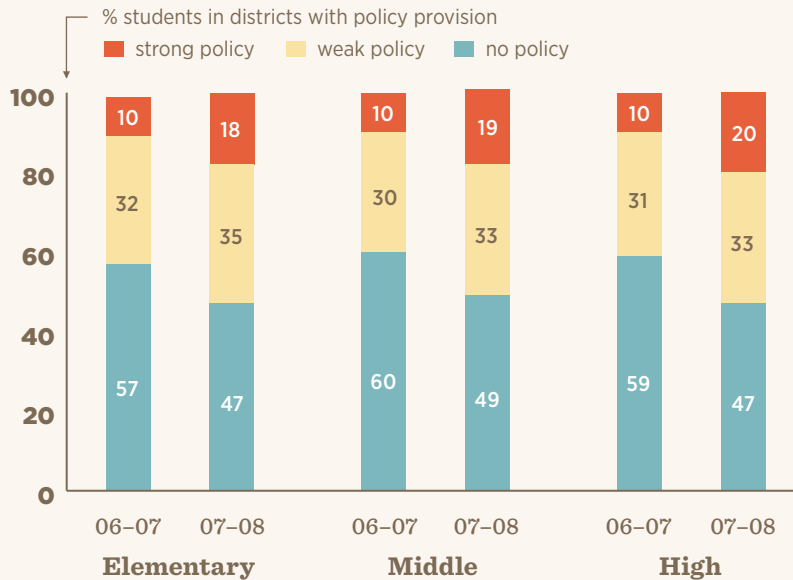
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## Nutritional Guidelines for School Meals that Met or Exceeded the 2005 Dietary Guidelines

The current federal school meal standards are based on the 1995 Dietary Guidelines and do not reflect current nutrition science as included in the 2005 Dietary Guidelines and Dietary Reference Intakes for energy, fat, fiber, sodium and essential nutrients.<sup>42</sup> Some school districts had policies that went beyond the required federal meal standards—these policies either met or exceeded the 2005 Dietary Guidelines requirements. The following data describe the strength of those wellness policies that reflect the most current nutrition science.

- By the first day of the 2007–08 school year, fewer than 20 percent of all students nationwide were enrolled in a district with a *strong* policy that clearly required the school meal guidelines to exceed the 2005 Dietary Guidelines (e.g., limiting milk options to 1% or skim, requiring that a specific amount of fruits and/or vegetables be offered daily, or requiring that at least one-half of all grains offered are whole grains).
  - Although the percentage of students enrolled in a district with a *strong* policy that clearly exceeded the 2005 Dietary Guidelines was relatively low, the percentage of students enrolled in a district with such a policy doubled during the two-year period at the middle school level and nearly doubled at the high school level.
- During the same period, approximately one-third of all students were enrolled in a district with a weak policy that only required the school meals to meet the 2005 Dietary Guidelines or suggested, but did not require, guidelines (e.g., encouraging schools to eliminate trans fats, recommending whole-grain items, or encouraging a minimum amount of fruits and/or vegetables at meal times).

FIGURE 4.2 Nutritional Guidelines for School Meals that Met or Exceeded the 2005 Dietary Guidelines



Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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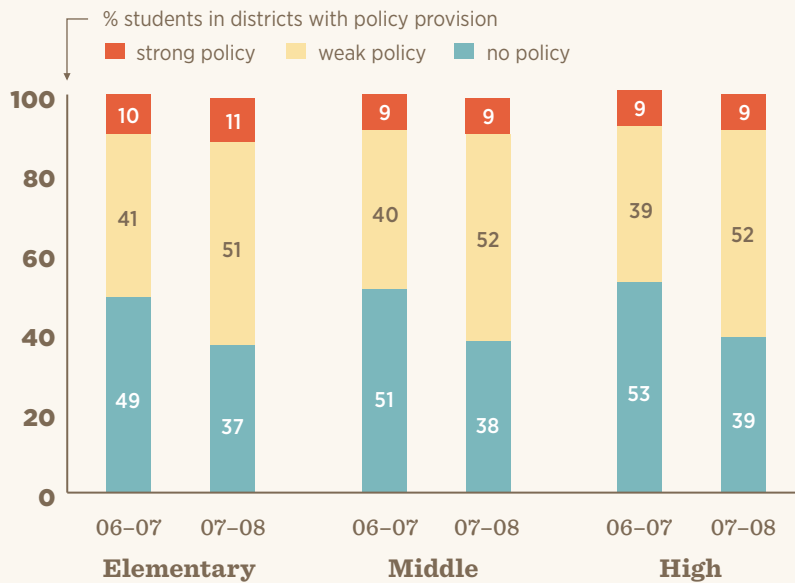


## Adequate Time to Eat Meals

According to the USDA, providing adequate time for students to eat meals contributes to healthy eating among students during the school day and helps reduce plate waste.<sup>43,44</sup> The USDA suggests that students should have a minimum of 20 minutes from the time they receive their lunch and 10 minutes at breakfast to allow for eating, socializing, food service, clean-up and other lunch-related activities.<sup>45</sup>

- By the first day of the 2007-08 school year, more than one-half of all students nationwide were enrolled in a district with a *weak* policy that 1) only suggested that students receive “adequate” time to eat meals without specifying *how much* time students should have for meals; or 2) specified a minimum amount of time that was less than 20 minutes for lunch and/or less than 10 minutes for breakfast.
- During the same period, only 11 percent of elementary students and 9 percent of middle and high school students were enrolled in a district with a *strong* policy that required students to receive at least 20 minutes for lunch and 10 minutes for breakfast from the time they receive their meals.

FIGURE 4.3 Adequate Time To Eat Meals



Only slightly more than 9 percent of students nationwide were enrolled in a district with a policy requiring that they receive 20 minutes for lunch and 10 minutes for breakfast.

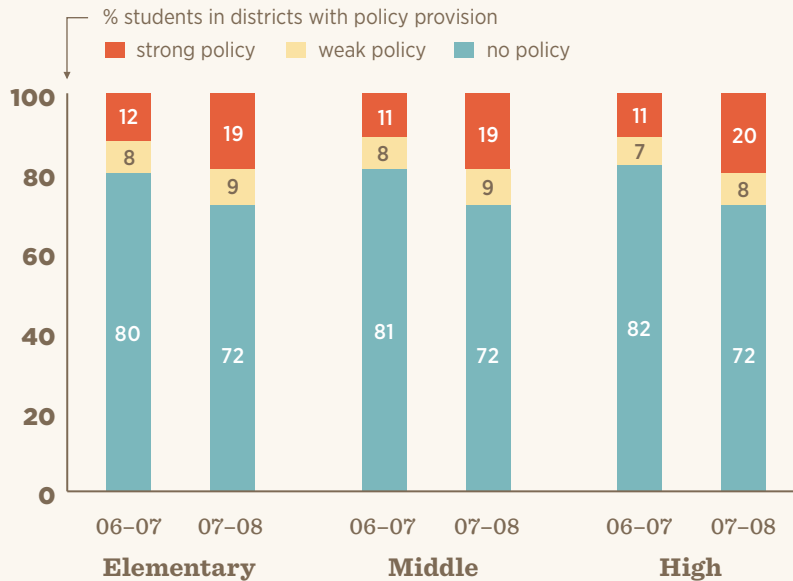
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## Nutritional Information for School Meals

- At the beginning of the second year of the policy requirement, approximately 72 percent of all students were enrolled in a district that did not mention in its wellness policy whether nutritional information (e.g., calories, fat, sugars, sodium, etc.) should be provided for school meals. While this finding seems to conflict with SNDA-III data indicating that more than 60 percent of all schools provided nutrient content information for USDA school meals,<sup>46</sup> it is likely that schools did provide the information, but that districts did not address it in their wellness policy.
- During the same period, students were more likely to be enrolled in a district with a *strong* policy that required the provision of nutritional information for school meals, as opposed being in a district with a *weak* policy that encouraged or suggested such action.

FIGURE 4.4 Nutritional Information for School Meals



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

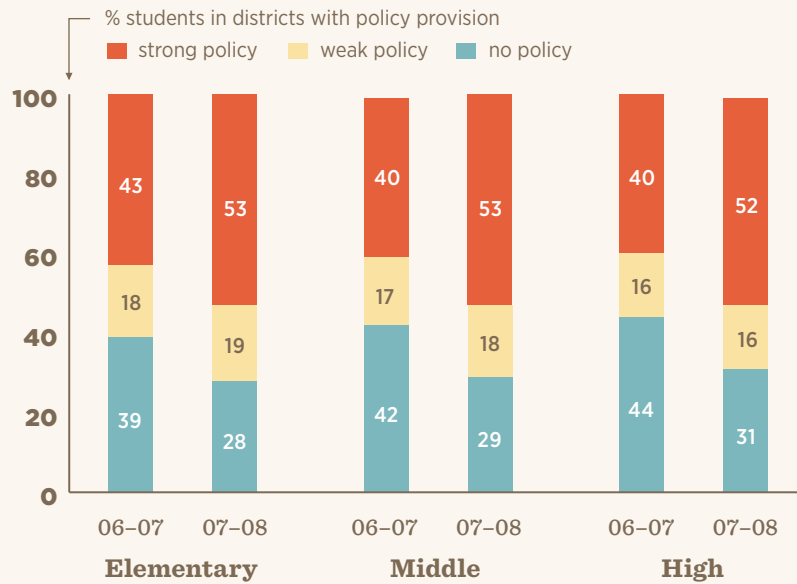
We defined **STRONG POLICY PROVISIONS** as those that required action and specified an implementation plan or strategy. They included language such as shall, must, will, require, comply and enforce. **WEAK POLICY PROVISIONS** offered suggestions or recommendations, and some required action, but only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

## School Breakfast Program

Research confirms that students who ate breakfast at school had better standardized test scores, math grades, attendance and classroom behavior than did those who skipped breakfast or ate breakfast at home.<sup>47-49</sup> SNDA-III data also found that School Breakfast Program participants had lower body mass index than non-School Breakfast Program participants, especially among non-Hispanic, white students.<sup>50</sup> Many advocates support efforts that aim to increase participation in the School Breakfast Program due to evidence linking these and other benefits to regular nutritious breakfast meals. Although not specifically addressed in the federal wellness policy requirement, this chapter includes data showing the percentage of districts that explicitly mentioned participation in the School Breakfast Program within their wellness policy. Findings from SNDA-III indicated that 85 percent of schools participating in the National School Lunch Program also participated in the School Breakfast Program.<sup>51</sup>

- By the first day of the 2007-08 school year, more than one-half of all students nationwide were enrolled in a district with a *strong* policy that clearly indicated their participation in the School Breakfast Program.
- During the same period, more than 16 percent of all students were enrolled in a district with a *weak* policy that encouraged students to eat a healthy breakfast or mentioned a school breakfast program, but did not clearly reference the national School Breakfast Program.

FIGURE 4.5 Policies Governing School Breakfast Program



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
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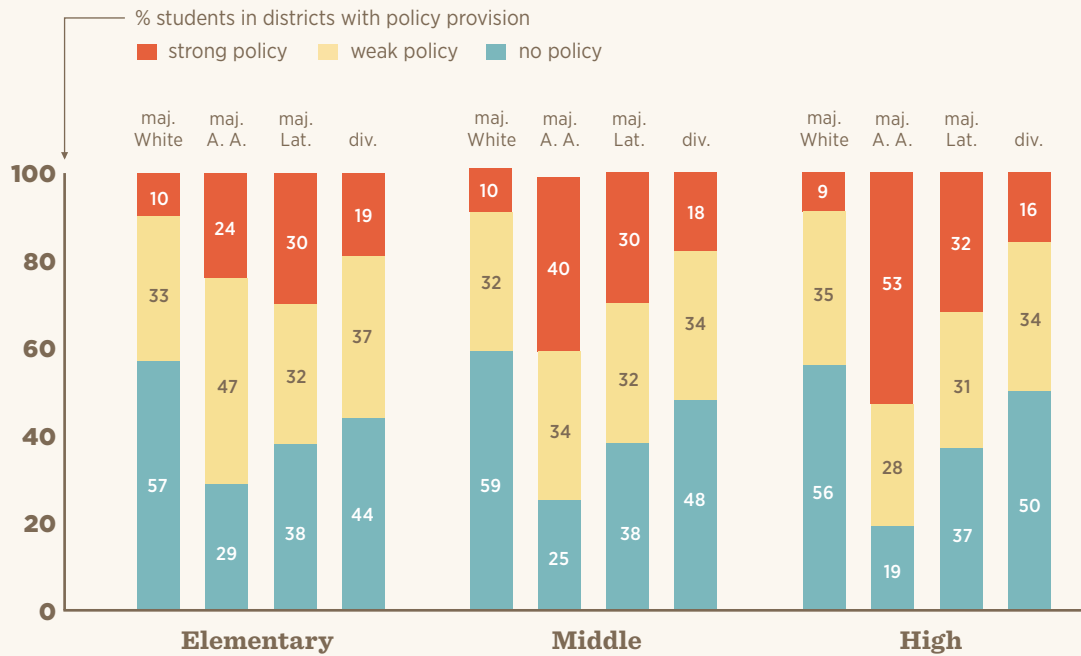
## School Meal Requirements by Race/Ethnicity

School meal policies in place at the beginning of the 2007-08 school year varied by racial/ethnic composition<sup>e</sup> of the districts' students, but did not vary based on socioeconomic status within districts.<sup>f</sup>

Students in predominantly black or Latino districts were more likely to be in a district with a strong policy that required school meals to meet or exceed the 2005 Dietary Guidelines than were students in predominately white districts. This was true across all grade levels.

Elementary and high school students in predominantly black districts were *more* likely to be in a district with a *strong* policy that required an "adequate" amount of time be provided for students to eat school meals or a *weak* policy that suggested specific time requirements than were students in predominantly white districts. Such distinctions were not seen at the middle school level.

FIGURE 4.6 School Meal Requirements by District Racial/Ethnic Composition



Data reflect policies in place by the first day of the 2007-08 school year.  
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<sup>e</sup>Data on the proportion of students that were white, black or Latino were computed to identify whether the student population was: majority white (>66% white), majority black (>50% black), or majority Latino (>50% Latino). Districts with diverse student populations that were not majority white, black or Latino represent the remaining districts.

<sup>f</sup>Only racial/ethnic variations that were different in analyses controlling for other district-level factors (e.g., SES, total instruction dollars per pupil, region and locale) have been highlighted in this section.

## Summary

By the first day of the 2007–08 school year, most districts established a policy that included the same school meal standards as those required by the USDA. Although most districts were in compliance with the federal policy, it is worth noting that the meal standards set forth by the USDA are based on the 1995 Dietary Guidelines—and do not reflect the 2005 Dietary Guidelines and Dietary Reference Intakes for energy, fat, fiber, sodium and essential nutrients.<sup>52</sup> Relatively few districts provided additional nutritional guidelines for school meals beyond the federal requirement.

As Congress considers the reauthorization of child nutrition programs, it is likely that nutrition standards for the National School Lunch Program and School Breakfast Program will be closely examined to ensure they meet current nutrition science. Accordingly, changes to district policies will likely follow. Some districts have gone beyond the federal school meal guidelines by including language in their wellness policy to 1) specify that nutritional guidelines meet or exceed the 2005 Dietary Guidelines; 2) require a minimum time to eat lunch and/or breakfast; and/or 3) require nutritional information to be made readily available for school meals.



# Policies Related to Competitive Foods and Beverages

## Policies Related to Competitive Foods and Beverages

The availability and consumption of competitive foods and beverages—those items that are sold or served outside of federal school meal programs—<sup>53,54</sup> have increased significantly during the past two decades.<sup>55,56</sup> Competitive foods and beverages include items sold through à la carte cafeteria sales, vending machines, school stores, snack bars and fundraisers, as well as items offered through classroom parties or as rewards for students. According to data from the third School Nutrition Dietary Assessment Survey (SNDA-III), during the 2004–05 school year:

- *more than 40 percent of public school students consumed at least one competitive food item during the school day;*
- *nearly two-thirds of all elementary students and almost 90 percent of middle and high school students were enrolled in schools that sold à la carte foods and beverages;*
- *more than 25 percent of elementary students, 87 percent of middle school students and 98 percent of high school students had access to food and beverage vending machines.*<sup>57</sup>

In addition, data from the Centers for Disease Control and Prevention’s School Health Policies and Practices Study (SHPPS) indicate that competitive foods and beverages were sold through school stores and snack bars in nearly 17 percent of elementary schools, 33 percent of middle schools and 50 percent of high schools during the 2006–07 school year. The study also found that only 17 percent of all schools prohibited using foods to reward students for good behavior or performance, and an additional 19 percent of schools discouraged this practice.<sup>58</sup>

Several studies demonstrate that the availability of competitive foods and beverages at school (whether sold or offered at parties or used as a reward) was associated with increased student consumption of soft drinks, other sugar-sweetened beverages and foods that were low in nutrients and high in fat and calories, such as desserts, candy and chips. Access to competitive foods and beverages on campus also was associated with decreased student consumption of nutrient-rich foods and beverages, such as low-fat and skim milk, fruits and vegetables.<sup>59–62</sup>

In 2007, the Institute of Medicine recommended specific limits on the fat, sugar and calorie content, as well as the serving sizes of competitive foods and beverages sold during the school day.<sup>63</sup> While many state governments and school districts have developed policies regarding the availability of competitive foods and beverages at school,<sup>64,65</sup> the only federal restriction on foods sold or served outside of school meal programs prohibits the sale of foods of minimal nutritional value (FMNVs), including certain candies, soft drinks and gum, during school meal times.<sup>66</sup> This federal requirement was developed more than 30 years ago and does not reflect current nutrition science.

The Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265, Section 204) required that each school district’s wellness policy include nutritional guidelines for all foods available on campus, including foods and beverages sold or offered outside of the school meal programs. This chapter includes data showing the percentages of students enrolled in districts nationwide that met this requirement by the first day of the 2006–07 and 2007–08 school years, which were the first two years of the wellness policy requirement.

It also provides examples of specific competitive food restrictions that were or were not incorporated into the district wellness policies for those school years, and highlights district policy provisions governing food and beverage marketing and advertising.

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 defi-

nitely 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.

