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Nutrition and physical education policy and practice in Pacific Region secondary schools

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November 2011

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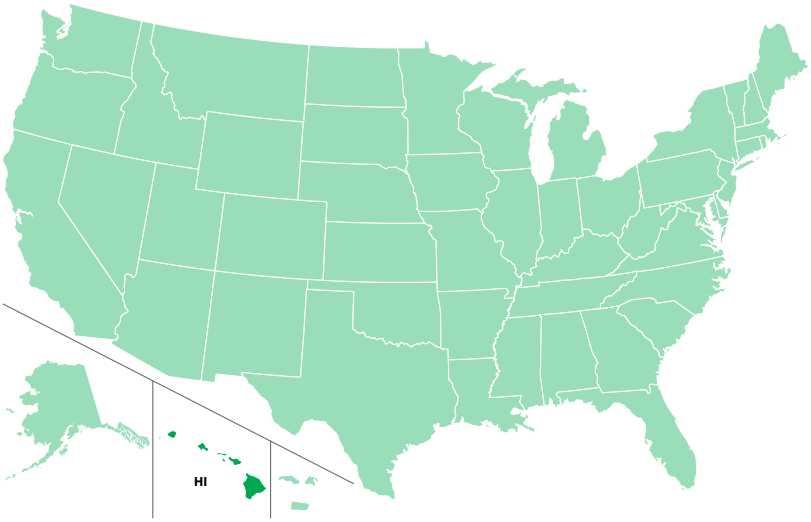

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November 2011

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This report is available on the regional educational laboratory web site at http://ies.ed.gov/ncee/edlabs.

Summary

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Nutrition and physical education policy and practice in Pacific Region secondary schools

The report describes the percentage of secondary schools that have adopted policies and practices for student wellness, physical education, food service, and nutrition education across the seven jurisdictions in the Pacific Region. Policies include providing professional development for lead health education teachers, developing strategies to promote healthy eating, forming a health council, and providing or prohibiting certain foods. Practices include requiring nutrition and physical education courses, and assessing physical activity or nutrition, and encouraging family and community involvement in health topics.

Obesity is a physically and emotionally debilitating condition that profoundly affects public health and education systems. According to the World Health Organization (WHO), there are 1.5 billion overweight adults in the world, with more than 200 million men and nearly 300 million women defined as obese (World Health Organization 2011).[1] The global prevalence of obesity in children, defined as being at or above the 95th percentile of body mass index for age and gender, has nearly quadrupled over the past 30 years. Overweight children experience cardiovascular risk factors, such as elevated blood pressure, elevated cholesterol or triglycerides, and high insulin levels (Telljohnann, Symons, and Pateman 2007). Poor dietary habits during childhood and adolescence also increase the risk of disease, unhealthy behaviors associated with weight gain during adulthood, adult overweight or obesity, and aberrant emotional and cognitive development (World Health Organization 2000; Lin, Guthrie, and Frazao 2001; Telljohnann, Symons, and Pateman 2007). Without a positive change in dietary and physical activity patterns, childhood obesity can lead to the early onset of life-threatening medical conditions, including diabetes, heart disease, and cancer (World Health Organization 2011).

Healthy eating and physical exercise are crucial for proper emotional and cognitive development in children and adolescents. Two main reasons for the rise in obesity over the past few decades are change in diets and decline in physical activity. Food portion sizes have increased, sugary drinks and foods high in saturated fats are more common, and young people are less active on average (Ogden et al. 2002; Ogden et al. 2006).

Federal and state health education programs are one of the primary means of relaying fitness and nutrition information to children (Barton and Coley 2009). This information is transmitted through nutrition education; physical education and opportunities for physical activity;

school nutrition policies that govern school lunch, breakfast, and snack nutrition content; and funding or support for school-based activities to promote student health and wellness. Legislating new programs, promulgating food service provider regulations, and developing standards for state education agency teachers and staff have affected nutrition and physical education policies in recent decades.

Increasing concerns about health issues and dietary considerations in the Pacific Region reveal a need to study education programs that disseminate information about health, physical activity, and nutrition. Recent WHO data show that 7 of the 10 countries with the highest prevalence of overweight people are Pacific Island nations, and the WHO cautions that children in these nation-states are at increased risk of developing Type 2 diabetes and other noncommunicable diseases (World Health Organization 2010, 2011).[2]

This study responds to regional requests for information on health issues and dietary considerations in the Pacific Region by providing relevant statistics and references to health education programs, policies, and practices in secondary schools[3] in Hawaii, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, the Federated States of Micronesia (Pohnpei, Kosrae, Chuuk, and Yap), and the Republic of Palau.[4]

This study is guided by eight research questions:

- What are the current policies for student wellness, physical education, food service, and nutrition education in secondary schools in the seven Pacific Region jurisdictions?
- What percentage of secondary schools in the seven Pacific Region jurisdictions teach a required health education or physical education course?
- What percentage of lead health education teachers in secondary schools in the seven Pacific Region jurisdictions are offered professional development in nutrition and dietary behavior or physical activity and fitness? What percentage of physical education teachers are certified?
- What percentage of secondary schools in the seven Pacific Region jurisdictions offer certain types of healthy or unhealthy foods for purchase?
- What percentage of secondary schools in the seven Pacific Region jurisdictions implement specific strategies to promote healthy eating?
- What percentage of secondary schools in the seven Pacific Region jurisdictions have some type of health council?
- What percentage of secondary schools in the seven Pacific Region jurisdictions encourage family and community involvement in health topics?
- What percentage of secondary schools in the Pacific Region use some type of evaluation instrument to assess physical activity or nutrition?

Key findings include:

- The most common nutrition and physical education policies in secondary schools in

the seven Pacific Region jurisdictions are physical education curriculum standards (six jurisdictions), student wellness policies (five jurisdictions), and school foods policy (five jurisdictions).

- Fewer than half the jurisdictions have nutrition education curriculum standards, provide nutrient content for school meals to students and parents, or require physical education in every grade. Only one jurisdiction, Hawaii, has a nutrition or health advisory council.

- American Samoa is the only jurisdiction that reported 100 percent of secondary schools requiring a health education course in grades 6–12, and the Republic of Palau is the only jurisdiction that reported requiring a physical education course in all secondary schools in grades 6–12.

- All jurisdictions reported that more than 75 percent of their secondary schools' physical education staff members are certified in physical education.

- Only American Samoa (11.5 percent) and the Commonwealth of the Northern Mariana Islands (14.3 percent) reported double-digit percentages of secondary schools that allow students to purchase fruits or nonfried vegetables in vending machines or school stores. Guam and the Republic of Palau reported that no schools in their jurisdictions offer such products for sale to students.

- More than half of secondary schools in Guam and Hawaii prohibit advertising and promoting candy, fast food, and sodas in school buildings, on school grounds, on school buses or other vehicles used to transport students, in school publications, and through sponsorship of school events on school premises.

- Across the Pacific Region, 83 percent of secondary schools have someone who oversees or coordinates school health and safety programs.

- Approximately 83 percent of secondary schools in the Republic of Palau help students' families develop or implement policies and programs related to physical activity and nutrition and healthy eating, while 24 percent of secondary schools in Hawaii and 18 percent of secondary schools in Guam do.

