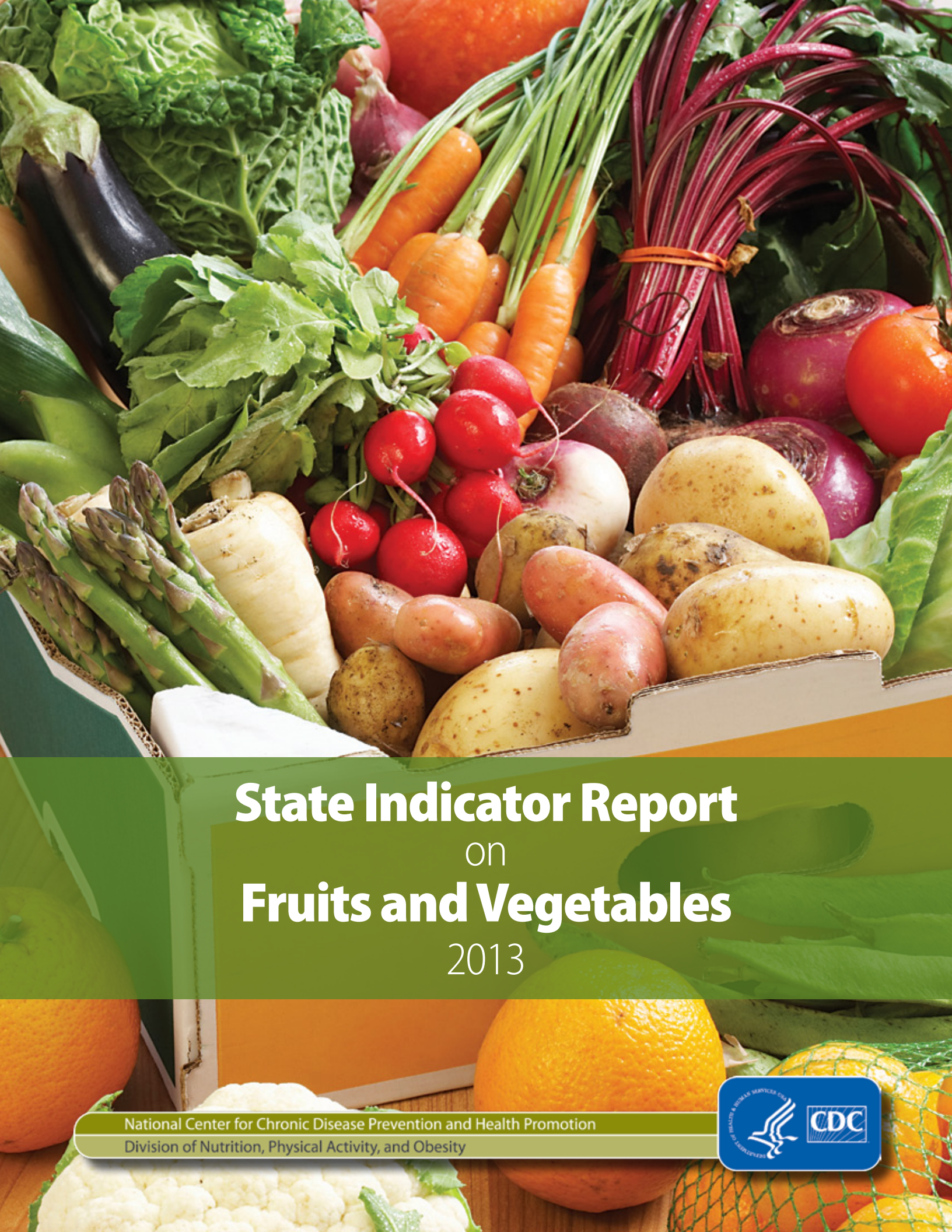


State Indicator Report on Fruits and Vegetables 2013

National Center for Chronic Disease Prevention and Health Promotion
Division of Nutrition, Physical Activity, and Obesity

Introduction

Fruits and vegetables (F&V) contribute important nutrients for the human body. Eating F&V lowers the risk of developing many chronic diseases and can also help with weight management.[1] Creating greater access to quality and affordable F&V nationwide is an important step to increase F&V consumption. When state leaders, health professionals, food retail owners, farmers, education staff, and community members work together, more Americans can live healthier lives.

The *State Indicator Report on Fruits and Vegetables, 2013* provides information for each state on fruit and vegetable (F&V) consumption, and environmental and policy indicators of support for consumption. The report, which can be used to inform decision makers, shows that F&V consumption is higher in some states than others, but overall consumption of F&V in the United States is low.

