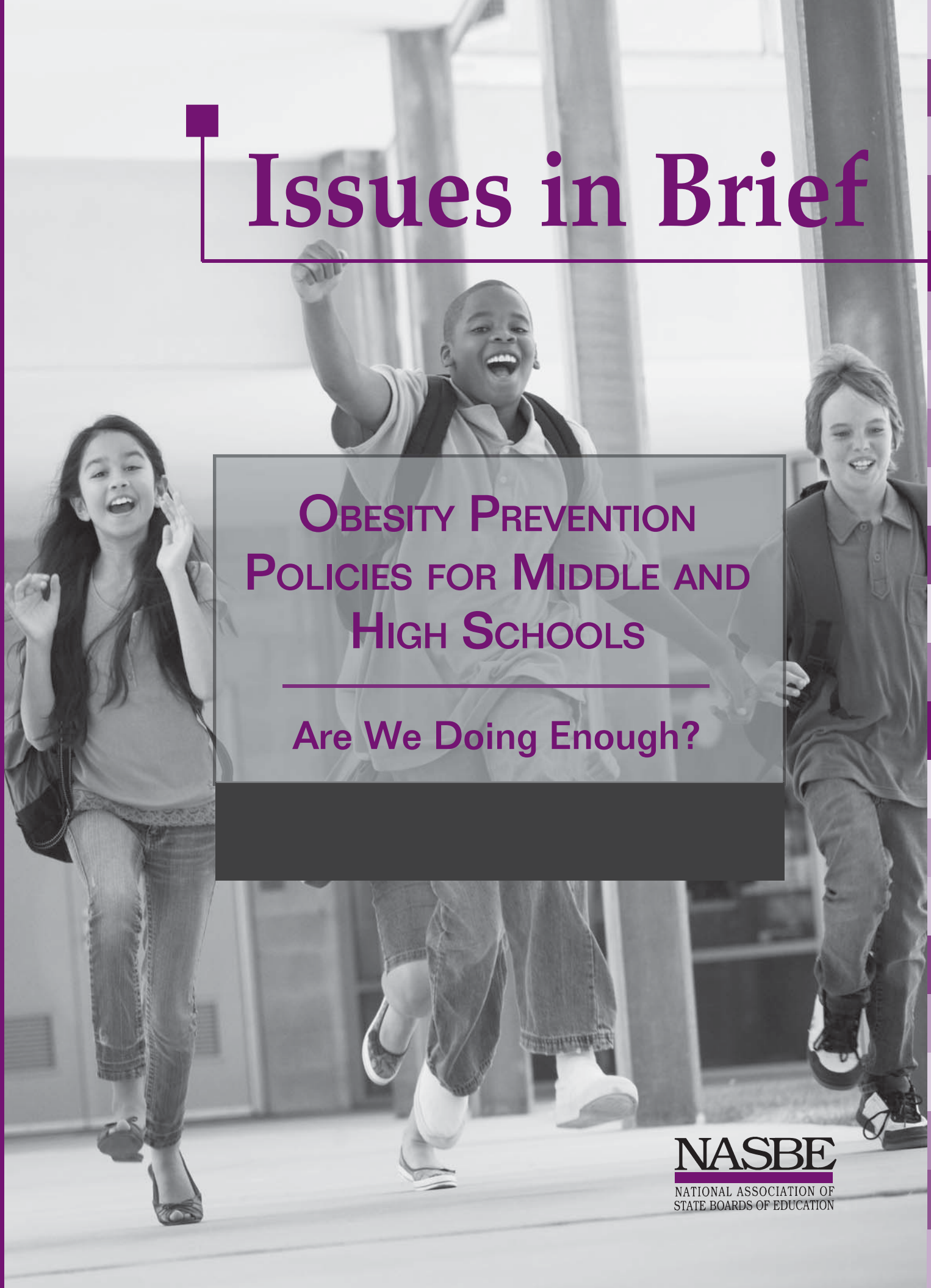

Issues in Brief

Obesity Prevention Policies for Middle and High Schools

Are We Doing Enough?

NASBE
NATIONAL ASSOCIATION OF STATE BOARDS OF EDUCATION

Obesity Prevention Policies for Middle and High Schools

Are We Doing Enough?

Issues in Brief

National Association of State Boards of Education ■ May 2010

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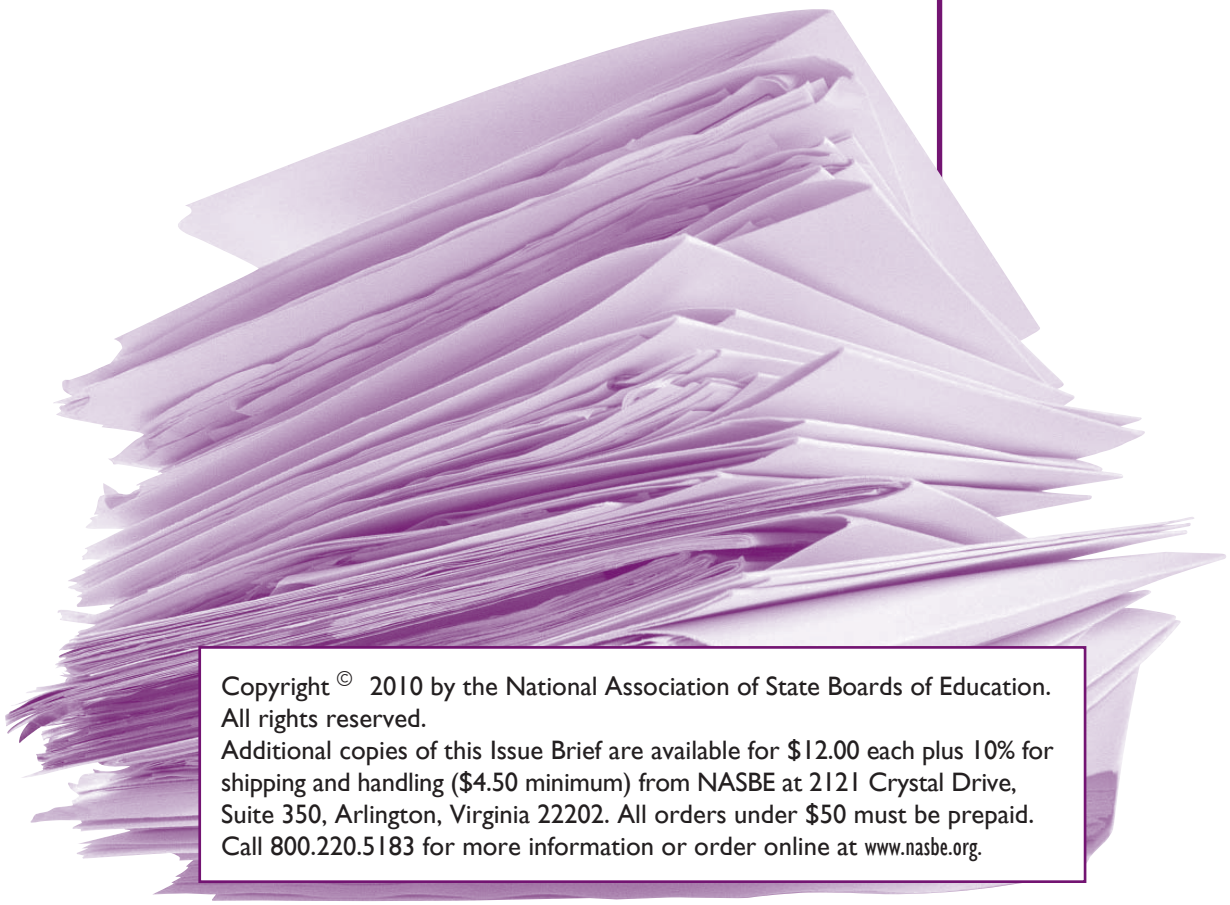

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Acknowledgements

Support for this report was provided by the Robert Wood Johnson Foundation (RWJF) through its Leadership for Healthy Communities (LHC) national program. However, the findings and recommendations contained in this publication are solely those of the authors and do not represent the official viewpoints of NASBE or RWJF.

The contributions of Jamie Chriqui, PhD, MHS, were provided through funding from the Robert Wood Johnson Foundation through the Bridging the Gap Program, located within the Health Policy Center, Institute for Health Research and Policy at the University of Illinois at Chicago (UIC) (PI: Frank Chaloupka, PhD).

The authors gratefully acknowledge the assistance provided by Linda Schneider, Amy Bruursema, Kristen Ide, and Oksana Pugach at UIC in the compilation, coding, and analytic activities associated with the district wellness policy data presented in this report. The authors would also like to thank the Alliance for a Healthier Generation's National Student Advisory Board and NASBE's student state board members, as well as Emily Kujawa and Dia Adams at NASBE, Melissa Maitin-Shepard at LHC, Elizabeth Goodman at Burness Communications, and Tracy Fox for their thoughtful feedback.

Executive Summary

If childhood obesity is not stopped, we will be the first generation to not live as long as our parents… Kids follow the examples they are given. If you tell them they need to be healthy, then why are they allowed to sell and then eat junk food products like cookie dough and pizza? That is saying one thing and doing another.

— Madeline Cumbey, student, Lafayette Meadows Elementary, Indiana

It is no secret that we are in the midst of one of the greatest health crises in modern times. In the last 30 years, obesity rates in the United States have skyrocketed—and children and adolescents are at the center of the epidemic. Researchers estimate that 31.7% of all children and adolescents ages 2 to 19 are overweight or obese, and this figure is even higher for adolescents, with 34.2% overweight or obese.[1]

Among children and adolescents, middle school and high school students not only have the highest rates of obesity, but they are also the least active, consume more sugary beverages, and take in too many calories from junk foods.[2] Approximately 92% of 12- to 19-year-olds did not meet minimum physical activity recommendations of at least 60 minutes of daily moderate to vigorous physical activity (MVPA), with less than six minutes spent in vigorous activity.[3]

State-Level and District-Level Policies

Schools are an important setting to address the growing obesity epidemic. They provide daily opportunities to encourage healthy eating, increase physical activity, and learn about lifelong healthy behaviors. During the last decade, state and national policymakers began working more actively to address obesity in the school environment. At the state level, many state boards of education, legislatures, and state departments of health and education have taken action to strengthen policy in the areas of physical education (PE), physical activity, and nutrition. At the national level, a federal law enacted in 2004 required local education leaders to develop wellness policies to promote nutrition and physical activity in schools by the beginning of the 2006-07 school year (Public Law 108-265, 118 Stat. 729, Child Nutrition and WIC Reauthorization Act of 2004).

Although much progress has been made, a closer look at the policies highlights an important paradox: while adolescents have the highest rates of obesity, are the least physically active, and consume more junk food and sugary beverages, both state- and district-level policies addressing these issues in the school environment are often more frequent and restrictive at the elementary level. In addition, in many areas, policies are simply not addressing critical components of school nutrition and physical activity policy *at any level* (elementary, middle, or high school).

In an effort to highlight the current policy environment at the middle school and high school levels, the National Association of State Boards of Education (NASBE) engaged in a review of state-level policies addressing nutrition and physical activity environments included in NASBE's State School Health Policy Database. In addition, district-level policies were examined using data collected from a nationally representative sample of more than 600 public school districts by the Robert Wood Johnson Foundation-supported Bridging the Gap Program. The results from the two reviews are highlighted below.

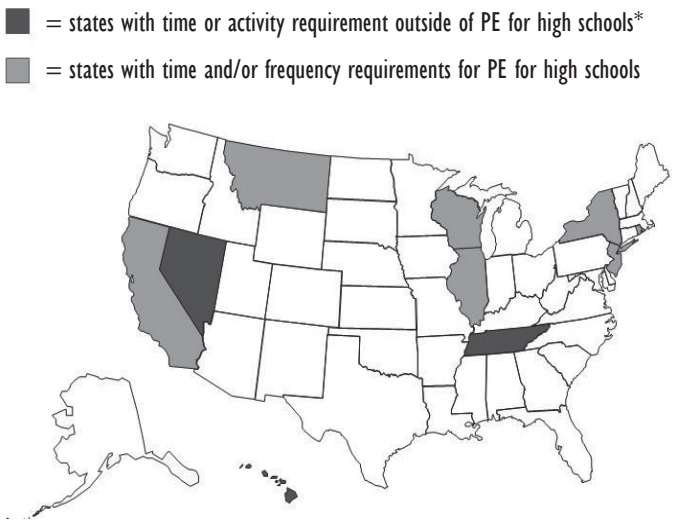
Key Findings

Physical Activity

According to the 2008 Physical Activity Guidelines for Americans, all children and youth should obtain at least 60 minutes per day of physical activity.[4] Of that, the Institute of Medicine recommends that at least 30 minutes per day be accumulated at school.[5]

However, state-level and district-level policies are not ensuring that middle school and high school students get enough opportunities for physical activity during the day to meet these recommendations. Only three states required time in minutes outside of physical education: Tennessee and Nevada had a specific time requirement for physical activity outside of PE at the high school level and Hawaii required a designated physical activity break at the high school level. Just 20% of states had a required policy at the high school level setting time and/or frequency requirements for physical education (PE).

Map 1. States Requiring Time/Frequency for PE and Time for Physical Activity Outside of PE at the High School Level



* Hawaii has both a requirement for physical activity outside of PE and a time/frequency requirement for PE at the high school level.

Although 80% of states had a general requirement for PE at the middle school level, only 34% had a time or frequency requirement. No state required a percentage of high school PE class time to be spent in moderate-to-vigorous physical activity (MVPA), and only 6% of states required it at the middle school level. Only 8% of districts required it at the high school level and 9% of districts required it at the middle school level. Despite the fact that 82% of states had a PE requirement for graduation from high school, no state included a time requirement that met the National Association of Sport and PE's (NASPE) recommendation of 225 minutes per week of PE through all four years of high school, and only 2% to 3% of districts met this standard. And of those states that required PE at the high school level, 28% had liberal PE exemption policies.

Key Takeaways for Policymakers

- Concerns about childhood obesity and overweight have not led to widespread adoption of state- and district-level policies to increase opportunities for physical education and physical activity at the middle school and high school levels.
- Policies addressing critical components of PE and physical activity in school—such as time and frequency requirements for PE, physical activity breaks and PE exemption policies—need to be stronger and meet national recommendations at the middle and high school levels.