- The Commonwealth of the Northern Mariana Islands and the Republic of Palau are the only two jurisdictions in which more than 70 percent of secondary schools use some type of self-evaluation instrument to assess physical activity or nutrition policies, activities, and programs.

Notes

1. Overweight in adults is defined as a body mass index (BMI) of 25.0–29.9. Obese is defined as having a BMI of 30.0 or greater. BMI is a standardized ratio of body weight in relation to height. It is calculated as weight in kilograms divided by height in meters squared (National Institutes of Health 2008). Overweight in children is defined using growth charts.

2. The seven Pacific Island nations are Nauru (96.9 percent of men and 93.0 percent of women are overweight), Cook Islands (93.4 percent of men and 90.3 percent of women), the Federated States of Micronesia (93.1 percent of men and 91.1 percent of women), Tonga (91.4 percent of men and

92.1 percent of women are overweight), Samoa (81.1 percent of men and 84.1 percent of women), Niue (80.9 percent of men and 86.7 percent of women), and the Republic of Palau (77.2 percent of men and 84.5 percent of women). Two of these countries (Federated States of Micronesia and the Republic of Palau) are part of the Regional Educational Laboratory Pacific Region and are included in this report's analysis.

3. "Secondary school" is defined as a school that instructs at any grade between 6 and 12.

4. Throughout this report, these jurisdictions are discussed in the following order: U.S. state (Hawaii), U.S. territories (American Samoa and Guam), U.S. commonwealth (the Commonwealth of the Northern Mariana Islands), and sovereign nations in free association with the United States (the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau).

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TABLE OF CONTENTS

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WHY THIS STUDY?

Obesity is a physically and emotionally debilitating condition that profoundly affects public health and education systems. According to the World Health Organization (WHO), there are more than 1.5 billion overweight adults in the world, with more than 200 million men and nearly 300 million women defined as obese.[1] The global prevalence of obesity in children, defined as being at or above the 95th percentile of body mass index for age and gender, has nearly quadrupled over the past 30 years. In addition, the incidence of Type 2 diabetes in adolescents has increased by a factor of 10 over the past decade (World Health Organization 2011). The WHO found that 7 of the 10 most overweight countries in the world are Pacific Island nations and cautions that children in these nation-states are at increased risk of developing Type 2 diabetes and other noncommunicable diseases (World Health Organization 2010, 2011).[2]

Pacific Region jurisdictions have begun to recognize and take action in response to this epidemic of obesity. A major goal cited by Pacific Island nation delegates at the 9th Annual Global Child Nutrition Forum in 2007 was to combat childhood obesity and promote healthy living in their nations (Global Child Nutrition Foundation 2007). The Commonwealth of the Northern Mariana Islands National Food and Nutrition Policy and Ten Year Plan of Action (Commonwealth of the Northern Mariana Islands National Food and Nutrition Advisory Council and World Health Organization 1996) states: "Obesity is a primary public health concern for the CNMI [Commonwealth of the Northern Mariana Islands] and a major contributing factor with a variety of noncommunicable diseases." The Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau have developed and are now implementing national food service and food and nutrition plans and policies (World Health Organization 2003; Food and Agriculture Organization 2004).

Why obesity among young people matters

Young people are heavier today than at any time in history (World Health Organization 2011). Two main reasons for the rise in obesity over the past few decades are change in diets and decline in physical activity. Food portion sizes have increased, sugary drinks and foods high in saturated fats are more common, and young people are less active on average (Ogden et al. 2002; Ogden et al. 2006). More than 60 percent of children and adolescents in the United States eat too much fat and saturated fat and not enough fruits and vegetables (Food and Agriculture Organization 2004; U.S. Department of Agriculture 2007a,b). In addition, only 39 percent of children in the United States eat enough fiber daily, and soft drink consumption has almost doubled among adolescent girls and almost tripled among adolescent boys in the last 25 years (U.S. Department of Agriculture 1998). Furthermore, children and adolescents consume 18–20 percent of their daily calories from added sugars (U.S. Department of Agriculture 2000). Survey responses from young people across the country confirm their inadequate nutritional intake and reveal that students nationwide consume well below the recommended daily intake of fruits and vegetables and engage in a number of behaviors that may have adverse effects on their health (Centers for Disease Control and Prevention 2003).

An important implication of the rise in childhood obesity is the related increase in obesity-related health problems. Few pediatric health problems have increased as quickly or pose as serious a threat as the epidemic of being overweight (Dietz 2005). Overweight children experience cardiovascular risk factors, such as elevated blood pressure, elevated cholesterol or triglycerides, and high insulin levels (Telljohnann, Symons, and Pateman 2007). Poor dietary habits during childhood and adolescence also increase the risk of disease, unhealthy behaviors associated with weight gain during adulthood, adult overweight or obesity, and aberrant emotional and cognitive development (World Health Organization 2000; Lin, Guthrie, and Frazao 2001; Telljohnann, Symons, and Pateman 2007). Without a positive change in dietary and physical activity patterns, childhood obesity can also lead to the early onset of life-threatening medical conditions, including diabetes, heart disease, and cancer (World Health Organization 2011).

An important implication of the rise in childhood obesity is the related increase in obesity-related health problems

What governments are doing

Federal and state health education programs are one of the primary means of relaying fitness and nutrition information to children (Barton and Coley 2009). This information is transmitted through nutrition education; physical education and opportunities for physical activity; school nutrition policies that govern school lunch, breakfast, and snack nutrition content; and funding or support for school-based activities to promote student health and wellness. Legislating new programs, promulgating food service provider regulations, and developing standards policies for teachers and staff have affected nutrition and physical education policies in recent decades.

Both national and state health initiatives have been set in motion by legislation and policies requiring schools to be primary sources of information on health-related topics (American Association of School Administrators 2006; Azzam 2009). As of July 2007, 26 states required schools to educate children on the benefits of physical activity, and 18 states required public schools to report on the body mass index of students (Health Policy Tracking Service 2007). State legislatures continue to address childhood obesity, with 12 states and the District of Columbia enacting some type of school nutrition legislation in 2010 (National Conference of State Legislatures 2010).

The No Child Left Behind Act of 2001 does not identify nutrition or physical or general health education as a "core academic subject," but recent federal and state legislation attests to a growing concern with overweight and obesity in the United States. In June 2004, President George W. Bush signed the Child Nutrition and WIC

Reauthorization Act of 2004, which mandated that all schools participating in the Federal School Meals Program establish and implement student wellness plans by June 2006. The National School Lunch Act of July 2004, as amended through P.L. 108-269, recognized the health and well-being of children as a matter of national security and called for the "establishment, maintenance, operation, and expansion of nonprofit school lunch programs" (Child Nutrition and WIC Reauthorization Act of 2004, Sec. 204). In addition, the Centers for Disease Control and Prevention (CDC) have linked school performance with student health. A compendium of reports (Centers for Disease Control and Prevention 2008) detailing the relationship between academic success and nutrition and physical health cites the need to integrate health into the education environment for all students.