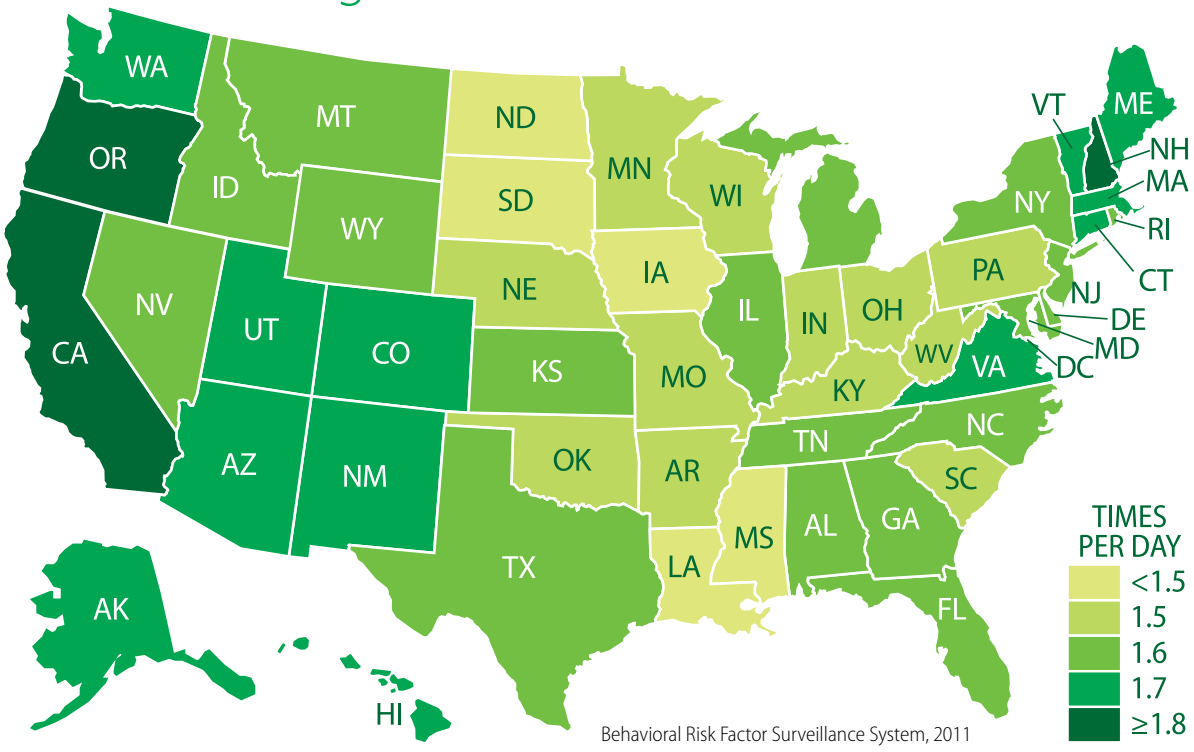
Adults in the United States consume fruit about 1.1 times per day and vegetables about 1.6 times per day. The Dietary Guidelines for Americans, 2010 recommends that Americans eat more F&V as part of a healthy diet. The MyPlate food guidance system emphasizes the need to "focus on fruits" and "vary your veggies" as building blocks for a healthy diet (www. choosemyplate.gov).

Many states are attempting to increase F&V consumption by improving access and establishing policies that make it easier to get F&V in communities, schools, and child care. For example, 28 states now have a farm to school/preschool policy. Twenty-seven states have created state-level food policy councils--coalitions of private and public partners working together to improve access to healthy food.

The *State Indicator Report on Fruits and Vegetables* can be used to:

- Illustrate how states support the consumption of F&V
- Monitor progress and celebrate state successes
- Identify opportunities for improvement in F&V access

Median **Daily Vegetable Intake** Among Adults in the United States



Behavioral Risk Factor Surveillance System, 2011

There is still more work to be done to increase F&V access and consumption. For example, only about 70% of all census tracts in this country currently have at least one store that offers a wide variety of affordable F&V. This rate varies by state, with California, New York, Florida, the District of Columbia, and Oregon having the greatest access to one of these stores.

Farmers markets are an additional source of affordable F&V in the community. Vermont, Wyoming, Iowa, and New Hampshire have more than seven farmers markets per 100,000 state residents. Nutrition assistance programs improve access to F&V for individuals and families with lower incomes. The percent of farmers markets that accept Supplemental Nutrition Assistance Program (SNAP) benefits varies among states; with the District of Columbia, Vermont, New Mexico, and Oregon currently leading all others. Additionally, 19 states now authorize farmers to accept Special Supplemental Nutrition Program for Women Infants and Children (WIC) Cash Value Vouchers.

A number of states with the highest consumption of fruits and vegetables have more environmental supports. For example, adults in Oregon and California eat more vegetables than adults in other states. They also are among the highest in fruit consumption. Oregon and California are also above the national score on access to a healthier food retailer, farmers market density, and farmers market acceptance of nutrition assistance program benefits. However, many factors play a role in improving consumption. Further monitoring and evaluation may highlight those factors most supportive of consumption.

Stories from the Field

Healthier Food Retail in Communities

New York City

Through its Health Bucks and Stellar Farmers Market programs, the New York City Department of Health and Mental Hygiene is helping customers learn about and buy fruits and vegetables.

- The Health Bucks program distributes $2 Health Bucks coupons to consumers for the purchase of fresh fruits and vegetables at farmers markets. SNAP participants who use their benefits at participating markets receive a $2 coupon for every $5 spent in SNAP benefits, effectively a 40% increase in purchasing power. Since the program began in 2005, the number of participating markets has grown from about 5 in 2005 to 138 in 2012. Coupon redemption rates have also increased every year; in 2011 93% of the nearly 88,000 coupons distributed to SNAP recipients were redeemed.
- The Stellar Farmers Market program provides free nutrition workshops and cooking demonstrations at farmers markets in low-income neighborhoods. It also offers tips on food safety and shopping on a budget. In 2011 the program sponsored over 1,300 workshops and provided Health Bucks coupons to more than 15,000 consumers.

Massachusetts

The Massachusetts Department of Transitional Assistance and the Department of Agricultural Resources partnered in 2009 to increase SNAP recipients' access to farmers markets. They helped finance point-of-sale terminals and transaction fees associated with SNAP purchases, increased people's purchasing power through incentives that matched SNAP purchases at the farmers markets, and promoted these benefits widely to SNAP recipients. In the first year, these efforts increased the number of farmers markets that accepted SNAP from 30 to 58 and boosted SNAP sales at these markets by over 500%. On average, markets that offered incentives had $1,700 more in SNAP sales than markets that did not offer them.

Schools, Child Care, and Early Education

Vermont

Since its launch in January 2011, the Vermont Works for Women FRESH Food Program has served more than 68,000 nutritious meals for 2 to 5-year-olds in early care and education centers throughout the Greater Burlington area. FRESH Food creates healthy and delicious menu items that exceed USDA nutritional standards and serves these meals home-style. As a member of the Vermont Fresh Network, FRESH Food works with more than 20 local and regional vendors and farmers to acquire vegetables, fruits, dairy products, herbs, meats, and honey. FRESH Food grew out of Vermont Works for Women's Transitional Jobs program, which provides skills training and work experience to help women find permanent employment.