Nutrition

> *Policies including nutrition standards are important because all students eat at school. Even if they don't eat the school food… they see what is being served and it influences what foods they eat. These policies will help encourage better eating habits, and those who depend on the school lunches will be able to have a healthy diet.*
>
> — Connie Lim, student, Newport High School, Washington

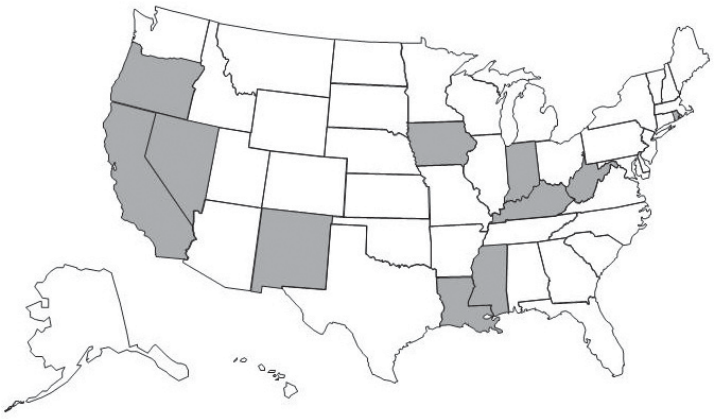
The Dietary Guidelines for Americans recommend that children and youth consume a healthy diet for a multitude of health benefits, including the prevention of heart disease, certain forms of cancers, high cholesterol, and high blood pressure.[6] Though progress is beginning to be made, school children and youth are not consuming enough fruits and vegetables, milk and whole grains to meet these guidelines. Too often they eat less healthy foods, such as french fries and other foods of minimal nutritional value (FMNV), and drink sodas and other sweetened beverages.[7]

There are still relatively few state-level and district-level policies that adequately promote healthy nutrition environments at the middle school and high school levels, including few jurisdictions that actively seek to increase access to fruits and vegetables to students or restrict food marketing. Only three states had a policy requiring strategies to increase access to fruits and vegetables at the middle and high school levels. Mississippi is an example of a state with a policy that requires schools to include quality fruits and vegetables anywhere snack items are sold (vending, snack bars, and concessions).[8] In the area of marketing, only three states had a policy restricting food marketing in the school environment. Maine provides an example of a comprehensive marketing policy that addresses all three schooling levels and requires all food advertised to meet the state's nutrition standards.[9]

Just 22% of states required comprehensive nutrition standards at the middle school and high school levels with limits on fats, sugar, calories, and/or portion sizes for competitive foods, including items sold in vending and à la carte settings (see Map 2). Only 38% of states had a policy requiring high schools to follow nutrition standards for competitive foods, compared to 46% for middle school and 50% for elementary schools. Competitive food requirements were somewhat more pervasive at the district level—over 51% required such provisions at the middle school level and nearly 49% required them at the high school level.

Map 2. States Requiring Comprehensive Nutrition Standards for Competitive Foods in Middle Schools and High Schools.

Shaded states are those requiring nutrition standards for competitive foods in à la carte and vending which limit fat, sugar and calories/portion size for secondary schools.



The beverages sold and served in middle and high schools are one of the major areas of disparity between nutrition policies at the elementary and secondary grades. Adolescents consume the least amount of milk and the largest amount of sugary beverages, yet states and districts consistently ease the regulations for unhealthy beverages when addressing secondary schools.

Just two states, Connecticut and Rhode Island, had strong, comprehensive beverage policies at the middle and high school levels, prohibiting all unhealthy beverages, including regular sodas, diet sodas, and other sugar-sweetened beverages, such as sports drinks and non-100% juice, for the entire school day. Thirty percent of states prohibited regular sugar-sweetened sodas for the entire school day at both the middle and high school level, while still allowing other unhealthy beverages to be sold. At the district level, 16% of policies governing high schools and 34% of district policies governing middle schools prohibited the sale of regular, sugar-sweetened soda. Two percent of districts prohibited the sale of other sugar-sweetened beverages at the high school level.

Map 3. States Prohibiting All Unhealthy Beverages Throughout the School Day in Middle Schools and High Schools.

Shaded states are those with beverage standards that prohibit regular soda, diet soda and other sugar sweetened beverages including non-100% juice for secondary schools.

Key Takeaways for Policymakers

- Concerns about childhood obesity and overweight have not led to widespread adoption of state- and district-level policies to improve the nutrition environment at the at the middle school and high school levels.
- Relatively few states or districts have strong policies that address critical components of the nutrition environment in school—such as comprehensive nutrition standards for school meals and competitive foods, and beverage restrictions at all points of sale—at the middle school and high school levels.
- There are few states or districts with strong policies aimed at increasing the availability of fruits and vegetables and restricting food marketing in the school environment at any level, elementary school, middle school, and high school.

The need for physical activity and healthy eating does not decrease when a child enters adolescence. If anything, it increases. As such, policymakers concerned about addressing the obesity epidemic need to ensure that adolescents are not being left behind. To ease the burden of change, some states, like Rhode Island, allowed high schools an extra year before policies went into effect. To address the disparities in eating and physical activity behaviors between secondary and elementary school students, policymakers may have to consider significant changes in both nutrition and physical activity policies and programs.

1. Introduction

These policies are important to me because sometimes high school students are ignored during policymaking. Often policymakers focus a lot on elementary-middle school students, but not on high school students."

— Connie Lim, student, Newport High School, Washington

It is no secret that we are in the midst of one of the greatest health crises in modern times. In the last 30 years obesity rates in the United States have skyrocketed, and children and adolescents are at the center of the epidemic. Researchers estimate that 31.7% of all children and adolescents ages 2 to 19 are overweight or obese, and this figure is even greater for adolescents, with 34.2% overweight or obese.[10]

Obesity during childhood and adolescence is a concern for education leaders for many reasons. First, it is associated with serious health and mental health complications such as type 2 diabetes, high blood pressure and cholesterol, asthma, sleep apnea, and depression.[11] In addition to health concerns, overweight and obese students are more likely to have greater rates of absenteeism and experience more bullying and teasing, which may affect their academic performance and achievement.[12] Furthermore, overweight adolescents have a 70% chance of becoming overweight or obese adults, which increases to 80% if one or more parents is overweight or obese.[13] Clearly, breaking this cycle early is important for the future.

Schools are an important setting to address the obesity epidemic. They provide daily opportunities to encourage healthy eating, increase physical activity, and learn about lifelong healthy behaviors. During the last decade, state and national policymakers began working more actively to address obesity in the school environment. At the state level, many state boards of education, legislatures, and state departments of health and education have taken action to strengthen policy in the areas of physical education (PE), physical activity, and nutrition. At the national level, a new federal law required the adoption and implementation of school district wellness policies by the beginning of the 2006-07 school year (Public Law 108-265, 118 Stat. 729, Child Nutrition and WIC Reauthorization Act of 2004). The wellness policy requirement spurred many education leaders to develop policies to promote nutrition and physical activity in schools. As indicated in recent reports from the Robert Wood Johnson Foundation-supported Bridging the Gap program and the School Health Policies and Program Study (SHPPS) by the Centers for Disease Control and Prevention (CDC), states and districts have been making strides in promoting healthier eating environments and providing more opportunities for physical activity and PE.[14]

However, when analyzing the policies in greater detail, it is clear that there is a stronger focus on policies that address students at the elementary level. In general, policies addressing middle and high schools are not as frequent, less restrictive, and more often recommended rather than required. In many areas, policies are simply not addressing critical components of school nutrition and physical activity policy *at any level* (elementary, middle, or high school).

Without a doubt, middle and high schools face unique challenges when it comes to implementing policies in the area of PE, physical activity, and nutrition. With more emphasis from both the federal and state governments on improving public school outcomes, there is more pressure for high schools to increase achievement levels for all students and reduce dropout rates while at the same time stepping up accountability both at the educator and student level. Middle and high schools must maneuver around issues such as complex scheduling demands, graduation requirements, athletic teams and associated fundraising, and an increased presence of vending machines, competitive foods, and marketing to students. However, in an effort to meet these demands, health advocates in particular believe education systems are short-changing students' overall needs. While elementary students have clearly benefited from the many policies focused on their environment, the argument can be made that it is actually middle and high school students who need the policies the most.

When looking at the key nutrition and physical activity behaviors that prevent obesity and its effects on health and academic achievement, adolescents are the *least* active compared with younger children and consume more calories from junk foods, especially sugar-sweetened beverages.[15] Nearly 80% of adolescents reported not consuming at least five fruits and vegetables daily, especially dark green and orange vegetables.[16] Over 85% reported that they did not drink at least three glasses of milk per day,[17] while a study by Wang et al. found that 84% of adolescents consumed a soda daily.[18]

In a national study measuring physical activity behaviors of children and adolescents, approximately 92% of 12- to 19-year-olds did *not* meet minimum physical activity recommendations of at least 60 minutes of daily moderate-to-vigorous physical activity (MVPA), compared to 58% of 6- to 11-year-olds. There also is a gender disparity; between 88% to 90% of boys did not meet the recommendations, while 95% to 97% of adolescent girls were not getting enough physical activity to achieve overall health benefits. For both groups, vigorous activity was relatively non-existent (one to three minutes daily for girls and three to six minutes daily for boys).[19]

The report that follows is an examination of the state- and district-level policies that address the obesity epidemic in the school environment. While statistics for the elementary level are included, in most cases they are there to serve as a reference point to demonstrate the marked differences between the prevalence of policies for elementary, middle, and high schools. At both the state and district levels, the numbers speak for themselves; in the effort to address childhood and adolescent obesity at the middle school and high school levels, there is a tremendous amount of policy work still to be done.

2. Background, Methods, and Study Limitations

"High school is a crucial time in body development and habit making."

— Madison Burke, student, Westminster Christian Academy, Missouri

Policies addressing physical activity and nutrition environments in schools come in many forms. At the state level, policies originate from a variety of sources: state legislatures, state boards of education, and state health, education, and agriculture departments. At the local level, they generally come from local boards of education. Policies can be binding (required), or non-binding (recommended), with the strongest ones requiring compliance. Both state- and district-level policies significantly impact the school environment. At times they overlap, at times they compliment one another, and at times neither level addresses a critical issue. In some states, policymaking for physical activity and nutrition in schools is more generally deferred to the local level and fewer required policies are in place at the state level. In other states there is a greater degree of state-level policymaking and local education boards may be encouraged or required to follow state policy examples.

This report examines both state and district policies in an effort to answer one important question: given the high rates of obesity and overweight among our students, are there sufficient changes being required in the physical activity and nutritional environments at middle and high schools to significantly impact the epidemic? The data is presented in column format by component to facilitate comparison between state and district policies. At times there is a mistaken assumption that where state-level policies fail to address physical activity and nutrition environments in schools, district level policies do. The findings in this report discredit that assumption, as the data reveal that across the board, not enough states and districts are enacting *required, binding policies* that will positively and significantly impact the health of adolescents.

State-Level Policies

This study examined state-level policies, as well as associated state curricula or guidelines, from the National Association of State Boards of Education's (NASBE) State School Health Policy Database on various components of school nutrition, competitive foods and beverages, PE, and physical activity. The NASBE database is a comprehensive compilation of laws and policies from all 50 states on more than 40 topics related to school health. Since creating the database in 1998, NASBE has worked to ensure that it is as accurate and up-to-date as possible, with information reflecting the various laws, rules, regulations, mandates, state board policies, and administrative orders that affect school health. The database is continually updated and the contents are regularly crosschecked with other legislative databases and recent publications covering state-level policy on database topics. Most importantly, every two years NASBE requests a review of policies from each state education agency (SEA). Over 75% of states participated in the 2009 review, and NASBE staff reviewed the remaining states. Staff review included a review of legislative and policy summaries from state boards of education and SEAs, when

available, and a comparison crosscheck of policies with other legislative databases and recently published documents on the topics covered in the database.

The study was limited to policies included in the database on or before Aug. 1, 2009. For the purposes of this report, "policy" was defined to include any state-level laws, regulations, rules, policies, and recommendations referenced in the database on the aforementioned topics. Policies that were pilot programs were not included. Recommendations were limited to those that were official state-level policy. Over 40 individual policy items were evaluated using the following scoring system: 0 (no policy), 1 (weak policy containing recommendations), and 2 (strong policy containing requirements). Policies were then coded separately for their applicability at the elementary, middle, and high school levels. Elementary school was defined as grades K-5, middle school as grades 6-8, and high school as grades 9-12. In cases where policies only referenced elementary and secondary school, middle school was included in secondary.

District-Level Policies

This study also examined school district wellness policies that were effective for the 2007-08 school year. Data were collected from a nationally representative sample of over 600 public school districts by the Robert Wood Johnson Foundation-supported Bridging the Gap Program, located in the Health Policy Center of the Institute for Health Research and Policy at the University of Illinois at Chicago. Policies were successfully obtained or verified not to exist in 94% of the sampled districts.

Wellness policies were chosen as the unit of analysis because in 2004 Congress required all school districts participating in the National School Lunch Program or other child nutrition programs to adopt and implement a wellness policy by the first day of the 2006-07 school year (P.L. 108-265, Section 204). The wellness policies were required to include goals for nutrition education, physical activity, and other school-based activities; provide an assurance that nutritional guidelines for school meals met the federal school meal requirements (42 U.S.C. 1751 et seq. and 42 U.S.C. 1771 et seq.); provide guidelines for competitive foods sold or served during the school day; and include implementation plans.

For the purposes of this report, policies were coded to reflect those in place by September 4, 2007, which was used as a proxy for the first day of the 2007-08 school year. Wellness "policy" was defined broadly to include the actual policy; any associated administrative rules, procedures, guidelines, or regulations; cross-referenced district policies and/or state laws or policies; and any model policies that were embedded by reference into the district policy. The wellness policies were independently evaluated and compared by two coders using an adaptation of a reliable and valid ordinal coding scheme developed by Schwartz et al.[20] More than 90 individual policy items were evaluated using the same scoring system used for state policies: 0 (no policy/provision), 1 (weak policy that is suggested, encouraged, or recommended), and 2 (strong policy that is required).