Increasing concerns about health issues and dietary considerations in the Pacific Region reveal a need to study the current health education programs that are disseminating information about health, physical activity, and nutrition.

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Research questions

This study responds to regional requests for information on health issues and dietary considerations in the Pacific Region by providing relevant statistics and references to health education programs, policies, and practices in secondary schools in Hawaii, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, the Federated States of Micronesia (Pohnpei, Kosrae, Chuuk, and Yap), and the Republic of Palau.[3]

This study is guided by eight research questions:

- What are the current policies for student wellness, physical education, food service, and nutrition education in secondary schools in the seven Pacific Region jurisdictions?
- What percentage of secondary schools in the seven Pacific Region jurisdictions teach a required health education or physical education course?
- What percentage of lead health education teachers in the seven Pacific Region jurisdictions receive professional development in nutrition and dietary behavior or physical activity and fitness? What percentage of physical education teachers are certified?
- What percentage of secondary schools in the seven Pacific Region jurisdictions offer certain types of healthy or unhealthy foods for purchase?
- What percentage of secondary schools in the seven Pacific Region jurisdictions implement specific strategies to promote healthy eating?
- What percentage of secondary schools in the seven Pacific Region jurisdictions have some type of health council?
- What percentage of secondary schools in the seven Pacific Region jurisdictions encourage family and community involvement in health topics?
- What percentage of secondary schools in the seven Pacific Region jurisdictions use some type of evaluation instrument to assess physical activity or nutrition?

To explore these questions, the study uses data from state education agency websites and published reports, legislative documents, and country reports from the CDC, the Food and Agriculture Organization of the United Nations, and the WHO Western Pacific Regional Office. (See box 1 and appendixes A and B for more on the data sources used in this study.)

BOX 1

About the data

Data sources. There are two main sources of data for this study:

- A document review of state education agency websites and Board of Education published documents, state legislative records, and regional and national data from websites and databases of the Centers for Disease Control and Prevention (CDC), the U.S. Department of Agriculture (2007a,b), the Food and Agriculture Organization of the United Nations (FAO), and the World Health Organization (WHO) Regional Office for the Western Pacific. Policy documents and state education agency plans (which do not have data collection and aggregation lag times) are for 2008/09.

- Data extracted from Brener et al. (2009), which are from CDC School Health Profiles, a biennial survey of school health policies and practices from a representative sample or census of middle and high schools. The survey questions cover school-level impact measures, CDC-recommended policies and practices to address critical health issues faced by children and adolescents. The data reflect the most comprehensive and inclusive perspective of the Pacific Region jurisdictions that are derived from a uniform instrument. The data presented here are for 2007/08, the most recent year available.

  While School Health Profiles collect data on policy and practice domains (ranging from HIV to asthma), this study uses only school-level impact measures data on nutrition and physical education and activity. The survey items reported here reflect practices and prominent themes in nutrition and physical education that were of primary interest to stakeholders in the Ministries of Education and Ministries of Health across the Pacific Region (Global Child Nutrition Foundation 2007; World Health Organization 2006). Data are reported for all Pacific Region jurisdictions except the Republic of the Marshall Islands, which had insufficient response rates to publish results, and the Federated States of Micronesia, which is not working with the CDC to collect data.

Data collection. During the document review, published policies and standards were reviewed to collect information related to the research questions. Publicly available legislation and guidelines provided information about school food service policy and nutrition and dietary education standards in each jurisdiction. State education agency wellness plans, legislative records on nutrition education, and dietary policies on curriculum in the public domain were accessed through state education agency websites and documentation requests to the CDC.

During the data extraction, data from a variety of governmental and nongovernmental sources (such as the CDC, FAO, WHO, and state education agencies) were analyzed to define quantifiable indicators of current practices. These data offer content and discriminant validity checks for the policy and legislative information collected by providing a descriptive account of actual practices and help provide details of nutrition and physical education practices in a manner that would otherwise be difficult to discern from only state legislation or policy documents.

Data analysis. The data distilled in the document review and data extraction were used to analyze and describe the status of nutrition and physical education policy by jurisdiction and region. The analysis of these data is primarily descriptive. Data from Brener et al. (2009), which reported the percentage of schools in all 50 states and selected U.S. territories that adopted specific health-related policies and practices, are based on all schools that responded to the CDC survey and are weighted for school nonresponse. Content analysis of policies and standards is based at the jurisdiction level only because policies and standards could not be obtained from independent complexes and districts.

FINDINGS

This section discusses the findings for secondary schools in the seven Pacific Region jurisdictions for the eight research questions examined in this study.

What are the current policies for student wellness, physical education, food service, and nutrition education in secondary schools?

State education agencies across the Pacific Region are cognizant of the importance of nutrition and physical education policies and practices in secondary schools. The most common nutrition and physical education policies for secondary schools in the seven Pacific Region jurisdictions are physical education curriculum standards (six jurisdictions), student wellness policies (five jurisdictions), and school foods policies (five jurisdictions; table 1). However, fewer than half the jurisdictions have nutrition education curriculum standards, provide nutrient content for school meals to students and parents, or require physical education in every grade. Only one jurisdiction, Hawaii, has a nutrition or health advisory council. No jurisdictions have a policy requiring nutrition education in every grade.

Student wellness. The Child Nutrition and WIC Reauthorization Act of 2004 [P.L. 108–265] requires all school districts with a federally funded

TABLE 1
Policies for student wellness, physical education, food service, and nutrition education in secondary schools, by Pacific Region jurisdiction, 2007/08

Policy	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of the Marshall Islands	Federated States of Micronesia	Republic of Palau
Student wellness							
Has a school wellness policy addressing student nutrition and physical activity	✔	✔	✔	✔			✔
Has a nutrition or health advisory council	✔						
Physical education							
Has physical education curriculum standards	✔	✔	✔	✔	✔		✔
Requires physical education in every grade			✔				✔
Food service							
Has a school foods policy	✔	✔	✔	✔			✔
Has a food purchasing policy with nutrient requirements	✔	✔	✔	✔			
Provides nutrient content for school meals	✔		✔				
Nutrition education							
Has nutrition education curriculum standards	✔		✔				
Requires nutrition education in every grade							

Note: The absence of a checkmark indicates that no policy existed or that no information on such a policy could be found.

Source: See table A1 in appendix A.

For the Pacific Region as a whole, the grade levels where the highest percentage of secondary schools require a health education course are grades 7 and 10

school meals program to develop and implement wellness policies that specifically address nutrition and physical activity (Section 204). Such policies must be based on evidence from nutrition science and public health research, and state education agencies must involve a broad group of individuals in wellness policy development and have a plan for measuring policy implementation. These requirements extend to four of the seven Pacific Region jurisdictions: Hawaii, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (see table 1). The Republic of Palau does not have a federally funded school meals program, but its Ministry of Education requires schools to develop and implement student wellness policies.

Physical education. Several federal and state policies have been enacted over the past decade to increase the quality and quantity of physical education in schools. Six of the seven Pacific Region jurisdictions (Hawaii, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, and the Republic of Palau) have physical education curriculum standards for all secondary school grades, but only two jurisdictions (Guam and the Republic of Palau) require physical education in every grade (see table 1).