## Nutrition Guidelines for Competitive Foods and Beverages

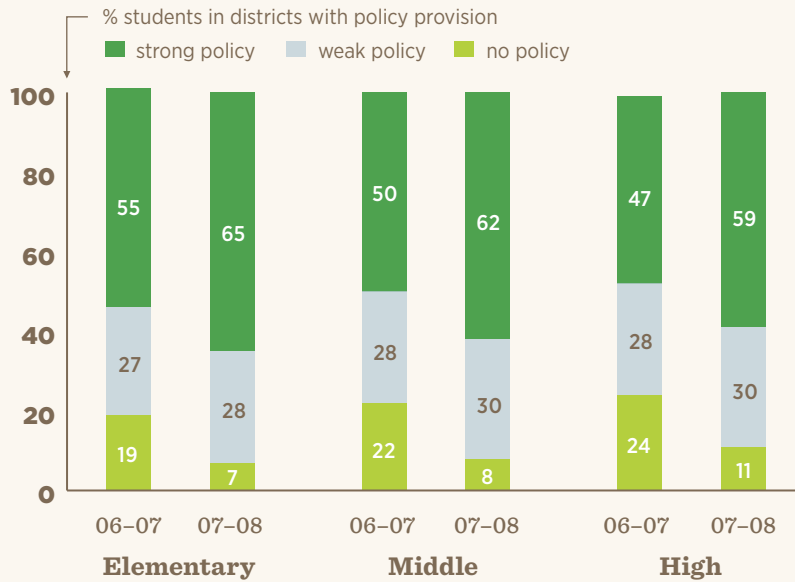
- At the beginning of the 2007–08 school year, more than 89 percent of all students were enrolled in a district that addressed competitive food and beverage sales in their wellness policy.
  - Sixty-five percent of elementary, 62 percent of middle school and 59 percent of high school students were enrolled in a district with a *strong* policy that included guidelines for all foods and beverages sold or served outside of the school meal program during the school day.
    - During the two-year period, the percentage of students enrolled in a district with a *strong* policy containing guidelines for competitive foods and beverages increased by nearly 20 percent in elementary schools, almost 23 percent in middle schools and by 24 percent in high schools.
  - Across grade levels, more than 28 percent of students were enrolled in a district with a *weak* policy that 1) had *vague* or *suggested* competitive food and beverage guidelines; or 2) only required competitive foods and beverages to meet minimum dietary guidelines that did not limit sodium or trans fats, or recommend whole-grain items.

Districts with guidelines that addressed competitive foods did not necessarily have strong policies or require schools to take action.





FIGURE 5.1 Nutritional Guidelines for Competitive Foods and Beverages\*



\*Required wellness policy element

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
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## Limits on Access to Competitive Foods

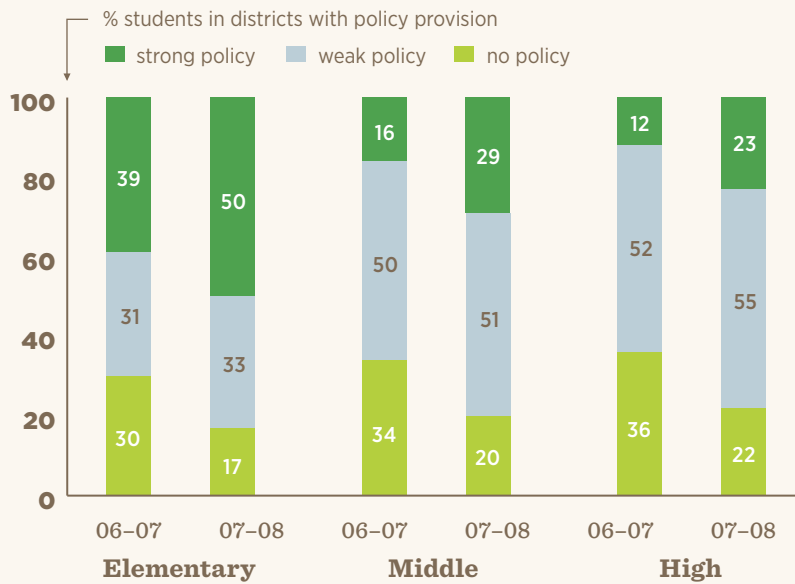
Vending machines, à la carte sales and school stores are widely available to students in public schools across the country.<sup>67,68</sup> As such, school districts nationwide have incorporated into their wellness policies provisions for limiting student access to competitive foods and beverages and/or requiring these venues to give preference to the sale of healthy items, such as fruits, vegetables, skim or low-fat milk, and 100% juice. Research shows that removing or prohibiting the sale of competitive foods and beverages in school stores and eliminating the sale of low-nutrient energy-dense foods sold à la carte were associated with reduced consumption of sugar-sweetened beverages, especially among middle and high school students.<sup>69</sup>

Districts had substantially stronger restrictions on competitive foods in elementary schools compared with middle or high schools. During the two-year period, districts intensified their efforts to address competitive foods in middle and high schools, but the restrictions were still weaker than those established in elementary schools.

### Vending Machine Restrictions

- By the first day of the 2007-08 school year, more than 78 percent of students were enrolled in a district that had some type of policy restriction on vending machine sales, but the requirements varied by grade level.
  - Fifty percent of elementary students, 29 percent of middle school students and 23 percent of high school students were enrolled in a district that had a *strong* policy banning vending machines, banning competitive foods, or requiring that vending machine sales comply with the district’s nutrition standards governing fat, calorie and sugar content.
    - Elementary students were 1.7 times more likely than middle school students and 2.2 times more likely than high school students to be enrolled in a district with a strong vending machine policy.
- During the two-year period, there was a substantial increase in the percentage of students enrolled in a district that had a policy regarding vending machines. The change was attributable to an increased percentage of districts with *strong* policies that specified definitive nutritional guidelines for competitive foods and beverages sold through vending machines, bans on vending machine sales, or complete bans on the sale of competitive foods and beverages.

FIGURE 5.2 Vending Machine Restrictions during the School Day



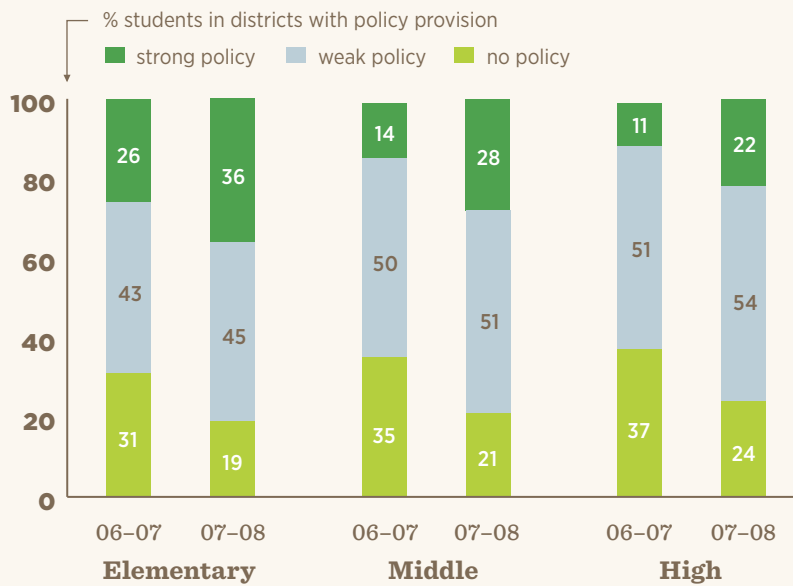
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### À la Carte Restrictions

- By the first day of the 2007-08 school year, more than 76 percent of students nationwide were enrolled in a district that had a *weak* policy suggesting restrictions or a *strong* policy completely restricting the sale of à la carte foods and beverages that are high in fat, sugar and calories.
- While still below 30 percent, the proportion of middle and high school students enrolled in a district with a *strong* policy that either banned à la carte sales, banned competitive foods and beverages, or imposed specific limits on fat, sugar and calorie content of à la carte foods and beverages doubled during the two-year period.

FIGURE 5.3 À La Carte Restrictions during Meal Times



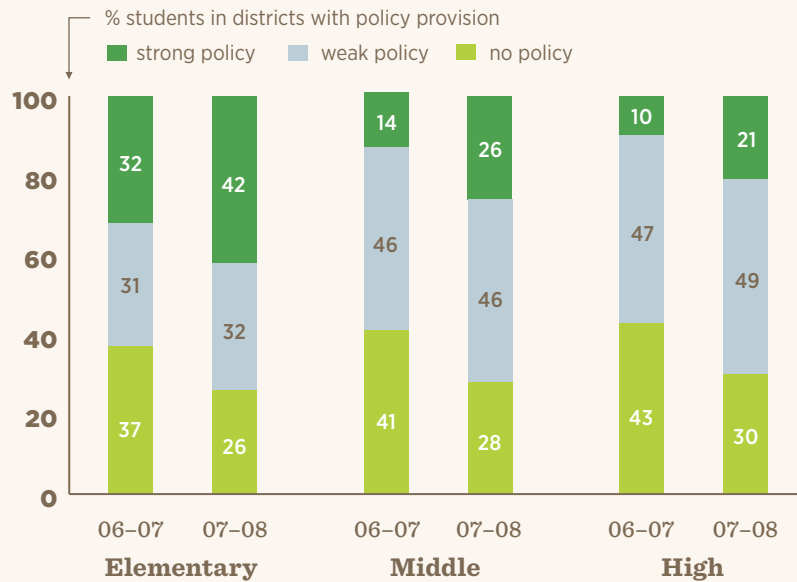
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### School Store Restrictions

- By the first day of the 2007-08 school year, more than 70 percent of all students were enrolled in a district with a *weak* policy that suggested limits or a *strong* policy that banned school stores, banned competitive foods and beverages, or required school stores to comply with the district's nutrition standards governing fat, calorie and sugar content.
- During the same period, 42 percent of all elementary students were enrolled in a district with a *strong* policy that banned school stores, banned competitive foods and beverages, or required that school store sales comply with the district's nutrition standards governing fat, calorie and sugar content. Elementary students were still 1.6 and 2.0 times more likely to be enrolled in a district with such a policy than were middle and high school students, respectively.
  - The greatest increases in *strong* policies that banned or imposed limits on the nutritional value of competitive foods sold through school stores were observed at the middle and high school levels during the two-year period.

FIGURE 5.4 School Store Restrictions during the School Day



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
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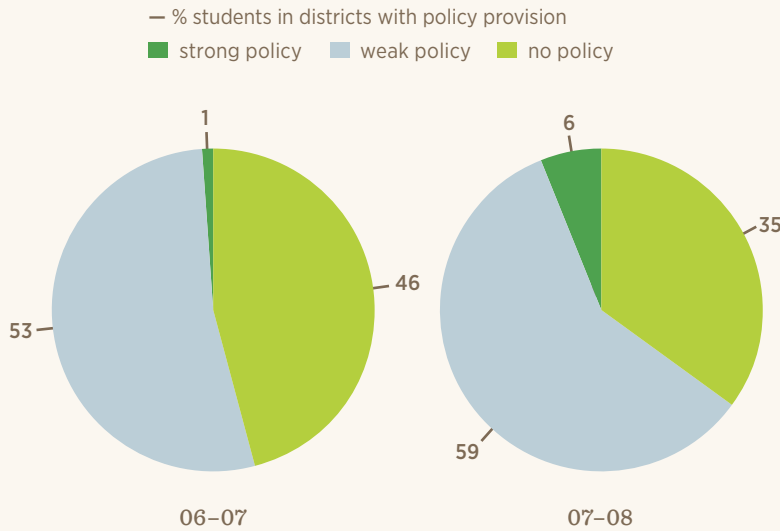
### Classroom Parties and Foods as a Reward

National data from the 2004–05 school year show that providing competitive foods through classroom parties or offering them as rewards or incentives was most common at the elementary level, and was the primary source of such foods for elementary students.<sup>70</sup> Foods served at parties or used for rewards often were low in nutrients and included unhealthy foods, such as cookies and candy. Establishing policies that limit the availability or use of competitive foods through these practices is one strategy districts have implemented to address the availability of unhealthy competitive foods and beverages at the elementary grade levels.

#### Classroom Parties

- By the first day of the 2007–08 school year, 65 percent of elementary students were enrolled in a district with a policy that placed some restriction on the availability of competitive foods during classroom parties. However, the vast majority of these policies were *weak* and only suggested or encouraged that healthy foods be provided or discouraged unhealthy foods.
- During the same period, only 6 percent of all elementary students were enrolled in a district with a *strong* policy that banned competitive foods at all times, prohibited the provision of foods at classroom parties, or limited the fat, sugar and calorie content of foods and beverages provided at such celebrations.

FIGURE 5.5A Policies Governing Classroom Parties at the Elementary School Level



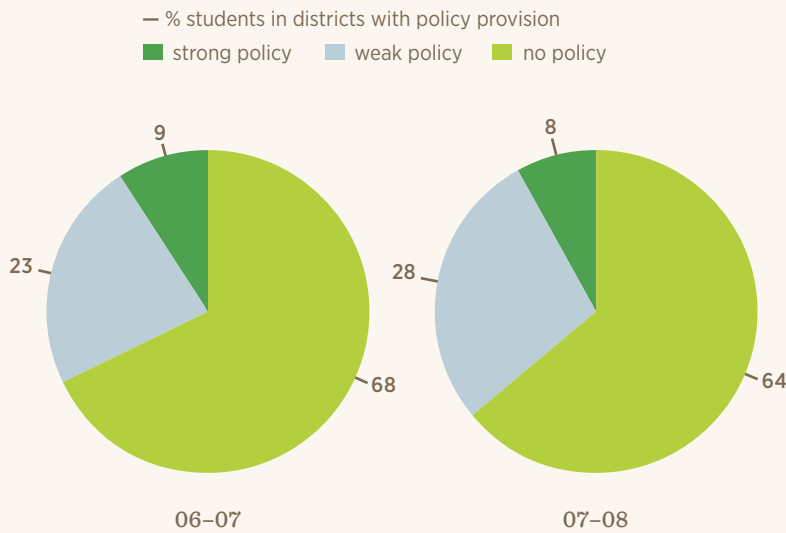
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Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

**Using Foods as a Reward or Withholding Foods as a Punishment**

- During the two-year period, district policies that governed the use of foods as a reward or prohibited withholding foods (e.g., lunch or snack) as punishment were much less prevalent than were policies that governed classroom parties.
- By the first day of the 2007-08 school year, 36 percent of all elementary students were enrolled in a district with a policy that addressed using foods as a reward or withholding foods as punishment. Only 8 percent of elementary students were enrolled in a district with a *strong* policy that explicitly prohibited these practices, and the remaining students were enrolled in districts with *weak* policies that suggested such restrictions or only prohibited withholding foods as punishment.

FIGURE 5.5B Policies Governing Food as a Reward at the Elementary School Level



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## Limits on Fat, Sugar and Calorie Content of Competitive Foods and Beverages

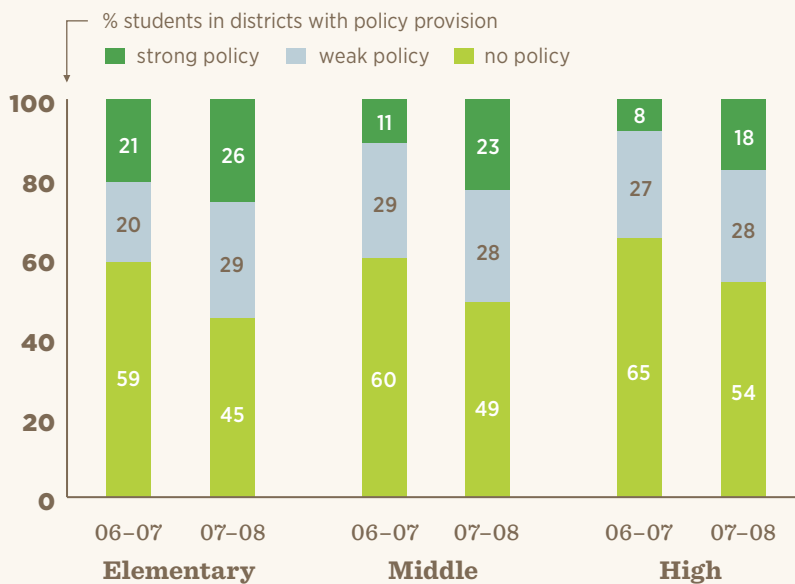
In addition to policies that addressed the sale of competitive foods and beverages in vending machines, à la carte lines and school stores, many policies also offered guidelines for the nutritional quality and calorie content of those foods and beverages. The federal legislation that required districts to develop a wellness policy did not include specific guidelines for restricting the fat, sugar or calorie content of foods available on campus. Accordingly, there was great variance in how school districts addressed the issue, and many policies had weak language that suggested—but did not require—that schools comply with the guidelines.

### Food Standards

#### Sugar Content of Competitive Foods

- More than 45 percent of all students were enrolled in a district with a policy that did not address limits on the sugar content of competitive foods at the beginning of the 2007–08 school year.
- By the first day of the 2007–08 school year, more than 28 percent of all students were enrolled in a district with a *weak* policy that only suggested restrictions or provided limited restrictions on the sugar content of competitive foods (e.g., during only certain times of the school day).
- At the beginning of the 2007–08 school year, policy restrictions on sugar content were more common at the elementary level than at the middle and high school levels.
  - Only 26 percent of elementary students were enrolled in a district with a *strong* policy that either banned competitive foods or placed specific restrictions on the amount of sugar per competitive food serving, while 23 percent of middle school students and 18 percent of high school students faced such restrictions.
- Policy restrictions on the sugar content of competitive foods increased substantially more at the middle and high school levels during the two-year period.

FIGURE 5.6 Sugar Content of Competitive Foods



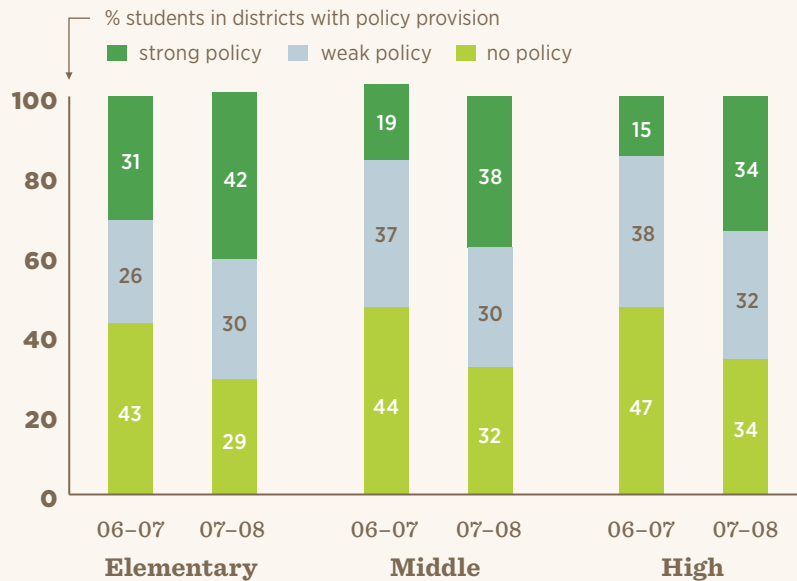
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Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

### Fat Content of Competitive Foods

- By the first day of the 2007-08 school year, more than two-thirds of all students were enrolled in a district with a *weak* policy that suggested or a *strong* policy that specified limits on the fat content of competitive foods sold and served during the school day. Most of these policies were *strong* and included specific restrictions on the percentage or amount of total fat calories per serving.
- Policy restrictions on fat content more than doubled at the middle and high school levels during the two-year period.

FIGURE 5.7 Fat Content of Competitive Foods



There was great variance in how school districts addressed guidelines for the nutritional quality and calorie content of competitive foods and beverages. Many policies had weak language that suggested that schools adhere to district guidelines, but did not require compliance.