Given that certain elements of the wellness policies vary greatly by grade level of applicability, each policy was coded separately for its applicability at the elementary, middle, and high school levels. All data presented in this report were adjusted to account for non-response and are weighted to reflect the percentage of districts nationwide* with/without policies applicable at the elementary, middle, and high school levels, respectively. Due to rounding, the district percentages may not sum to 100 percent. A

* Readers should be advised that the data presented herein is weighted to the percentage of districts nationwide. This is in contrast to the student-level weighted data presented in Chriqui et al.[21] and available at www.bridgingthegapresearch.org. The difference in weighting means that the percentages presented herein will differ from the percentages included in the wellness policy report.

detailed description of the methods used for the compilation of the district policy data are available in "Local Wellness Policies: Assessing School District Strategies for Improving Children's Health, School Years 2006-07 and 2007-08," available at www.bridgingthegapresearch.org. The Web site also provides links to all data presented in this report, as well as other policy items coded but not presented herein.

Student Input

Student input for this report was obtained from the Alliance for a Healthier Generation National Student Advisory Board members and NASBE student state board of education members. A national conference call explaining the work of the NASBE School Health projects was held with both groups. A link to a survey asking participants for their opinion on nine questions related to nutrition, physical activity, and food marketing policies was sent to each student member. Parental permission was obtained and signatures are on file at NASBE headquarters. Questions included: how the respondents would change current nutrition and physical activity requirements, why such policies were important to them, and how they felt the policies would be implemented in their school. All originals are on file at NASBE headquarters.

Limitations of the Report

All state-level data presented in this report reflect the contents of the NASBE database, and as such has an inherent limitation. NASBE acknowledges that despite efforts to ensure accuracy, it is possible that there are unintentional omissions. This is particularly true of recommended ("weak") policies, since the primary focus of the database is required policy, and recommendations are sometimes found outside of the rules, regulations, administrative orders, state board policies, and legislation that NASBE regularly tracks. In addition, data and statistics for each individual topic may vary from other reports covering similar issues, such as CDC's School Health Profiles (SHP) and SHPPS, as both are based on self-report survey data, while this report examined actual policy.

The timeframe for state policies referenced in this report (policies in place by Aug. 1, 2009) also differed from the district-level data presented herein. The district information was based on the most recent available data—namely, district policies in place by September 4, 2007 (proxy for the first day of the 2007-08 school year). It is important to recognize these different timeframes because of the potential for changes in district policies that may have occurred during the intervening two years. Finally, although both studies looked at policies around PE, physical activity, and nutrition, not all topics covered in NASBE's State School Health Policy Database review were included in the Local Wellness Policies analysis (and, in some cases, vice versa), and the definitions/categorizations vary slightly.

3. Physical Activity Environments

We hear a lot that we are supposed to exercise or be active 60 minutes a day, but then we sit in chairs and don't move except for PE... It seems like we say one thing and do another. Grownups would never say you need to read 20 minutes a day and then not let you read books all day at school.

— Madeline Cumbey, student, Lafayette Meadows Elementary, Indiana

According to the 2008 Physical Activity Guidelines for Americans, all children and youth should obtain at least 60 minutes per day of physical activity.[22] Of that, the Institute of Medicine recommends that at least 30 minutes per day be accumulated at school.[23] Integrating physical activity and physical education (PE) throughout the day has been associated with many beneficial outcomes, including increased attention span, focus, and possibly academic achievement.[24] The National Association of Sports and Physical Education (NASPE), Healthy People 2010, and the CDC recommend that states, districts, and schools adopt comprehensive physical activity and PE policies that include requiring quality PE with time requirements for classes, moderate-to-vigorous physical activity (MVPA) during PE class as well as outside of class, including recess, physical activity breaks, and walk- and bike-to-school programs.[25]

There are many components of quality PE and comprehensive physical activity; however, for the purpose of this report, the authors focused on behaviors that promote physical activity and correspond to the federal wellness policy language requiring district policies to include goals for physical activity. Districts incorporated a variety of approaches to meeting this goal, including provisions for physical activity outside of PE for all grade levels, prohibiting or discouraging the use of physical activity or withholding of physical activity as punishment, and requiring or encouraging physical activity opportunities or breaks throughout the school day.

Overall, state-level policies required PE, but they did not have a requirement for MVPA. Furthermore, the policies did not meet national standards for PE time and frequency at the middle school and high school levels. Few states had a requirement for physical activity outside of PE and/or physical activity breaks at the secondary level, though several states required those same opportunities at the elementary level. District wellness policies were also relatively silent when it came to meeting national standards for time requirements for PE, physical activity breaks, and the use of physical activity as punishment.

General Physical Education Requirement or Recommendation

PE should be considered a cornerstone to teaching students the skills necessary to lead enjoyable, active lifestyles throughout their lives. However, 46% of students in grades 9-12 in the 2007 Youth Risk Behavior Surveillance Study (YRBSS) reported they were not taking PE and 70% were not enrolled in daily PE classes.[26]

State-Level Findings

Sixty percent of states had a policy that included a general requirement for PE at the high school level and 80% at the middle school level, compared to 88% at the elementary school level. (Of note, this only included general requirements, not time or frequency or graduation requirements.)

At the high school level, many states that did not have a general requirement for PE did require PE credit(s) for graduation. Eighty-two percent of states had a policy requiring at least .5 credits for graduation from high school. The remainder left the decision of graduation requirements to local school boards. Graduation requirements varied, from one-half credit of PE to one credit inclusive of both PE and health, with the highest being three credits of PE. The most common requirement was one credit, which generally equals one year-long or two semester-long courses.

District-Level Findings

Although not a required element in the wellness policies, more than 80% of all districts included PE-related provisions in their wellness policies, regardless of grade level of applicability.

Physical Education Time and/or Frequency Requirement

NASPE recommends that students in elementary school participate in at least 150 minutes of PE weekly and students in middle and high school participate in at least 225 minutes weekly to ensure regular participation in physical activity and education to promote healthy lifestyles.[27] At the high school level, PE time and frequency requirements are important to boosting overall physical activity levels even when graduation requirements exist, since credit requirements can be as little as one semester of PE during all four years of high school.

State-Level Findings

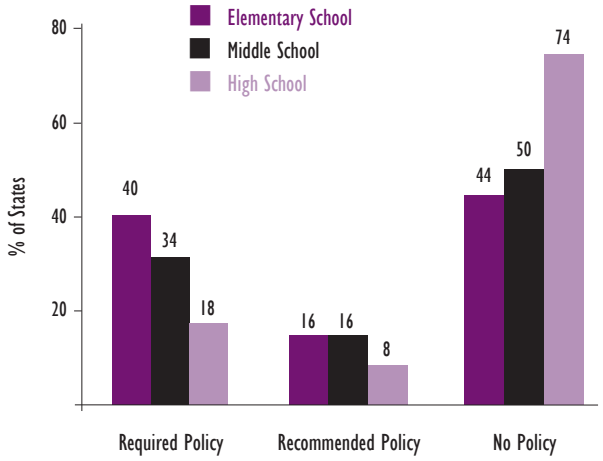
Although a majority of states had PE requirements for high school graduation, just 18% of states had a required policy specifying time and/or frequency requirements for PE at the high school level. (This does not include graduation requirements. Time and frequency requirements were considered separately as graduation requirements vary widely and no state requires PE through all four years of high

District-Level Findings

As of the beginning of the 2007-08 school year, only 3% of the district policies required that schools meet the NASPE PE time requirements for high schools and 2% required such time requirements for middle schools. (Only 3% of the district policies required that elementary schools meet the NASPE time requirements.) An additional 18% and 13% of district policies

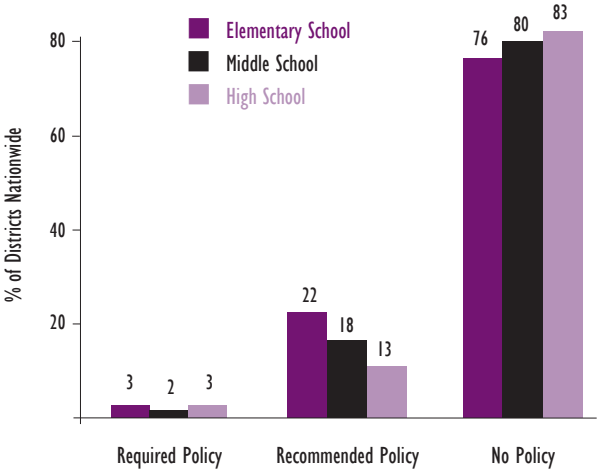
school.) This compared to 34% of states at the middle school level and 40% at the elementary level. Overall, 60% of states had a policy requiring or recommending time and/or frequency requirements for PE in at least one level (elementary school [ES], middle school [MS], high school [HS]), with 42% of the policies requiring implementation and 18% recommending it. However, time and frequency requirements varied greatly, with the majority of state policies falling well below NASPE recommendations of 150 minutes/week for elementary schools and 225 minutes/week for middle and high schools. Only Alabama, Florida, Louisiana, New Jersey, and Oregon (implementation required by 2017-2018) require 150 minutes of PE for elementary school students and just Oregon requires middle school students to achieve 225 minutes/week of PE (implementation required by 2017-2018). No state required 225 minutes of PE per week for high school students during each year for grades 9-12. Two states that come close to meeting the NASPE guidelines for the high school level are Hawaii (requiring 200 minutes of PE/week in grades 6-12) and California* (requiring 400 minutes of PE every 10 days).[28]

Figure 1. State Policies Requiring or Recommending a Time and/or Frequency Requirement for Physical Education, School Year 2009-2010



suggested time requirements or included time requirements that were less than the NASPE standard for middle and high schools, respectively; while 22% of district policies suggested such standards for elementary school levels.

Figure 2. District Policies Meeting the NASPE Time Requirements for Physical Education by Grade Level of Applicability, School Year 2007-08



*It should be noted, however, that in California, students may be exempted from the requirements for up to two years during grades 10-12 upon passing 5 out of 6 standards of the physical performance test administered in grade 9.[29]

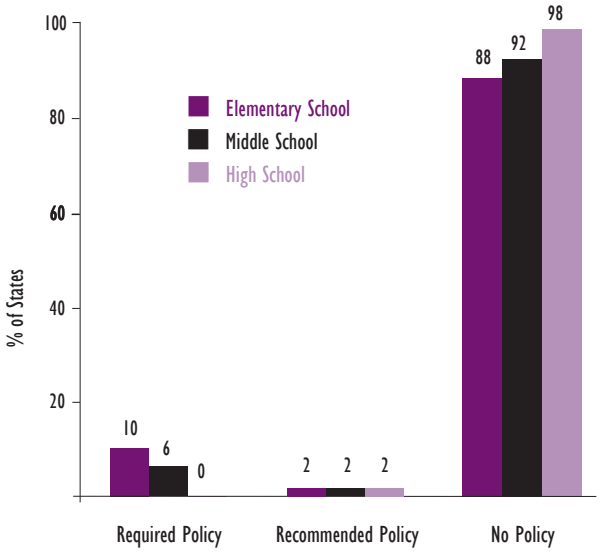
Percentage of Physical Education Dedicated to Moderate-to-Vigorous Physical Activity

The Physical Activity Guidelines for Americans recommend that all students have at least 60 minutes of physical activity that include moderate or vigorous activity to ensure maximum health benefits.[30] Students who maintain high levels of enjoyable physical activity are more likely to be active later in life.[31] To help achieve this goal, national recommendations are that at least 30 minutes of physical activity be offered at schools daily and that at least 50% of PE class time be dedicated toward MVPA.[32] District policies were more likely to address MVPA than state-level policies.

State-Level Findings

No state-level policy required a percentage of PE to be MVPA at the high school level, while only three states required it at the middle school level and 10% at the elementary level. Fourteen percent of states had a policy requiring or recommending a percentage of PE to be devoted to MVPA in at least one level (ES, MS, HS), with 10% required and 4% recommended. While not addressing the high school level, Texas is an example of a state with a policy that requires daily MVPA for at least 30 minutes during PE throughout the school year in elementary and for at least four semesters in middle school.[33]

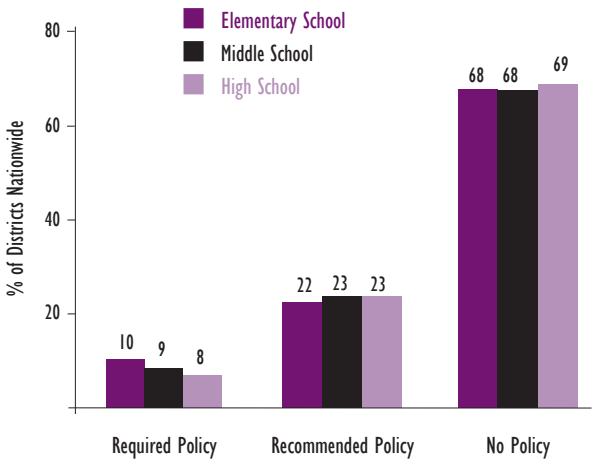
Figure 3. State Policies Addressing Moderate-to-Vigorous Physical Activity as part of Physical Education Class Time by Grade Level of Applicability, School Year 2009-10



District-Level Findings

Only 8% and 9% of all districts required that at least 50% of PE class time be devoted to MVPA at the high school and middle school levels, respectively, as compared to 10% at the elementary school level. Twenty-three percent of districts suggested that PE class time be devoted to MPVA or required a percentage of time that was less than 50% time for the middle and high school levels of applicability as compared to 22% at the elementary level of applicability.

Figure 4. District Policies Addressing Moderate-to-Vigorous Physical Activity as part of Physical Education Class Time by Grade Level of Applicability, School Year 2007-08



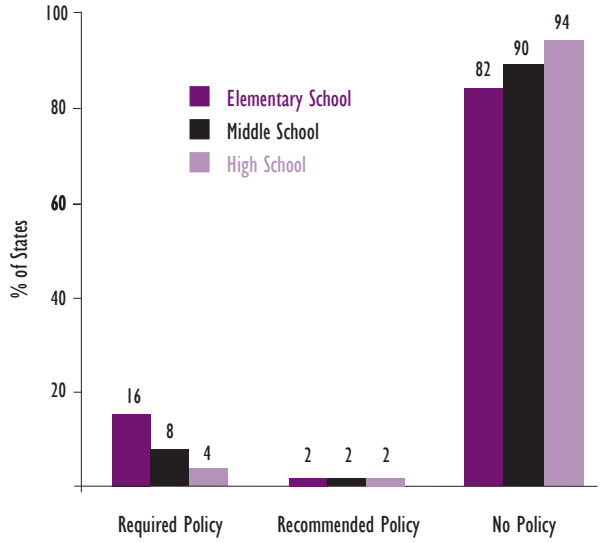
Physical Activity Outside of Physical Education

For students to obtain at least 50% of their recommended amount of physical activity at school, the entire school environment should promote and engage students in activity throughout the day through a variety of means, such as physical activity breaks or physical activity clubs, according to national guidelines.[34] Typically, however, high school and middle school students are not given the opportunity outside of PE and organized sports to integrate activity within their day.