Minnesota

With CDC funding, Minnesota's Great Trays™ Partnership worked to help schools serve healthier foods to students. Formed in 2010 among eight state-level organizations—including the State Departments of Agriculture, Education, and Health and Human Services—Great Trays™ trained school nutrition leaders, promoted time and cost savings to allow schools to buy healthier foods, and supported farm-to-school programs. Over three-quarters of Minnesota public schools participated in trainings and are now committed to improving the foods they offer. Plus, farm-to-school efforts are increasing access to local produce in at least 367 schools and 22 school districts across the state, serving more than 200,000 students.

Food System Support

Rhode Island

Market Mobile, which began in 2009 as a pilot project of the non-profit organization Farm Fresh, is increasing Rhode Islanders' access to healthy local foods. By facilitating relationships between local food producers, institutions, and other buyers, Market Mobile in 2012 generated over $1.5 million in sales from 60 local food producers to more than 260 retail venues—including restaurants, schools, hospitals, worksites, grocery stores, corner stores, and farm stands. Through Market Mobile, about 50,000 families throughout Rhode Island and neighboring areas like Boston now have access to locally produced food, including fruits and vegetables.

Fruit and Vegetable **Indicators**

In 2011, two updates occurred in the Behavioral Risk Factor Surveillance System (BRFSS) that will affect estimation of fruit and vegetable intake. First, there was an overall change in the BRFSS methodology to adjust sample weighting procedures and accommodate cell phone usage. Second, there were changes to the core questions used to assess fruit and vegetable intake. Because of these changes, estimates of fruit and vegetable intake from 2011 forward cannot be compared to estimates from previous years. Data from BRFSS collected in 2011 will provide a new baseline for fruit and vegetable data collected in subsequent years. A number of policy and environmental indicators, which are not based on BRFSS, may be comparable to findings from previous years.

There are eight behavioral indicators presented in Table 1 and 13 policy and environmental indicators presented in Table 2. The indicators (described below) follow the order of the columns in the tables. This report provides data on behavioral, policy, and environmental indicators for 50 states and the District of Columbia (hereafter referred to as states).

Behavioral Indicators

This report presents indicators of F&V consumption for both US adults and adolescents from the Behavioral Risk Factor Surveillance System* and Youth Risk Behavior Surveillance System, respectively, both supported by CDC.

- **Percentage of adults in the state who report consuming fruits less than one time daily and vegetables less than one time daily** *(new)*
- **Median daily intake of fruits and median daily intake of vegetables for adults in the state (times per day)** *(new)*
- **Percentage of adolescents in the state who report consuming fruits less than one time daily and vegetables less than one time daily** *(new)*
- **Median daily intake of fruits and median daily intake of vegetables for adolescents in the state (times per day)** *(new)*

Tracking consumption of fruits and vegetables over time will help states monitor progress towards increased F&V consumption, a key recommendation of the *Dietary Guidelines for Americans, 2010.*[1]

Policy and Environmental Indicators

Most indicators are the same as those introduced in the 2009 report, though two were dropped and two have different definitions or data sources. In addition, there are six new indicators. The strategies represented by these indicators can occur or be supported at the state level as well as in communities across the state. States may focus on a few or many of the indicators based on their existing capacity, partnerships, and resources.

** Due to changes in the Behavioral Risk Factor Surveillance System, these data cannot be compared to previous reports. See page 10 for more information.*

Availability of Healthier Food Retail in Communities

Having access to stores that sell F&V and other healthier foods may increase F&V consumption among adults.[2,3] Improving access to F&V and other healthier foods can include expanding access to stores that typically stock an affordable and wide selection of F&V (i.e. supermarkets, larger grocery stores, F&V specialty stores), improving availability of F&V in small stores including convenience and corner stores, and utilizing farm-to-consumer approaches such as markets at which farmers sell F&V directly to consumers.[2,4,5]

- **Percentage of census tracts in a state that have at least one healthier food retailer located within the tract or within 1/2-mile of tract boundaries** *(different definition or data source)*

One measure of access to F&V is the percentage of census tracts in states that have a typical healthier food retailer (at least one supermarket, supercenter, larger grocery store, warehouse club, or F&V specialty store) located within the tract or within a 1/2-mile of tract boundaries. A census tract is a small and relatively permanent subdivision of counties that is similar in population and economic characteristics and living conditions. On average supermarkets, supercenters, larger grocery stores, warehouse clubs, and F&V specialty stores stock a wide selection of affordable F&V. Other types of retail venues in communities are often less consistent in what they offer making it difficult to identify whether they provide access to F&V. Residents may have additional access to F&V in their neighborhoods through seasonal farmers markets and farm stands, although temporary venues may not be captured in this metric.

- **State-level healthier food retail policy**

State-level policies that support healthier food retail have the potential to increase F&V access and improve nutrition among adults and children.[5] Such policies include support for: 1) the building and/or placement of new food retail outlets (e.g. new supermarkets in underserved areas); 2) renovation and equipment upgrades of existing food retail outlets (e.g. purchasing refrigerators for corner stores to allow for the sale of fresh produce); 3) increases in and promotion of F&V at food retail outlets (e.g., increased shelf space for F&V; shelf-labeling).

- **Number of farmers markets per 100,000 state residents**
- **Percentage of farmers markets that accept SNAP benefits** *(new)*
- **Percentage of farmers markets that accept WIC Farmers Market Nutrition Program coupons**
- **States that authorize farmers to accept WIC Cash Value Vouchers** *(new)*

Farmers markets are a mechanism for purchasing foods from local farms and can augment access to F&V from typical retail stores or provide a retail venue for F&V in areas lacking such stores.[5,6] The number of farmers markets per 100,000 state residents provides a broad estimate of the availability of F&V from farmers markets adjusted for variation in state population. Farmers markets that accept nutrition assistance program benefits, such as Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Farmers Market Nutrition Program (FMNP) coupons, and WIC Cash Value Vouchers (CVV), improve access to F&V for individuals and families with lower incomes.[6]

Availability of Fruits and Vegetables in Schools, Child Care, and Early Education Programs

Schools, child care, and early education programs (e.g., child care centers, day care homes, Head Start programs, preschool and pre-kindergarten) are uniquely positioned to model and reinforce healthful eating behaviors by including F&V at meals, activities and events, such as celebrations, and incorporating nutrition education into curricula.