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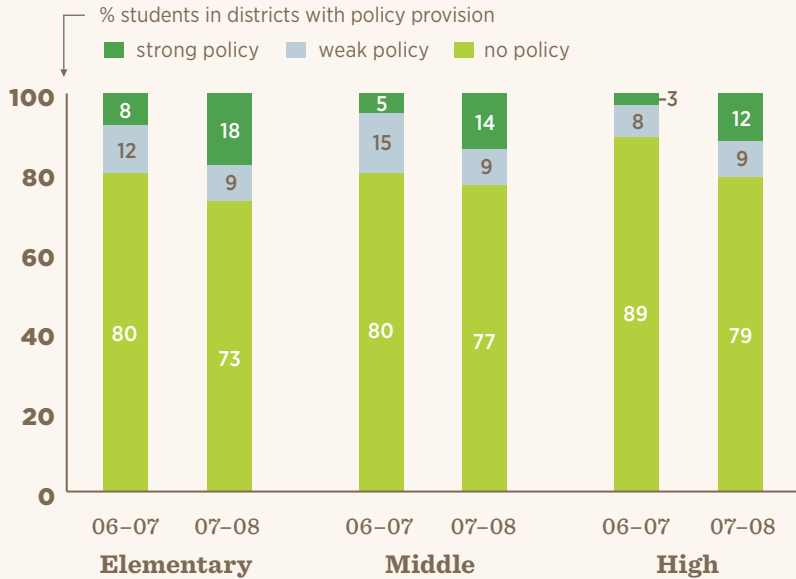
Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year. Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.



### Calorie Content of Competitive Foods

- During the two-year period, the vast majority of students were enrolled in a district that did not address limits for the calorie content of competitive foods sold or served at school in their policy.
- When addressed, calorie limits were more prevalent in policies focused on the elementary level than on middle and high school levels at the beginning of the 2007-08 school year.
  - Only 18 percent of all elementary students, 14 percent of middle school students and 12 percent of high school students were enrolled in a district with a *strong* policy that included specific calorie restrictions.
  - The percentage of students enrolled in a district with a *strong* policy containing specific calorie limits more than doubled at the elementary and middle school levels, and increased from 3 percent to 12 percent at the high school level.

FIGURE 5.8 Calorie Content per Serving of Competitive Foods



Most students were enrolled in a district that did not address limits on the calorie content of or provide nutritional information for competitive foods sold or served on campus in their policy.

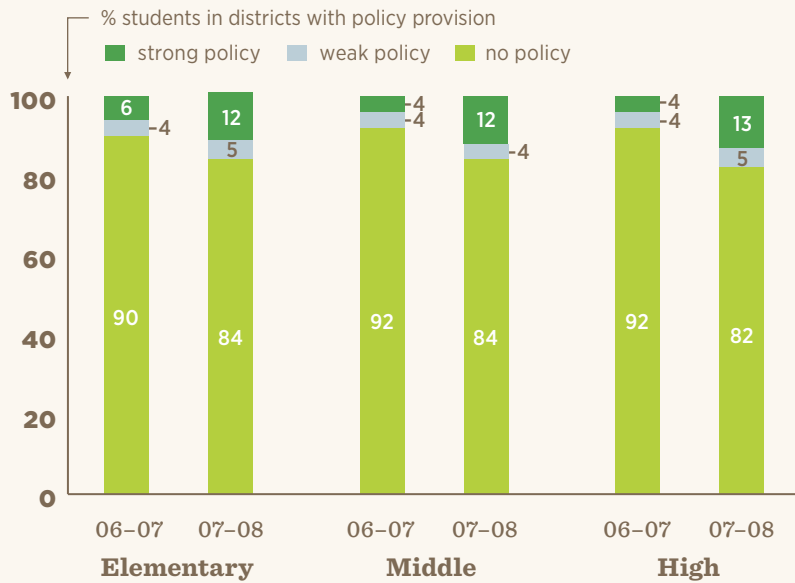
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### Nutrition Information for Competitive Foods

- By the first day of the 2007-08 school year, more than 82 percent of all students were enrolled in a district that did not address in their policy whether nutritional information (e.g., calories, fat, sugars, sodium, etc.) should be provided for competitive foods.
- Among district policies that did address this issue as of the beginning of the 2007-08 school year, it was more likely that nutritional information be required (*strong* policy), as opposed to encouraged or suggested (*weak* policy).
- While relatively uncommon in the district policies, the percentage of students enrolled in a district that addressed nutritional information for competitive foods more than doubled at the elementary and middle school levels, and more than tripled at the high school level during the two-year period.

FIGURE 5.9 Nutritional Information Provided for Competitive Foods Sold



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## Beverage Standards

### Sugar-Sweetened Beverages

Sugar-sweetened beverage consumption is associated with increased caloric intake, weight gain and obesity incidence among children and adolescents.<sup>71-75</sup> Sugar-sweetened beverages include regular sodas, sweetened teas, less than 100% fruit juices, juice drinks, energy drinks and other beverages with added sugars. Soda accounts for more than one-half of all sugar-sweetened beverage consumption among youths, particularly among adolescents.<sup>76</sup> Although the majority of youths' weekday consumption of sugar-sweetened beverages occurs at home,<sup>77</sup> some school districts have prohibited or limited the availability of these beverages on campus to help reduce student consumption of these products.

#### Regular Soda

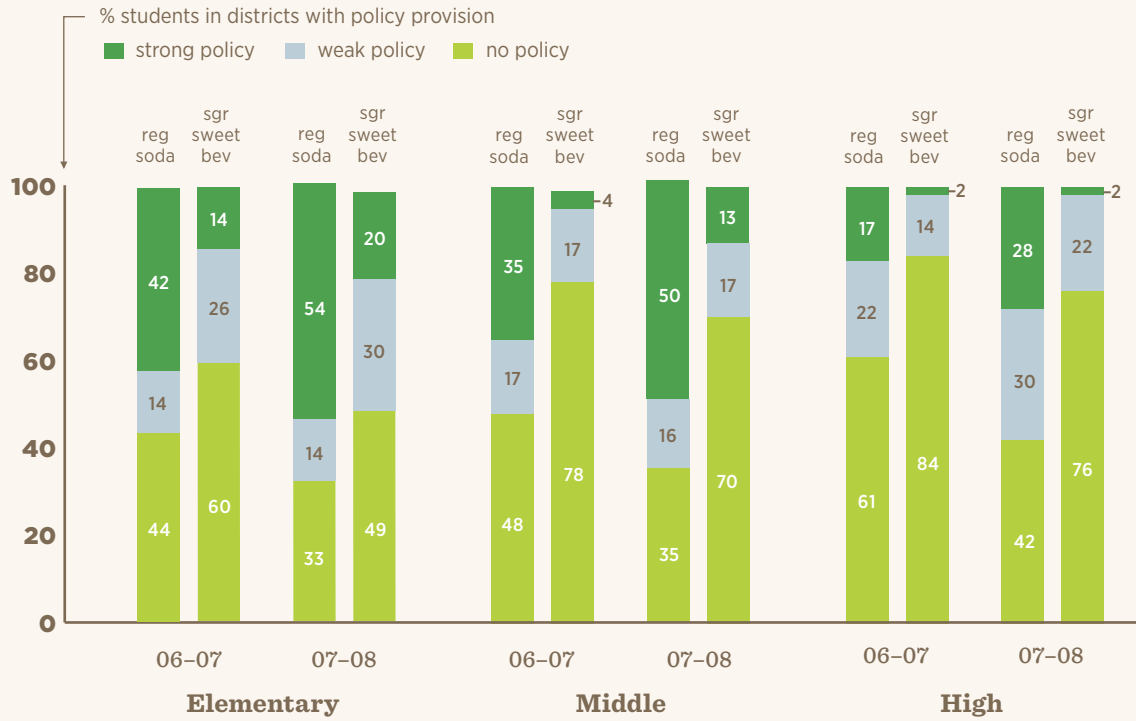
- By the first day of the 2007–08 school year, elementary students were nearly twice as likely to be enrolled in a district with a *strong* policy that prohibited soda sales at their school than were high school students.
- The percentage of middle school students enrolled in a district with a *strong* policy that prohibited soda sales increased from 35 percent to 50 percent during the two-year period.

#### Other Sugar-Sweetened Beverages

- Restrictions on other sugar-sweetened beverages were much less common than soda restrictions. By the first day of the 2007–08 school year, 50 percent of elementary students, 70 percent of middle school students and 76 percent of high school students were enrolled in a district that *did not* impose any limits on the availability of sugar-sweetened beverages or that had a *weak* policy that limited some but not all such products.
- At the beginning of the 2007–08 school year, only 20 percent of elementary students, 13 percent of middle school students and only 2 percent of all high school students were enrolled in a district with a *strong* policy that completely banned other sugar-sweetened beverages (e.g., sweetened teas, sports drinks) during the school day or that banned all competitive beverages.

By the first day of the 2007–08 school year, only 20 percent of elementary students, 13 percent of middle school students and 2 percent of all high school students were enrolled in a district with a strong policy that completely banned other sugar-sweetened beverages, such as sweetened teas and sports drinks, during the school day.

FIGURE 5.10 Limits on the Sale of Soda and Other Sugar Sweetened Beverages



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

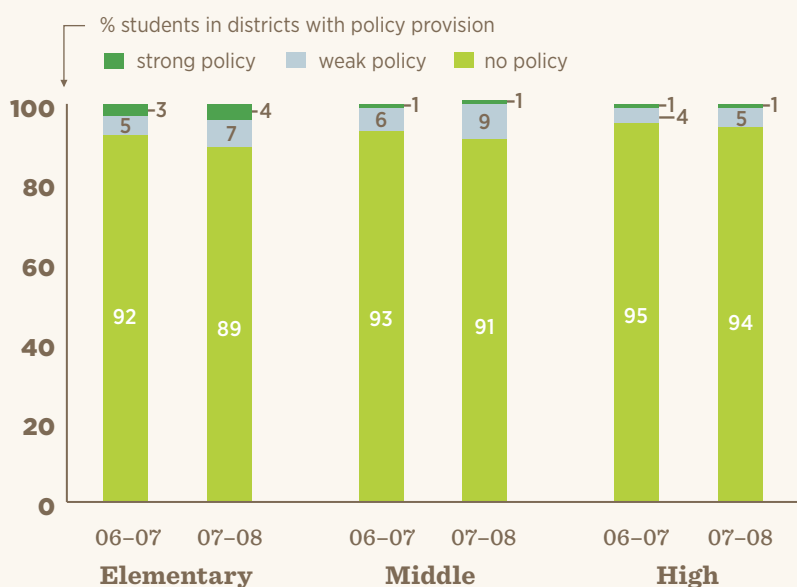
We defined **STRONG POLICY PROVISIONS** as those that required action and specified an implementation plan or strategy. They included language such as shall, must, will, require, comply and enforce. **WEAK POLICY PROVISIONS** offered suggestions or recommendations, and some required action, but only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

## Other Beverage Restrictions

### Calorie Content

- By the first day of the 2007-08 school year, more than 89 percent of all students were enrolled in a district that did not have a policy limiting the amount of calories for beverages sold through competitive food and beverage sources; a slight change from the first year of the policy requirement.
- Among district policies that did address this issue in their policy as of the beginning of the 2007-08 school year, it was more likely that calorie content restrictions were suggested or encouraged (*weak* policy), as opposed to required (*strong* policy).

FIGURE 5.11 Calorie Content of Competitive Beverages



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

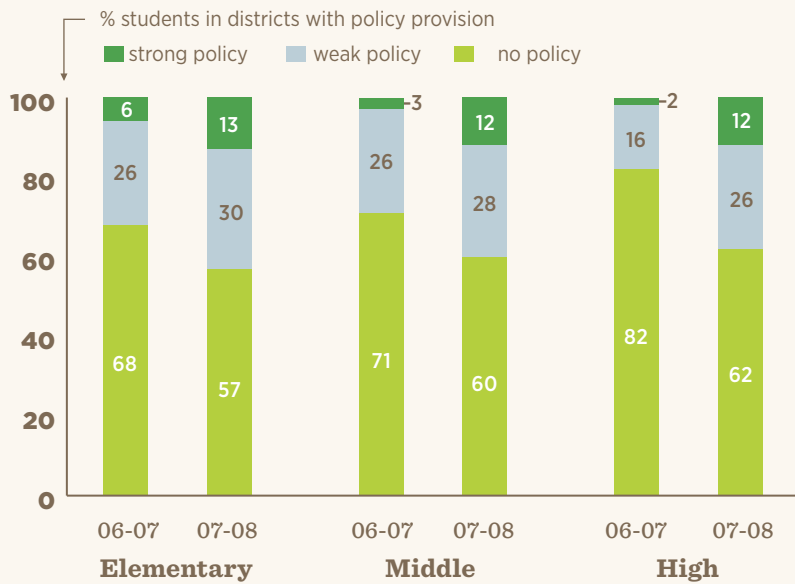
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### Fat Content of Milk

Although consumption of milk outside of the school meal program is relatively uncommon across all grade levels,<sup>78</sup> a number of districts have included policy provisions with suggested or required limits on milk fat sold through competitive food and beverage venues.

- More than 38 percent of all students were enrolled in a district that addressed milk fat in its district policy as of the first day of the 2007–08 school year, but few had *strong* policies that specifically limited options to skim or 1% milk.
- Most of the policy changes regarding milk fat requirements occurred at the middle and high school levels during the two-year period.

FIGURE 5.12 Fat Content of Milk



Fewer than 13 percent of all students were enrolled in a district with a strong policy that specifically limited milk products to skim or 1% milk by the first day of the 2007–08 school year.

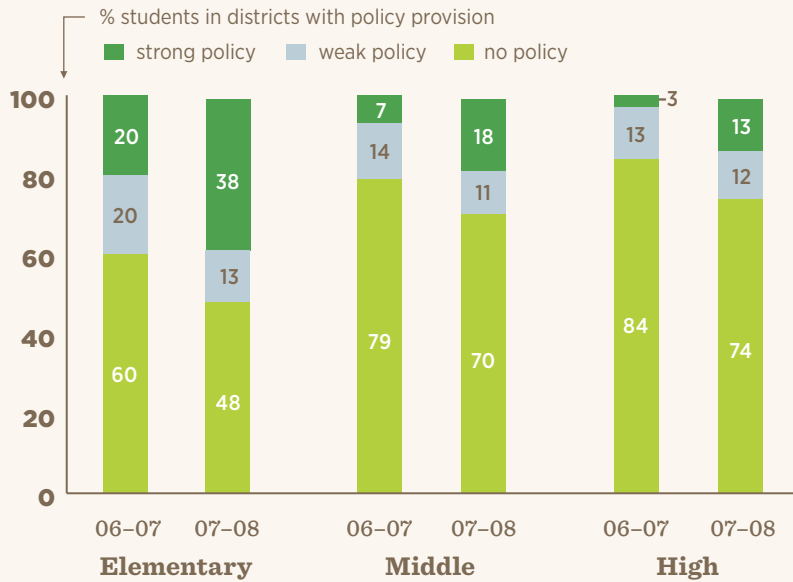
Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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.

### Caffeine Content of Beverages

- By the first day of the 2007-08 school year, more than 49 percent of elementary students, 71 percent of middle school students and 75 percent of high school students were enrolled in a district that does not prohibit caffeine for all beverages sold and served through competitive food and beverage venues in their policy.
- During the same period, elementary students were more than twice as likely to be enrolled in a district with a policy that banned caffeine in beverages at their grade level than were middle and high school students.

FIGURE 5.13 Caffeine Content of Beverages



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

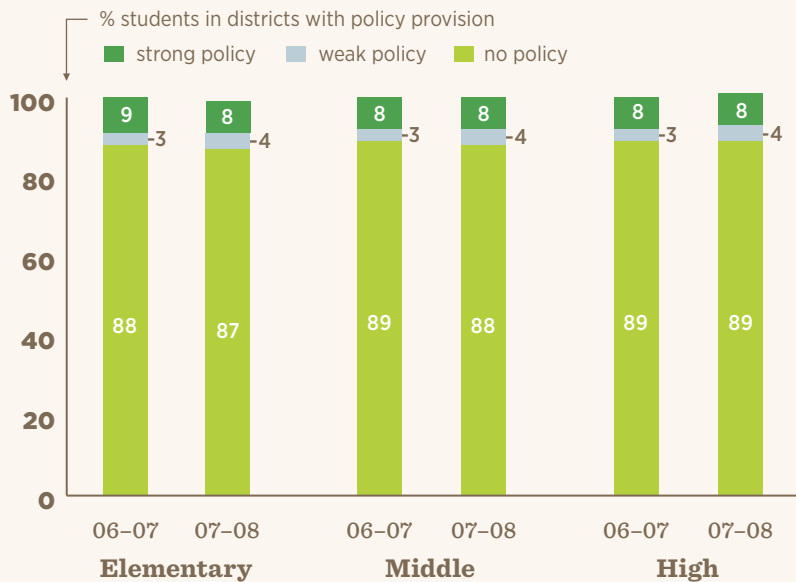
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## Availability of Free Drinking Water throughout the School Day

A randomized controlled trial conducted during the 2006–07 school year found that increasing student access to free drinking water throughout the school day combined with a coordinated nutrition education program was associated with reducing the risk of being overweight among elementary students in deprived urban areas of Germany.<sup>79</sup> Making free drinking water available on campus throughout the school day is one policy strategy that some districts have used to reduce student consumption of sugar-sweetened beverages and other beverages that offer little to no nutritional value.

- By the first day of the 2007–08 school year, only 12 percent of all students were enrolled in a district with a policy that addressed the availability of free drinking water throughout the day.
- Most of these policies were *strong* and included specific requirements to make drinking water freely available throughout the school day, as opposed to making water available only in the cafeteria and/or gymnasium.

FIGURE 5.14 Availability of Free Drinking Water throughout the School and Day



By the beginning of the 2007–08 school year, 88 percent of all students were enrolled in a district that had no policy regarding the availability of free drinking water throughout the day.

Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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## Advertising and Marketing of Foods and Beverages in Schools

Food and beverage marketing in public schools across the United States has grown substantially in the last decade. Much of this growth has been due to efforts by food and beverage companies to increase revenue and generate product or brand loyalty; the ability of these companies to reach large numbers of children and adolescents consistently and at one time; and the revenue opportunities that such marketing practices offer to financially strapped districts and schools.<sup>80</sup> The direct advertising and marketing strategies employed by food and beverage companies in schools include: displaying logos on athletic scoreboards, fields, gyms, newspapers, yearbooks and screensavers; providing free textbook covers that include their advertisements; and promoting unhealthy foods and beverages on vending machine fronts.<sup>81</sup>

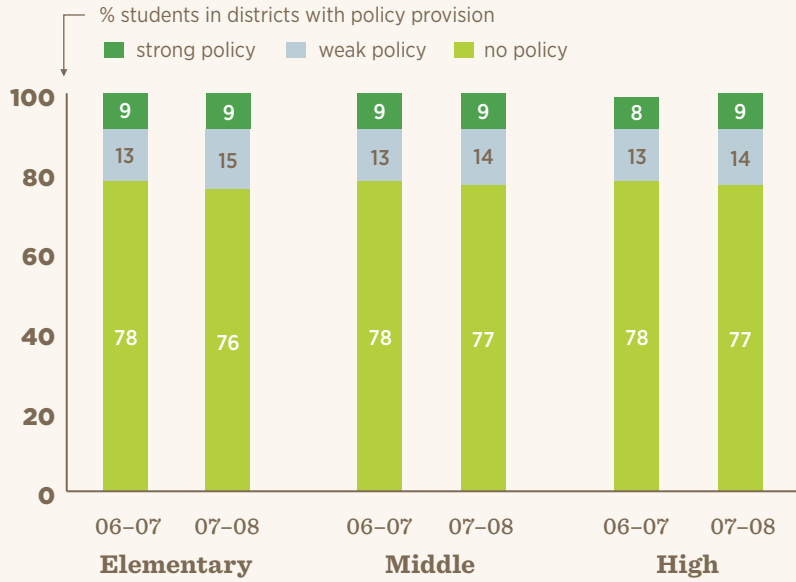
In 2006, the Institute of Medicine (IOM) concluded that food and beverage marketing influences the diets and behaviors of children and youths.<sup>82</sup> Competitive foods and beverages are widely available in U.S. schools, yet no national standards currently exist for restricting the marketing of these products on campuses.<sup>83</sup> The IOM specifically recommended that state and local education authorities, with support from parents, health officials and other stakeholders, promote healthy diets for children throughout the school environment. Further, the IOM encouraged food and beverage companies to “adopt policies and best practices that promote the availability and marketing of foods and beverages that support healthful diets.”<sup>84(p. 14)</sup>

Although the Child Nutrition and WIC Reauthorization Act of 2004 did not address the marketing of foods and beverages in schools, some districts incorporated such provisions into their wellness policy during the two-year period.

- By the first day of the 2007–08 school year, nearly one-quarter of all students were enrolled in a district with a policy that encouraged or required promotion of healthy food and beverage options throughout the school (e.g., preferential pricing for healthy items, healthy food posters in the cafeteria and throughout the school). The majority of these students were in a district with a weak policy that encouraged such promotion, as opposed to a *strong* policy that required it.
- By the first day of the 2007–08 school year, approximately one-quarter of all students were enrolled in a district with a policy that discouraged or prohibited the marketing of unhealthy foods and beverages in the school. The majority of these students were in a district that with a *strong* policy that explicitly prohibited unhealthy food and beverage marketing in school.
  - The percentage of students in a district with a *strong* policy that prohibited the marketing of unhealthy foods and beverages in school remained relatively low at 17 percent. However, the percentage of students enrolled in a district with such a policy increased by more than 54 percent at the elementary level, more than 78 percent at the middle school level and more than 100 percent at the high school level during the two-year period.

Although relatively uncommon, wellness policy prohibitions on the marketing of unhealthy foods and beverages increased substantially during the two-year period.

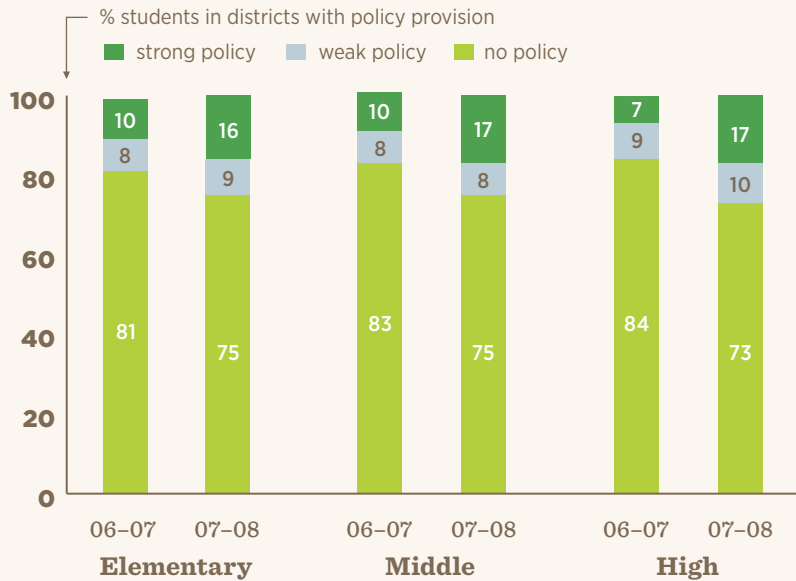
FIGURE 5.15 Promotion of Healthy Foods and Beverages



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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FIGURE 5.16 Restrictions on Marketing of Unhealthy Foods and Beverages



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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## Competitive Food Restrictions by Socioeconomic Status and Race/Ethnicity

Certain competitive food policies also varied by district socioeconomic status (SES)<sup>g</sup> and the racial/ethnic composition<sup>h</sup> of the districts' students.<sup>i</sup> All data below represent findings by the first day of the 2007–08 school year.

### Limits on Access to Competitive Foods

#### Socioeconomic Status

- At the elementary level, students in low- or medium- SES districts were *less* likely to be in a district with a policy that restricted or prohibited vending machine sales or school stores than were students in high-SES districts.
- At the high school level, students in low SES districts were *less* likely to be in a district with a policy that restricted or prohibited vending machine sales than were students in high-SES districts.

#### Race/Ethnicity

- Regardless of grade level, students in diverse racial/ethnic districts were *more* likely to be in a district with a *strong* policy that 1) restricted or prohibited vending machine sales; and 2) restricted or prohibited school stores on campus than were students in predominantly white districts.
- At the elementary school level, students in predominantly Latino districts were *more* likely to be in a district with a *strong* policy that prohibited school stores than were students in predominantly white districts.

Overall, policies related to competitive foods and beverages generally did not vary between districts where the majority of the student population was black and those where it was white.

<sup>g</sup>Throughout this document, free and reduced-price lunch (FRL) participation has been used as a proxy for socioeconomic status (SES) within districts. FRL is based on verified family income or categorical eligibility based on household participation in other federal assistance programs including the Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families (TANF).<sup>85</sup> The SES groupings were computed as: low SES (>47% FRL participation), medium SES (>28% to 47% FRL participation), and high SES (0 to 28% FRL participation).

<sup>h</sup>Data on the proportion of students that were white, black or Latino were computed to identify whether the student population was: majority white (>66% white), majority black (>50% black), or majority Latino (>50% Latino). Districts with diverse student populations that were not majority white, black or Latino represent the remaining districts.

<sup>i</sup> Only SES and racial/ethnic variations that were different in analyses controlling for other district-level factors (e.g., SES and/or race/ethnicity, total instruction dollars per pupil, region and locale) have been highlighted in this section.

## Limits on Fat, Sugar and Calorie Content of Competitive Foods and Beverages

### Socioeconomic Status

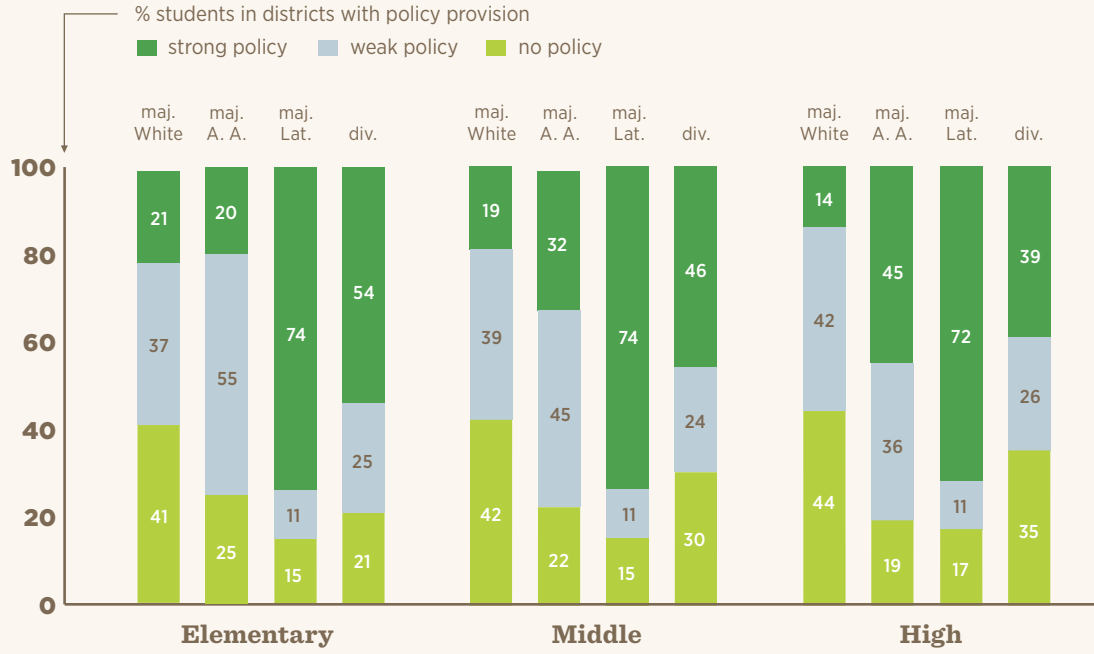
- At the elementary and middle school levels, students in medium-SES districts were *less* likely to be in a district with a *strong* policy that imposed specific limits on the fat content of competitive foods than were students in high-SES districts.
- At the high school level, students in low or medium-SES districts were *less* likely to be in a district with a *strong* policy that required milk products be limited to skim or 1% milk than were students in high-SES districts.

### Race/Ethnicity

Differences in competitive food and beverage content restrictions also varied by racial/ethnic composition of the student population. With a few exceptions, policies related to competitive foods and beverages generally did not vary between districts where the majority of the student population was black and those where it was white.

- At the elementary level, students in diverse racial/ethnic districts were *more* likely than students in predominately white districts to be in a district with a policy that 1) suggested restrictions or specifically limited the sugar, fat or calorie content of competitive foods; 2) limited or banned the sale of regular soda; 3) limited or banned the sale of other sugar-sweetened beverages; or 4) restricted or banned caffeinated beverages.
- At the elementary level, students in predominantly Latino districts were *more* likely than students in predominantly white districts to be in a district with a policy that 1) suggested restrictions or specifically limited the fat content of competitive foods; 2) limited or banned the sale of regular soda; or 3) restricted or banned caffeinated beverages.
- At the middle school level, students in diverse racial/ethnic districts were *more* likely than were students in predominantly white districts to be in a district with a *strong* policy that limited or banned the sale of regular soda
- At the middle and high school level, among predominately black districts, no students were enrolled in a district with a *strong* policy that placed specific limits on the calorie content of competitive foods.
- At the middle and high school level, students in diverse racial/ethnic districts were *more* likely than were students in predominantly white districts to be in a district with a policy that suggested or completely limited competitive food fat content or calories per serving size.
- At the middle and high school level, students in predominantly Latino districts were *more* likely than were students in predominantly white districts to be in a district with a policy that 1) suggested restrictions or specifically limited the fat content of competitive foods; or 2) banned the sale of regular soda.
- At the high school level, students in predominantly Latino districts were *more* likely than were students in predominantly white districts to be in a district with a *strong* policy that limited milk sales to skim or 1% milk.
- At the high school level, students in predominantly black districts were *more* likely than were students in predominantly white districts to be in a district with a policy that suggested restrictions or specifically limited the fat content of competitive foods.

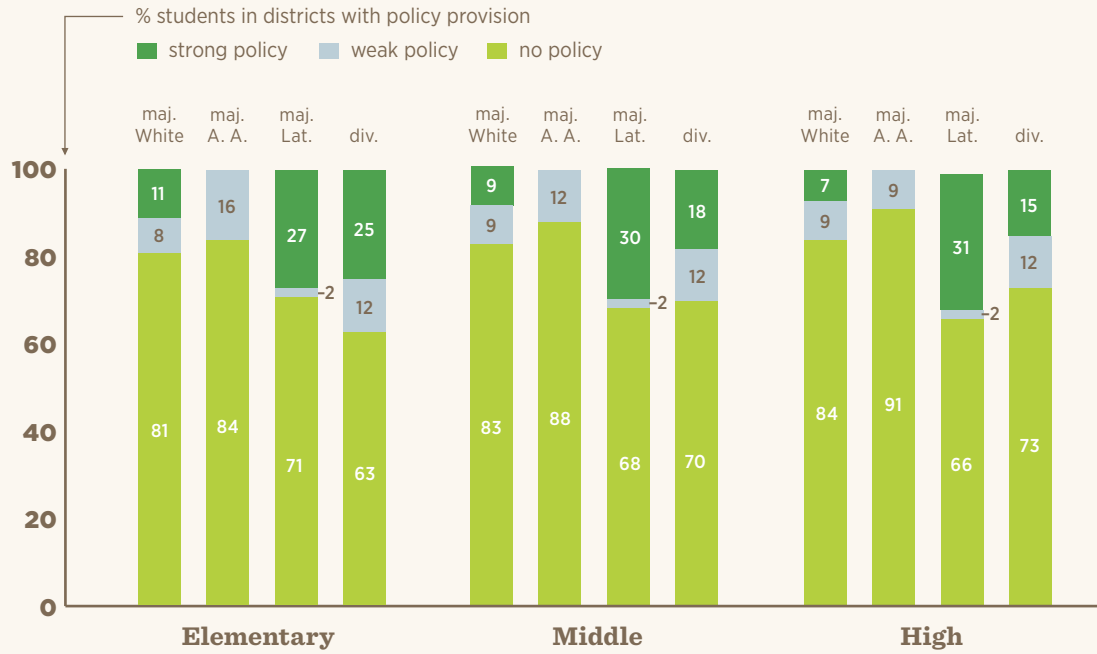
FIGURE 5.17 Fat Content of Competitive Foods by District Racial/Ethnic Composition



Data reflect policies in place by the first day of the 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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.

FIGURE 5.18 Calorie Content of Competitive Foods by District Racial/Ethnic Composition



Data reflect policies in place by the first day of the 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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.

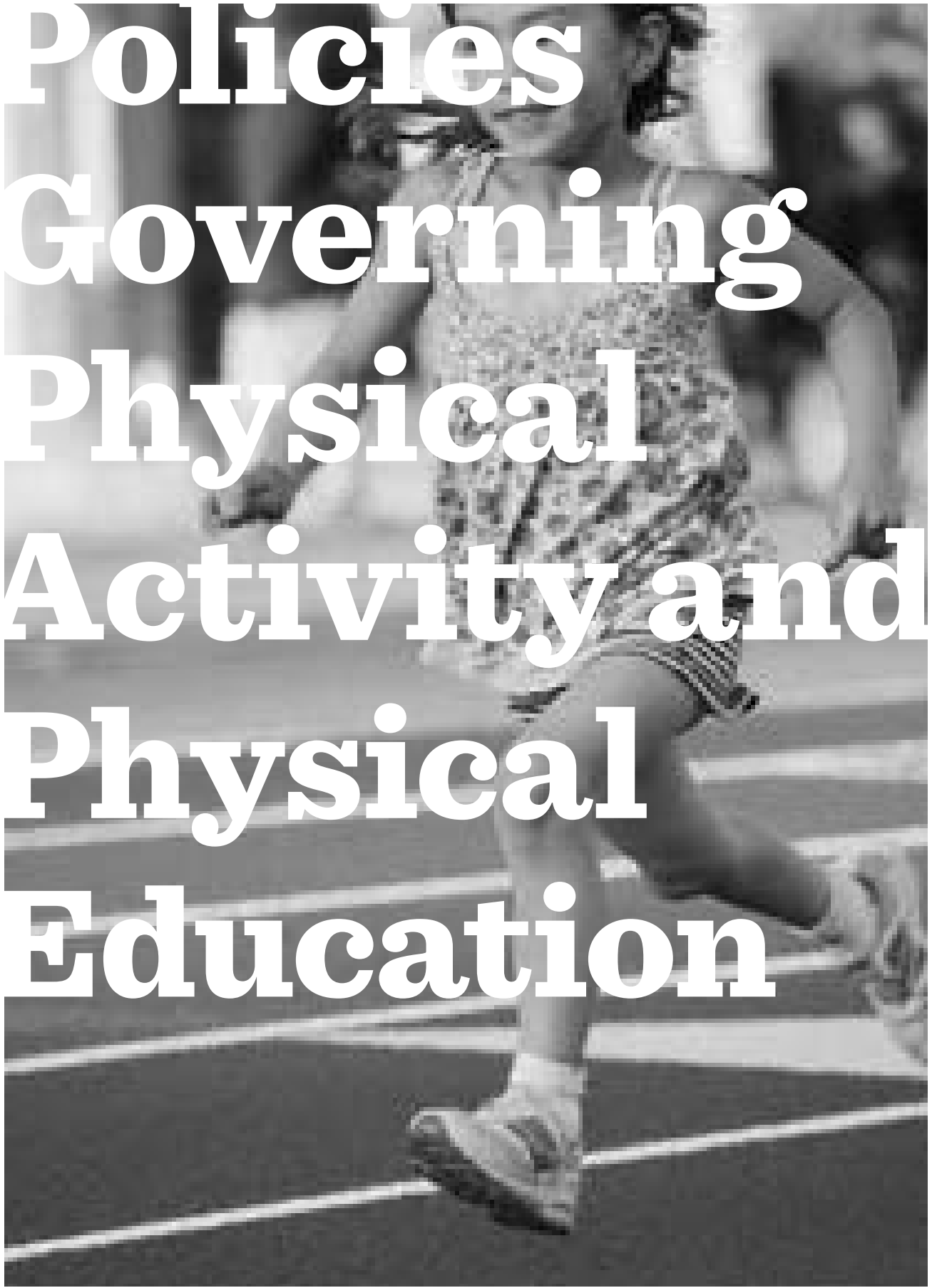
Among districts with a predominately black student population, there were no strong policies setting specific limits on the calorie content of competitive foods at the middle and high school levels.

## Summary

While the vast majority of students were enrolled in a district that suggested or required guidelines governing competitive foods and beverages, the restrictions set forth by districts varied greatly. Across all provisions, district wellness policies were clearly strengthened during the two-year period. The gains in policy strength demonstrated by data presented in this chapter 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 only counted for the 2007–08 school year;*
- *some district policies were revised between the school years;*
- *many policies included delayed effective dates for the competitive food and beverage restrictions, which did not fully take effect until the 2007–08 school year; and/or*
- *competitive food and beverage access and content restrictions were increasingly applied at the middle and high school levels by the 2007–08 school year—an indicator that districts are gradually expanding the competitive food and beverage policies to also apply at the secondary school level.*

By far, competitive foods and beverages were the most common and diverse set of policy provisions included in the district wellness policies. However, analyses of data from the first two years of the wellness policy requirement show great variability in the strength and scope of district-level policies governing competitive foods and beverages.