State-Level Findings

Just three states had a specific time requirement for physical activity outside of PE at the high school level, with 6% at the middle school level compared to 16% at the elementary level. Eighteen percent of states had a policy with a time requirement for physical activity outside of PE in at least one level (ES, MS, HS), with another 2% recommending it. The requirements usually specified time required outside of PE or had a general requirement for physical activity, of which PE could be a part. The strongest policies required physical activity *in addition* to PE requirements. Oklahoma's elementary school policy is such an example, requiring 60 minutes of physical activity per week in addition to PE requirements.[35] Tennessee and Nevada are the only states with a high school requirement for physical activity.[36] Tennessee requires districts to integrate 90 minutes of physical activity per week into the instructional day, while Nevada requires 30 minutes of physical activity per day. In both cases, attending physical education class may help meet the requirement, but physical education may not be substituted by physical activity alone.

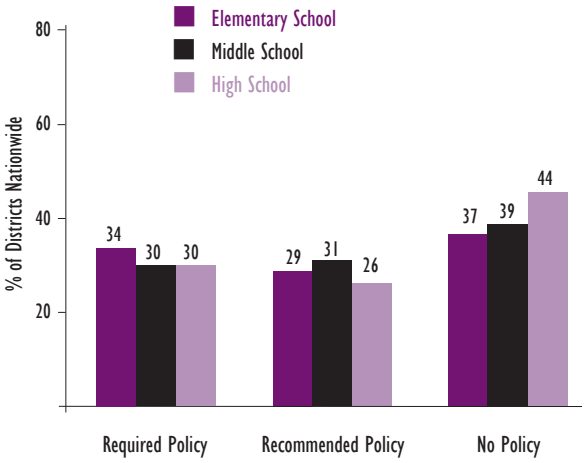
Figure 5. State Policies Addressing a Time Requirement or Recommendation for Physical Activity Outside of Physical Education, School Year 2009-10



District-Level Findings

Districts were fairly evenly divided as to whether they included language in their wellness policies related to providing physical activity for all grade levels outside of PE. Thirty percent of all district policies required that physical activity outside of PE be provided for all middle and high school grades, as compared to 34% for the elementary school level of applicability. Physical activity outside of PE was encouraged or required for some, but not all, grade levels in 26% of the policies governing high schools and 31% of the policies governing middle schools, as compared to 29% of the policies governing elementary schools.

Figure 6. District Policies Addressing Physical Activity Outside of Physical Education by Grade Level of Applicability, School Year 2007-08



Withholding Physical Activity or Prohibiting the Use of Physical Activity as Punishment

To promote lifelong enjoyment of physical activity, the CDC and the American Heart Association discourage the use of physical activity as a form of punishment.[37]

State-Level Findings

Only a few states addressed the practice of withholding physical activity as punishment. Three states (6%) had a required policy that prohibits the withholding of activity (i.e., recess or other physical activity) as punishment at the middle and high school levels. Overall, 18% of states had a required or recommended policy addressing the withholding of activity as punishment in at least one level (ES, MS, HS), with 6% requiring it and 12% recommending it. The three states with a required policy addressed every grade level K-12.

District-Level Findings

Most district policies did not address whether physical activity could be used as punishment for bad behavior (e.g., running laps for not paying attention, withholding recess for failure to complete class work). When such provisions were included in the district policies, they were fairly evenly split between discouraging use of physical activity as punishment and prohibiting such practices, regardless of grade level of applicability. By the beginning of the 2007-08 school year, 11% of all district policies prohibited the use of physical activity as punishment for the middle and high school levels as compared to 13% at the elementary level of applicability. An additional 11% to 12% of district policies discouraged such practices at the high school and middle school levels of applicability, respectively, as compared to 14% at the elementary level.

Recess and Physical Activity Breaks for Secondary Students

> *I would open the gyms and other sporting areas (tennis courts, football field, track, etc.) to the general student population....When students have the option to have fun with their friends or play the sports they enjoy, they are more likely to do them, as opposed to having no options. Similarly, I might devise some sort of "2-minute fitness breaks" during certain classes….These breaks would most likely be enjoyed by students because it gives them the opportunity to move around and take a quick break from a possibly boring lecture."*
>
> – Robert Hsu, student, Northville High School, Michigan

NASPE and the CDC recommend that students engage in recess or physical activity breaks daily in order to be more focused and physically active.[38]

State-Level Findings

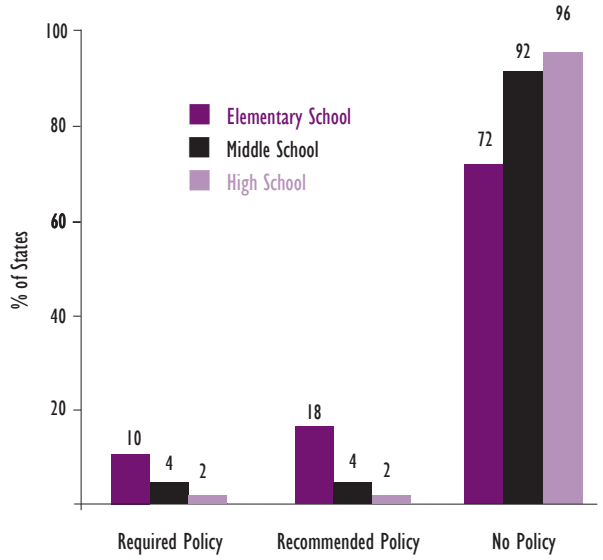
At the state level, high school and middle school students were largely overlooked in policies to promote physical activity throughout the day. Only Hawaii had a requirement for recess or physical activity breaks at the high school level.

District-Level Findings

Overall, less than one-half of all district policies included provisions for providing physical activity opportunities or breaks throughout the school day, regardless of grade level of applicability. Seven percent of districts required physical activity

At the middle school level, two states (Hawaii and North Carolina) required it, compared to 10% of states at the elementary level. Overall, 32% of states had a policy requiring or recommending recess or physical activity in at least one level (ES, MS, HS), with 10% requiring it and 22% recommending. Of note, not included in this figure are states that had a time requirement or recommendation for physical activity outside of PE, with recess being one of the options to fulfill the requirement. Those policies are reflected in the physical activity outside of PE category.

Figure 7. State Policies Addressing a Requirement for Recess or Physical Activity Breaks, School Year 2009-10



opportunities or breaks throughout the school day at the high school level and 6% required such provisions at the middle school level, as compared to 10% at the elementary school level of applicability. Thirty-seven percent of all district policies encouraged or suggested that physical activity opportunities or breaks be provided throughout the school day at the high school level, 39% included such recommendations for middle school levels, and 37% included them for elementary school levels. In addition, 18% of all district wellness policies required that elementary students be provided with daily recess.

Figure 8. District Policies Addressing Physical Activity Opportunities Throughout the School Day, School Year 2007-08

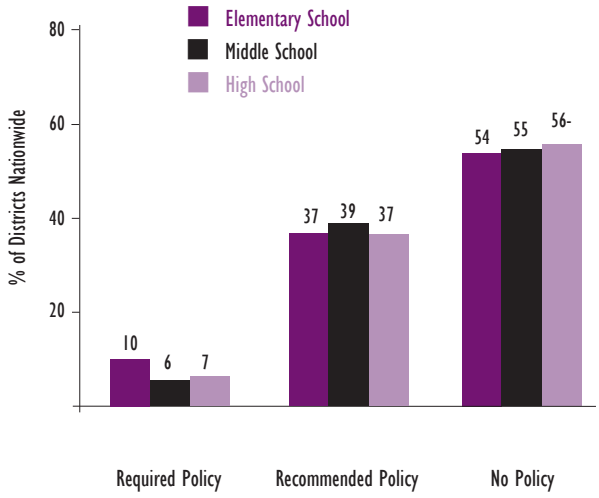
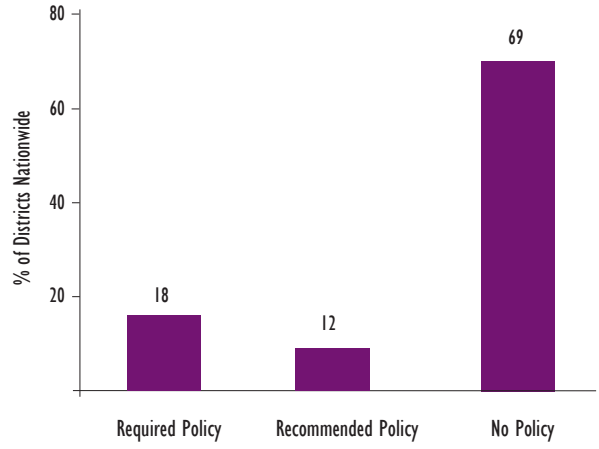


Figure 9. District Policies Including a Daily Recess Requirement – Elementary Level, School Year 2007-08



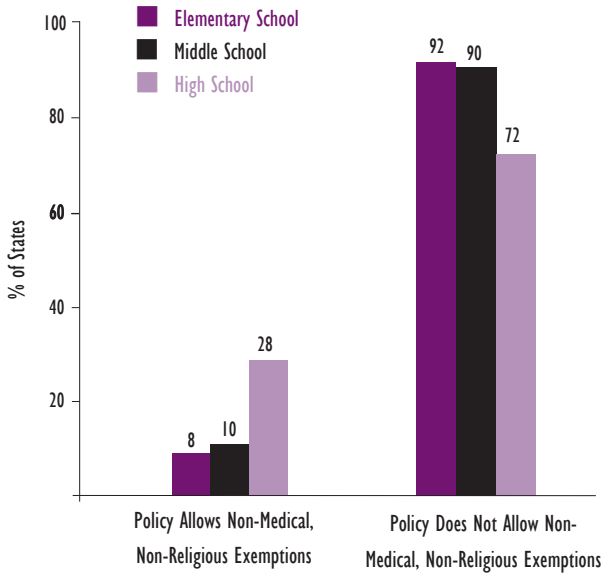
Exemptions from PE Requirements

Policies allowing exemptions from PE requirements range from those permitting religious or medical exemptions to more liberal policies allowing substitution of other academic courses, participation in school or community-based athletic teams, marching band, ROTC training, work study programs, or satisfactorily meeting physical performance test standards. Liberal policies can nullify efforts to increase PE and physical activity requirements at the middle and high school levels.

State-Level Findings

Twenty-eight percent of states had a policy requiring schools at the high school level to allow one or more types of non-religious, non-medical exemptions from PE requirements. This compared to 10% at the middle school level and 8% at the elementary level.

Figure 10. State Policies Addressing Non-Medical, Non-Religious Exemptions from Physical Education Requirements, School Year 2009-10



4. Nutrition

Policies [related to] nutrition standards are important because all students eat at school. Even if they don't eat the school food… they see what is being served and it influences what foods they eat. These policies will help encourage better eating habits, and those who depend on the school lunches will be able to have a healthy diet.

— Connie Lim, student, Newport High School, Washington

The Dietary Guidelines for Americans recommend that children and youth consume a healthy diet for a multitude of health benefits, including the prevention of heart disease, certain forms of cancers, high cholesterol, and high blood pressure.[39] However, students are not consuming enough fruits, vegetables, and whole grains at school to help them meet these guidelines. Too often, they eat less healthy foods such as french fries and other foods of minimal nutritional value (FMNV) and drink sodas and other sweetened beverages.[40] Finkelstein and colleagues demonstrated that as students progress from elementary to high school their environment becomes increasingly less healthy.[41] Schools cannot control what happens at home or outside of school; however, they have the authority to offer the best environment at school to educate high school and middle school students about the choices they should be making and to ensure that they are leading by example.

Nutrition Standards for School Meals

Across the board, nutrition standards for school meals at both the state and district levels do not vary by school level. What is notable is the lack of attention paid to ensuring that school meals meet the most recent Dietary Guidelines for Americans. A majority of states and districts rely on United States Department of Agriculture (USDA) standards for reimbursable meals, which currently require school lunches to meet the applicable recommendations of the 1995 Dietary Guidelines for Americans. However, as a recent Institute of Medicine report points out, the current nutrition standards for school meals are outdated and in need of an overhaul.[42]

Overall, few state-level policies required nutrition standards for school meals beyond USDA requirements at the middle school and high school levels. One-third of district-level policies addressed nutritional guidelines for school meals in line with 2005 Dietary Guidelines for Americans, however they were much more likely to recommend than require compliance at the secondary level.

State-Level Findings

Using a broad definition of "nutrition standards" to include all policies that address at least one standard for school meals beyond USDA requirements, 12% of states had a policy requiring nutrition standards for school meals at the high school

District-Level Findings

As of the beginning of the 2007-08 school year, most district wellness policies did not address whether nutritional guidelines for school meals meet or exceed the 2005 Dietary Guidelines for Americans. When it was addressed, district poli-

level, 12% at the middle school level and 14% at the elementary level. Overall, 26% of states had a policy requiring or recommending nutrition standards for school meals for at least one level (ES, MS, HS), with 14% of the policies requiring compliance and 12% recommending it. The actual policy requirements varied widely, and only a handful address multiple nutritional standards for meals or include compliance with the 2005 Dietary Guidelines for Americans.

West Virginia and Idaho are two states that have addressed the need for updated nutrition standards for school meals. West Virginia's State Board Policy 4321.1 includes requirements beyond the USDA requirements that are applicable to all foods sold on the campus at all levels (ES, MS, HS).[43] These requirements include limiting trans fat and sodium, providing at least 6 grams of naturally occurring dietary fiber, omitting beverages with artificial sweeteners, and meeting the 2005 Dietary Guidelines for Americans. Idaho's *New Nutrition Standards for School Meals* (recommended, not required) includes calorie, trans fat, sodium and cholesterol limits, along with innovative recommendations such as offering legumes at least once per week, not offering grains with more than 14 grams of sugar per ounce, a fiber requirement, and eliminating the availability of salt shakers and sugar dispensers.[44]

cies were more likely to encourage or suggest that school meal guidelines meet the 2005 Dietary Guidelines rather than require that school meals exceed them. Thirty-three percent of districts included language in their wellness policies that encouraged such provisions for policies applicable at the high school and elementary school levels; while 32% included such language for policies governing middle schools. Only 9% of the districts with policies applicable at the middle and high school levels and 10% at the elementary level required school meals to exceed the Dietary Guidelines by specifying definitive language such as requiring that meals include a specific number of fruits/vegetables, including only low-fat (1%) or nonfat milk, half of all grains are not whole grains, etc.