- **Percentage of middle and high schools that offer fruits or non-fried vegetables at school celebrations** *(new)*

The Institute of Medicine recommends that schools limit opportunities for food and beverages obtained outside the United States Department of Agriculture (USDA) school meals programs.[7] However, when these opportunities arise, schools can encourage consumption of healthier foods, including fruits and vegetables.[7] Many middle and high schools offer foods or beverages at school celebrations and thus increasing the percentage of schools that offer fruits and vegetables at these events indicates schools' support of a food environment that aligns with current dietary guidance.[7,8]

- **State child care regulations align with national standards for serving fruits** *(new)*
- **State child care regulations align with national standards for serving vegetables** *(new)*

States can support increased fruit and vegetable consumption by ensuring that their state child care regulations related to nutrition closely align with

evidence-based, best-practice standards.[9] These standards specify that children in early education and child care facilities (both centers and family-homes) be served a variety of fruits, especially whole fruits, and vegetables, specifically dark green, orange, deep yellow and root vegetables.

- **State-level farm to school/preschool policy** *(different definition or data source)*

Farm to school and farm to preschool programs can support increased fruit and vegetable intake among children through the purchase of produce from local/regional farms, implementation of salad bars, training services for food providers, teachers, or parents, and by providing experiential learning opportunities such as school gardens programs and farm visits for youth and staff.[10,11] The existence of state-level farm to school/preschool policies shows support for creation, expansion, or maintenance of these programs.

Food System Support

A systems approach to increasing access to F&V considers the many factors involved in getting food from farm to consumer, including aspects of food production, processing, distribution, and retail.[12] Also included in such an approach are partnerships with the participants in that system, including farmers, industries, workers, governments, institutional purchasers, communities, and consumers.

- **Number of food hubs in each state** *(new)*

A food hub, as defined by the USDA, is a "business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand."[13,14] For retailers and foodservice buyers who would like to purchase larger volumes of locally and regionally grown products, food hubs lower the procurement costs by providing a single point of purchase for consistent and reliable supplies of source-identified products from local and regional producers. Moreover, food hubs have the potential to reach populations who might otherwise lack access to healthier foods. For example, some food hubs accept SNAP benefits and have initiatives that support food banks and hunger relief organizations. Additionally, food hubs may provide services, such as quality control and processing, that facilitate the purchase of F&V by schools, hospitals, and small stores.[13,14]

- **Percentage of cropland acreage harvested for fruits and vegetables**

Cropland acreage harvested for F&V is a broad indicator of domestic F&V inputs to the food system. When interpreting this measure, it may be important to consider the types of crops harvested and their yields as well as growing conditions across states. State-grown fruits and vegetables can provide F&V for institutional buyers as well as retail venues that source from local growers.

- **State-level food policy council**
- **Number of local food policy councils in each state**

Food policy councils (FPCs) and similar coalitions bring together diverse stakeholders to examine and develop recommendations for improvements to a regional, state, and/or local food system.[15] Members typically represent a wide array of interests, including nutrition, health, agriculture, education, community design, and commerce.[6] FPCs can support improved food environments for healthy eating and aid community F&V access by encouraging improvement of retail stores and supporting farm to institution programs and practices by schools, child care and early education, work sites, and community organizations.

For more information or to provide feedback contact *fvreport@cdc.gov.*

Additional materials for the *State Indicator Report on Fruits and Vegetables, 2013* are available at *http://www.cdc.gov/nutrition/professionals/data*.

Table 1: State Indicator Report on Fruits and Vegetables, 2013: Behavioral Indicators

	Adults				Adolescents			
	Percentage who report consuming fruits and vegetables less than one time daily		Median intake of fruits and vegetables (times per day)		Percentage who report consuming fruits and vegetables less than one time daily		Median intake of fruits and vegetables (times per day)	
State	**Fruits**	**Vegetables**	**Fruits**	**Vegetables**	**Fruits**	**Vegetables**	**Fruits**	**Vegetables**
U.S. National	**37.7**	**22.6**	**1.1**	**1.6**	**36.0**	**37.7**	**1.0**	**1.3**
Alabama	43.8	24.3	1.0	1.6	44.4	45.7	1.0	1.0
Alaska	38.7	19.7	1.1	1.7	39.1	34.1	1.0	1.3
Arizona	38.0	20.6	1.1	1.7				
Arkansas	47.5	28.6	1.0	1.5	49.4	43.2	1.0	1.0
California	30.4	16.5	1.3	1.8				
Colorado	35.7	19.1	1.1	1.7				
Connecticut	32.0	20.6	1.3	1.7	34.6	35.3	1.3	1.3
Delaware	39.2	23.8	1.0	1.6	46.0		1.0	
Dist of Columbia	31.7	20.1	1.3	1.8				
Florida	37.7	22.6	1.1	1.6	37.2	42.1	1.0	1.1
Georgia	41.9	23.2	1.0	1.6	42.9	43.1	1.0	1.0
Hawaii	39.5	22.6	1.0	1.7	45.1	40.8	1.0	1.1
Idaho	38.1	20.1	1.1	1.6	33.9	32.2	1.0	1.3
Illinois	36.0	25.2	1.1	1.6	38.7	42.3	1.0	1.1
Indiana	41.6	27.3	1.0	1.5	44.7	42.0	1.0	1.1
Iowa	39.8	26.9	1.0	1.4	36.1	35.1	1.0	1.3
Kansas	41.4	22.2	1.0	1.6	40.4	35.7	1.0	1.3
Kentucky	45.9	25.2	1.0	1.5	49.7	43.2	1.0	1.1
Louisiana	46.7	32.5	1.0	1.4	47.8	50.1	1.0	0.9
Maine	33.2	18.9	1.2	1.7	37.5		1.0	
Maryland	36.4	22.8	1.1	1.6	38.7	38.9	1.0	1.3
Massachusetts	31.6	20.7	1.2	1.7				
Michigan	37.3	23.2	1.1	1.6	37.8	36.8	1.0	1.3
Minnesota	36.2	23.6	1.1	1.5				
Mississippi	50.8	32.3	0.9	1.4	39.8	42.4	1.0	1.1
Missouri	43.9	25.2	1.0	1.5				
Montana	39.2	21.7	1.0	1.6	38.4	33.5	1.0	1.3
Nebraska	40.1	26.2	1.0	1.5	41.0	38.0	1.0	1.3
Nevada	36.9	24.4	1.1	1.6				
New Hampshire	30.3	17.6	1.3	1.8	36.8	31.8	1.0	1.3
New Jersey	33.9	22.2	1.1	1.6	39.1	34.9	1.0	1.3
New Mexico	38.0	21.9	1.1	1.7	40.8	37.1	1.0	1.3
New York	33.9	23.0	1.2	1.6	34.7		1.3	
North Carolina	40.8	21.9	1.0	1.6	44.5	39.6	1.0	1.1
North Dakota	39.1	27.1	1.1	1.4	36.4	39.4	1.0	1.1
Ohio	40.5	26.0	1.0	1.5	42.4	42.2	1.0	1.1
Oklahoma	50.2	26.8	0.9	1.5	44.3	40.4	1.0	1.1
Oregon	32.0	15.3	1.1	1.9				
Pennsylvania	36.1	23.9	1.1	1.5				
Rhode Island	32.9	20.7	1.2	1.6	36.5	35.3	1.0	1.3
South Carolina	44.4	27.3	1.0	1.5	50.6	47.8	0.7	1.0
South Dakota	39.6	26.3	1.0	1.4	41.2	38.8	1.0	1.1
Tennessee	46.3	25.4	1.0	1.6	44.9	41.4	1.0	1.1
Texas	40.3	21.8	1.0	1.6	42.1	47.5	1.0	1.0
Utah	34.9	19.8	1.1	1.7	32.5	31.8	1.0	1.3
Vermont	31.4	18.1	1.3	1.7	30.7	26.4	1.3	1.6
Virginia	38.4	22.2	1.1	1.7	39.8	41.7	1.0	1.1
Washington	35.0	18.8	1.1	1.7				
West Virginia	47.2	26.2	1.0	1.5	37.8	34.9	1.0	1.3
Wisconsin	35.6	26.0	1.1	1.5	34.1	35.7	1.0	1.3
Wyoming	38.2	22.4	1.1	1.6	37.9	31.4	1.0	1.3