Food service. Despite some jurisdictions' recent legislative efforts to increase the presence of healthy foods in school, competitive foods and beverages[4] are still widely available, while nutrient content for school meals is less available. Of the seven Pacific Region jurisdictions, five have school foods policies (Hawaii, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau), four have food purchasing policies linked to nutrient requirements (Hawaii, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands), and two provide nutrient content for school meals (Hawaii and Guam).

Nutrition education. The development and implementation of nutrition education policies for secondary schools in the Pacific Region have been uneven, with only two jurisdictions (Hawaii and Guam) having nutrition education curriculum standards and none of the jurisdictions mandating nutrition education in every grade (see table 1). All seven Pacific Region jurisdictions include nutrition education in a health course that is required for high school students.

What percentage of secondary schools teach a required health education or physical education course?

The percentage of secondary schools in Pacific Region jurisdictions that teach a required health education or physical education course varies by grade and jurisdiction (table 2). For the region as a whole, the grade levels where the highest percentage of secondary schools require a health education course are grades 7 and 10. American Samoa is the only jurisdiction where 100 percent of secondary schools require a health education course in grades 6–12. (For a more detailed review of nutrition and dietary behavior topics taught in required courses, see table B1 in appendix B.)

For the region as a whole, the grade levels where the highest percentage of secondary schools require a physical education course are grades 6–9, dropping to 67 percent in grade 10 and to below 40 percent in grades 11 and 12. The Republic of Palau is the only jurisdiction where 100 percent of secondary schools require a physical education course in grades 6–12. (For percentages of specific physical activity topics taught in required courses, see table B2 in appendix B.)

What percentage of lead health education teachers in secondary schools are offered professional development in nutrition and dietary behavior or physical activity and fitness? What percentage of physical education teachers are certified?

All Pacific Region jurisdictions offer professional development in either nutrition and dietary behavior or physical activity and fitness to the lead

TABLE 2
Percentage of secondary schools that teach a required health education or physical education course, by grade and Pacific Region jurisdiction, 2007/08

Policy and grade level	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Health education						
6	42.6	100.0	57.1	0.0	100.0	47.5
7	66.2	100.0	85.7	100.0	100.0	73.5
8	20.9	100.0	42.9	100.0	100.0	34.8
9	35.4	100.0	100.0	100.0	na	50.8
10	77.4	100.0	75.0	100.0	na	78.3
11	13.8	100.0	50.0	100.0	na	28.6
12	10.7	100.0	50.0	100.0	na	26.3
Physical education						
6	77.7	87.0	100.0	100.0	100.0	82.8
7	85.7	87.0	85.7	100.0	100.0	86.8
8	80.9	86.4	57.1	100.0	100.0	79.5
9	87.4	100.0	100.0	100.0	100.0	90.8
10	58.8	100.0	75.0	100.0	100.0	66.7
11	29.0	66.7	50.0	50.0	100.0	36.8
12	29.0	66.7	50.0	50.0	100.0	36.8

na is not available, as reported in Brener et al. (2009).

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

health education teacher in at least some secondary schools (table 3).

However, there are large discrepancies in the percentage of schools that offer professional development in each topic. American Samoa and the Commonwealth of the Northern Mariana Islands have the highest percentages of secondary schools offering professional development in nutrition and dietary behavior and in physical activity and fitness. Hawaii and Guam have the lowest percentages offering professional development in nutrition and dietary behavior, and Guam and the Republic of Palau have the lowest percentages of secondary schools offering professional development in physical activity and fitness. (For percentages of physical education teachers and specialists who received professional development, see table B3 in appendix B.)

What percentage of secondary schools offer certain types of healthy or unhealthy foods for purchase?

While the majority of secondary schools do not allow students to purchase baked goods (cookies, crackers, cakes, pastries), salty snacks (regular potato chips), candy, or sugary drinks on school premises, the Republic of Palau is the only jurisdiction that reported not selling any of these items on school premises (table 4).

Only American Samoa (11.5 percent) and the Commonwealth of the Northern Mariana Islands (14.3 percent) reported double-digit percentages of secondary schools that allow students to purchase fruits or nonfried vegetables in vending machines or school stores (see table 4). Guam and the Republic of Palau reported that no secondary schools in

TABLE 3

Percentage of secondary schools that offered professional development and teacher certification in physical education in the previous two years, by health topic and Pacific Region jurisdiction, 2007/08

Professional development or teacher certification and topic	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Lead health education teacher professional development[b]						
Nutrition and dietary behavior	50.4	84.0	36.4	83.3	71.4	53.0
Physical activity and fitness	70.9	96.0	27.3	83.3	42.9	67.0
Physical education staff certification[c]						
Physical education	94.7	76.0	90.9	100.0	83.3	92.9

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

b. Includes workshops, conferences, continuing education, or any other kind of in-service.

c. Refers to all physical education staff having a certification, license, or endorsement from the state.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE 4

Percentage of secondary schools that allow students to purchase certain products from vending machines or school stores, by product and Pacific Region jurisdiction, 2007/08

Product	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Fruits or nonfried vegetables[b]	2.3	11.5	0.0	14.3	0.0	3.2
Did not sell any of five items below	75.0	57.7	90.9	71.4	100.0	76.2
Baked goods that are not low in fat	5.3	30.8	9.1	14.3	0.0	7.9
Salty snacks that are not low in fat	9.0	26.9	0.0	14.3	0.0	9.2
Chocolate candy	5.6	26.9	0.0	14.3	0.0	6.7
Other kinds of candy	7.9	30.8	0.0	14.3	0.0	8.6
Soda pop or fruit drinks that are not 100 percent juice	17.6	42.3	0.0	14.3	0.0	16.5

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

b. Includes purchases at school celebrations where food and beverages are offered

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

their jurisdictions allow students to purchase such products.

What percentage of secondary schools implement specific strategies to promote healthy eating?

One popular strategy to improve students' eating habits is to prohibit advertisement and promotion of candy, fast food, and sodas in school buildings, on school grounds, on school buses or other vehicles used to transport students, in school publications, and through sponsorship of school events. Just 29 percent of secondary schools in the Commonwealth of the Northern Mariana Islands and 20 percent of secondary schools in the Republic of Palau prohibit such advertising and promotion, while more than half of secondary schools in Hawaii and Guam prohibit such advertising and

promotion (table 5). (For additional information on percentages of secondary schools that promoted candy, fast food, and soda, see table B4 in appendix B.)

Of strategies to promote healthy eating that Brener et al. (2009) surveyed for, more than 90 percent of secondary schools in the Pacific Region implement fewer than half (see table 5).

What percentage of secondary schools have some type of health council?

For the region as a whole, 83 percent of secondary schools have someone who oversees or coordinates school health and safety programs and activities (table 6). In all jurisdictions except Guam, more than 75 percent of secondary schools have someone in this capacity. Across the region, there is variation in the percentage of secondary schools whose principals have a copy of their district's wellness policies (table 7).