Nutrition Information at Point-of-Sale

This is important to me because I feel that people should know what goes into [their] body.

– Kenderick Scorza, student, North Little Rock High School East Campus, Arkansas

At both the state and district levels, the majority of policies did not require or recommend nutrition information at point-of-sale.

State-Level Findings

Only two states (4%) states had a policy requiring nutrition information at the point-of-sale at both the high school and middle school levels, while three states (6%) required it at the elementary school level. Overall, only 8% of states had a policy requiring or recommending nutrition information at the point-of-sale in at least one

District-Level Findings

Most public school districts did not have any policy addressing whether nutritional information be provided for school meals. Only 11% of district wellness policies required such provisions at the high school level, 10% at the middle school level and 12% at the elementary level. Less than 7% of districts suggested or encour-

level (ES, MS, HS), with 6% requiring it and 2% recommending it. A good example of a policy requiring point-of-sale information can be found in Hawaii's Departments of Education and Health's Wellness Guidelines,which schools are required to implement.[45] These guidelines require that nutrition information for products offered in snack bars, à la carte, and vending is readily available near the point of purchase at all schools.

aged that nutritional information be provided for school meals, regardless of grade level of applicability.

Adequate Time to Eat Meals

The USDA suggests that students should have a minimum of 20 minutes at lunch and 10 minutes at breakfast from the time they receive their food to consume the meal, in order to allow for socializing, food service, clean-up and other lunch-related activities.[46]

Overall, few states and districts had policies requiring adequate time to eat at the secondary level. District-level policies were more likely to recommend than require adequate time to eat at the middle school and high school levels. Many policies required or recommended "adequate time to eat" without specifying a minimum amount of time.

State-Level Findings

Sixteen percent of states had policies requiring adequate time to eat at the middle and high school levels, while 18% required it at the elementary level. Overall 34% of states had a state-level policy that included a requirement or recommendation in at least one level (ES, MS, HS). Eighteen percent of the policies were required, while 16% were recommended. Many policies included a general "adequate time" recommendation, while a few specified minimum minutes for lunch and/or breakfast. Connecticut and West Virginia are examples of states with required state-level policies that are applicable at elementary, middle, and high school levels, and include minimum time specifications (in the case of West Virginia, for both breakfast and lunch).

District-Level Findings

Approximately 10% of all district wellness policies required that middle and high school students be provided with the recommended amount of time to eat their meals, as compared to 13% at the elementary level. However, most districts that addressed the amount of time for meals suggested or encouraged such time limits as opposed to requiring them. Overall, 42% of districts with policies applicable at the high school level included language in their wellness policies suggesting that students be provided with "adequate time to eat" without specifying a minimum amount of time, specified an amount that falls below the recommended 10 minutes for breakfast and/or 20 minutes for lunch; 41% of districts included such language in policies applicable at the elementary and middle school levels.

COMPETITIVE FOODS

There is no more contentious issue around school nutrition than that of foods that compete with and are served and/or sold outside the school meal. Food companies and special interest groups have a financial stake in ensuring their products get sold to students. For example, in West Virginia where there are strong nutrition standards for most competitive foods, a strong lobbying effort resulted in legislation specifically allowing "soft drinks" to be served in high schools.[47]

According to CDC's 2007 SHPPS study, 71% of middle schools and 89% of high schools reported having a vending machine, school store or canteen, or snack bar where students could purchase competitive foods. From these foods offered at school, students add an extra 277 calories per day to their diet, of which 177 calories are from junk foods.[48] If calculated over a 180-day school year, a student could consume nine pounds from competitive junk foods alone.

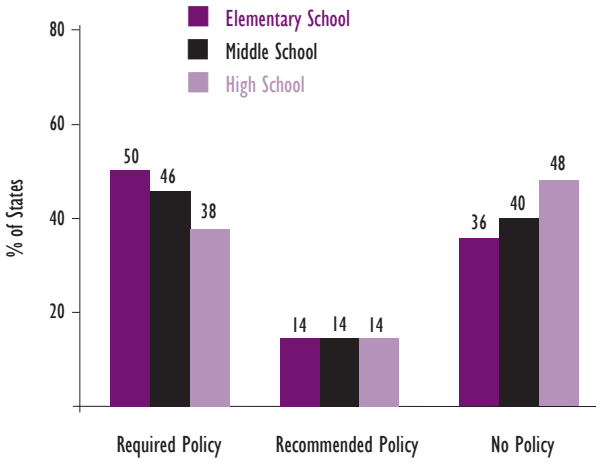
To address this issue, in 2007 the Institute of Medicine released recommendations that called on education systems to change their practices and focus on offering more fruits, vegetables, whole grains, and healthy beverages and for limits on portion size, calories, fat, sodium, and sugar.[49] Many states and districts have worked to include these key recommendations in their nutrition policies. However, nutrition standards for competitive foods are less frequent at the middle and high school levels and, in many cases, still nonexistent.

Nutrition Standards for Competitive Foods and Beverages

State-Level Findings

Only 38% of states had a required policy addressing competitive foods at the high school level, compared to 46% at the middle school level and 50% at the elementary school level. In all cases, this marked difference can be attributed to policies that require implementation only at the elementary or elementary and middle school levels. Overall, 64% of states had a state-level policy requiring or recommending nutrition standards for competitive foods in at least one level (ES, MS, HS), with 50% of states requiring compliance and 16% recommending it.

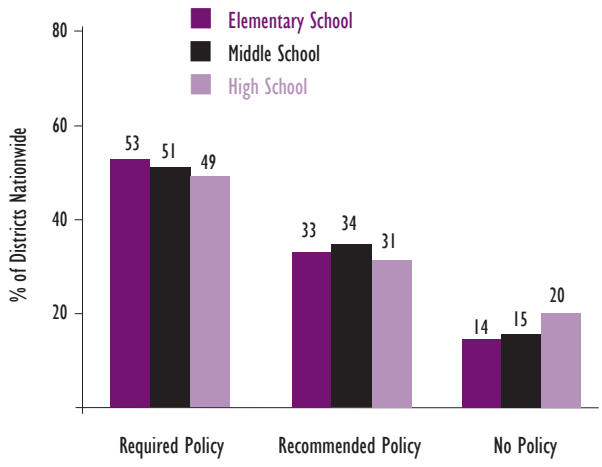
Figure 11. State Policies Establishing Nutrition Standards for Competitive Foods, School Year 2009-10



District-Level Findings

While most districts met the federal requirement that the district policy include nutrition standards or guidelines for all foods sold outside of the school meal program during the school day, such provisions were not uniform. Fifty-one percent of the wellness policies governing middle schools and 49% governing high schools required definitive nutritional guidelines for competitive foods and beverages, as compared to 53% at the elementary level. In addition, nearly one-third of the districts either suggested standards or simply repeated the federal language without providing any details on their competitive food policy, regardless of grade level of applicability.

Figure 12. District Policies Including Nutritional Guidelines for Foods Sold/Served Outside of the School Meal Program by Grade Level of Applicability, School Year 2007-08



Competitive Food Nutrition Standards: Key Areas

When looking at policies addressing competitive foods, the quality of the food served is important. The CDC and School Nutrition Dietary Assessment Study-III research showed that students are beginning to have more healthy food options, however the most common competitive foods found in the study were fruit drinks, sports drinks, pastries and cookies, candy and soda.[50] Many foods are still being served that do not meet national nutrition standards for competitive foods outlined in the Institute of Medicine's (IOM) *Nutrition Standards for Foods in Schools*.[51]

Overall, state-level policies addressed certain components more frequently than others, and district wellness policies were relatively silent when it came to specifying nutritional requirements for competitive foods sold at school. For certain nutritional limits such as fat and sugar, the standards were markedly stronger for policies governing elementary as compared to middle and high school levels.

1. Portion Size Limits

The IOM report does not include specific recommendations for portion sizes of competitive foods, rather recommending calorie limits.[52] However states and districts with policies addressing portion sizes often addressed them separately, setting maximums for different items.

State-Level Findings

Just over one-quarter of all states (28%) had a policy placing portion limits on competitive foods at the high school level, compared to 32% at the middle school level and 34% at the elementary level. Forty-six percent of states had a policy placing portion limits on competitive foods in at least one level (ES, MS, HS), with 34% requiring compliance and 12% recommending it.

District-Level Findings

District wellness policies did not typically suggest or specify limits on the portion sizes for competitive foods. When they were addressed, the policies were more likely to require such limits rather than suggest them, regardless of grade level of applicability (more than 19% required as compared to 13% suggested at the middle school level and nearly 19% required as compared to 15% at the elementary and high school levels).

2. Calorie Limits

The IOM recommends that snack items should contain 200 calories or less per portion as packaged and à la carte entrée items should not exceed calorie limits for comparable National School Lunch Program (NSLP) items.[53] However, very few states or districts set strong calorie limits on competitive foods.

State-Level Findings

Of the key nutrition areas, calorie limits was the least frequently addressed by states. Only 18% of states had a policy placing calorie limits on competitive foods at the high school level, compared to 22% at the middle school level and 20% at the elementary level. Thirty percent of states had a policy placing calorie limits on competitive foods in at least one level (ES, MS, HS), with 20% requiring compliance and 10% recommending it. Calorie limits varied between 200 and 450 for items sold á la carte, and 150 and 300 for all other items.

District-Level Findings

District wellness policies were relatively silent on calorie limites for competitive foods sold at the middle and high school levels. District policies for high schools were split between requiring and recommending calorie limits for competitive foods: 6% required and 6% recommended. For middle schools, districts were more likely to require calorie limits (10%) than recommend them (6%). At the elementary level, over 12% of districts required specific calorie limits for competitive foods sold at school, while another 6% recommended them.

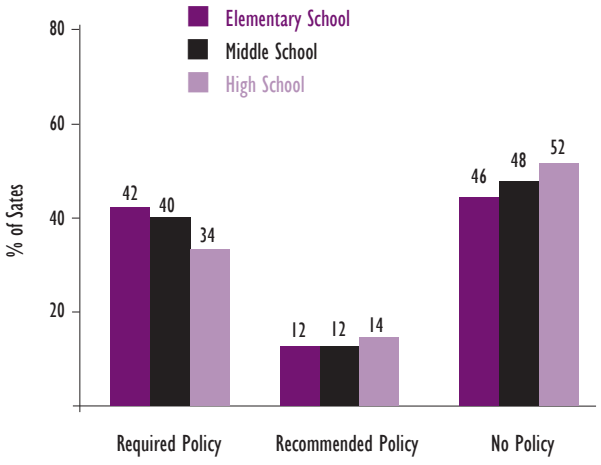
3. Fat limits

The IOM recommends the following limits for fat content of snacks, foods and beverages: no more than 35% of total calories from fat, less than 10% from saturated fat and zero trans fats.[54] States and districts were more likely to address limits for fats than other areas.

State-Level Findings

Fat content was the nutrition component most frequently addressed at the state level. However, such limits are least frequently found at the high school level. Just 34% of states had a policy including a limit on fat for competitive foods at the high school level, compared to 40% at the middle school level and 42% at the elementary level. Overall, 58% of states had a policy including a limit on fat for competitive foods in at least one level (ES, MS, HS), with 42% requiring it and 16% recommending it. Required policies varied, some following the IOM guidelines and others setting a limit on the maximum number of fat grams per serving.

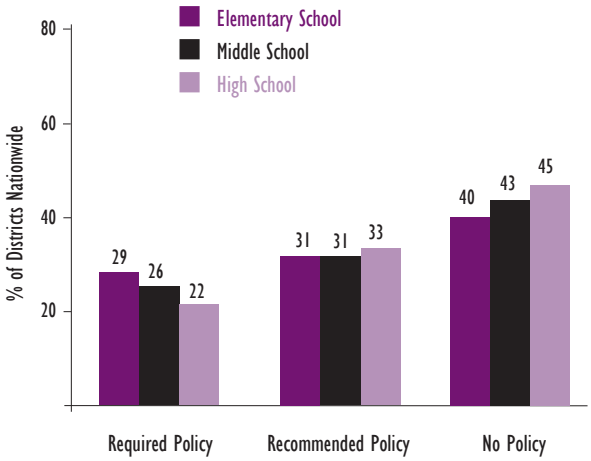
Figure 13. State Policies Governing the Fat Content of Competitive Foods, School Year 2009-10



District-Level Findings

District wellness policies were more likely to address limits on fat content of competitive foods than other nutritional limits for competitive food items and, consistent with other findings in this report, policies governing elementary schools were stronger on fat content restrictions than they were for policies governing middle and high schools. However, limits on fat content were not strong or overly prevalent at any school level. Twenty-two percent of district policies applicable at the high school level and 26% of the policies applicable at the middle school level required specific limits on fat content for competitive food items, as compared to 29% at the elementary level. While, 33% of the policies applicable at the high school level and 31% of the policies applicable at the elementary and middle school levels suggested or encouraged limits on fat content.

Figure 14. District Policies Governing the Fat Content of Competitive Foods Sold at School by Grade Level of Applicability, School Year 2007-08



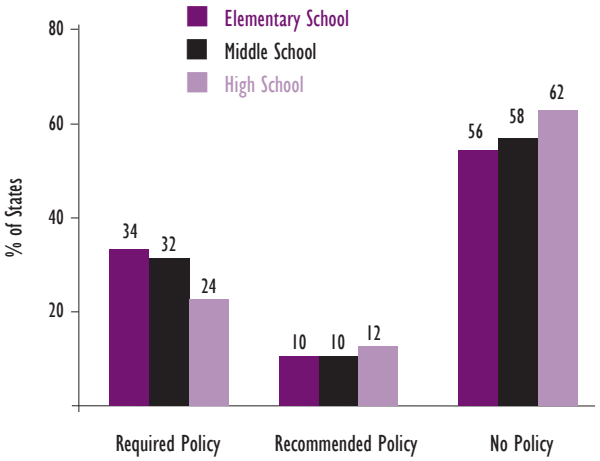
4. Sugar Limits

The IOM recommends that snacks, foods, and beverages provide no more than 35% of calories from total sugars per portion as packaged, except for yogurt, with no more than 30 grams per eight-ounce portion.[55] A greater percentage of states addre sugar content limits than districts; however, the secondary level has the least restrictions in both cases.