Data sources: Behavioral Risk Factor Surveillance System, 2011. Youth Risk Behavior Surveillance System, 2011. Some states may not have estimates for F&V intake among adolescents which may be due to either not collecting survey data, not achieving a high enough overall response rate to receive weighted results, or omitting 1 or more questionnaire items during administration of the survey.

Table 2: State Indicator Report on Fruits and Vegetables, 2013: Policy and Environmental Indicators

	Healthier Food Retail in Communities						Schools, Child Care, and Early Education			Food System Support			
State	Percentage of census tracts with at least one healthier food retailer within 1/2 mile of tract boundary	State-level healthier food retail policy	Number of farmers markets per 100,000 residents	Percentage of farmers markets that accept SNAP benefits	Percentage of farmers markets that accept WIC Farmers Market Nutrition Program coupons	States that authorize farmers to accept WIC Cash Value Vouchers	Percentage of middle / high schools that offer fruits or vegetables at celebrations[2]	State child care regulations align with national standards for serving fruits / vegetables	State-level farm to school / preschool policy	Number of food hubs	Percentage of cropland acreage harvested for fruits and vegetables	State-level food policy council	Number of local food policy councils
U.S. National	**69.5**	**10**	**2.5**	**21.0**	**25.8**	**19**	**33.6[3]**	**10 / 4**	**28**	**213**	**2.5**	**27**	**150**
Alabama	64.8	No	3.1	4.7	6.7	No	34.9	No / No	No	3	1.2	Yes	2
Alaska	48.5	No	4.4	18.8	37.5	Yes	40.9	No / No	Yes	0	4.0	Yes	0
Arizona	71.1	No	1.3	30.5	41.5	Yes	44.0	No / No	No	2	18.9	No	2
Arkansas	58.9	No	2.7	8.8	18.8	No	22.2	No / No	No	4	0.2	Yes	0
California	82.4	Yes	2.2	27.4	39.3	Yes	36.9	Yes / No	Yes	10	34.4	Yes	22
Colorado	69.9	No	3.2	21.7	NA[1]	Yes	33.8	No / No	Yes	3	1.7	Yes	6
Connecticut	66.7	No	4.3	10.3	21.3	Yes	44.5	No / No	Yes	2	10.8	Yes	3
Delaware	76.2	No	3.5	6.3	NA	No	35.4	Yes / No	No	0	8.7	No	0
Dist of Columbia	77.7	Yes	5.7	60.0	71.4	Yes	30.6	No / No	Yes	2		NA	1
Florida	78.5	No	1.1	15.7	5.4	No	35.3	Yes / Yes	Yes	5	42.9	Yes	7
Georgia	70.9	No	1.2	21.5	10.7	No	31.5	No / No	Yes	2	4.3	Yes	2
Hawaii	73.5	No	6.4	30.7	NA	No	39.4	No / No	No	0	27.6	Yes	0
Idaho	67.1	No	4.2	9.0	NA	No	34.1	No / No	No	2	9.1	No	1
Illinois	71.4	Yes	2.3	10.6	10.6	No		Yes / No	Yes	8	0.3	Yes	7
Indiana	62.3	No	2.5	11.7	35.0	No	23.5	No / No	No	1	0.3	No	1
Iowa	55.5	No	7.5	12.2	24.9	No	23.1	No / No	Yes	5	0.1	Yes	3
Kansas	57.3	No	3.4	18.6	NA	No	17.6	No / No	No	2	0.1	No	1
Kentucky	59.6	No	3.7	9.3	20.4	No	24.0	No / No	Yes	4	0.2	No	2
Louisiana	67.1	Yes	1.4	12.9	16.1	No	30.3	Yes / No	No	2	0.6	No	1
Maine	55.3	No	6.3	31.0	35.7	Yes	48.6	No / No	Yes	3	29.3	Yes	3
Maryland	74.0	Yes	2.6	16.3	66.0	Yes	41.6	No / No	Yes	3	3.0	No	3
Massachusetts	68.6	No	4.4	29.8	45.0	Yes	44.4	No / No	Yes	13	23.2	Yes	5
Michigan	63.9	Yes	3.2	29.5	32.1	Yes	28.3	No / No	Yes	5	4.5	Yes	6
Minnesota	57.6	No	3.2	20.1	21.3	Yes	29.5	No / No	No	3	1.3	No	6
Mississippi	61.5	No	2.5	26.7	13.3	No	33.3	Yes / Yes	No	2	0.8	Yes	0
Missouri	65.9	No	2.6	14.8	NA	No	24.4	Yes / No	No	3	0.3	No	4
Montana	52.0	No	6.5	21.5	18.5	Yes	30.6	No / No	Yes	4	0.1	Yes	1
Nebraska	60.2	No	4.6	8.2	7.1	No	16.4	No / No	No	1	0.1	No	1
Nevada	71.9	Yes	1.5	17.5	NA	No	39.1	No / No	No	0	2.2	No	2
New Hampshire	54.5	No	7.3	16.7	NA	No	44.7	No / No	No	0	6.6	No	0
New Jersey	76.9	No	1.5	13.4	32.1	Yes	41.0	No / No	Yes	1	17.9	No	5
New Mexico	56.4	No	3.3	47.8	76.8	No	44.4	Yes / No	Yes	4	3.6	Yes	4
New York	78.9	Yes	3.3	29.5	42.7	Yes	41.7	No / No	Yes	15	7.2	Yes	3
North Carolina	69.9	No	2.2	12.6	11.7	No	27.3	No / No	No	13	3.3	Yes	5
North Dakota	49.8	No	9.5	1.5	NA	No	28.9	No / No	No	0	0.4	No	1