# Policies Governing Physical Activity and Physical Education





## 6

## CHAPTER

## Policies Governing Physical Activity and Physical Education

Data from the 2003–04 National Health and Nutrition Examination Survey (NHANES) have shown that physical activity levels, as assessed by accelerometer, decline significantly from childhood to adolescence and continue to decline into adulthood.<sup>86</sup> Forty-two percent of children ages 6 to 11 met the recommendation for 60 minutes of daily physical activity, yet only 8 percent of adolescents ages 12 to 19 met the recommendation. Among adults, fewer than 5 percent achieved 30 minutes of daily physical activity, which is recommended by the Centers for Disease Control and Prevention (CDC).<sup>87</sup> Compared with boys, girls were less likely to engage in an adequate amount of moderate-to-vigorous physical activity by the time they reach adolescence and into adulthood. This trend was more pronounced among Hispanic and black females than Asian-American and white females.<sup>88</sup> One study estimated that girls fell below the recommended level of moderate-to-vigorous physical activity for weekday activity at 13.1 years, while boys fell below at 14.7 years.<sup>89</sup>

The U.S. Department of Health and Human Services' *Physical Activity Guidelines for Americans* and the National Association for Sport & Physical Education (NASPE) recommend that children engage in at least 60 minutes, and up to several hours, of physical activity daily. They also recommend that moderate-to-vigorous physical activity should account for the majority of the activity time; the activity should be accumulated in several short bouts throughout the school day; and strength training should be included. Extended periods of inactivity (e.g., more than two hours) are discouraged.<sup>90,91</sup>

Schools serve as an excellent venue to provide young people the opportunity for daily physical activity and to

build skills that will support lifelong healthy behaviors. The CDC Task Force on Community Preventive Services reports insufficient evidence to determine the effectiveness of classroom-based health education focused on providing information on increasing physical activity levels and physical fitness.<sup>92</sup> However, the task force recommends implementing programs that increase the length of, or activity levels in, school-based physical education classes based on strong evidence of their effectiveness in improving both physical activity levels and physical fitness among school-age children and adolescents.<sup>93</sup> In addition, several recent studies have found a positive association between school-based physical activity and cognitive functioning, on-task behavior, motor skills, self-esteem and body image, concentration, memory, and classroom behavior in elementary students.<sup>94-96</sup>

The Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265, Section 204) required that each school district's wellness policy include goals for physical activity. This chapter includes data showing the percentages of students enrolled in districts nationwide that met this requirement by the first day of the 2006–07 and 2007–08 school years, which were the first two years of the wellness policy requirement. It also provides examples of specific physical activity provisions that were or were not incorporated into the district wellness policies for those school years. Because physical education is a primary strategy for increasing students' physical activity at school, this chapter also presents data showing the extent to which districts address physical education, even though federal legislation did not require the district policies to include language about physical education.

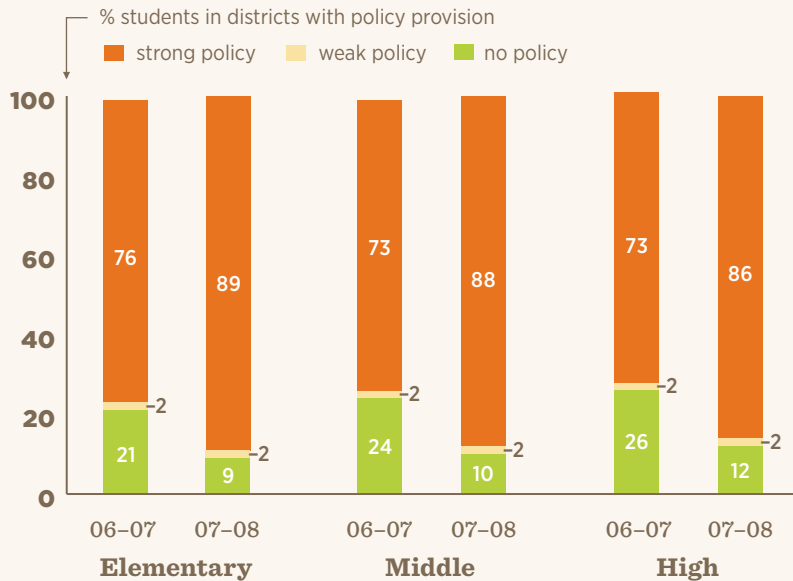
For each policy provision described, data are presented on the percentage of students in a district with: 1) a strong policy; 2) a weak policy; or 3) no policy. We defined strong policy provisions as those that were definitely required and specified an implementation plan or strategy. Strong policy provisions 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.

## Physical Activity Goals

- By the beginning of the 2007-08 school year, more than 86 percent of all students were enrolled in a district with a policy that included goals for physical activity.
  - During the two-year period, the percentage of students enrolled in a district with a policy that had physical activity goals increased by 17 percent in elementary schools, 20 percent in middle schools and 19 percent in high schools.

FIGURE 6.1 Physical Activity Goals\*



By the first day of the 2007-08 school year, more than 86 percent of all students were enrolled in a district that included physical activity goals in their wellness policy.

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.

\*Required wellness policy element

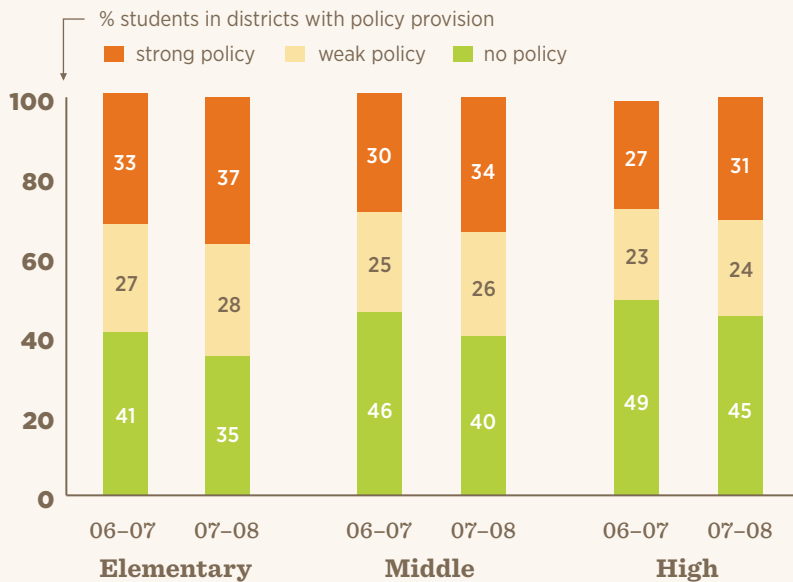
Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

## Physical Activity Opportunities Outside of Physical Education

School-based physical activity opportunities that take place outside of physical education include physical activity breaks, initiatives that integrate regular physical activity throughout the school day and—at the elementary level—recess. The Guidelines for School and Community Programs to Promote Lifelong Physical Activity among Young People, which were developed by the CDC, recommend that physical activity programs emphasize enjoyable participation in lifelong physical activities; include a diverse range of competitive and non-competitive activities; help build young people’s skills and confidence; and promote physical activity as part of a broader coordinated school health program.<sup>97</sup>

- By the first day of the 2007–08 school year, 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 policy provisions varied greatly.
  - Fewer than 40 percent of all students were enrolled in a district with a *strong* policy that required physical activity opportunities to be provided outside of physical education for every grade level. This represents an increase of 13 percent to 14 percent across all grade levels during the two-year period.
  - From 24 percent to 28 percent of students were enrolled in a district with a *weak* policy that suggested physical activity opportunities be provided outside of physical education, or a policy that required such opportunities for some, but not all, grades.
  - From 35 percent to 45 percent of students were enrolled in a district with a policy that *did not* address whether physical activity should or must be provided outside of physical education for every grade level.

FIGURE 6.2 Physical Activity Outside of Physical Education for Every Grade Level



Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

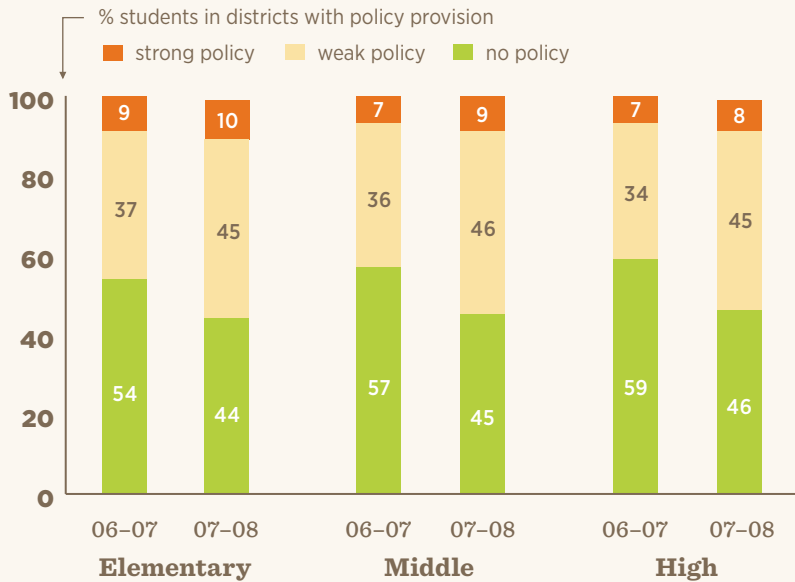
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### Physical Activity Opportunities throughout the School Day

According to data from the CDC’s School Health Policies and Programs Study (SHPPS), participation in physical activity opportunities during the school day was most common in middle schools, 67 percent, compared with 44 percent and 22 percent at the elementary and high school levels, respectively, during the 2006–07 school year.<sup>98</sup>

- By the beginning of the 2007–08 school year, requirements for physical activity opportunities throughout the school day were not commonly addressed in the district wellness policies.
  - Fewer than 10 percent of all students were enrolled in a district with a *strong* policy that required physical activity opportunities to be provided throughout the school day (e.g., physical activity breaks).
  - More than 45 percent of all students were enrolled in a district with no policy provision that addressed providing physical activity opportunities throughout the school day, including physical activity breaks.

FIGURE 6.3 Physical Activity throughout the School Day



By the first day of the 2007–08 school year, fewer than 10 percent of students were enrolled in a district that required physical activity opportunities to be provided throughout the school day.

Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year. Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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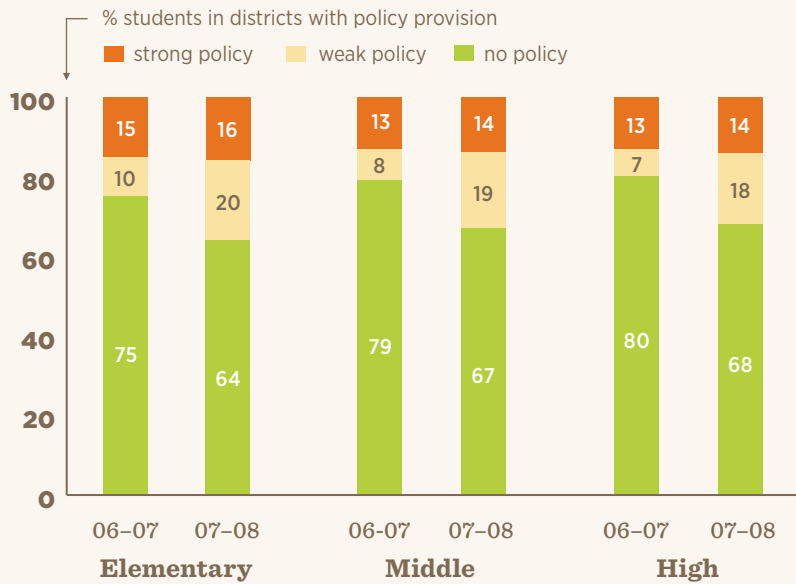


## Discourage Using or Withholding Physical Activity as Punishment

The CDC guidelines described above discourage using or withholding physical activity as a punishment for students.<sup>99</sup> However, data from SHPPS indicated that 82 percent of schools with regularly scheduled recess periods allowed staff to exclude students from participating as punishment for bad behavior. Only 17 percent of schools discouraged such practices. Furthermore, 32 percent of schools allowed staff to use physical activity as punishment (e.g., running laps) for bad behavior in physical education classes. Only 9 percent of schools discouraged such practices.<sup>100</sup>

- By the first day of the 2007–08 school year, more than one-third of all students were enrolled in a district with a policy that discouraged using or withholding physical activity as punishment.
- During the same period, only 16 percent of elementary students and 14 percent of middle and high school students were enrolled in a district with a *strong* policy that explicitly prohibited using or withholding physical activity as punishment.

FIGURE 6.4 Discouraged Using or Withholding Physical Activity as Punishment



By the first day of the 2007–08 school year, only about one-third of all students were enrolled in a district with a wellness policy that discouraged using or withholding physical activity as punishment.

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

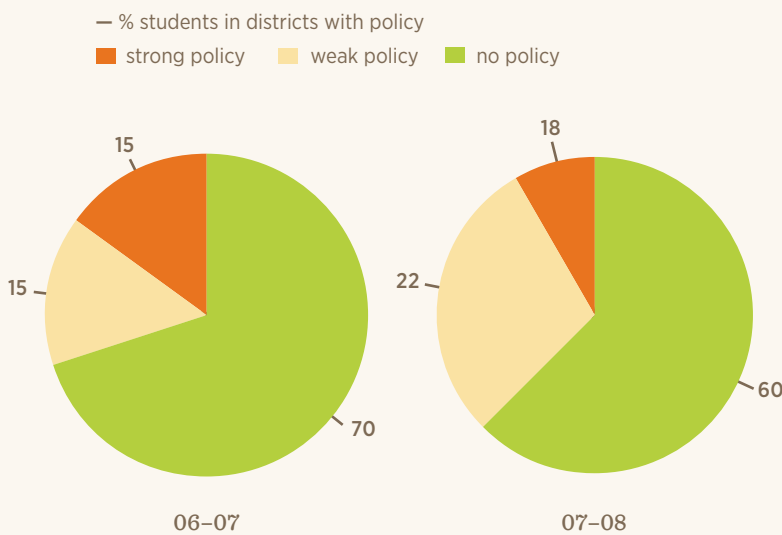
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## Daily Recess Requirements for Elementary Students

NASPE recommends that elementary schools provide students with at least one daily recess period, for a minimum of 20 minutes.<sup>101</sup> According to SHPPS data, 74 percent of elementary schools provided recess, for approximately five days per week and 30 minutes per day on average during the 2006–07 school year.<sup>102</sup>

- Although the SHPPS data indicate that daily recess is a common practice at the elementary level, 60 percent of all elementary students were enrolled in a district by the first day of the 2007–08 school year that did not address providing daily recess in their wellness policy.
  - Only 22 percent of students were enrolled in a district with a *weak* policy that either encouraged or required daily recess, but not for every elementary grade level.
  - Only 18 percent of students were enrolled in a district with a *strong* policy that required daily recess for all elementary students.

FIGURE 6.5 Daily Recess Requirements for Elementary Students



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Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

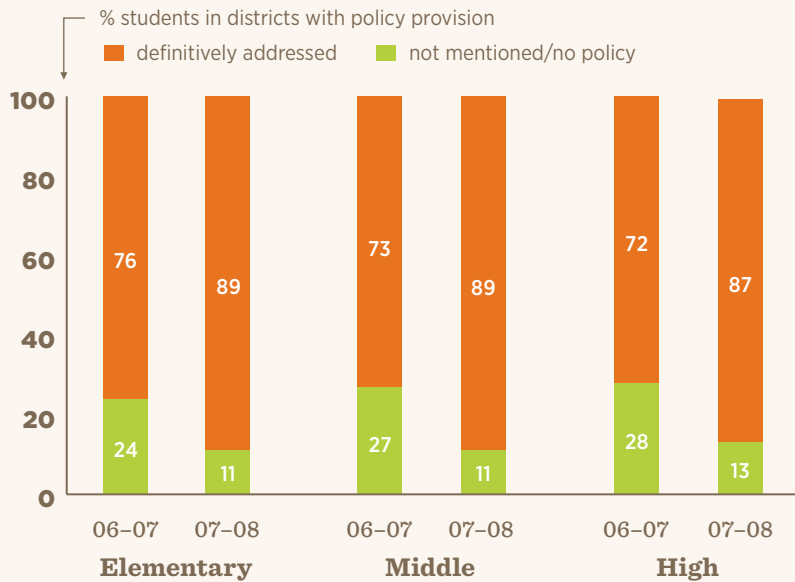
## Physical Education Provisions

According to NASPE, a quality physical education program should serve as the foundation of a comprehensive school physical activity program.<sup>103</sup> A quality physical education program includes: 1) daily physical education; 2) a curriculum meeting the National Standards for Physical Education; 3) student assessment aligned with instruction; 4) a certified physical education instructor; 5) a pupil-teacher ratio that is equivalent to that in the classroom context; and 6) adequate equipment.<sup>104</sup>

- Although physical education provisions were not required as part of the district wellness policy, more than 87 percent of students were enrolled in a district that included such provisions within the policy by the first day of the 2007-08 school year. This represents an increase of more than 18 percent during the two-year period.

Some district wellness policies included specific physical education-related provisions and others referenced the state-mandated physical education standards. Data below describe the percentage of students enrolled in a district that either included specific physical education provisions in its policy or a district that referenced state physical education standards.

FIGURE 6.6 Physical Education Provisions Included in Wellness Policies



The vast majority of students were enrolled in a district with a wellness policy that included provisions related to physical education, but the quality and strength of the provisions varied greatly.

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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.

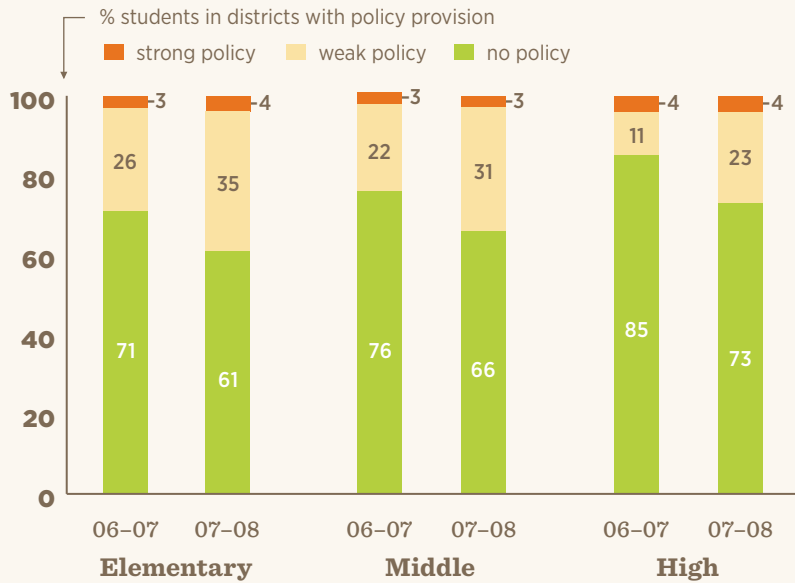
### Physical Education Time Requirements

NASPE recommends that a quality physical education program include instructional periods totaling 150 minutes per week for elementary students and 225 minutes per week for middle and high school students.<sup>105</sup> Data from SHPPS indicated that fewer than 8 percent of all schools provided daily physical education in all grades for the entire school year during 2006–07.<sup>106</sup> SHPPS data also indicated that the total amount of active time spent in a typical physical education period during the 2006–07 school year was 34.9, 39.7, and 44.6 minutes, in elementary, middle and high schools, respectively.<sup>107</sup>

- At the beginning of the 2007–08 school year, only 3 percent to 4 percent of all students were enrolled in a district with a *strong* wellness policy that required the NASPE-recommended amount of weekly physical education be provided.
- During the same period, 35 percent of elementary students, 32 percent of middle school students and 23 percent of high school students were enrolled in a district with a *weak* policy that either included time requirements for physical education that did not meet the NASPE standard or a policy that specified a minimum number of days for physical education, but not the amount of time per day.