State-Level Findings

Limits on sugar content was least common in state policies addressing the high school level compared to the middle and elementary levels. Twenty-four percent of states had policies that include a sugar limit for competitive foods at the high school level, compared to 32% at the middle school and 34% at the elementary school level. Forty-six percent of states had a policy including a limit on sugar in competitive foods in at least one level (ES, MS, HS), with 36% requiring it and 10% recommending it. Required policies generally followed the IOM guidelines, with a few states setting a limit on the maximum number of grams of sugar.

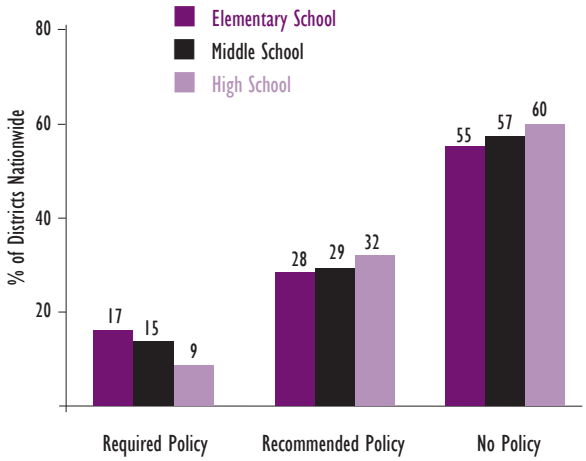
Figure 15. State Policies Governing the Sugar Content of Competitive Foods, School Year 2009-10



District-Level Findings

By the beginning of the 2007-08 school year, the majority of school districts did not specify limits on the amount of sugar that would be allowed for competitive foods; however, when they did, the policies were stronger at the elementary than the middle and high school levels of applicability. Twenty-nine percent of districts suggested that limits on sugar be applied to competitive foods sold at the middle school level and 32% suggested limits at the high school level, as compared to 28% at the elementary school level. In contrast, 15% of districts required specific limits on sugars in competitive foods sold at the middle school level and 9% required such limits at the high school level, as compared to 17% at the elementary level of applicability.

Figure 16. District Policies Governing the Sugar Content of Competitive Foods Sold at School by Grade Level of Applicability, School Year 2007-08



5. Competitive Foods Prohibited

State-Level Findings

No state had a state-level policy requiring schools to prohibit the sale of all competitive foods during the entire school day at the middle or high school level. However, three states had a policy that prohibits the sale of all competitive foods for the entire school day at the elementary level.

District-Level Findings

Most districts do not prohibit the sale of competitive foods throughout the school day. As of the beginning of the 2007-08 school year, only 2% of districts definitively prohibited the sale of competitive foods at the elementary school level in their wellness policies and 14% suggested a competitive food ban at this level. No district prohibited competitive food at either the high school or middle school levels, and fewer than 2% suggested such a ban.

BEVERAGES

> *I propose that every high school in my state eliminate all soda, energy drinks, such as Gatorade and artificial juice drinks. My schools could implement this by replacing all of the drinks in the vending machines at schools stores with water, 100% juice, and low-fat milk.*
>
> — Isabella Barna, student, Summit High School, Oregon

The beverages sold and served in middle and high schools are one of the major areas of disparity between nutrition policies at the elementary and secondary grades. While significant strides have been made in the last few years improving the beverage environment at the elementary level, middle and high school policies have lagged behind. At the same time, studies have shown that consumption of sodas, other sugar sweetened beverages, and sports drinks are higher among adolescents when compared to children, with the consumption trend increasing over the last two decades.[56]

Beverages, such as soda, sports drinks, low-calorie energy drinks, and fruit drinks, make up a large portion of the extra calories that youth consume.[57] While just 14% of youth reported drinking the recommended amount of milk, Wang and colleagues found that 84% of adolescents drank a sugar sweetened beverage on any given day, consuming an average of 360kcal.[58] They calculated that a 15-year-old boy who weighs about 110 lbs. would have to run one hour or walk about 3 hours to burn off the calories consumed from beverages in a single day. Limiting the intake of calories from sugary beverages in the school environment is critical step in advancing the battle against childhood obesity.

The IOM recommends that schools limit "Tier 1" beverages, or those sold to all students, to the following: (1) water without flavoring, additives or carbonation, (2) 1% and nonfat milk in 8 ounce portions (lactose free and soy beverages included), (3) flavored milk with no more than 22 grams of sugar per 8 ounce portion, (4) 100% fruit juice in 4 ounce portions as packaged for elementary/middle school and 8 ounce portions for high school, and (5) caffeine-free beverages, with the exception of trace amounts of naturally occurring caffeine substances. Recommendations for "Tier 2" beverages, or those sold in high schools after school, are noncaffeinated, nonfortified beverages with fewer than 5 calories per portion as packaged (with or without nonnutritive sweeteners, carbonation, or flavoring).[59]

Overall, state-level policies were much more lenient at the secondary level, with a majority permitting regular sodas, diet sodas, and non-100% fruit juice beverages, and an overwhelming majority permit-

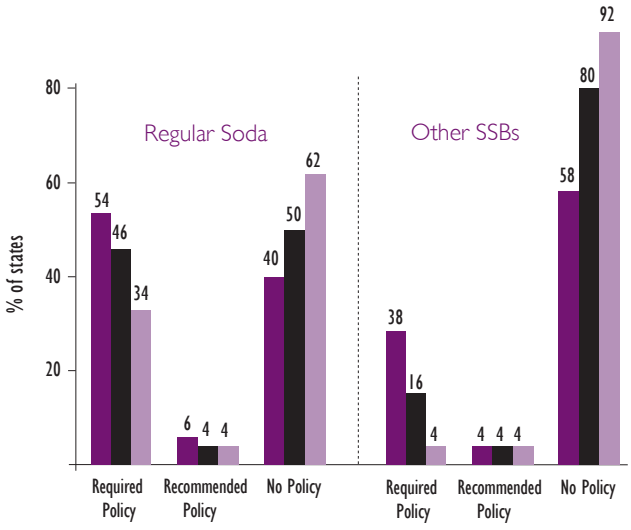
ting sugar-sweetened beverages at the middle school and high school levels. Similarly, over half of district policies permitted regular sodas, few policies prohibited other sugar-sweetened beverages, and restrictions on milk fat were weak.

Regular Sodas

State-Level Findings

Only 34% of states had a required policy prohibiting the sale of regular, sugar-sweetened sodas for at least a portion of the school day at the high school level, compared to 46% at the middle school level, and 54% at the elementary school level. Overall, 60% of states had a policy prohibiting the sale of regular, sugar-sweetened sodas on the school campus in at least one level (ES, MS, HS) for at least a portion of the school day, with 54% of the policies requiring compliance and 6% recommending it. Policies prohibiting the sale of regular sodas generally fell into three categories: (1) those specifically prohibiting the sale of all sodas, carbonated beverages or FMNV, (2) those prohibiting "full calorie" sodas, and (3) those excluding the sale of sodas in a list of "approved beverages." In all cases, the sale of regular soda may be banned either for the entire school day or only a portion of the school day, in both vending and school meal locations or school meal locations only.

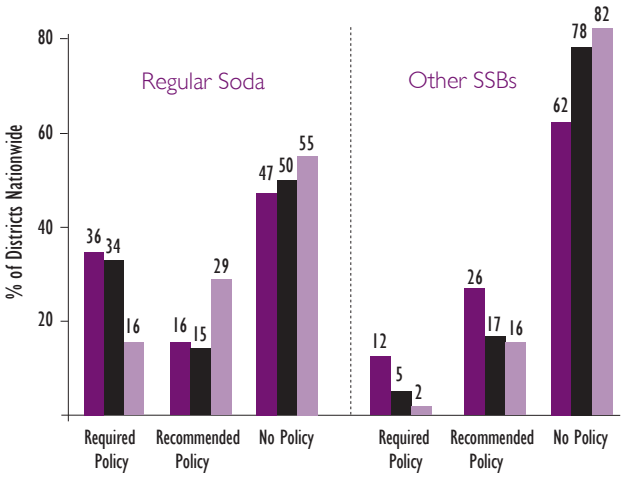
Figure 17. State Policies Prohibiting the Sale of Regular Soda and Other Sugar-Sweetened Beverages on School Campus for a Portion of the School Day or Full School Day, School Year 2009-10



District-Level Findings

Prohibitions on regular, sugar-sweetened sodas were much more common in district policies governing elementary and middle schools than high schools. As of the beginning of the 2007-08 school year, 16% of district policies for high schools and 34% of district policies for middle schools prohibited the sale of regular, sugar-sweetened soda as compared to 36% of elementary schools. In contrast, wellness policies were more likely to limit the sale of regular soda to certain times of the day or to suggest restrictions for sales at the high school level as compared to the middle and elementary school levels (29% as compared to 15% and 16%, respectively).

Figure 18. District Policies Governing the Sale of Regular Soda and Other-Sweetened Beverages by Grade Level of Applicability, School Year 2007-08



SSB = Sugar-Sweetened Beverage

Other Sugar-Sweetened Beverages

If I were to create a policy to be implemented in all high schools, it would be to ban the sale and consumption of soda and energy drinks....It is an unhealthy habit to get into.

– David Sanchez, student, Wisconsin

State-Level Findings

A large difference can be seen between state policies addressing sales of other sugar-sweetened beverages at the elementary, middle and high school levels. Other sugar-sweetened beverages include sport drinks, fruit punch, sweetened teas and juice drinks containing less than 100% juice. Only two states, Rhode Island and Connecticut, had a required policy prohibiting the sale of other sugar-sweetened beverages at the high school level. Sixteen percent of states required sugar-sweetened beverages to be prohibited at the middle school level, while 38% of states prohibited it at the elementary level. All of the required policies at the middle school and high school level covered the entire school day, sometimes extending to before and after school. Overall, 42% of states had a policy prohibiting the sale of other sugar-sweetened beverages on the school campus for at least a portion of the school day in at least one level (ES, MS, HS), with 38% of the policies requiring compliance and 4% recommending it.

District-Level Findings

Most public school districts did not have a policy that restricted or prohibited the sale of other sugar-sweetened beverages as of the beginning of the 2007-08 school year, regardless of grade level of applicability. When the issue was addressed, district wellness policies governing high schools were markedly weaker than they were for middle and elementary schools in particular. In fact, only 2% of all district policies governing high schools prohibited the sale of other sugar-sweetened beverages during the school day as compared to 5% at the middle school level and 12% at the elementary school level of applicability. An additional 26% of district policies governing elementary schools suggested or encouraged restrictions on other sugar-sweetened beverages as compared to 16% at high school levels of applicability and 17% at the middle school.

Diet or Low-Sugar Beverages

State-Level Findings

In the area of diet or low-sugar beverages, such as other sugary beverages and regular sodas, there was a marked difference between the restrictions at different levels. Only 20% of states had a policy prohibiting the sale of diet or low-sugar sodas on the school campus for at least a portion of the school day at the high school level, compared to 40% at the middle school level and 50% at the elementary school level. Overall, 54% of states had a policy prohibiting the sale of diet or low-sugar sodas on the school campus for at least a portion of the school day in at least one level (ES, MS, HS), with 50% of the policies requiring compliance and 4% recommending it.

Generally, policies prohibiting the sale of diet or low-sugar sodas fell into one of the following categories: 1) those specifically prohibiting the sale of all sodas, carbonated beverages or FMNV, 2) those prohibiting "diet or low-calorie" sodas, 3) those specifying no- or low- calorie drinks must be non-carbonated, and 4) those excluding the sale of sodas in a list of "approved beverages." In all cases, the sale of diet or low-

calorie soda was banned either a portion of the school day or the entire school day, in both vending and school meal locations or school meal locations only. (See Fig. 19, below.)

Figure 19. State Policies Prohibiting the Sale of Diet or Low-Sugar Beverages for a Portion of the School Day or Full School Day, School Year 2009-10

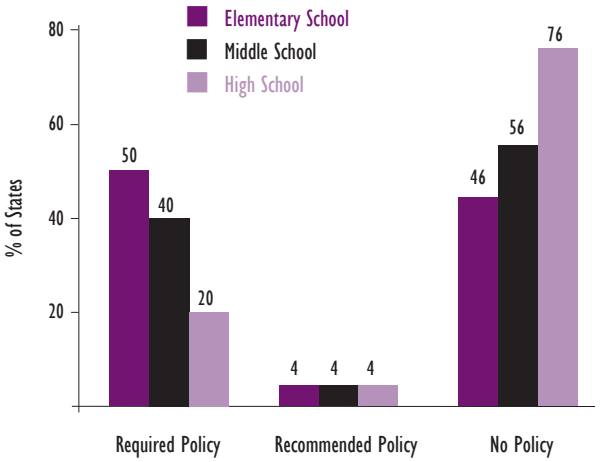
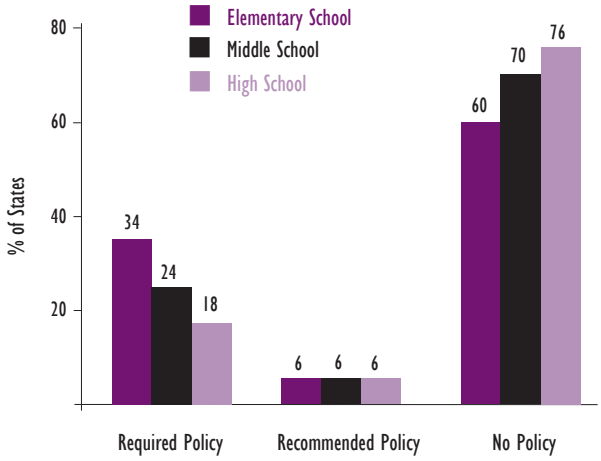


Figure 20. State Policies Recommending or Requiring 100% Juice, School, School Year 2009-10 Year 2009-10



Encouraging Water, Low-Fat Milk, and 100% Juice

State Level Findings

Only 32% of states had a required policy related to the sale of water, milk or juice at the high school level, compared to 42% at the middle school level and 44% at the elementary level. Policies generally included requiring 100% or 50% juice, non-carbonated, non-flavored water and low-fat or skim milk.