Ohio	63.7	No	2.3	21.5	22.6	Yes	27.6	No / No	No	7	0.6	Yes	9
Oklahoma	51.1	Yes	1.9	14.1	NA	Yes	23.7	No / No	Yes	2	0.3	Yes	1
Oregon	77.1	No	4.2	45.4	47.2	Yes	42.3	No / No	Yes	8	7.7	No	4
Pennsylvania	69.1	Yes	2.0	20.7	22.7	No	41.6	Yes / Yes	Yes	10	2.6	No	5
Rhode Island	67.6	No	5.8	27.9	39.3	Yes	47.8	No / No	Yes	2	17.1	Yes	0
South Carolina	66.4	No	2.7	13.6	15.2	Yes	37.4	No / No	No	2	2.9	Yes	1
South Dakota	45.5	No	4.6	31.6	NA	No	12.5	Yes / Yes	No	0	0.0	No	0
Tennessee	63.1	No	1.5	11.8	2.2	No	29.4	No / No	Yes	2	0.8	Yes	3
Texas	66.4	No	0.7	18.5	11.3	No	27.1	No / No	Yes	6	0.9	No	6
Utah	66.0	No	1.3	10.8	NA	No	31.6	No / No	No	0	1.4	No	1
Vermont	43.7	No	15.0	50.0	25.5	No	52.4	No / No	Yes	12	1.6	No	3
Virginia	70.3	No	2.8	14.5	NA	No	37.9	No / No	Yes	18	1.8	Yes	1
Washington	71.6	No	2.1	35.6	58.2	No	29.8	No / No	Yes	8	14.9	No	3
West Virginia	59.3	No	4.4	19.8	34.6	No	43.2	No / No	No	1	1.4	Yes	0
Wisconsin	61.1	No	5.2	13.1	36.9	No	25.6	No / No	Yes	8	3.6	Yes	3
Wyoming	60.3	No	7.6	7.0	NA	No	30.1	No / No	No	0	0.1	No	0

[1] *Indicates states that did not receive WIC FMNP grants in FY2012.*
[2] *Among schools that offer foods or beverages at school celebrations.*
[3] *Median across states.*

Indicator **Definitions and Data Sources**

Behavioral Indicators

Percentage of adults in the state consuming fruits less than one time daily and vegetables less than one time daily

Median daily intake of fruits and vegetables among adults in the state (times per day)

Behavioral Risk Factor Surveillance System (BRFSS) (adults aged ≥ 18 years), 2011. Weighted data.

The BRFSS included 6 questions about F&V intake asked via a telephone survey, preceded by the following statement: "These next questions are about the fruits and vegetables you ate or drank during the past 30 days. Please think about all forms of fruits and vegetables including cooked or raw, fresh, frozen or canned. Please think about all meals, snacks, and food consumed at home and away from home." Respondents were asked to report consumption of the following beverages and foods during the past month as times per day, week, or month: 1) 100% PURE fruit juices; 2) fruit, including fresh, frozen, or canned fruit (not counting juice); 3) cooked or canned beans (not including long green beans); 4) dark green vegetables; 5) orange-colored vegetables; 6) other vegetables (not counting what was reported already). Total daily fruit consumption was calculated based on responses to questions 1 and 2, and total daily vegetable consumption was based on questions 3-6.

Survey questions and data are available at:

http://www.cdc.gov/brfss/questionnaires/pdf-ques/2011brfss.pdf and *http://www.cdc.gov/brfss/technical_infodata/surveydata/2011.htm*.

Percentage of adolescents in the state consuming fruits less than one time daily and vegetables less than one time daily

Median daily intake of fruits and vegetables among adolescents in the state (times per day)

Youth Risk Behavior Surveillance System (adolescents in grades 9–12), 2011. Weighted data.

The Youth Risk Behavior Survey questionnaire includes 6 questions about F&V intake asked via classroom survey, preceded by the following statement: "The next questions ask about food you ate or drank during the past 7 days. Think about all the meals and snacks you had from the time you got up until you went to bed. Be sure to include food you ate at home, at school, at restaurants, or anywhere else." Respondents were asked about intake of the following: 1) 100% fruit juices; 2) fruit; 3) green salad; 4) potatoes; 5) carrots; 6) other vegetables. Total daily fruit consumption was calculated based on responses to questions 1 and 2, and total daily vegetable consumption was based on responses to questions 3-6.