Notably, in a number of instances, district wellness policies included the NASPE-recommended time requirements but set requirements for a minimum amount of *physical activity* time rather than *physical education* time. Physical education was included as one possible strategy for meeting the required amount of *physical activity* time per week. In such instances, the district wellness policies essentially reduced the amount of time required for *physical education* each week.

FIGURE 6.7 Physical Education Time Requirements



A number of districts had a policy that required a specific amount of time for physical activity, but not for physical education. In this way, some district wellness policies actually encouraged schools to fall below the NASPE recommendations for time spent in physical education.

Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year. Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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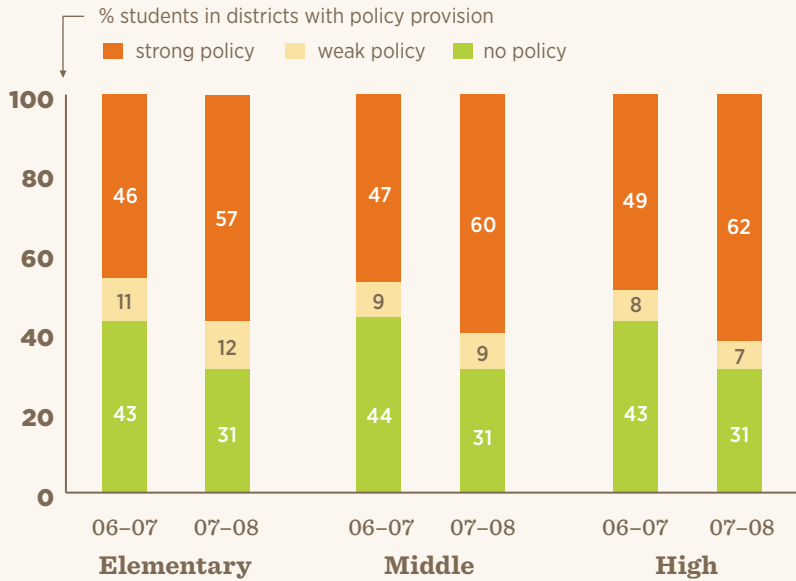


### Physical Education Teaches a Physically Active Lifestyle

Both NASPE and the CDC recommend that a quality physical education program provide students with the knowledge, skills and attitudes necessary to adopt and maintain a physically active lifestyle.<sup>108,109</sup> NASPE recommends that physical education programs teach motor skill development; provide a wide range of developmentally appropriate physical activities; improve personal fitness; provide opportunities to learn positive social skills, such as teamwork and cooperation; and improve self-confidence and self-esteem to help facilitate physical activity throughout the lifespan.<sup>110</sup>

- By the first day of the 2007–08 school year, the majority of students were enrolled in a district that had a policy or followed state-mandated standards requiring physical education to include a component about physically active lifestyles.
  - More than 57 percent of elementary students and more than 60 percent of middle and high school students were enrolled in a district with a *strong* policy that required physical education to include a component about physically active lifestyles.

FIGURE 6.8 Physical Education Taught Physically Active Lifestyle



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

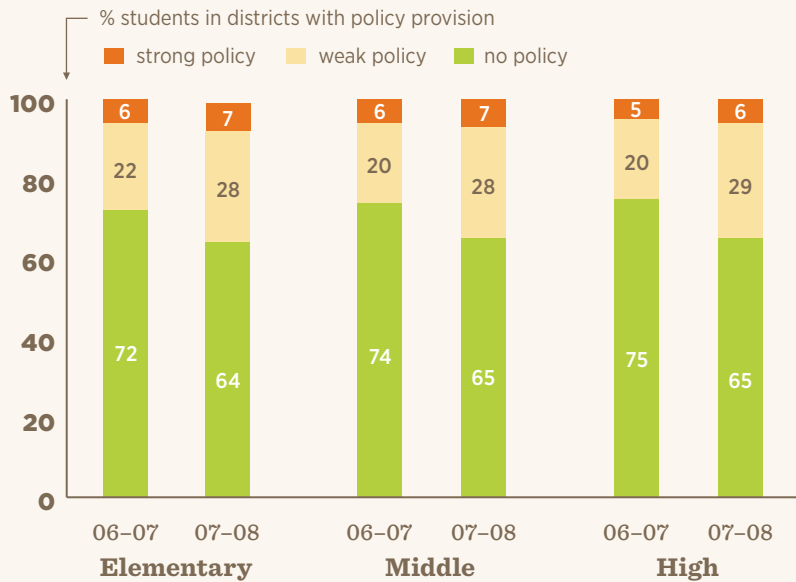
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### Physical Education Time Devoted to Moderate-to-Vigorous Physical Activity

Recommendations set for *Healthy People 2010* by the U.S. Department of Health and Human Services specify that at least one-half of daily physical education class time should be devoted to moderate-to-vigorous physical activity.<sup>111</sup> Studies observing physical activity among third-grade girls nationwide<sup>112</sup> and female middle school students in six states<sup>113</sup> found that time spent in moderate-to-vigorous physical activity during physical education classes fell below the national recommendation. A Canadian study that monitored children during a three-year period found that less time engaged in moderate-to-vigorous physical activity was associated with increased odds of overweight and adiposity among children ages 8 to 10.<sup>114</sup>

- By the beginning of the 2007-08 school year, most students were enrolled in a district with a policy that did not mention moderate-to-vigorous physical activity as part of the physical education provisions.
  - Fewer than 9 percent of students were enrolled in a district with a *strong* policy that required at least one-half of physical education class time be devoted to moderate-to-vigorous physical activity or a district that followed state standards with such requirements.
  - Fewer than 30 percent of students were enrolled in a district with a *weak* policy that encouraged, but did not mandate, these requirements or a district that followed a state standard that encouraged such requirements.

FIGURE 6.9 Physical Education Time Devoted to Moderate-to-Vigorous Physical Activity



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

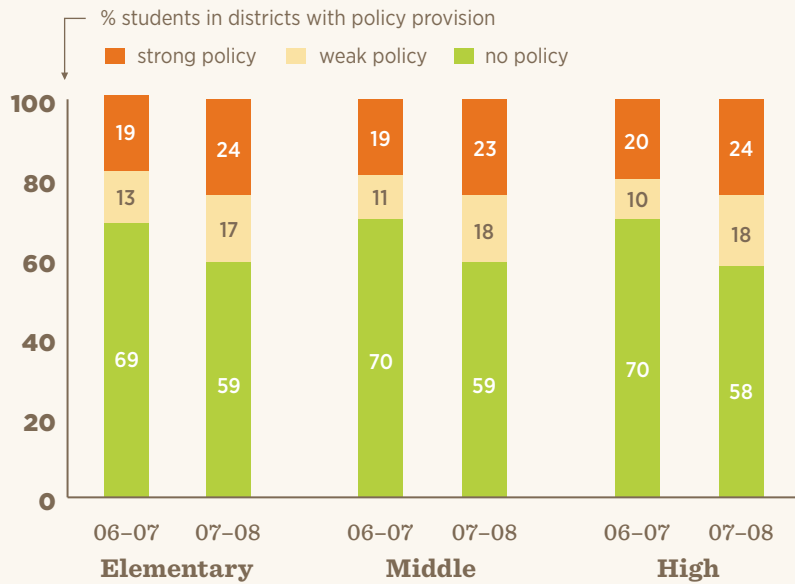
We defined **STRONG POLICY PROVISIONS** as those that required action and specified an implementation plan or strategy. They included language such as shall, must, will, require, comply and enforce. **WEAK POLICY PROVISIONS** offered suggestions or recommendations, and some required action, but only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

### Qualifications of Physical Education Instructors

Most state laws specify certification requirements for instructors seeking to become a state-authorized (e.g., licensed or certified) physical educator.<sup>115,116</sup> National data from SHPPS for the 2006–07 school year indicated that physical education was taught by a physical education teacher or specialist in 89 percent of elementary schools and 94 percent of middle and high schools. Other staff responsible for teaching physical education included health education teachers and teachers of other subjects.<sup>117</sup> Overall, district wellness policies did not require that physical education be taught by a state-authorized physical educator.

- By the first day of the 2007–08 school year, nearly one-quarter of all students were enrolled in a district with a *strong* policy that required physical education to be taught by a state-authorized physical educator or a policy that referenced a state standard with such a requirement.
- During the same period, more than one-half of all students were enrolled in a district with a policy that did not address whether physical education must be taught by state-authorized physical educators.

FIGURE 6.10 Required Physical Education to be Taught by a State-Authorized Physical Educator



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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## Physical Activity and Physical Education Policies by Socioeconomic Status and Race/Ethnicity

Some physical activity and physical education policies also varied by district socioeconomic status (SES)<sup>j</sup> and the racial/ethnic composition<sup>k</sup> of the districts' students.<sup>l</sup> All data below represent findings by the first day of the 2007–08 school year.

### Socioeconomic Status

Certain physical activity and physical education policies varied significantly by SES at the elementary and high school levels. No significant differences were found at the middle school level.

- At the elementary level, students from medium-SES districts were *less likely* than students from high-SES districts to be enrolled in a district with a *strong* policy that required physical activity outside of physical education for every grade level.
- At the elementary level, students from low or medium-SES districts were *more likely* than students from high-SES districts to be enrolled in a district with a strong policy that met the NASPE standard for a minimum of 150 minutes of physical education per week.
- At the high school level, students from low-SES districts were *less likely* than students from high-SES districts to be enrolled in a district with a policy that suggested or required physical activity outside of physical education for every grade level.
- At the high school level, students from low- or medium- SES districts were *less likely* than students from high-SES districts to be enrolled in a district with a policy that: 1) suggested that physical education class time include moderate-to-vigorous physical activity; or 2) required at least one-half of physical education class time to be devoted to moderate-to-vigorous physical activity.

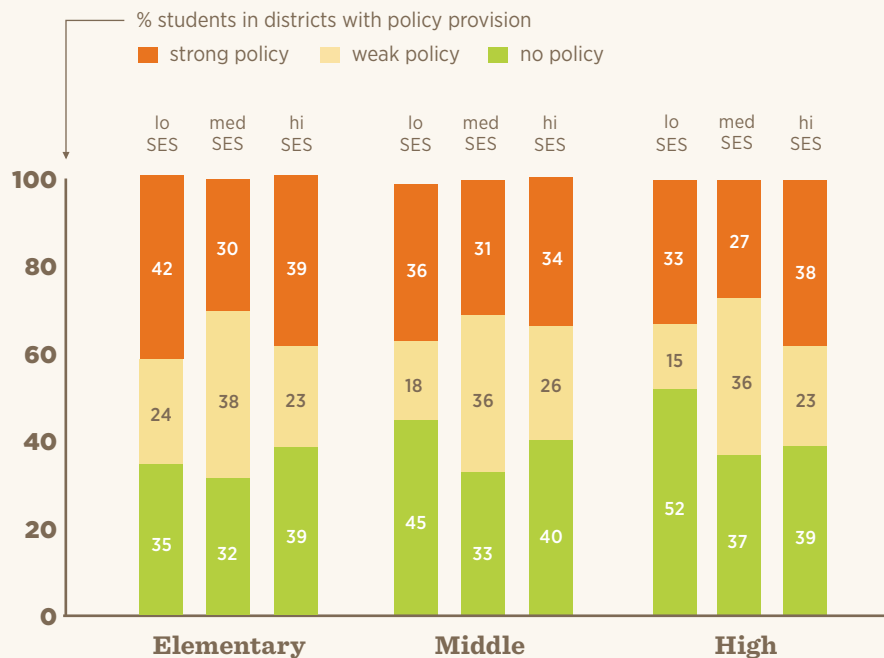
**Elementary students from low- or medium- SES districts were more likely than students from high-SES districts to be enrolled in a district with a strong policy that met the NASPE standard for 150 minutes per week of physical education.**

<sup>j</sup> Throughout this document, free and reduced-price lunch (FRL) participation has been used as a proxy for socioeconomic status (SES) within districts. FRL is based on verified family income or categorical eligibility based on household participation in other federal assistance programs including the Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families (TANF).<sup>118</sup> The SES groupings were computed as: low SES (>47% FRL participation), medium SES (>28% to 47% FRL participation), and high SES (0 to 28% FRL participation).

<sup>k</sup> Data on the proportion of students that were white, black or Latino were computed to identify whether the student population was: majority white (>66% white), majority black (>50% black), or majority Latino (>50% Latino). Districts with diverse student populations that were not majority white, black or Latino represent the remaining districts.

<sup>l</sup> Only SES and racial/ethnic variations that were different in analyses controlling for other district-level factors (e.g., SES and/or race/ethnicity, total instruction dollars per pupil, region and locale) have been highlighted in this section.

FIGURE 6.11 Physical Activity Outside of Physical Education by District Socioeconomic Status



Data reflect policies in place by the first day of the 2007-08 school year.  
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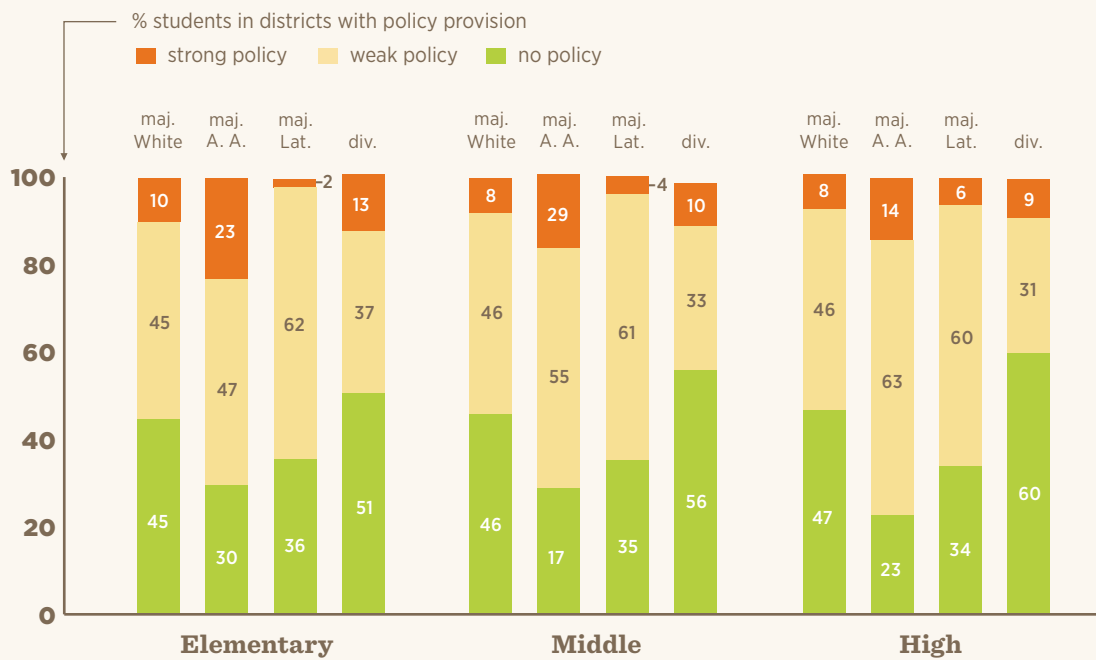
### Race/Ethnicity

Students in predominantly black, Latino and racially/ethnically diverse districts were enrolled in districts with varying physical activity and physical education policy requirements as compared with students in predominantly white districts.

- Across all grade levels, students in predominantly Latino districts were *more likely* than students in predominantly white districts to be in a district with a policy that either encouraged or required physical activity opportunities outside of physical education to be provided for all grade levels.
- Across all grade levels, students in racially/ethnically diverse districts were *less likely* than students in predominantly white districts to be in a district with a policy that either encouraged or required physical activity opportunities outside of physical education to be provided for all grade levels.
- At the elementary and middle school levels, students in predominantly Latino districts were *more likely* than students in predominantly white districts to be in a district with a policy that: 1) suggested that physical education class time include moderate-to-vigorous physical activity; or 2) required at least one-half of physical education class time to be devoted to moderate-to-vigorous physical activity.

- At the elementary level, students in predominantly Latino districts were *less likely* than students in predominantly white districts to be in a district with a *strong* policy that required physical activity opportunities to be provided throughout the day.
- At the high school level, students in predominantly black districts were *more likely* to be in a district with a *strong* policy that required physical activity opportunities to be provided throughout the day.
- At the high school level, students in predominantly Latino districts were *more likely* than students in predominantly white districts to be in a district with a weak policy that suggested that physical education class time include moderate-to-vigorous physical activity than were students in predominantly white districts.

FIGURE 6.12 Physical Activity Outside of Physical Education by District Racial/Ethnic Composition



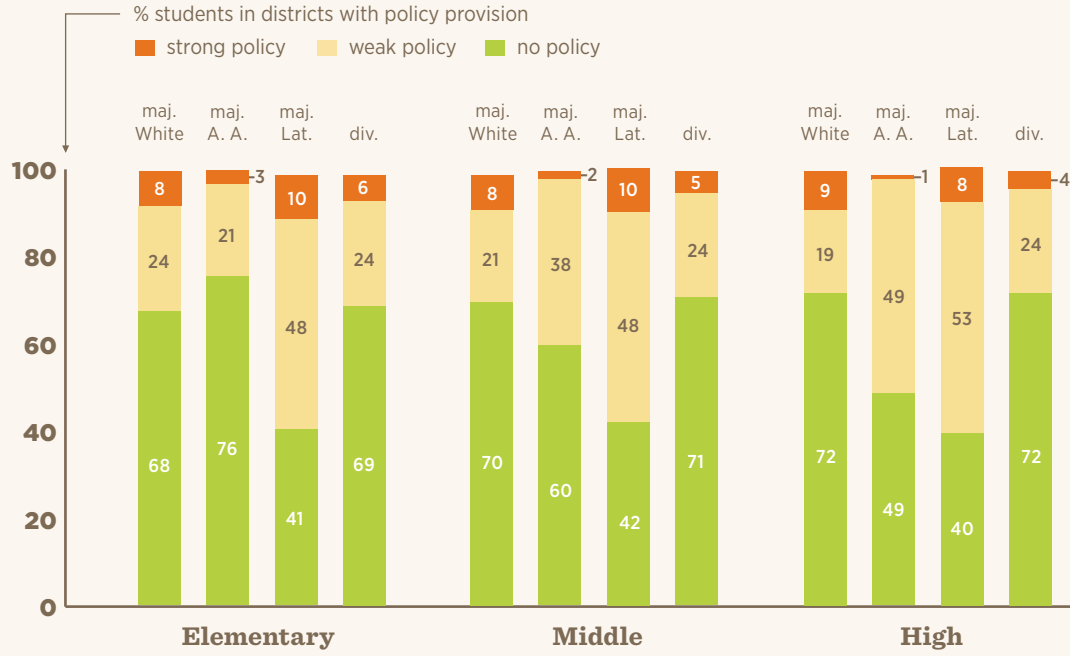
Data reflect policies in place by the first day of the 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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Elementary and middle school students in predominantly Latino districts were more likely to be in a district with a policy that either suggested or required that a portion of physical education class time be devoted to moderate-to-vigorous physical activity.