Eighteen percent of states had a required policy stating that all juice sold on campus for at least a portion of the school day must be 100% juice at the high school level, compared to 24% at the middle school level and 34% at the elementary level. Forty percent of states had a policy requiring or recommending that all juice sold on school campus for at least a portion of the school day be 100% juice in at least one level (ES, MS, HS), with 34% required and 6% recommended. (See Fig. 20, above.)

Limits on Milk Fat

State-Level Findings

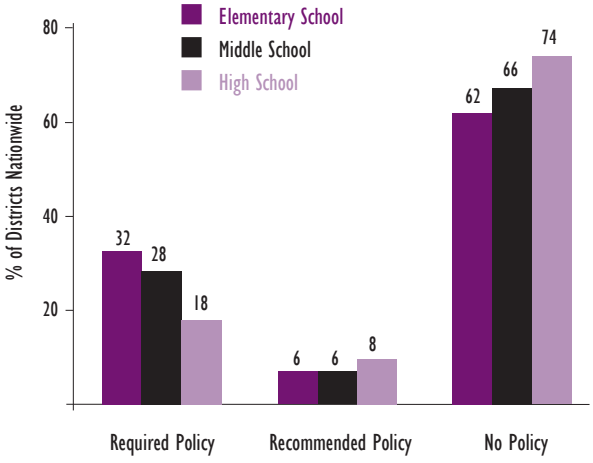
Only 12% of states had a required policy limiting the amount of fat contained in milk sold on campus to 1% ("low-fat") or less at the high school level, compared to 16% at the middle school level and 18% at the elementary level. Overall, 24% of states required or recommended a restriction on milk fat of 1% or less in at least one level (ES, MS, HS), with 18% of

District-Level Findings

The majority of districts did not have policies limiting the amount of fat in milk sold through competitive food venues. When included in district wellness policies, the provisions were weak (they allowed reduced-fat (2%) milk to be sold at all times) for 19% for the high school level of applicability and 22% of the elementary and middle school levels of applicability. Four

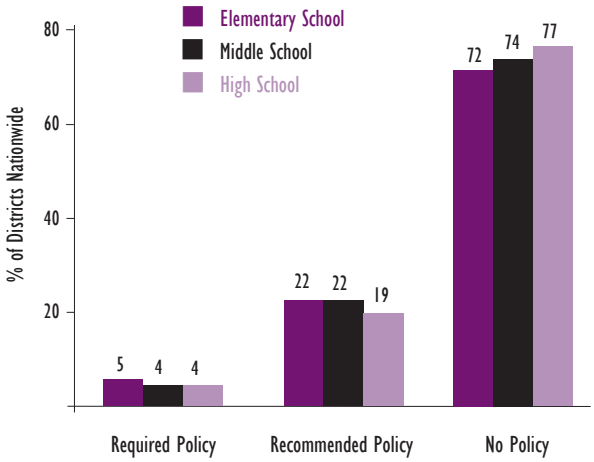
the policies requiring compliance and 6% recommending it. When states with policies specifying 2% milk fat ("reduced fat") or less are included, then 40% of states required or recommended a restriction on milk fat of 2% or less in at least one level, with 32% of the policies requiring compliance and 8% recommending it.

Figure 21. State Policies Limiting the Fat Content of Milk Sold on School Campuses by Grade Level of Applicability, School Year 2009-10



percent of all district policies required milk sold in competitive food venues at the middle and high school levels to be limited to 1% or skim milk, as compared to 5% at the elementary school level of applicability.

Figure 22. District Policies Limiting the Fat Content of Milk Sold in Competitive Food Venues by Grade Level of Applicability, School Year 2007-08



Settings in which Competitive Food Nutrition Standards Apply

School food environments play a key role in influencing the food that youth consume.[60] Secondary schools offer more avenues than elementary schools for students to purchase foods such as vending machines, à la carte, school stores, and fundraisers. Consequently, nutrition standards for secondary schools cannot be limited to the cafeteria, they must also apply to all settings where food is served. Kubik and colleagues demonstrated how food environments and practices, including food-related fundraising, the use of food as reward and use of vending machines, were associated with an increase in BMI among middle school students.[61] Nutrition standards must stretch beyond the school meal into each area where food is available for purchase.

Despite the fact that most middle and high schools sell competitive foods, policies requiring limits on their sale in à la carte settings and school stores are by no means universal, either at the state or district levels. At the district level, policies were much more likely to recommend rather than require restrictions.

1. À La Carte

In a national survey, 64% of high schools and 62% of middle schools served food to students as à la carte compared to 32% at the elementary school level.[62]

State-Level Findings

While à la carte foods are more frequently available at the middle and high school levels, there is less oversight of their nutritional content when compared to the elementary level. Thirty-four percent of states had a policy limiting, restricting or banning the sale of competitive foods and beverages in à la carte settings at the high school level and 40% at the middle school level, compared to 46% at the elementary level. Overall, 62% of states had a policy limiting, restricting or banning the sale of competitive foods and beverages in à la carte settings in at least one level (ES, MS, HS), with 48% of the policies requiring compliance and 14% recommending it.

District-Level Findings

The majority of district wellness policies limited, restricted, or banned the sale of competitive foods and beverages in à la carte settings as of the beginning of the 2007-08 school year. More than 50% of all district policies, regardless of grade level of applicability, limited à la carte sales or specified competitive food and beverage guidelines that applied to some but not all à la carte items. District policies were less likely to either ban à la carte sales or to require that all a la carte sales meet the district's competitive food and beverage nutrition guidelines at high school (12%) and middle (16%) levels of applicability compared to the elementary school level (21%).

Figure 23. State Policies Limiting, Restricting or Banning the Sale of Competitive Foods in À La Carte Settings, School Year 2009-10

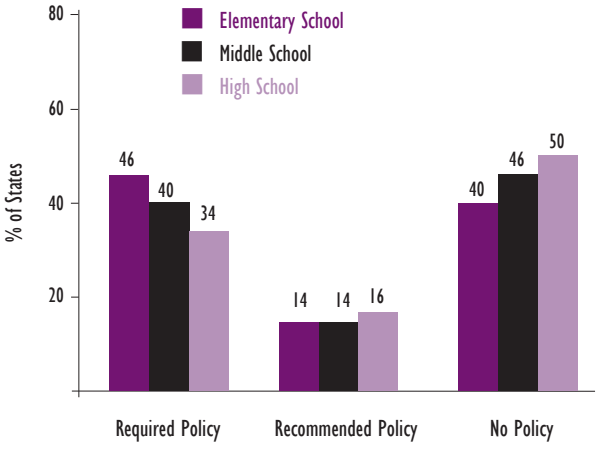
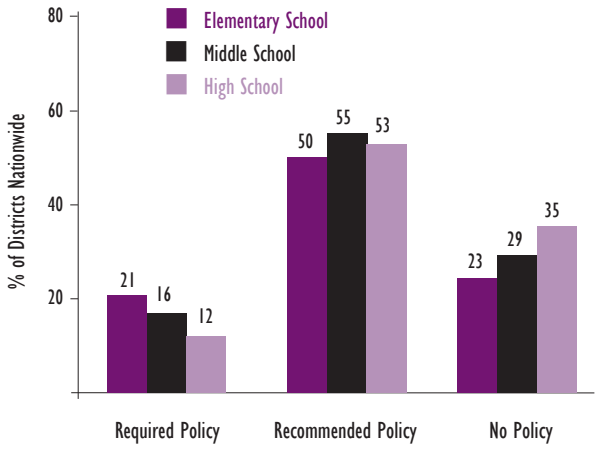


Figure 24. District Policies Restricting Access to À La Carte Foods and Beverages by Grade Level of Applicability, School Year 2007-08



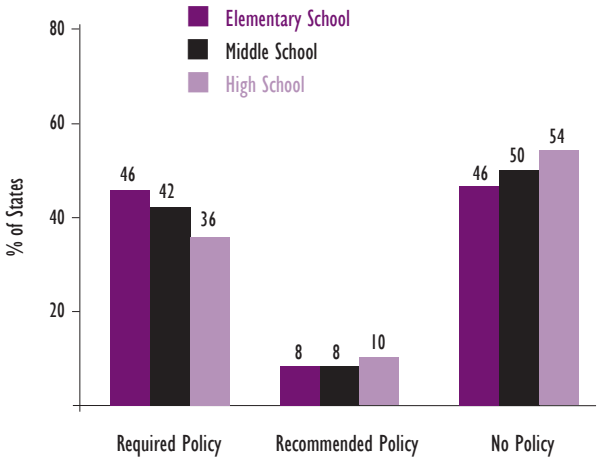
2. School Stores

School stores are most prevalent at the high school level. Twenty-five percent of high schools, 12% of middle schools, and 8% of elementary schools reported they have school stores on their campus.[63]

State-Level Findings

While school stores were more commonly found in high schools, only 36% of states had policies requiring restrictions on the foods and/or beverages that may be sold in school stores at the high school level. Forty-two percent of states had policies at the middle school level and 46% at the elementary level, even though elementary schools had the fewest school stores. Overall, 56% of states had a policy requiring or recommending restrictions on the foods and/or beverages that may be sold in a school store in at least one level (ES, MS, HS), with 46% requiring compliance and 8% recommending it.

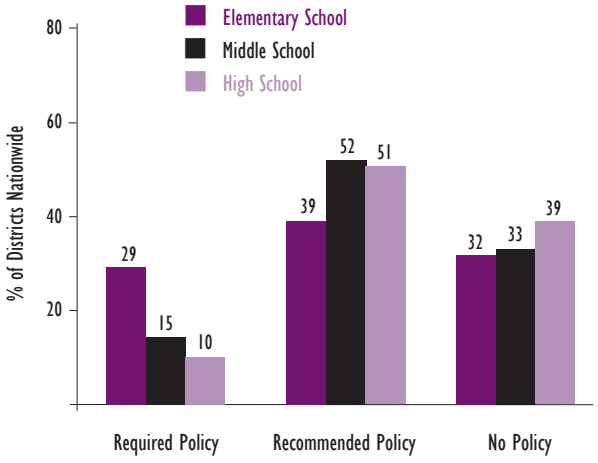
Figure 25. State Policies Including Restrictions on Competitive Foods and Beverages Sold in School Stores, School Year 2009-10



District-Level Findings

District wellness policies governing the sale of foods and beverages sold through school stores also were more stringent for the elementary levels of applicability as compared to the middle and high school levels of applicability as of the beginning of the 2007-08 school year. Only 10% of the district policies governing high schools and only 15% of the policies governing middle schools banned the sale of competitive foods and beverages through school stores or required that all items sold in school stores meet the district's nutrition standards. Twenty-nine percent of the policies governing elementary schools met this requirement. District policies were more likely to limit or to suggest restrictions on competitive foods and beverages sold in school stores at the middle and high school levels of applicability (52% at the middle school level and 51% at the high school level) as compared to the elementary level of applicability (39%).

Figure 26. District Policies Restricting Access to Competitive Foods and Beverages Sold in School Stores by Grade Level of Applicability, School Year 2007-08



Vending Machines

In the School Nutrition Dietary Assessment III, 97% of high schools and 82% of middle schools reported serving competitive foods and beverages through vending machines compared to 17% of elementary schools.[64]

Overall, state-level policies were more likely to require contents be regulated in vending machines than to restrict their access at the secondary level. District-level policies were more likely to restrict access to vending machines than to ban them or regulate their contents at the middle school and high school levels.

1. Prohibited During the School Day or Content Regulated

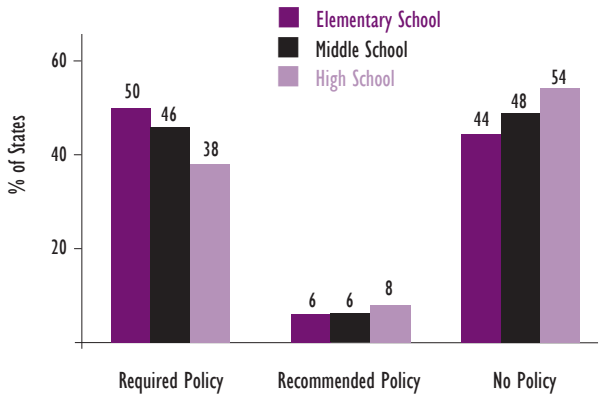
State-Level Findings – Vending Prohibited

No state had a policy prohibiting access (either recommended or required) to vending machines during the entire school day at the middle school or high school level. Overall, 12% of states had a policy prohibiting access to vending machines on the school campus during the entire school day. In all cases these policies are required and applicable only at the elementary school level.

State-Level Findings – Content Regulated

Almost all high schools and most middle schools in the United States serve food and beverages through vending machines.[65] However, just 38% of states had policies regulating the content of vending machines at the high school level, 46% at the middle school level, and 50% at the elementary school level. Sixty percent of states had a policy regulating the content of vending machines on the school campus, with 52% requiring compliance and 8% recommending it. Content standards generally followed nutrition standards for competitive foods.

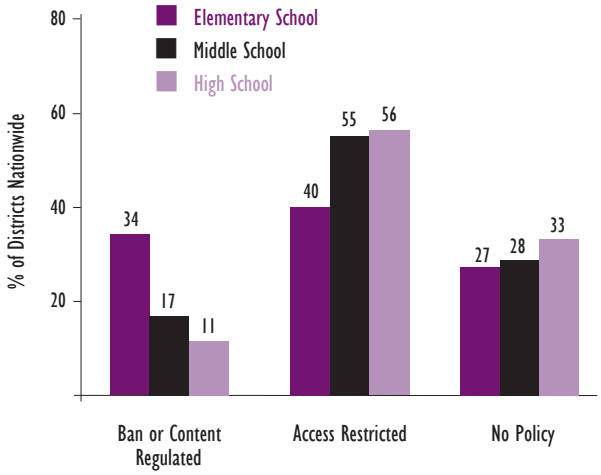
Figure 27. State Policies Including Regulations for Content of Vending Machines, School Year 2009-10



District-Level Findings

As of the beginning of the 2007-08 school year, district wellness policies were significantly more likely to ban or require that all foods and beverages sold through vending machines meet the district's nutrition standards governing competitive foods and beverages at the elementary school level as compared to the middle and high school levels of applicability. In fact, district policies were two times more likely to include such language in policies governing the elementary level (34%) as compared to the middle school level (17%) and three times more likely to include such language as compared to the high school level (11%).