The national estimate was derived from the national Youth Risk Behavior Survey, conducted among a nationally representative sample of students in grades 9–12. The state estimates were derived from Youth Risk Behavior Surveys conducted among representative samples of students in grades 9–12 in each state. Some states may not have estimates for F&V intake among adolescents. This may be due to either not collecting survey data, not achieving a high enough overall response rate to receive weighted results, or omitting 1 or more questionnaire items during administration of the survey.

Survey questions and data are available at:

http://www.cdc.gov/healthyyouth/yrbs/pdf/questionnaire/2011_hs_questionnaire.pdf and *http://www.cdc.gov/healthyyouth/yrbs/data/index.htm*.

Policy and Environmental Indicators

Percentage of census tracts in a state that have at least one healthier food retailer located within the tract or within 1/2-mile of tract boundaries*

Numerator: Number of census tracts that have at least one healthier food retailer within the tract or within one-half mile of the tract boundary. Two separate national-level directories on retail food stores were used to develop a comprehensive list of healthier food retailers in the U.S.:[3,16] InfoUSA, a proprietary source of individual store listings, current as of June 2011, and a list of stores authorized to accept Supplemental Nutrition Assistance Program (SNAP) benefits as of January 2012. The following types of stores were defined as healthier food retailers: larger grocery stores, supermarkets, supercenters, warehouse clubs, and fruit and vegetable specialty food stores. General descriptions of these Food and Beverage and General Merchandise Stores (North American Industry Classification System (NAICS) codes 445 and 452, respectively) can be found at *http://www.census.gov/eos/www/naics*. Date accessed June 1, 2012. Further details on methodology for identifying healthier food retailers are available upon request.

Denominator: Total number of census tracts in the state. Census Tract Boundaries, 2010 U.S. Census Bureau. Available at *http://www.census.gov/geo/www/tiger/tgrshp2010/tgrshp2010.html*. Date accessed June 1, 2012.

State-level healthier food retail policy

State-level healthier food retail policies include state legislation enacted between January 1, 2001, and December 31, 2011 that supported any of the following goals: a) the building and/or placement of new food retail outlets (e.g. new supermarkets in underserved areas, loan financing program for small business development); b) renovation and equipment upgrades of existing food retail outlets (e.g. purchasing refrigerators for corner stores to allow for the sale of fresh produce); c) increases in and promotion of foods encouraged by the *Dietary Guidelines for Americans, 2010* stocked or available at food retail outlets (e.g. increase shelf space for F&V; assistance in marketing of these foods such as through point of decision information).

1. Chronic Disease State Policy Tracking System. Date accessed June 1, 2012. Available at *http://apps.nccd.cdc.gov/CDPHPPolicySearch*.
2. National Conference of State Legislatures Healthy Community Design and Access to Healthy Food Legislation Database. Date accessed August 11, 2009. Available at *http://www.ncsl.org/?tabid=13227*.
3. The Food Trust. Date accessed August 11, 2009. Available at *http://www.thefoodtrust.org/php/programs/super.market.campaign.php#*FFFIcreation.
4. Patricia L. Smith, The Reinvestment Fund, personal communication, May 21, 2009.
5. Nguyen, L., Kong, J., Barnhart, K., Eyler, A., & Brownson, R. (2011). State Legislative Search Guide. Available at *http://prcstl.wustl.edu/Documents/2011*%20State%20Legislative%20Search%*20Guide.pdf*. (Source of state legislative websites; used to find state bills.)

Number of farmers markets per 100,000 state residents

Numerator: Total farmers markets per state. United States Department of Agriculture, Agricultural Marketing Service. USDA National Farmers Market Directory. Released August 2012. Date accessed August 23, 2012. Available at *http://apps.ams.usda.gov/FarmersMarkets*.

Denominator: Population Estimates United States Census Bureau. July 1, 2011. Date accessed July 23, 2012. Available at *http://www.census.gov/popest/*.

Percentage of farmers markets that accept SNAP benefits

Numerator: Number of farmers markets that accept SNAP benefits. United States Department of Agriculture, Agricultural Marketing Service. USDA National Farmers Market Directory. Released August 2012. Date accessed August 23, 2012. Available at *http://apps.ams.usda.gov/FarmersMarkets*.

(Note: This is the number of farmers markets with one or more vendor accepting SNAP benefits based on survey responses received by USDA's Agricultural Marketing Service (AMS). This number will differ from the official number used by USDA's Food and Nutrition Service (FNS), which is based on the number of organizations and vendors who are authorized to accept SNAP benefits.)

Denominator: Total number of farmers markets. United States Department of Agriculture, Agricultural Marketing Service. USDA National Farmers Market Directory. Released August 2012. Date accessed August 23, 2012. Available at *http://apps.ams.usda.gov/FarmersMarkets*.

Percentage of farmers markets that accept WIC Farmers Market Nutrition Program coupons

Numerator: Number of farmers markets that accept WIC FMNP coupons. United States Department of Agriculture, Agricultural Marketing Service. USDA National Farmers Market Directory. Released August 2012. Date accessed August 23, 2012. Available at *http://apps.ams.usda.gov/FarmersMarkets*.

Denominator: Total number of farmers markets in states that receive WIC FMNP grants. United States Department of Agriculture, Agricultural Marketing Service. USDA National Farmers Market Directory. Released August 2012. Date accessed August 23, 2012. Available at *http://apps.ams.usda.gov/FarmersMarkets*.

WIC Farmers Market Nutrition Program. Grant Levels by State FY 2008-2012. Date accessed August 30, 2012. Available at *http://www.fns.usda.gov/wic/FMNP/FMNPgrantlevels.htm*.