FIGURE 6.13 Physical Education Time Devoted to Moderate-to-Vigorous Physical Activity by District Racial/Ethnic Composition



Data reflect policies in place by the first day of the 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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.

## Summary

While the vast majority of students were enrolled in a district that included goals for physical activity in its wellness policy, the related policy provisions set forth by districts varied greatly. In most cases, district wellness policies provided *weak* language, rather than *strong* policy requirements, for provisions related to physical activity, such as encouraging (rather than requiring) physical activity opportunities for students throughout the school day. Interestingly, more than 87 percent of students nationwide were enrolled in a district that addressed physical education as part of the wellness policy, even though the Child Nutrition and WIC Reauthorization Act of 2004 did not require this topic to be included in the wellness policy. However, in most cases, district wellness policies fell far short of national standards for physical education among all grade levels and national standards for recess at the elementary level.

Overall, most district wellness policy provisions related to physical activity and physical education did not vary by grade level, and there were not marked changes in these provisions for the first two years of the wellness policy requirement. Because most district wellness policies addressed physical education, Congress will have an opportunity to help districts nationwide identify and establish specific goals for physical education and strengthen requirements for physical activity overall as lawmakers consider the reauthorization of the Child Nutrition and WIC programs.





# Requirements for Wellness Policy Implementation and Evaluation



## Requirements for Wellness Policy Implementation and Evaluation

The Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265, Section 204) required school districts to develop a wellness policy to help create healthier school environments, reduce childhood obesity and prevent diet-related chronic diseases. Monitoring and evaluating the implementation of the district wellness policies is a critical component of the federal mandate. It is equally important to systematically review each district policy to determine if it meets the needs of the given district, is aligned with current scientific recommendations, and is politically and financially feasible.

Preliminary assessments of the implementation of district wellness policies indicated that their evaluation components were fairly weak. Analyses conducted in Colorado and Connecticut found a mean strength rating of 30 and 38, respectively, for district wellness policy provisions related to evaluation. The scores were based on a scale of 1 to 100.<sup>119,120</sup> In addition, early data from national and statewide studies consistently identified limited resources, such as funding, time and labor, as the primary barrier to implementing district wellness policy components.<sup>121-123</sup> It is not yet clear that results from these studies accurately represent national data or trends. More evidence about the implementation of district wellness policies and their impact on school environments is needed.

The Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265, Section 204) required that each school district's wellness policy include a plan for measuring implementation of the policy itself and designate at least one person within the school district or at each school, as appropriate, who is charged with operational responsibility for ensuring that the school meets the wellness policy requirements. This chapter includes

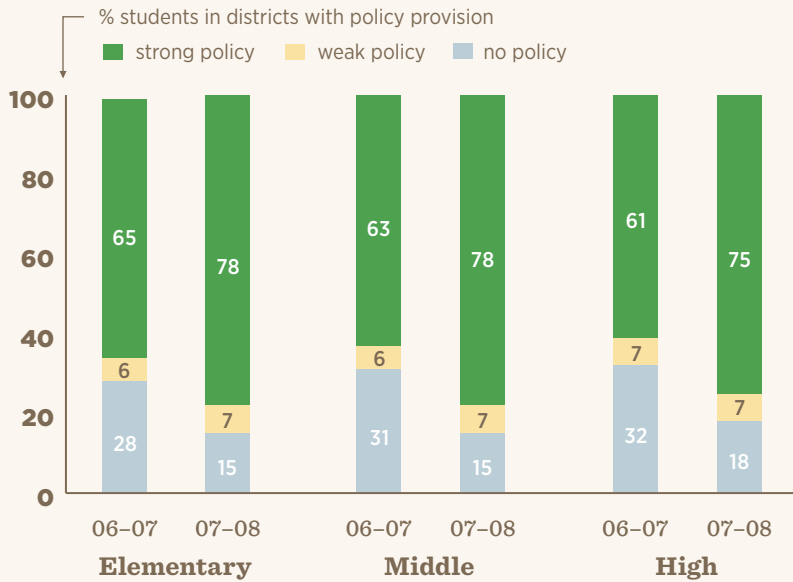
data showing the percentages of students enrolled in districts nationwide that met this requirement by the first day of the 2006–07 and 2007–08 school years, which were the first two years of the wellness policy requirement. It also provides examples of specific implementation and evaluation strategies that districts included in their wellness policies, including assessing and reporting on body mass index (BMI) for individual students.

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.

## Establishing a Plan for Implementation

- By the first day of the 2007-08 school year, more than three-quarters of all students were enrolled in a district with a strong policy that included a specific implementation plan and designated a person responsible for ensuring implementation.
- The proportion of students in a district with this policy provision increased by more than 19 percent at the elementary level and more than 23 percent at the middle and high school levels during the two-year period.

FIGURE 7.1 Plan for Implementation\*



\*Required wellness policy element

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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More than three-quarters of all students nationwide were enrolled in a district with a strong policy that included a specific implementation plan and designated a person responsible for ensuring implementation.

## Implementation Strategies

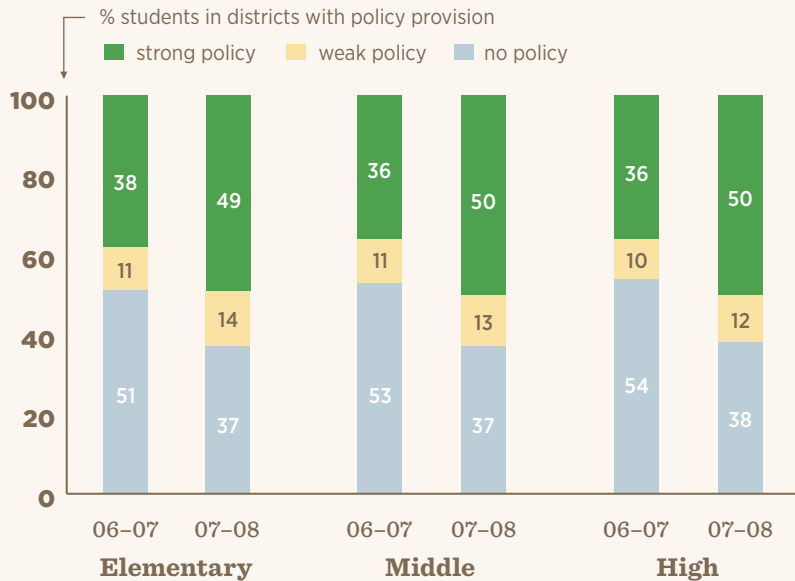
While the majority of students were enrolled in a district with explicit implementation plan requirements, the specific details of these plans varied greatly. To help measure the implementation of wellness policies, some districts required the following: an ongoing health advisory committee; plans to evaluate policy implementation; BMI screening and reporting; reporting on implementation progress; revising the policy; and identifying—within the policy—possible sources of funding to support implementation efforts.

### Health Advisory Committee

Districts that addressed implementation, evaluation, review and revision components in their wellness policy often identified a health or wellness advisory committee with operational responsibility for implementation activities. The committees included a broad range of stakeholders, including nutritionists, physical educators, parents, school administrators and board members, students, community members, and occasionally, members of the medical profession. In some cases, an advisory committee was newly formed after the adoption of the wellness policy. Other districts assigned the implementation-related responsibilities to an existing committee.

- By the beginning of the 2007–08 school year, nearly one-half of all students were enrolled in a district with a *strong* policy that required an ongoing health advisory committee. This represented a 33 percent to 38 percent increase across all grade levels during the two-year period.
- During the same period, from 12 percent to 14 percent of all students were enrolled in a district with a *weak* policy that suggested, but did not require, an advisory committee or a policy that required an advisory committee without specifying that the committee would be ongoing.

FIGURE 7.2 Health Advisory Committee



Wellness policy implementation strategies varied greatly among school districts nationwide.

Data reflect policies in place by the first day of the 2006–07 or 2007–08 school year.  
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## Plans for Evaluation

Requiring an evaluation of policy implementation is one strategy that districts have used to assess the effectiveness of their wellness policy; to identify barriers to successful implementation; to determine if the policy needs to be revised; and to identify areas for continued improvement of outcomes related to student weight status, nutrition and physical activity. When included in the district policies, the frequency of conducting an evaluation ranged from three times per year to every five years. The most common evaluation timeframes cited within the policies were “periodically” and “annually.”

- By the first day of the 2007–08 school year, approximately 54 percent of all students were enrolled in a district with some type of policy that addressed evaluation.
  - Only 10 percent of all students were enrolled in a district with a *strong* policy that had specific evaluation requirements, including measureable outcomes. This represents a slight increase from the beginning of the 2006–07 school year.
  - An additional 44 percent to 46 percent of all students were enrolled in a district with a *weak* policy that suggested, but did not require, an evaluation plan.

## Body Mass Index Screening

Due to high rates of obesity among U.S. children and teens, school-based BMI screening has been proposed as a means of monitoring children’s weight status. While changes in students’ weight status may provide valuable insight about the impact of district wellness provisions over time, significant changes in BMI are unlikely to appear in the early evaluation stages and are affected by many other environmental and contextual factors. The American Academy of Pediatrics recommends that BMI should be calculated and plotted annually for all youths as part of normal health supervision within the child’s medical home,<sup>124</sup> and the Institute of Medicine<sup>125</sup> recommends annual school-based screenings.

Despite such recommendations, school-based BMI screening remains a controversial issue due to concerns about cost and training of staff; falsely mislabeling children as overweight; ensuring confidential results; parental response to BMI reports (e.g., promotion of restrictive dieting); stigmatization of students; increased body dissatisfaction; and an increase in eating disorders.<sup>126,127</sup> One evaluation of a childhood obesity-prevention initiative that included BMI assessments for Arkansas public school students found no evidence of an increase in weight-based teasing, use of diet pills or other inappropriate dieting behaviors five years after the new school policies were implemented.<sup>128</sup> However, few studies have evaluated the effectiveness of BMI screening on reducing or preventing childhood obesity, and there is currently no consensus on this issue.<sup>129,130</sup>

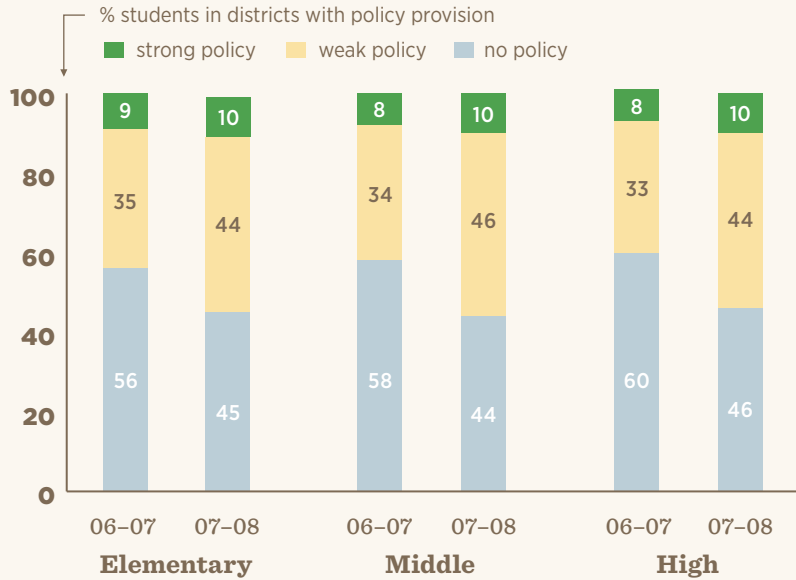
An expert panel convened by the Centers for Disease Control and Prevention recommended that, when school-based BMI data is collected, appropriate follow-up must be provided, and school and community resources (e.g., medical providers) must be made available to help students and parents make healthy nutrition and physical activity choices.<sup>131</sup> Currently, a number of states, including Arkansas, California, Delaware, Florida, Texas and West Virginia, have enacted BMI-related legislative provisions to help assess the impact of childhood obesity-prevention initiatives.<sup>132,133</sup>

Although the federal mandate did not require districts to address BMI screening in their wellness policy, some districts did have a policy that included guidelines for BMI measures. It is unclear if the data below accurately reflect the proportion of districts nationwide that have implemented such provisions.

- By the first day of the 2007–08 school year, approximately 27 percent of all students were enrolled in a district that addressed school-based BMI measurements in their wellness policies.
  - Twenty-six percent of all students were enrolled in a district with a *weak* policy that suggested BMI data be obtained or a policy that referenced a state law suggesting the collection of BMI data.
  - Fewer than 1 percent of all students were enrolled in a district with a *strong* policy that required the collection of BMI data.

By the first day of the 2007–08 school year, about 90 percent of students were enrolled in a district that did **not require** any evaluation of the implementation or effectiveness of the wellness policy.

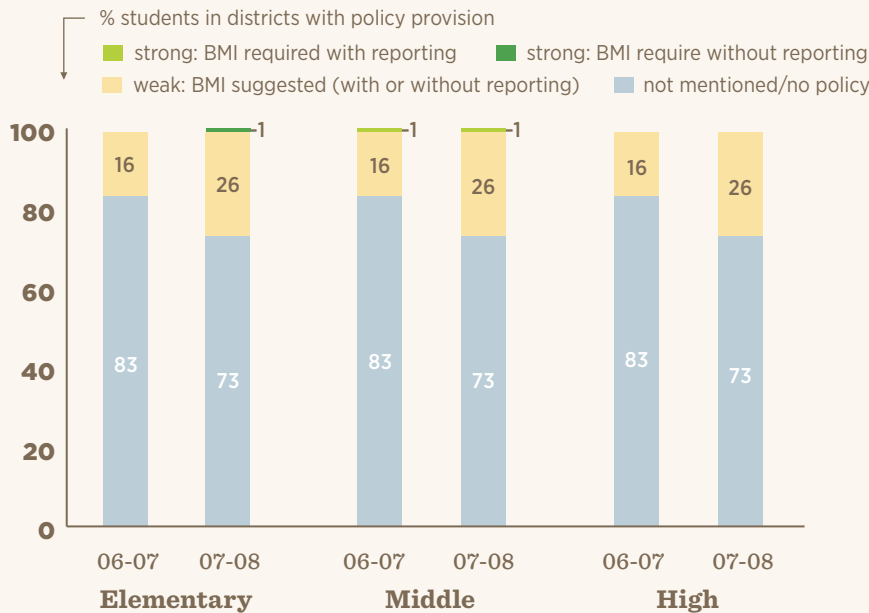
FIGURE 7.3 Plans for Evaluation



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
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FIGURE 7.4 Body Mass Index Screening



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

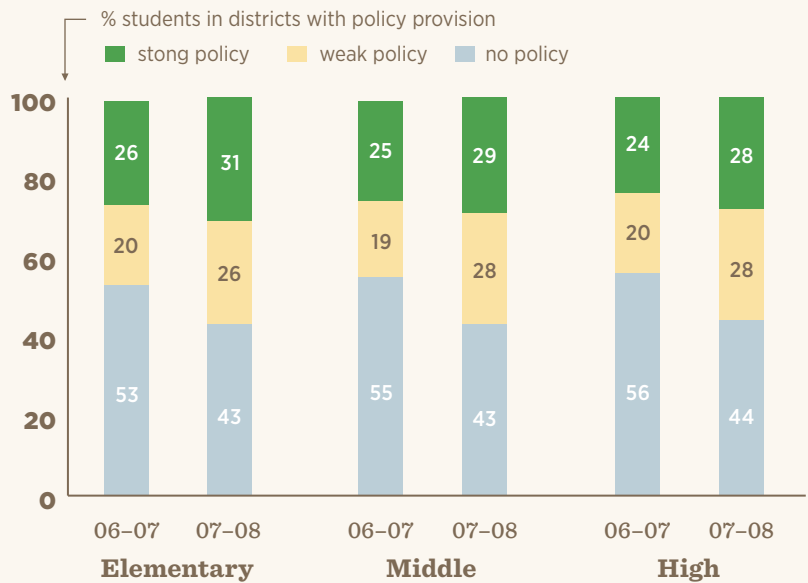
We defined **STRONG POLICY PROVISIONS** as those that required action and specified an implementation plan or strategy. They included language such as shall, must, will, require, comply and enforce. **WEAK POLICY PROVISIONS** offered suggestions or recommendations, and some required action, but only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

### Reporting Requirements

Many districts have required some type of reporting on the progress of implementation efforts to ensure that the wellness policy provisions were being implemented. The timing of these reporting requirements varied greatly, ranging from monthly to once every three years, and annual reporting was the most common requirement.

- By the first day of the 2007-08 school year, the majority of students were enrolled in a district with a policy that included provisions for reporting on implementation progress.
  - Nearly 30 percent of all students were enrolled in a district with a *strong* policy that included specific requirements for compliance reporting, such as including a specific target audience (e.g., district school board, parent teacher association, school administrators) and specific reporting items (e.g., compliance with nutrition standards, required amount of time for physical activity and physical education).
  - More than one-quarter of all students were enrolled in a district with a *weak* policy that suggested, but did not require, reporting on implementation progress or a policy that required reporting without specifying a target audience or explicit reporting items.

FIGURE 7.5 Reported on Policy Compliance and/or Implementation



Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

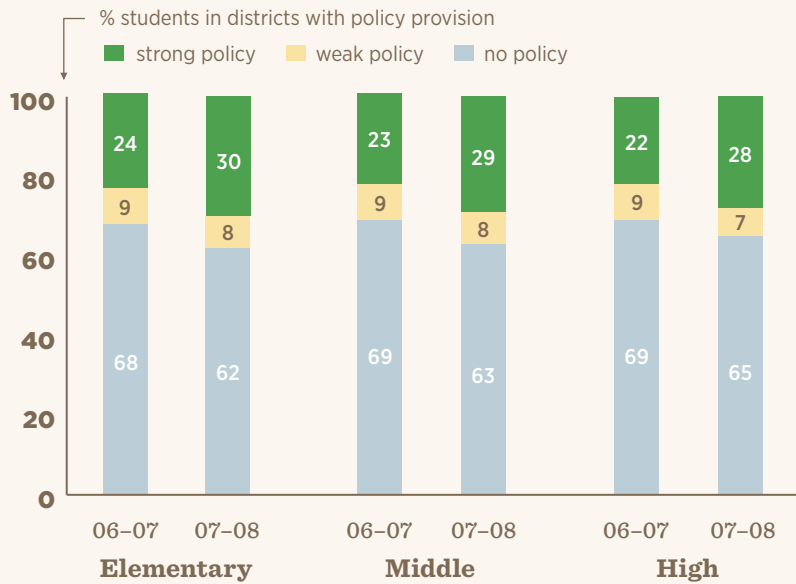
We defined **STRONG POLICY PROVISIONS** as those that required action and specified an implementation plan or strategy. They included language such as shall, must, will, require, comply and enforce. **WEAK POLICY PROVISIONS** offered suggestions or recommendations, and some required action, but only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

### Plan for Policy Revision

Recognizing that policy-making is an incremental process, some districts included specific language in their wellness policy that required or encouraged some type of future policy review. The intent behind the review was often to ensure that a policy was effective; to determine areas for continued improvement of outcomes related to student weight status, nutrition and physical activity; to identify new issues that have emerged and that may require policy attention; and to revise policy language based on new scientific and evaluation data.