The percentage of secondary schools that have one or more school health councils—a group, committee, or team that offers guidance on the development of policies or coordinates activities on health topics—varies widely across the region, from 36 percent in Guam to 100 percent in the Commonwealth of the Northern Mariana Islands (table 8). In 4 of 5 jurisdictions, 100 percent of secondary schools that have a health council include physical education teachers on the council. However, in 4 of 5 jurisdictions, 50 percent or less of schools with a health council included nutrition or food services staff.

TABLE 5

Percentage of secondary schools that have implemented specific strategies to promote healthy eating, by Pacific Region jurisdiction, 2007/08

Strategy	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Prohibit advertising and promotion of unhealthy foods	59.4	48.0	54.5	28.6	20.0	55.6
At least three of the five strategies below	6.4	16.7	9.1	42.9	16.7	9.5
Price nutritious food and beverages at a lower cost while increasing the price of less nutritious foods and beverages	2.8	0.0	9.1	14.3	0.0	3.9
Collect suggestions from students, families, and school staff on nutritious food preferences and strategies to promote healthy eating	30.5	28.0	9.1	57.1	50.0	29.3
Provide information to students or families on the nutrition and caloric content of foods available	23.7	48.0	18.2	71.4	66.7	27.9
Conduct taste tests to determine food preferences for nutritious items	7.9	8.3	27.3	28.6	0.0	11.3
Provide opportunities for students to visit the cafeteria to learn about food safety, food preparation or other nutrition related topics	30.3	37.5	18.2	57.1	16.7	30.3

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE 6

Percentage of secondary schools that have someone who oversees or coordinates school health and safety programs and activities, by Pacific Region jurisdiction, 2007/08

Item	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Had someone who oversees or coordinates school health and safety programs and activities	91.2	80.8	72.7	85.7	85.7	83.2

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE 7

Percentage of secondary schools whose principal has a copy of the district's wellness policy, by Pacific Region jurisdiction, 2007/08

Item	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Principal had a copy of district's wellness policy	71.0	15.4	54.5	100.0	28.6	65.6

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

What percentage of secondary schools encourage family and community involvement in health topics?

In American Samoa, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau, more than half of secondary schools provide parents and family members of students with information on physical activity and nutrition and healthy eating, while in Hawaii and Guam, 27–33 percent do (table 9).

For the region as whole, less than 30 percent of secondary schools involve students' parents and families in developing or implementing physical activity and nutrition and healthy eating policies and programs (see table 9). In 83 percent of secondary schools in the Republic of Palau, students' families helped develop or implement policies and programs related to physical activity and nutrition and healthy eating. By contrast, that occurred in 24 percent of schools in Hawaii and 18 percent of schools in Guam.

The Republic of Palau also reported the highest percentage (83.3 percent) of secondary schools in which community members helped develop or implement policies and programs related to physical activity and nutrition and healthy eating; Hawaii and Guam also reported the lowest percentages (see table 9).

What percentage of secondary schools use some type of evaluation instrument to assess physical activity or nutrition?

There is a wide range in the percentages of secondary schools that use a school health index or other evaluation instrument to assess physical activity or nutrition policies, activities, and programs (table 10). The Commonwealth of the Northern Mariana Islands and the Republic of Palau were the only two jurisdictions in which more than 70

TABLE 8

Percentage of secondary schools with one or more school health councils and the staff that serve on such councils, by Pacific Region jurisdiction, 2007/08

Health council composition	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Secondary schools with one or more school health councils	59.4	61.5	36.4	100.0	71.4	58.8
Those that include physical education teachers	93.2	100.0	100.0	100.0	100.0	95.0
Those that include nutrition or food services staff	69.7	50.0	50.0	42.9	0.0	63.0

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE 9

Percentage of secondary schools that involve parents, families, and the community in health topics, by activity and Pacific Region jurisdiction, 2007/08

Activity and topic	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Information provided to parents and families						
Physical activity	33.0	72.0	27.3	66.7	57.1	37.2
Nutrition and healthy eating	28.2	52.0	27.3	66.7	57.1	32.3
Parents and families helped develop or implement policies and programs						
Physical activity	24.1	41.7	18.2	28.6	83.3	26.0
Nutrition and healthy eating	24.1	45.8	18.2	42.9	83.3	27.0
Community members helped develop or implement policies and programs						
Physical activity	34.3	61.5	27.3	71.4	83.3	38.1
Nutrition and healthy eating	32.0	61.5	54.5	57.1	83.3	39.3

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

percent of secondary schools use some type of self-evaluation instrument to assess physical activity and nutrition policies, activities, and programs.

DISCUSSION

Jurisdictions in the Pacific Region have made important strides in implementing policies and practices that promote student wellness, physical education, and nutrition education, as evidenced by the large percentages of schools that limit student access to snacks with high sugar or salt content and cover nutrition, dietary behavior, and physical education in their curricula. While these practices are important in combating child overweight and obesity, data from this study reveal additional areas that state education agencies may

TABLE 10

Percentage of secondary schools that use a school health index or other self-evaluation instrument to assess physical activity or nutrition policies, activities, and programs, by Pacific Region jurisdiction, 2007/08

	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Physical activity	38.6	53.8	18.2	100.0	71.4	40.7
Nutrition	39.5	42.3	18.2	85.7	71.4	39.9

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

want to consider to further facilitate healthy nutrition and physical education behaviors, such as:

- Establishing school health councils if they do not yet exist.
- Increasing prohibitions on advertising and promotion of candy, fast food, and soda in schools.
- Including more nutrition and food service staff on school health councils.
- Increasing principals' access to and understanding of student wellness policies.
- Integrating families and communities into plans to increase physical activity, nutrition understanding, and healthy eating.

In these ways, state education agencies may further align student health with school administration practices and community values. These findings should be interpreted with consideration of the limitations of this study (see below).

Future research is needed to understand the extent to which increasing practices, such as limiting advertising and involving families and communities, affect students' healthy behaviors.

STUDY LIMITATIONS

The objective of this study is to provide an overview of the nutrition and physical education policies and practices in secondary schools in Pacific Region jurisdictions, not to compare and contrast jurisdictions. Such reporting is intended to assist jurisdictions in identifying gaps in data accessibility and to create greater awareness of nutrition and physical education reports and resources.

When considering policies and standards, it is important to distinguish among guidelines at the district, state or territory, and regional levels. However, the findings in this study can be generalized only at the state or territory level because policies and standards from individual complexes or district levels were unavailable.

Another limitation of this study is that data were available only from secondary schools, thus restricting the generalization of those findings to secondary schools in the region. Furthermore, no schools from the Republic of the Marshall Islands or the Federated States of Micronesia were surveyed for the CDC's School Health Profiles, so the findings also cannot be generalized to those jurisdictions. This also prevents direct comparison of all jurisdictions for some variables.