States that authorize farmers to accept WIC Cash Value Vouchers

United States Department of Agriculture, Food and Nutrition Service. SFMNP/FMNP map. Released September 2012. Date accessed September 27, 2012. Available at *http://www.fns.usda.gov/wic/SFMNP-FMNP-Map.pdf*.

Percentage of middle and high schools that offer fruits or non-fried vegetables at school celebrations

Numerator: Number of middle and high schools that responded (via principal survey) "(e) always or almost always" to Q. 33 "When foods or beverages are offered at school celebrations, how often are fruits or non-fried vegetables offered?" States with estimates are those with weighted data (at least 70% of the principals in the sampled schools completed the survey). CDC 2010 School Health Profiles, School Principal Survey. Available at *http://www.cdc.gov/healthyYouth/profiles/2010/QuestionnaireP.rtf*.

Denominator: Total number of middle and all high schools surveyed with the exception of schools that responded "(a) foods or beverages are not offered at school celebrations" to Q.33 "When foods or beverages are offered at school celebrations, how often are fruits or non-fried vegetables offered?". CDC 2010 School Health Profiles, School Principal Survey. Available at *http://www.cdc.gov/healthyYouth/profiles/2010/QuestionnaireP.rtf*.

State child care regulations align with national standards for serving fruits / vegetables

Data were derived from the National Resource Center for Health and Safety in Child Care and Early Education's (NRC) analysis of the degree to which state child care regulations (for licensed child care centers, large or group family child care homes, and small family child care homes) reflected national nutrition standards for serving fruits and vegetables as described in *3rd Caring for Our Children: National Health and Safety Performance Standards for Early Care and Education Programs*. The standards specify that children be served a variety of fruits, especially whole fruits and vegetables, specifically dark green, orange, deep yellow and root vegetables. States whose regulations were given a score of 4 (regulation fully addresses standard) across all 3 childcare types were designated as "yes" whereas states that received a score of less than 4 in any childcare type were designated as "no."

National Resource Center for Health and Safety in Child Care and Early Education (NRC). 2012. Achieving a State of Healthy Weight: 2011 update. Aurora, CO: NRC. Available at: *http://nrckids.org/ASHW/ASHW%20 2011-Final-8-1.pdf*.

State-level farm to school/preschool policy*

State-level farm to school/preschool policies include state legislation enacted between January 1, 2001, and December 31, 2011 that supported any component of a farm to school program or initiative and targeted grades K-12 or child care and early care and education.10 Components can include: serving F&V purchased from local/regional farms; providing agriculture and nutrition education opportunities; and supporting local and regional farmers.

1. Chronic Disease State Policy Tracking System. Date accessed June 1, 2012. Available at *http://apps.nccd.cdc.gov/CDPHPPolicySearch*.

2. National Conference of State Legislatures Healthy Community Design and Access to Healthy Food Legislation Database. Date accessed August 11, 2009. Available at *http://www.ncsl.org/?tabid=13227*.

3. National Farm to School Network and Community Food Security Coalition. State Farm to School Legislation, Updated 8/17/11. Available at *http://www.farmtoschool.org/files/policies_114.pdf*.

4. Nguyen, L., Kong, J., Barnhart, K., Eyler, A., & Brownson, R. (2011). State Legislative Search Guide. Available at *http://prcstl.wustl.edu/Documents/2011*%20State%20Legislative%20Search%*20Guide.pdf*. *(Source of state legislative websites; used to find state bills.)*

Number of food hubs in each state

The number of food hubs by state was based on the list available on the USDA, Agricultural Marketing Service website as of the accessed date. Multiple models of food hubs are included in the list: farm to consumer, farm to business/institution, and a combination of the two. Food hubs may be cooperative, nonprofit, publicly held, or privately held business.

United States Department of Agriculture, Agricultural Marketing Service. Working List of Food Hubs. Updated September 1, 2012. Date accessed September 1, 2012. Available at *http://www.ams.usda.gov/AMSv1.0/foodhubs*.

Percentage of cropland acreage harvested for fruits and vegetables

Every five years the Census of Agriculture collects comprehensive agricultural data from U.S. farms and ranches producing $1000 or more of agricultural products. Crop production is measured for the calendar year, except for avocados, citrus, and olives for which the production year overlaps the calendar year. Harvested cropland includes land from which crops were harvested, land used to grow short-rotation woody crops, and land in orchards, citrus groves, vineyards, nurseries, and greenhouses. Land from which two or more crops were harvested was counted only once.

Numerator: Total cropland harvested for fruits and vegetables includes: Table 29 Vegetables, page 508; Table 32 Fruits (excluding nuts), page 543; Table 33 Berries, page 560. National Agricultural Statistics Service, United States Department of Agriculture. 2007. Census of Agriculture. Available at *http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf*.

Denominator: Total cropland harvested in the state found in: Table 1, State Summary Highlights: 2007, page 276. National Agricultural Statistics Service, United States Department of Agriculture. 2007. Census of Agriculture.

Available at *http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf*.

State-level food policy council

States with state-level councils listed in this report have a named point of contact on the Community Food Security Coalition website as of the accessed date. Recognized state food policy councils exist to influence state food policy and to coordinate the work of the area food system stakeholders. Those listed include councils of various types at different stages of development.

Community Food Security Coalition. 2012. Food Policy Council Program. Date accessed July 16, 2012. Available at *http://www.foodsecurity.org/FPC/council.html*.

Number of local food policy councils in each state

Local councils enumerated in this report have a named point of contact on the Community Food Security Coalition website as of the accessed date. Recognized local food policy councils exist to influence local, county or regional food policy and to coordinate the work of the area food system stakeholders. Those listed include councils of various types at different stages of development.

Community Food Security Coalition. 2012. Food Policy Council Program. Date accessed July 16, 2012. Available at *http://www.foodsecurity.org/FPC/council.html*.

* Indicator definition or data source varies from 2009 indicator, therefore direct comparisons are not recommended.

Links to non-Federal organizations are provided solely as a service to our users. These links do not constitute an endorsement of these organizations or their programs by CDC or the Federal Government, and none should be inferred. CDC is not responsible for the content of the individual organization Web pages found at these links.

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