- By the first day of the 2007-08 school year, the majority of students were enrolled in a district with a policy that did not address reviewing and revising the wellness policy.
  - Fewer than 30 percent of all students were enrolled in a district with a *strong* policy requiring that the wellness policy be reviewed and revised. Annual reviews and revisions were most commonly required when frequency was addressed.
  - Fewer than 8 percent of students were enrolled in a district with a *weak* policy that suggested, but did not require, such provisions.

FIGURE 7.6 Plan for Policy Revision



As of the 2007-08 school year, the majority of students were enrolled in a district with a policy that did not include provisions for reviewing and revising the wellness policy.

Data reflect policies in place by the first day of the 2006-07 or 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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.



## Funding for Policy Implementation

Lack of resources, such as funding, time and labor, has been cited by school district officials as a primary barrier to implementing their wellness policy.<sup>134-136</sup> Thus, it is not surprising that in a study of 256 school districts conducted at the beginning of the 2007–08 school year, only 2 percent of those districts addressed funding for policy implementation and evaluation efforts within their wellness policy.<sup>137</sup> Consistent with that study, we found that by the first day of the 2007–08 school year, only 6 percent of elementary and middle school students and 5 percent of high school students were enrolled in a district with policy that included some indication about how implementation efforts would be funded. Most of these references to implementation funding were *weak*—they suggested, but did not require—that funds be allocated.

## Policy Implementation and Evaluation Requirements by SES

Data from the beginning of the 2007–08 school year show that certain implementation and evaluation provisions also varied by district socioeconomic status (SES),<sup>m,n</sup> but did not vary based on racial/ethnic composition of the district’s students.

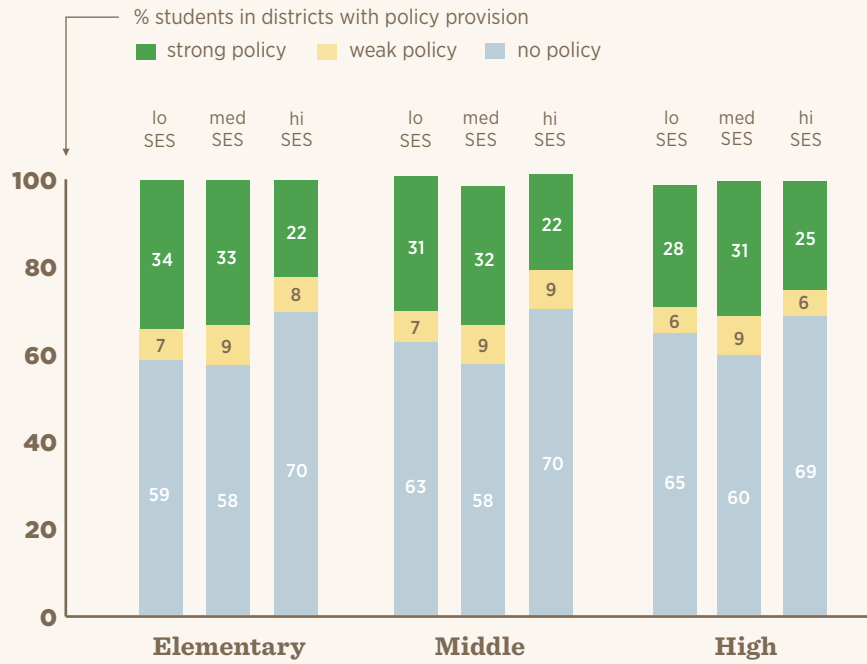
- Elementary and middle school students in medium-SES districts were *more likely* than students in high-SES districts to be in a district with a policy that required or suggested evaluation provisions. Such distinctions were not seen at the high school level.
- Similarly, elementary and middle school students in low- or medium-SES districts were *more likely* than students in high-SES districts to be in a district with a policy that required or suggested that the wellness policy be reviewed and revised. Such distinctions were not seen at the high school level.

Elementary and middle school students in low- or medium-SES districts were more likely than students in high-SES districts to be in a district with plans to review and revise the wellness policy.

<sup>m</sup> Throughout this document, free and reduced-price lunch (FRL) participation has been used as a proxy for socioeconomic status (SES) within districts. FRL is based on verified family income or categorical eligibility based on household participation in other federal assistance programs including the Food Stamp Program and Temporary Assistance for Needy Families (TANF).<sup>138</sup> The SES groupings were computed as: low SES (>47% FRL participation), medium SES (>28% to 47% FRL participation), and high SES (0 to 28% FRL participation).

<sup>n</sup> Only SES variations that were different in analyses controlling for other district-level factors (e.g., race/ethnicity, total instruction dollars per pupil, region and locale) have been highlighted in this section.

FIGURE 7.7 Policy Review and Revision by District Socioeconomic Status



Data reflect policies in place by the first day of the 2007-08 school year.  
 Source: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2009.

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.

## Summary

Most districts established a policy that included plans for implementing the new provisions. The implementation strategies required or suggested by the districts varied greatly, and most strategies did not specify any source of funding to facilitate policy implementation. The lack of funding has been cited by prior studies as a chief barrier to implementing the wellness policy provisions. Data that examine the extent to which states or school districts actually allocated funds for wellness policy implementation are still needed, regardless of whether the policy describes how the implementation efforts would be funded. Additionally, setting requirements for an ongoing advisory committee was the most common strategy districts used to monitor implementation efforts, while setting requirements for ongoing policy review and revision was the least common strategy (outside of funding).

As Congress considers reauthorization of the Child Nutrition and WIC programs, it is likely that wellness policy implementation and evaluation provisions will be prominently considered. Some districts have identified specific implementation strategies that can serve as models to help school district officials better understand how the wellness policies are working, and the extent to which the policies may facilitate ongoing student-level improvements in the areas of diet and nutrition, physical activity, and overall wellness attitudes and behaviors.

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# Appendix

The following discussion briefly summarizes the sample design and weighting, policy collection process, coding methodology, and analytic approaches and methods employed for this study.

## Sample Design and Weighting

Bridging the Gap researchers, in collaboration with the Survey Research Operations department at the Institute for Social Research at the University of Michigan, developed the sample design and weighting methodology. The overall sampling goal was to develop three separate but connected samples, each of which would be nationally representative:

1. *a sample of public, K–12 school districts;*
2. *a sample of elementary schools (with grade 3) from within those districts;*
3. *a sample of secondary schools (with grade 8, 10 or 12) from within those districts.*

The district-level sample was used for this study. The related elementary and secondary school samples were used in two related studies that will be presented in forthcoming Bridging the Gap reports. The sampling strategy used a multi-stage probability proportional to size design, with districts selected at the first stage and schools selected at the second stage. The ultimate goal of this study is to link and examine policies and practices of schools located in districts with the various wellness and related policy measures.

The sampling frame was developed using the National Center for Educational Statistics (NCES) Common Core of Data (CCD). Because of the CCD

release schedule, the 2004–05 CCD was used to develop the sample frame for the 2006–07 district sample, and the 2006–07 CCD was used to develop the sample frame for the 2007–08 district sample. Because the district sample was inherently linked with the school samples drawn for the related studies mentioned above, the district sample for the second study year was reliant upon the school sample chosen for that year. Nonresponding schools from the first year were replaced with new schools, and when possible, replacements were selected from the same districts. In some cases, new districts were added and districts with nonresponding schools and no replacements were dropped. Ultimately, districts located in 47 of the 48 contiguous states<sup>a</sup> were included in the sample for both study years. After accounting for two districts that merged during the first study year, the final study population included a nationally representative sample of 579 and 641 districts for school years 2006–07 and 2007–08, respectively, which were the first two years of the wellness policy requirement. Table A.1 illustrates the district inclusion rates across the two study years for the overall sample and by grade level (elementary school, middle school and high school).

Student-level weights also were computed by multiplying each non-response adjusted district weight by the number of students within the district, at each grade level of interest. For weighting and analytic purposes, we used grade 3 as the proxy for the elementary level, grade 8 as the proxy for the middle school level, and grade 10 as the proxy for the high school level. These weights provide inference to the number of students within school districts in the United States.

<sup>a</sup>No school districts in the state of Wyoming were randomly selected in the sample for either study year.

TABLE A.1 District Sample Size by School Year and Grade Level

Inclusion Status	2006–2007		2007–2008	
	no.	%	no.	%
<b>Overall Sample</b>				
% of districts included for only one school year	43	7%	105	16%
% of districts included for both school years	536	93%	536	84%
<b>total number of districts included in the full sample</b>	<b>579</b>	<b>100%</b>	<b>641</b>	<b>100%</b>
<b>Elementary School Level</b>				
% of districts included for only one school year	41	8%	100	16%
% of districts included for both school years	507	92%	507	83%
<b>total number of districts with an elementary school</b>	<b>548</b>	<b>100%</b>	<b>607</b>	<b>100%</b>
<b>Middle School Level</b>				
% of districts included for only one school year	38	7%	100	17%
% of districts included for both school years	505	93%	505	83%
<b>total number of districts in a sample with a middle school</b>	<b>543</b>	<b>100%</b>	<b>605</b>	<b>100%</b>
<b>High School Level</b>				
% of districts included for only one school year	28	6%	83	15%
% of districts included for both school years	470	94%	470	85%
<b>total number of districts in a sample with a high school</b>	<b>498</b>	<b>100%</b>	<b>553</b>	<b>100%</b>

The non-response adjusted student-level weights were used as the basis for all estimates presented in this report and on the Bridging the Gap Web site ([www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org)). Data are presented on the percentage of students nationwide to provide readers with a sense of the relative reach of the policies. Ultimately, 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 during the 2007–08 school year.

Additionally, throughout this report and on our Web site ([www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org)), data are presented by grade level using the following assumptions: elementary (grades 1 to 5), middle school (grades 6 to 8) and high school (grades 9 to 12).

## Wellness Policy Collection Process

A mixed-methods approach, involving Internet research with telephone, e-mail and regular mail follow-up, was employed to collect wellness policies from the sampled school districts. At the outset of each study year, Internet research was conducted to determine if each of the sampled districts had a Web site and, if so, whether a copy of their wellness policy and associated regulations, procedures and/or guidelines were readily accessible from the site. Given prior research that documented discrepancies in district policies obtained via Internet versus telephone/mail requests,<sup>1</sup> all policies obtained from the Internet searches were then verified through telephone calls, typically to the

superintendent or food service director. These calls also were used to verify that the policies retrieved from the district’s Web site were current at the beginning of school years 2006–07 and 2007–08, respectively. Wellness policies that had been revised, but not updated on the Web site, were requested from the district.

When we were unable to retrieve a district’s wellness policy via Internet research, we called the district superintendent’s office or, in some instances, the food service director, school nurse or district business office to determine if the district:

1. *had officially adopted a wellness policy that had been approved by the school board;*
2. *had a wellness policy, but one that had not been adopted by the school board (i.e., draft);*
3. *did not currently have a wellness policy.*

Copies of officially adopted wellness policies, administrative procedures, and any other district-level policies that had been incorporated into a district’s wellness policy were requested via fax, e-mail or postal mail.

A persistent follow-up methodology was employed such that all non-responders were contacted on a bi-weekly or monthly basis to attempt to confirm the existence of a policy and to obtain a copy of the district’s policy and related documents. The final follow-up involved

mailing a formal hard copy letter along with a letter of endorsement from the American Association of School Administrators (AASA) to approximately 40 non-responding districts (across both study years) requesting the following:

1. *notification that no wellness policy existed for their school district;*
2. *a copy of the district wellness policy and any related or cross-referenced regulations, procedures or other policy documents;*
3. *notification that the existence and location of the district wellness policy was in fact online and available to us.*

All of the written policies were collected between April 2007 and June 2008, with a 94 percent response rate achieved for both study years. A district was considered to have responded if:

1. *copies of the wellness policy and any related documents were obtained*
2. *if the district confirmed that they did not have a policy in place. Table A.2 details the policy collection status by school year.*

Upon receipt of a district’s wellness policy, we subsequently examined it for reference to the following:

TABLE A.2 Policy Collection Status by School Year

	2006–2007		2007–2008	
	no.	%	no.	%
<b>Policy Collectiton Status</b>				
policy obtained	517	89%	574	90%
no policy verified	26	5%	28	4%
missing (non-respondent)	36	6%	39	6%
<b>total</b>	<b>579</b>	<b>100%</b>	<b>641</b>	<b>100%</b>

1. *any district-level policies incorporated into the district wellness policy (e.g., related district policies on competitive foods, food services, physical education, curriculum development, etc.);*
2. *state regulations, laws or statutes or state standards, frameworks or guidelines (e.g., health and nutrition education standards, physical education standards);*
3. *any model policies developed by the state association of school boards or other organization (e.g., National Alliance for Nutrition and Activity, state Action for Healthy Kids organization).*

Follow-up calls were conducted and/or e-mail messages were sent to retrieve any other district-level policies and/or administrative regulations or procedures that may have been referenced in the wellness policy (e.g., related district policies on competitive foods, food services, physical education, curriculum development, etc.) but were not posted on the district Web site or provided as part of our initial request. We also contacted the district to determine dates of adoption and revision of the wellness policy if such information was not identified on said policies.

Additionally, since many of the district policies referenced existing state laws and regulations, copies of all potentially relevant state laws and regulations were retrieved from Lexis-Nexis using primary legal research techniques<sup>2</sup> that involved Boolean and natural language searches of the state-level statutory and administrative law (i.e., regulatory) databases for each state for the time periods of interest. The statutory and administrative law tables of contents and indices also were reviewed as an additional cross-check to determine if any potentially relevant state laws or regulations were overlooked during the database searches. Additionally, all state laws were compared against several secondary sources of state laws and regulations including: the National Association of School Boards of Education (NASBE) Healthy Schools database,<sup>3</sup> The Trust for America's Health: *F as in Fat* annual compilations,<sup>4,5,6</sup> the Balance Report prepared by the Albermarle State Policy Center,<sup>7</sup> and reports from the National Conference of State Legislatures.<sup>8,9</sup> Additionally, many dis-

trict policies referenced state curriculum frameworks, standards and/or guidelines (particularly for health and nutrition education and physical education-related provisions). Copies of all such state standards, frameworks and /or guidelines were retrieved from the respective state Department of Education Web sites.

## Definition of Policy

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.*

Additionally, in many instances, districts indicated that they followed existing state laws; state regulations or rules; and/or state curriculum frameworks, benchmarks or standards (e.g., health education curriculum framework, physical education benchmarks). In such cases, districts were given credit for the state laws, regulations or rules, and/or frameworks, benchmarks, or standards as part of the evaluation of the given district’s policy. Likewise, a number of districts followed model wellness policies created by their state association of school boards or other organizations such as the National Alliance for Nutrition and Activity (NANA) or followed voluntary national standards for physical education that were created by the National Association for Sport & Physical Education (NASPE). In all such instances, districts were given full credit in the analysis of their policy for the associated model policy embedded into their policy.<sup>b</sup>

## Annual Policy Reference Date

The day after Labor Day each year was used as the annual reference date for the study. This date was chosen

<sup>b</sup> For example, the wellness policy or administrative procedure for a given district may indicate that the district follows the district’s food services policy regarding the sale of competitive foods without repeating the language of the food services’ policy in the wellness policy or administrative procedure document. In such cases, the wellness policy, administrative procedure and the cross-referenced food services’ policy were all coded as reflective of the given district’s wellness “policy.”

since the federal legislation required that the wellness policies be adopted by the first day of school year 2006–07. Thus, September 5, 2006, was used as a proxy for the first day of the 2006–07 school year and September 4, 2007, was used as a proxy for the first day of the 2007–08 school year.

## Coding Methodology

All district policies, model policies and state laws were analyzed using an adaptation of a valid and reliable ordinal coding scheme developed by Schwartz et al.<sup>10</sup> Each policy provision was double-coded by two independent reviewers as follows: 0 (no policy/no provision), 1 (weak policy provision) or 2 (strong policy provision). 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. The detailed coding scheme that explains the coding for each study item and coding level is available at [www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org).

The items chosen for inclusion in this report were intended to highlight the range of policy content across the required wellness policy elements (as well as a few supplemental areas) and to illustrate the variability in policy strength. Aggregate data for all of the topics analyzed for this study (including the report items) are provided for interested readers at [www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org).

## Analysis Methodology

All data were analyzed using the survey command in STATA version 10.0 weighted using the non-response adjusted student-level weights for each grade level of

interest (as described above). Most of the report and the data on the Bridging the Gap Web site ([www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org)) include basic frequency distributions.

In certain chapters, data also were presented on the proportion of students in districts with policies based on the racial/ethnic composition or the socioeconomic status (SES) of the districts. Following the approach used by O'Malley et al. in their analysis of school characteristics associated with secondary student obesity rates,<sup>11</sup> data on the proportion of students that were white, black or Latino were computed to identify whether the student population was: majority white (>66% white), majority black (>50% black) or majority Latino (>50% Latino). Districts with diverse student populations represented the remaining districts.

Additionally, throughout this report, free and reduced-price lunch (FRL) participation has been used as a proxy for SES within districts. FRL is based on verified family income or categorical eligibility based on household participation in other federal assistance programs, including the Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families.<sup>12</sup> The groupings were computed as tertiles as follows: low SES (>47% FRL participation), medium SES (>28% to 47% FRL participation) and high SES (0 to 28% FRL participation).

This report highlights only SES and racial and ethnic variations that were different in bivariate analyses and multivariate, general ordered logit regression analyses after controlling for other district-level factors that were readily available from NCES (i.e., race/ethnicity, SES, total instruction dollars per pupil, region and locale). Aggregate data for all of the topics analyzed for this study (including the report items) by SES and district racial and ethnic variations are provided for interested readers at [www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org).

## Computation of Strength Scores for the Executive Summary

An overall policy strength score was computed for inclusion in the executive summary. Following the

method described in Schwartz et al.,<sup>13</sup> a strength score was computed for each policy category included in this report (i.e., nutrition education, school meals, competitive foods and beverages, physical activity, physical education, and implementation) by counting the number of items coded as 2 (strong) within each category and dividing by the number of policy items included in the given category within the report.<sup>c</sup> The following items that were presented in the report were excluded from the categorical and overall strength score computations because they fell somewhat outside of the realm of the category being measured:

1. *nutrition information, availability of free drinking water, and marketing items in the competitive food and beverage category score; and*
2. *body mass index screening in the implementation category score.*

The overall policy strength score was computed by summing the six category strength scores (i.e., nutrition education, school meals, competitive foods and beverages, physical activity, physical education, and implementation), dividing the total score by six categories and multiplying by 100.

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<sup>c</sup> With the exception noted herein, the strength score presented in this report is based solely on the items included in the report and does not include the other items presented on the Bridging the Gap Web site ([www.bridgingthegapresearch.org](http://www.bridgingthegapresearch.org)) that were not highlighted in the report.