APPENDIX A
DATA SOURCES

TABLE A1
Data sources used to describe nutrition and physical education policies

Theme and measure	Jurisdiction	Source
Student wellness		
Intended frequency of school-based health and wellness activities	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Student wellness plans specific to each jurisdiction (Hawaii Department of Education n.d. a, American Samoa Department of Education n.d. b, Guam Public School System n.d. e, Commonwealth of the Northern Mariana Islands Public School System n.d. b, Republic of Palau Ministry of Education n.d. b)
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Country Health Information Profiles (WHO 2007b, c, d, e, f)
	Guam	National Health Education Standards for Students (Guam Public School System n.d. c)
	Republic of the Marshall Islands	Health Education Standards for Students (Republic of the Marshall Islands Public School System n.d. a)
	Federated States of Micronesia	Health Education Standards (Federated States of Micronesia Department of Education n.d. a)
	Republic of Palau	Health Education Standards for Students (Republic of Palau Public School System n.d. a)
Grade levels participating in school-based health and wellness activities	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Student wellness plans specific to each jurisdiction (Hawaii Department of Education n.d. a, American Samoa Department of Education n.d. b, Guam Public School System n.d. e, Commonwealth of the Northern Mariana Islands Public School System n.d. b, Republic of Palau Ministry of Education n.d. b)
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Country Health Information Profiles (WHO 2007b, c, d, e, f)
	Guam	National Health Education Standards for Students (Guam Public School System n.d. c)
	Guam	Child Nutrition and Food Programs Overview (Guam Public School System n.d. a)
	Federated States of Micronesia	National Youth Policy 2004–2010 (Federated States of Micronesia Department of Health, Education and Social Affairs 2004)
	Republic of Palau	Health Education Standards for Students (Republic of Palau Public School System n.d. a)

(CONTINUED)

TABLE A1 (CONTINUED)

Data sources used to describe nutrition and physical education policies

Theme and measure	Jurisdiction	Source
Fundraising events involving food and beverages	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Student wellness plans specific to each jurisdiction (Hawaii Department of Education n.d. a, American Samoa Department of Education n.d. b, Guam Public School System n.d. e, Commonwealth of the Northern Mariana Islands Public School System n.d. b, Republic of Palau Ministry of Education n.d. b)
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Country Health Information Profiles (WHO 2007b, c, d, e, f)
Physical education		
State education agency–level policy requirements (laws and language) • Staff requirements • Student–teacher ratios • Physical education coordinators • Professional development	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Student wellness plans specific to each jurisdiction (Hawaii Department of Education n.d. a, American Samoa Department of Education n.d. b, Guam Public School System n.d. e, Commonwealth of the Northern Mariana Islands Public School System n.d. b, Republic of Palau Ministry of Education n.d. b)
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau	Centers for Disease Control and Prevention Physical Activity and Physical Education School-Level Impact Measures (Centers for Disease Control and Prevention 2011)
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Country Health Information Profiles (WHO 2007b, c, d, e, f)
	Guam	National Health Education Standards for Students (Guam Public School System n.d. c)
	Commonwealth of the Northern Mariana Islands	Physical Education Standards (Commonwealth of the Northern Mariana Islands State Public School System n.d. a)
	Republic of the Marshall Islands	Health Education Standards for Students (Republic of the Marshall Islands Public School System n.d. a)

(CONTINUED)

TABLE A1 (CONTINUED)

Data sources used to describe nutrition and physical education policies

Theme and measure	Jurisdiction	Source
Curriculum standards • Grade levels using physical education curriculum • Intended frequency of physical education instruction	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Plan of action on nutrition for each jurisdiction (Hawaii Department of Health 2007; American Samoa Department of Education n.d. c, n.d. d; Guam Office of the Governor 2009; Guam Department of Public Health and Social Services n.d.; Commonwealth of the Northern Mariana Islands Public School System 1996; Republic of the Marshall Islands 2005, n.d. c).
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Student wellness plans specific to each jurisdiction (Hawaii Department of Education n.d. a, American Samoa Department of Education n.d. b, Guam Public School System n.d. e, Commonwealth of the Northern Mariana Islands Public School System n.d. b, Republic of Palau Ministry of Education n.d. b)
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau	Centers for Disease Control and Prevention Physical Activity and Physical Education School-Level Impact Measures (Centers for Disease Control and Prevention 2011)
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Country Health Information Profiles (WHO 2007b, c, d, e, f)
	Hawaii	Physical Education Content Standards: Moving from the Bluebook to HCPS II (Hawaii Department of Education, Office of Accountability and School Instructional Support/School Renewal Group 1999b)
	American Samoa	National Health and Physical Education Curriculum Standards (American Samoa Department of Education 2006)
	American Samoa	National Sports Policy (American Samoa Department of Education 2005)
	Guam	Physical Education Program Standards (Guam Public School System n.d. d)
	Guam	National Health Education Standards for Students (Guam Public School System n.d. c)
	Republic of the Marshall Islands	Physical Education Standards (Republic of the Marshall Islands Public School System n.d. b)
	Republic of the Marshall Islands	Health Education Standards for Students (Republic of the Marshall Islands Public School System n.d. a)
	Federated States of Micronesia	Physical Education Content Standards (Federated States of Micronesia Department of Education n.d. c)
	Republic of Palau	Physical Education Standards (Republic of Palau Public School System n.d. b)

(CONTINUED)

TABLE A1 (CONTINUED)

Data sources used to describe nutrition and physical education policies

Theme and measure	Jurisdiction	Source
Food service		
Policy requirements (laws and language) • School menus and nutritional guidelines • Lunch schedule • Evaluations of food or nutrition policies • Foods sold outside of school meals—in vending machines, stores, or a la carte	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Student wellness plans specific to each jurisdiction (Hawaii Department of Education n.d. a, American Samoa Department of Education n.d. b, Guam Public School System n.d. e, Commonwealth of the Northern Mariana Islands Public School System n.d. b, Republic of Palau Ministry of Education n.d. b)
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau	Centers for Disease Control and Prevention Physical Activity and Physical Education School-Level Impact Measures (Centers for Disease Control and Prevention 2011)
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Country Health Information Profiles (WHO 2007b, c, d, e, f)
	Hawaii	Hawaii Physical Activity and Nutrition Surveillance Report 2008 (Kolodziejski et al. 2008)
	Hawaii	State School Foods Report Card 2007 (Center for Science in the Public Interest 2007)
	Hawaii	Competitive Food Sales Policy (Hawaii Board of Education 2007a)
	Hawaii	School Food Services Policy (Hawaii Board of Education 2007b)
	Guam	National Health Education Standards for Students (Guam Public School System n.d. c)
	Guam	Child Nutrition and Food Programs Overview (Guam Public School System n.d. a)
	Republic of the Marshall Islands	Health Education Standards for Students (Republic of the Marshall Islands Public School System n.d. a)
	Federated States of Micronesia	Federated States of Micronesia National Food Safety Act (Code of the Federated State of Micronesia, Title 41)

(CONTINUED)

TABLE A1 (CONTINUED)
Data sources used to describe nutrition and physical education policies