Figure 28. District Policies Restricting Access to Competitive Foods and Beverages Sold through Vending Machines by Grade Level of Applicability, School Year 2007-08



2. Access Restricted During School Day

State-Level Findings

Twenty-two percent of states had a policy requiring high schools and middle schools to restrict access to vending machines on the school campus, compared to 20% of states at the elementary level. Generally policies restricted access from a period of time before lunch until a period of time after. In some cases policies did not explicitly restrict access to vending machines but prohibited access to all competitive foods and beverages on the school campus for a portion of the school day, vending machines included. The relatively low percentage for restricted access can partially be explained by the existence of other policies that regulate content or ban vending machines. Overall, 26% of states had a policy restricting access to vending machines on the school campus during the school day in at least one level (ES, MS, HS), with 24% requiring compliance and 2% recommending it.

District-Level Findings

Since so many district policies completely ban or regulate the content of items sold through vending machines at the elementary level of applicability, it was not surprising that district policies were less likely to restrict access to vending machines at the elementary as compared to the middle and high school levels of applicability. Specifically, more than 55% of district policies applicable at the middle and high school levels limited access to vending machines during the school day as compared to 40% at the elementary level.

Use of Food as Reward or Punishment

State-Level Findings

A small number of states addressed food as reward or punishment: 14% had a policy regarding the use of food as reward or punishment in the school setting, with 8% requiring compliance and 6% recommending it. All of the required policies applied equally to elementary, middle, and high schools. Recommended policies were limited to those that specifically recommended schools prohibit the use of food as reward or punishment (excluding those that merely encouraged non-food reward alternatives). Arkansas' State Board Rules Governing Nutrition and Physical Activity is an example of a policy that is required, applies to all three levels, and is comprehensive, while allowing for appropriate exceptions. The policy prohibits schools from serving, providing access to, through direct or indirect sales, or use as a reward, any FMNV or competitive foods. This includes FMNV and competitive foods given, sold, or provided by school administrators or staff, students or student groups, parents or other parent groups, or any other person, company, or organization associated with the school.[66]

District-Level Findings

Districts were more likely than states to address the use of food as a reward in their policies. As of the beginning of the 2007-08 school year, approximately 30% of all districts (across all grade levels of applicability) addressed the use of food as a reward in their wellness policy, with the majority of these policies suggesting limiting the use of food as a reward rather than explicitly prohibiting it. Six percent of districts prohibited the use of food as a reward at the high school level and 7% and 8% prohibited such practices at the middle and elementary school levels, respectively. An additional 23% of districts suggested such limits at the high school level as compared to 22% at the middle school level and 24% at the elementary level.

Fundraising on School Grounds During School Hours

> *I could see these policies being done in my school by having a wellness committee of teachers, parents, students and staff create a healthy options list for school parties, fundraisers, and so on. Allowing fundraisers that uses healthy food choices could be done. Also, fundraisers could be non-food fundraisers such as walk-a-thons and jump rope contests.*
>
> – Madeline Cumbey, student, Lafayette Meadows Elementary, Indiana

Fundraising is more common at the high school and middle school levels than in elementary schools. Researchers found that 64% and 62% of high schools and middle schools, respectively, reported holding fundraisers, compared to 37% of elementary schools.[67]

State-Level Findings

Twenty-four percent of states had a policy restricting the foods and/or beverages that can be used in fundraising on school grounds during school hours at the high school level compared to 30% at the middle school and 32% at the elementary school levels. Forty-six percent of states had a policy for at least one level (ES, MS, HS) restricting the foods and/or beverages that can be used in fundraising on school grounds during school hours. Thirty-two percent required compliance and 14% recommended it. Restrictions generally followed policies governing competitive foods. Of note, this study also examined restrictions on fundraising after school hours and/or off of school grounds. However, no state was found to have a required policy restricting food and/or beverages that can be used in these settings.

District-Level Findings

District wellness policies also were examined to understand the extent to which they prohibited or restricted the use of food-based fundraisers on school grounds. In contrast to the state analyses, the district policies were coded as either (1) prohibiting fundraisers on school grounds at all times or (2) limiting fundraisers to just the school day (as opposed to at all times) or restricting the items that may be sold through fundraisers. Only 2% of districts prohibit fundraisers at all times on school grounds at the high and middle school levels and 3% prohibit them at the elementary level. Most of the district policies either limit fundraisers to certain items or prohibit fundraisers but only during the school day—47% at the high school level, 51% at the middle school level, and 48% at the elementary school level.

INCREASED ACCESS TO OR AVAILABILITY OF FRUITS AND VEGETABLES AND FARM-TO-SCHOOL

When changing the items in the competitive food and school meal environment, it is important to replace them with foods that meet the standards but also have a high nutrient value, like fruits and vegetables. To give middle and high school students the opportunity to eat enough fruits and vegetables, policies can encourage fruit and vegetable access at every point of sale. Farm-to-school is another initiative that can improve the fruit and vegetable environment. It connects local farmers with schools and provides funding for nutrition education and opportunities for hands-on learning.

Overall, less than one-quarter of states included a strategy for increasing fruit and vegetable access or availability at the secondary level, and policies were more likely to be recommendations than requirements. State-level policies requiring farm-to-school programs were more common than district-level ones.

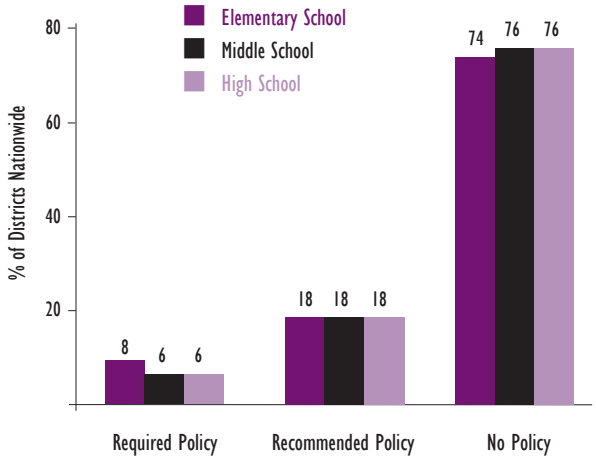
Increasing Access to or Availability of Fruits and Vegetables

Map 4. States Requiring Strategies to Increase Access and Availability of Fruits and Vegetables at the Middle School and High School Level.

State-Level Findings

Improving access to and/or availability of fruits and vegetables is a topic that receives little attention at all grade levels. Only three states (Texas, Mississippi, and Iowa) had policies requiring strategies to increase access to or availability of fruits and vegetables at the high school and middle school levels. These same states, in addition to South Carolina (a total of 8% of states) had a required policy at the elementary level. Twenty-six percent of states had a policy requiring or recommending strategies to increase access to or availability of fruits and vegetables in at least one level (ES, MS, HS), with 8% of policies required and 18% recommended. Two examples of how states have addressed this are Mississippi's policy that requires schools to include quality fruits and vegetables anywhere snack items are sold (vending, snack bars and concessions) and Texas' policy that requires fruits and vegetables to be offered daily at all points of sale.[68]

Figure 29. State Policies Requiring Strategies to Increase Access to or Availability of Fruits and Vegetables, School Year 2009-10



Farm-to-School

State-Level Findings

Farm-to-school programs and policies are gaining increased support across states. Thirty percent of states had a state-level policy in the area of farm-to-school, with 24% required and 6% recommended. For the purposes of this report, policies were limited to those that specifically established a farm-to-school program statewide, inclusive of pilot programs, but not inclusive of general preferential purchasing policies for state agencies. In all cases, both the required and recommended policies were equally applicable to all levels of elementary, middle and high school.

District-Level Findings

Most district wellness policies were silent on farm-to-cafeteria, farm-to-school or sourcing of locally grown produce provisions. When such provisions were addressed they were suggestive—encouraging farm-to-cafeteria/school or encouraging that locally grown produce be obtained. Five percent of the district policies encouraged farm-to-school or related types of provisions at the high school level compared to 6% of policies governing middle schools and 7% of policies governing elementary schools. Less than 1% of all district policies required such provisions, regardless of grade level of applicability.

Marketing

I think marketing and media policies are important because we are all influenced by both.

–Wendi Oppenheim, student, Florida

Food companies spent $186 million in 2006 to market to students in schools.[69] Marketing can take many different forms, including pencils, coupons, bags, advertising scoreboards, school nights, vending machine fronts, sports teams sponsorships, etc. Youth are especially vulnerable because marketing in the school environment can shape their dietary habits at school.[70]

Overall, few districts and even fewer states have addressed food marketing in the school environment. When district-level policies did exist, they were more likely to prohibit marketing than restrict it at the secondary level.

Map 5. States with Any Type of Policy Restricting Marketing at the Middle School and High School Level.

State-Level Findings

Only three states—Maine, West Virginia, and Alabama—had any type of policy restricting marketing and advertising on school grounds. Maine's policy requires compliance and prohibits brand-specific advertising of food or beverages in school buildings or on school grounds except for those meeting standards for sale or distribution on school grounds in accordance with the federal FMNV standard for advertising.[71] It applies to all three levels (ES, MS, HS). West Virginia's policy is mandatory, requiring county boards of education to minimize the marketing of other foods and beverages in the high school setting by locating distribution in low student traffic areas and ensuring the exterior of vending machines does not depict commercial logos of products or convey that the consumption of vended items provides a health or social benefit.[72] Alabama's policy is also required, but is limited to restricting advertising on the fronts of vending machines at the elementary level to water and 100% juice with no added sweeteners.[73]

District-Level Findings

Policies prohibiting or restricting the marketing/advertising of unhealthy foods and beverages are more common at the district level than at the state level. Districts are more likely to prohibit such practices than restrict them. As of the beginning of the 2007-08 school year, 9% of districts prohibited such marketing practices at the high school level as compared to 11% at the middle school level and 13% at the elementary school level. An additional 5% of districts restricted marketing of unhealthy foods and beverages at the high school and elementary school levels, while 4% restricted such practices at the middle school level.

5. Discussion

These policies are important to me because they dramatically affect my generation.

— Isabella Barna, student, Oregon

As a student moves up in the education system, the environment becomes more focused on and supportive of academic excellence and achievement. Yet, the analysis in this report shows that the opposite happens when it comes to obesity prevention and health. For most topics covered here, a consistent pattern emerged at state and district levels: high schools had the fewest required policies, followed by middle, and then elementary schools. In several areas, including time and frequency requirements for PE and prohibiting soda and sugary beverages, the differences were dramatic.

Middle and high school students fall short of meeting even half of the recommended time and intensity levels of daily physical activity. Just 11 states (California, Indiana, Iowa, Kentucky, Mississippi, New Mexico, Nevada, Oregon, Rhode Island, and West Virginia) have any requirement addressing time and frequency of PE, physical activity breaks, or time for physical activity outside of PE.

Though most states and districts required PE, few required high schools to dedicate a specific amount of time, and no state met the NASPE recommendation of 225 minutes per week. Even within the PE required, no state has a policy requiring high school students to be moderately or vigorously active at least 50% of the time (Kansas recommends this, but does not require it), while at the district level just 8% require moderate and vigorous activity for high school students.

Elementary schools offer recess to students to help provide more activity breaks. Just three states require any physical activity outside of PE at the high school level—Nevada, Tennessee, and Hawaii. If these numbers are to change, education leaders need to provide more opportunities for activity throughout the day.

In addressing middle school and high school nutrition environments, secondary school students are allowed more opportunities to purchase junk food and unhealthy beverages than younger students. Adolescents consume the least amount of milk and the largest amount of sugary beverages, yet states and districts consistently ease the regulations for unhealthy beverages when addressing secondary schools. Connecticut and Rhode Island are the only states that require all beverages to be healthy throughout the school day.

Only 38% of states have a policy requiring middle and high schools to follow nutrition standards for competitive foods. For those nutrition standards that had state and district policies, more than half of states did not have a requirement addressing the middle or high school level, either required or recommended. The clear difference in the percentages of policies at the different levels can be attributed almost entirely to policies that address K-5 or K-8, but do not include middle and/or high school and those that that are required at the elementary level but only recommended at the middle and/or high school level.

When it comes to these nutrition and physical activity topics, there is a clear disconnect between policy and the evidence showing that adolescents are the least physically active of all students[74] and have diets that include too many empty calories provided by junk foods and drinks.[75] Simply put, an adolescent doesn't need a soda with 10 teaspoons of sugar any more than an 8-year-old does. And health experts agree that children and youth need to be active at least 60 minutes per day, whether they are 6 or 16 years of age.

Addressing the Obesity Epidemic: Key Takeaways for Policymakers

Physical Activity

- Concerns about childhood obesity and overweight have not led to widespread adoption of state- and district-level policies to increase opportunities for physical education and physical activity at the middle school and high school levels.
- Policies addressing critical components of PE and physical activity in school—such as time and frequency requirements for PE, physical activity breaks and PE exemption policies—should be stronger and meet national recommendations at the middle and high school levels.

Nutrition

- Concerns about childhood obesity and overweight have not led to widespread adoption of state- and district-level policies to improve the nutrition environment at the at the middle school and high school levels.
- Policies addressing critical components of the nutrition environment in school—such as comprehensive nutrition standards for school meals and competitive foods, and beverage restrictions at all points of sale—need to be to be stronger at the middle school and high school levels.
- Policies increasing availability of fruits and vegetables and restricting food marketing in the school environment need greater emphasis at all levels, elementary school, middle school and high school.

If we truly want to address the obesity epidemic, we cannot afford to have older students receive the inadvertent message that when you are young, you must eat healthy and be active, but as you get older, it is okay to sit all day, eat junk food, and drink sugary beverages. As the quotes presented in this report demonstrate, adolescents—who are experts at picking out hypocrisy in grown-ups' behavior—understand these contradictions in our school policies very well.

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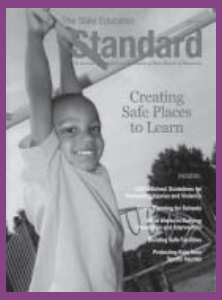

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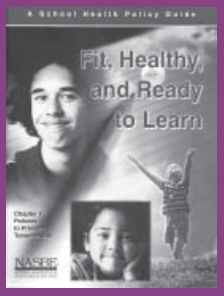

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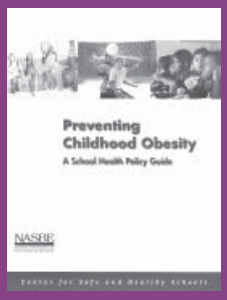

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