Theme and measure	Jurisdiction	Source
Nutrition education		
State education agency–level policy requirements (laws and language) • Staff requirements • Student/teacher ratios • Classroom instruction • Health education coordinators • Professional development	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Codex Regulations on Nutrition Labeling (Food and Agriculture Organization 1995)
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau	Federal Child Nutrition Program Guidelines (U.S. Department of Agriculture 2010).
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau	National School Lunch Act of 1946, 42 U.S.C. 1758, as amended in 2004 by Public Law 108-265; PL 108-265, section 204
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau	State-Level School Health Policies and Practices: A State-by-State Summary from the School Health Policies and Programs Study 2006 (Centers for Disease Control and Prevention 2007)
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Plan of action on nutrition for each jurisdiction (Hawaii Department of Health 2007; American Samoa Department of Education n.d. c, n.d. d; Guam Office of the Governor 2009; Guam Department of Public Health and Social Services n.d.; Commonwealth of the Northern Mariana Islands Public School System 1996; Republic of the Marshall Islands 2005, n.d. c).
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Student wellness plans specific to each jurisdiction (Hawaii Department of Education n.d. a, American Samoa Department of Education n.d. b, Guam Public School System n.d. e, Commonwealth of the Northern Mariana Islands Public School System n.d. b, Republic of Palau Ministry of Education n.d. b)
	Hawaii, American Samoa, Guam, Republic of Palau	Nutrition standards specific to each jurisdiction
	Hawaii	State-Level School Health Policies and Practices: A State-by-State Summary from the School Health Policies and Programs Study 2006 (Centers for Disease Control and Prevention 2007)
	Hawaii	State School Foods Report Card 2007 (Center for Science in the Public Interest 2007)
	Hawaii	Health Content Standards: Moving from the Bluebook to HCPS II (Hawaii Department of Education, Office of Accountability and School Instructional Support/School Renewal Group 1999a)
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Country Health Information Profiles (WHO 2007b, c, d, e, f)

(CONTINUED)

TABLE A1 (CONTINUED)

Data sources used to describe nutrition and physical education policies

Theme and measure	Jurisdiction	Source
State education agency–level policy requirements (laws and language) • Staff requirements • Student/teacher ratios • Classroom instruction • Health education coordinators • Professional development	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	National health education standards specific to each jurisdiction
	Federated States of Micronesia	National Youth Policy 2004–2014 (Federated States of Micronesia Department of Health, Education and Social Affairs 2004)
	Federated States of Micronesia	State constitution
	Republic of Palau	K–12 Content Performance Standards (Republic of Palau Ministry of Education n.d. a)
Curriculum standards • Grade levels using nutrition education curriculum • Intended frequency of nutrition instruction	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau	State-Level School Health Policies and Practices: A State-by-State Summary from the School Health Policies and Programs Study 2006 (Centers for Disease Control and Prevention 2007)
	Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands	Student wellness plans specific to each jurisdiction (Hawaii Department of Education n.d. a, American Samoa Department of Education n.d. b, Guam Public School System n.d. e, Commonwealth of the Northern Mariana Islands Public School System n.d. b, Republic of Palau Ministry of Education n.d. b)
	Hawaii	Health Content Standards: Moving from the Bluebook to HCPS II (Hawaii Department of Education, Office of Accountability and School Instructional Support/School Renewal Group 1999a)
	Hawaii	Nutrition Standards (Hawaii Department of Education 2005)
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	National health education standards specific to each jurisdiction
	Guam, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau	Country Health Information Profiles (WHO 2007b, c, d, e, f)
	American Samoa	Curriculum Health and Nutrition Standards (American Samoa Department of Education n.d. a)
	Federated States of Micronesia	National Health Content Standards for Students (Federated States of Micronesia Department of Education n.d. b)

BOX A1

Data sources used by the Centers for Disease Control and Prevention school-level impact measures to describe nutrition and physical education practices

Required education courses

The percentage of schools that teach about all of the following in a required course:

- Physical, psychological, or social benefits of physical activity.
- Health-related fitness (cardio respiratory endurance, muscular endurance, muscular strength, flexibility, and body composition).
- Phases of a workout (warm-up, workout, cool down).
- How much physical activity is enough (determining frequency, intensity, time, and type of physical activity).
- Developing an individualized physical activity plan.
- Monitoring progress toward reaching goals in an individualized physical activity plan.
- Overcoming barriers to physical activity.
- Decreasing sedentary activities such as television viewing.
- Opportunities for physical activity in the community
- Preventing injury during physical activity
- Weather-related safety (avoiding heat stroke, hypothermia, and sunburn while physically active).
- Dangers of using performance-enhancing drugs such as steroids.

The percentage of schools that do not allow exemptions from required physical education for participation in other activities such as interscholastic sports, band, chorus, or other academic classes.

The percentage of schools in which physical education is taught only by physical education teachers or specialists with state certification, licensure, or endorsement to teach physical education.

The percentage of schools in which at least one physical education teacher or specialist received professional development on physical education during the past two years.

The percentage of schools in which physical education teachers are provided with the following:

- A chart describing the annual scope and sequence of instruction for physical education.
- Plans for how to assess student performance in physical education.

The percentage of schools that offer intramural activities or physical activity clubs for all students, including those with disabilities.

Teacher certification and professional development

The percentage of schools in which the lead health education teacher received professional development on nutrition education and dietary behavior during the past two years.

School food service

The percentage of schools that always offer fruit or nonfried vegetables in vending machines, school stores, and during celebrations when foods and beverages are offered.

The percentage of schools that do not sell the following foods and beverages anywhere at school outside of the school food service program:

- Baked goods that are not low in fat (such as cookies, crackers, cakes, pastries).
- Salty snacks that are not low in fat (such as regular potato chips).
- Candy (chocolate or non-chocolate candy).
- Soda pop or fruit drinks that are not 100 percent juice.

The percentage of schools that use the following strategies anywhere in the school to promote healthy eating:

- Price nutritious food and beverage choices at a lower cost while increasing the price of less nutritious foods and beverages.
- Provide information on the nutrition and caloric content of foods available.

The percentage of schools that prohibit all forms of advertising and promotion (including contests and coupons) of less nutritious foods and beverages on school property.

BOX A2

Other data sources

Hawaii

Hawaii State Department of Education website, http://doe.k12.hi.us/.

Hawaii State Department of Health website, http://hawaii.gov/health/.

American Samoa

American Samoa Department of Education website, http://www.doe.as/.

American Samoa Department of Health website, http://americansamoa.gov/departments/depts/health.htm.

Guam

Centers for Disease Control and Prevention. (2007a). *YRBSS: Youth Online: Dietary Behaviors – Comprehensive Results Guam 2007.* Atlanta: U.S. Department of Health and Human Services. Retrieved July 13, 2008, from http://apps.nccd.cdc.gov/youthonline/App/Results.aspx?TT=A&OUT=0&SID=HS&QID=QQ&LID=GU&YID=2007&LID2=&YID2=&COL=S&ROW1=&ROW2=&HT=5&LCT=&FS=&FR=1&FG=1&FSL=&FRL=&FGL=&PV=&TST=False&C1=&C2=&QP=G&DP=1&VA=CI&CS=Y&SYID=&EYID=&SC=DEFAULT&SO=ASC.

Centers for Disease Control and Prevention. (2007b). *YRBSS: Youth Online: Physical Activity – Comprehensive Results Guam 2007.* Atlanta: U.S. Department of Health and Human Services. Retrieved July 13, 2008, from http://apps.nccd.cdc.gov/youthonline/App/Results.aspx?TT=A&OUT=0&SID=HS&QID=QQ&LID=GU&YID=2007&LID2=&YID2=&COL=S&ROW1=&ROW2=&HT=6&LCT=&FS=&FR=1&FG=1&FSL=&FRL=&FGL=&PV=&TST=False&C1=&C2=&QP=G&DP=1&VA=CI&CS=Y&SYID=&EYID=&SC=DEFAULT&SO=ASC.

Guam Public Health and Human Services website: http://dphss.guam.gov/.

Guam Public School System website, http://www.gdoe.net/.

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BOX A2 (CONTINUED)

Other data sources

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Republic of the Marshall Islands Ministry of Health website, http://www.rmiembassyus.org/Health.htm.

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Republic of Palau Ministry of Education website, http://www.palaumoe.net/.

Republic of Palau Ministry of Health website, http://www.palau-health.net/.

APPENDIX B
SUPPLEMENTARY DATA ON SECONDARY SCHOOL NUTRITION AND PHYSICAL EDUCATION PRACTICES

TABLE B1

Percentage of secondary schools that teach specific nutrition and dietary behavior topics in a required course, by Pacific Region jurisdiction, 2007/08

Topic	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
All 14 nutrition and dietary behavior topics	56.3	72.0	72.7	66.7	66.7	60.3
Benefits of healthy eating	93.1	100.0	100.0	100.0	100.0	95.0
Food guidance using MyPyramid	84.9	96.0	100.0	100.0	100.0	88.7
Using food labels	87.0	96.0	100.0	100.0	100.0	90.2
Balancing food intake and physical activity	88.9	96.0	100.0	100.0	100.0	91.6
Eating more fruits, vegetables, and whole grain products	93.1	100.0	100.0	100.0	100.0	95.0
Choosing foods that are low in fat, saturated fat, and cholesterol	90.6	88.0	90.9	100.0	100.0	91.1
Using sugars in moderation	89.0	80.0	100.0	83.3	85.7	89.4
Using salt and sodium in moderation	86.4	80.0	100.0	83.3	85.7	87.6
Eating more calcium-rich foods	81.7	92.0	90.9	83.3	100.0	84.1
Food safety	70.7	96.0	90.9	83.3	100.0	76.3
Preparing healthy meals and snacks	80.6	96.0	90.9	100.0	71.4	83.8
Risks of unhealthy weight control practices	88.0	92.0	100.0	100.0	100.0	90.7
Accepting body size differences	86.1	80.0	90.9	83.3	100.0	86.4
Signs, symptoms, and treatment for eating disorders	78.3	84.0	90.9	83.3	100.0	81.0

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE B2

Percentage of secondary schools that teach specific physical activity topics in a required course, by Pacific Region jurisdiction, 2007/08

Topic	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
All 12 physical activity topics	57.1	62.5	36.4	83.3	57.1	56.1
Physical, psychological, or social benefits of physical activity	87.9	95.8	90.0	100.0	85.7	89.3
Health-related fitness (cardio respiratory endurance, muscular endurance, muscular strength, flexibility, and body composition)	83.7	88.0	90.0	100.0	100.0	86.0
Phases of a workout (warm-up, workout, cool down)	81.7	95.8	80.0	100.0	100.0	83.7
How much physical activity is enough (determining frequency, intensity, time, and type of physical activity)	80.3	80.0	80.0	100.0	100.0	81.6
Developing an individualized physical activity plan	71.1	84.0	60.0	83.3	71.4	71.2
Monitoring progress toward reaching goals	68.4	72.0	54.5	83.3	85.7	67.9
Overcoming barriers to physical activity	74.8	72.0	63.6	100.0	71.4	74.3
Decreasing sedentary activities	86.5	80.0	90.0	100.0	71.4	86.9
Opportunities for physical activity in the community	74.5	96.0	72.7	100.0	100.0	77.6
Preventing injury during physical activity	82.6	95.8	100.0	100.0	85.7	86.7
Weather-related safety (avoiding heat stroke, hypothermia, and sunburn while physically active)	73.0	66.7	90.0	100.0	85.7	76.4
Dangers of using performance-enhancing drugs	84.3	75.0	60.0	83.3	85.7	80.5

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE B3

Percentage of secondary schools in which at least one physical education teacher or specialist received professional development on physical education in the previous two years, by Pacific Region jurisdiction, 2007/08

Item	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Have at least one physical education teacher or specialist that received professional development on physical education during the two years preceding the survey	75.6	12.0	81.8	71.4	0.0	70.2

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE B4

Percentage of secondary schools that promote candy, meals from fast food restaurants, or soft drinks through the distribution of products to students, by Pacific Region jurisdiction, 2007/08

Item	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Promote candy, meals from fast food restaurants, or soft drinks through the distribution of products (such as t-shirts, hats, and book covers) to students	1.4	8.0	0.0	14.3	0.0	2.3

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE B5

Percentage of secondary schools that have someone who oversees or coordinates school health and safety programs and activities, by Pacific Region jurisdiction, 2007/08

Item	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Have someone who oversees or coordinates school health and safety programs and activities	91.2	80.8	72.7	85.7	85.7	83.2

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

TABLE B6

Percentage of secondary schools where the principal had a copy of the district's wellness policy, by Pacific Region jurisdiction, 2007/08

Item	Hawaii	American Samoa	Guam	Commonwealth of the Northern Mariana Islands	Republic of Palau	All jurisdictions[a]
Principal had a copy of district's wellness policy	71.0	15.4	54.5	100.0	28.6	65.6

a. Excludes the Republic of the Marshall Islands because it had insufficient survey response rates to publish results and the Federated States of Micronesia because it is not working with the Centers for Disease Control and Prevention to collect data on school-level impact measures and has not collected these types of data.

Source: Based on data from Centers for Disease Control and Prevention School Health Profiles in Brener et al. (2009).

NOTES

1. Overweight in adults is defined as a body mass index (BMI) of 25.0–29.9. Obese is defined as having a BMI of 30.0 or greater. BMI is a standardized ratio of body weight in relation to height. It is calculated as weight in kilograms divided by height in meters squared (National Institutes of Health 2008). Overweight in children is defined using growth charts.

2. The seven Pacific Island nations are Nauru (96.9 percent of men and 93.0 percent of women are overweight), Cook Islands (93.4 percent of men and 90.3 percent of women), the Federated States of Micronesia (93.1 percent of men and 91.1 percent of women), Tonga (91.4 percent of men and 92.1 percent of women are overweight), Samoa (81.1 percent of men and 84.1 percent of women), Niue (80.9 percent of men and 86.7 percent of women), and the Republic of Palau (77.2 percent of men and 84.5 percent of women). Two of these countries (the Federated States of Micronesia and the Republic of Palau) are part of the Regional Educational Laboratory Pacific Region and are included in this report's analysis.

3. Throughout this report, these jurisdictions are discussed in the following order: U.S. state (Hawaii), U.S. territories (American Samoa and Guam), U.S. commonwealth (the Commonwealth of the Northern Mariana Islands), and sovereign nations in free association with the United States (the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau).

4. Competitive foods and beverages are those that are sold on school campuses outside of and in competition with the federally reimbursable meal programs. Examples of competitive foods and beverages include those sold during the school day in vending machines and student stores, à la carte items sold by the school food service program, and items sold as fundraisers.

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