ISSUE REPORT

The State of Obesity:

Better Policies for a Healthier America 2014






Trust for America's Health
WWW.HEALTHYAMERICANS.ORG

Robert Wood Johnson Foundation

SEPTEMBER 2014

Acknowledgements

Trust for America's Health is a non-profit, non-partisan organization dedicated to saving lives by protecting the health of every community and working to make disease prevention a national priority.

For more than 40 years the **Robert Wood Johnson Foundation** has worked to improve the health and health care of all Americans. We are striving to build a national Culture of Health that will enable all Americans to live longer, healthier lives now and for generations to come. For more information, visit www.rwjf.org. Follow the Foundation on Twitter at www.rwjf.org/twitter or on Facebook at www.rwjf.org/facebook.

TFAH would like to thank RWJF for their generous support of this report.

REPORT AUTHORS

Jeffrey Levi, PhD.
Executive Director
Trust for America's Health
and Professor of Health Policy
Milken Institute School of Public Health at the George Washington University

Laura M. Segal, MA
Director of Public Affairs
Trust for America's Health

Rebecca St. Laurent
Health Policy Research Manager
Trust for America's Health

Jack Rayburn, MPH
Senior Government Relations Manager
Trust for America's Health

CONTRIBUTORS

Susan D. Promislo, MA
Senior Communications Officer
Robert Wood Johnson Foundation

Kristen M. Gurdin, JD
Legal Counsel
Robert Wood Johnson Foundation

Kimberly Elliott, MA
Director of Policy Outreach
Robert Wood Johnson Foundation

Burness Communications

Cover photos, clockwise from top left, courtesy of: Shuttersock; © Jordan Gantz, used with permission from RWJF; © Matt Moyer, used with permission from RWJF Shutterstock; © Matt Moyer, used with permission from RWJF; Shutterstock

The State of Obesity

The following is a letter from Risa Lavizzo-Mourey, MD, MBA, president and CEO of the Robert Wood Johnson Foundation (RWJF), and Jeffrey Levi, PhD, executive director of the Trust for America's Health (TFAH)

After ten years of "F as in Fat," we are excited to unveil a new name for this report: "The State of Obesity: Better Policies for a Healthier America." Why? Well, quite simply, we believe the "F" no longer stands for failure. We launched the first "F as in Fat" report in response to the urgent call from national leaders, including the U.S. Surgeon General, to create a public health response that matched the level of a crisis that had reached epidemic proportions in the United States.[1] Our goal was to raise awareness about the seriousness of the obesity epidemic and present ideas on how to overcome it.

Since then, we've learned a lot about what works to change public policies, improve school and community environments and strengthen industry practices in ways that support and promote healthy eating and physical activity. We've seen that when schools, parents, policymakers, industry leaders and community champions join forces, they can create a Culture of Health that helps to make healthy choices the easy, affordable and accessible choices for everyone.

So what is the "state of obesity" in America today? We are starting to see signs of progress. After decades of alarming increases, this year's report shows us that childhood obesity rates have stabilized in the past decade. We also know that rates have declined in a number of places around the country — from Anchorage, Alaska to Philadelphia, Pennsylvania.

This is success worth heralding, brought about in part through committed action by policy makers

For the first time in a decade, data also show a downward trend in obesity rates among young children from low-income families in many states.

across the nation. But this progress is still early and fragile.

Unfortunately, the progress is more mixed for adults. Over the past 30 years, adult obesity rates have sharply risen, doubling since 1980. Today, that rate of increase is beginning to slow. In 2005, every state but one reported an increase in obesity rates; this past year, only six states experienced an increase. Ultimately, however, adult rates remain far too high across the nation, putting millions of Americans at higher risk for a range of serious health problems, from type 2 diabetes to heart disease.

Significant disparities also persist. Rates are disproportionately higher in the South, among lower-income Americans and among racial and ethnic minorities.

For example, adult obesity rates for Blacks were at or above 40 percent in 11 states, 35 percent in 29 states and 30 percent in 41 states. And rates of adult obesity among Latinos were above 35 percent in five states and above 30 percent in 23 states. Among Whites, adult obesity topped 30 percent in 10 states, and no state had a rate higher than 34 percent.

Our efforts to reverse the obesity epidemic will not be successful until we close these disparity gaps. Our challenge moving forward is to take what we've learned and apply it more intensively in communities where obesity rates remain extremely high. In essence, we must ensure that everyone has the opportunity to achieve a healthy weight by redoubling efforts to reduce health disparities. Such commitment will be essential if we are to meaningfully reduce people's risks for a range of serious health problems, rein in high healthcare costs, and extend equal opportunity for good health to everyone in the nation.

In this report, we focus on some of the highest-impact approaches, including implementation of policies to: increase physical activity before, during and after school; offer nutritious food and beverages at school; make healthy, affordable food prevalent in all communities; ensure healthy food and beverage marketing practices; engage healthcare professionals to more effectively prevent obesity both within and outside the clinic walls, in collaboration with community partners; and intensify our focus on prevention in early childhood.

© Matt Moyer, used with permission from RWJF

This emphasis on early childhood is particularly important because research tells us that if you can avoid obesity early on, you're much more likely to maintain a healthy weight into adolescence and adulthood.

Through the years, we've also learned that reversing the obesity epidemic is not enough; we need to support strategies to assure that everyone in America can be as healthy as they can through regular physical activity and good nutrition. This will only happen if and when all of our children and families are able to make healthy choices where they live, learn, work and play.

We know we still have much more work to do. We must spread approaches that work to every community. This report is an urgent call to action for our nation and an essential step for building a strong, vibrant Culture of Health that provides everyone in America with the opportunity to maintain a healthy weight and live a healthy life.

SECTION 1:

The State of Obesity: *Key Findings*

Obesity Rates and Trends

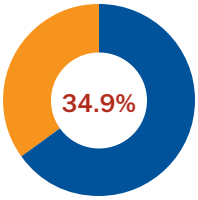
There is increasing evidence that obesity rates are stabilizing for adults and children — but the rates remain high, putting millions of Americans at risk for increased health problems. Rates of severe obesity are continuing to increase in adults, and more than one-in-ten children becomes obese as early as the ages of 2 to 5.

Moreover, racial and ethnic disparities persist, with Blacks and Latinos experiencing higher rates of obesity compared with Whites. Inequities also persist in income and education, with poorer and less educated Americans experiencing higher rates of obesity than more affluent and higher educated populations.

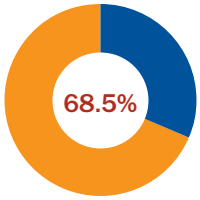
OBESITY RATES REMAIN HIGH[3]

- **Adults:** More than a third of adults (34.9 percent) were obese as of 2011 to 2012.[4] More than two-thirds of adults were overweight or obese (68.5 percent).[5]
  - Nearly 40 percent of middle-aged adults, ages 40 to 59, were obese (39.5 percent), compared with younger adults, ages 20-39, (30.3 percent) or older adults, ages 60 and over, (35.4 percent).[6]
  - More than 6 percent of adults were severely obese (body mass index (BMI) of 40 or higher).
- **Children:** Approximately 16.9 percent of children (ages 2 to 19) were obese in 2011 to 2012, and 31.8 percent were either overweight or obese.[7]
  - More than one-in-ten children (8.4 percent) were obese starting in early childhood (2- to 5-year-olds).
  - By ages 12 to 19, 20.5 percent of children and adolescents were obese.
  - More than 2 percent of young children were severely obese, 5 percent of 6- to 11-year-olds were severely obese and 6.5 percent of 12- to 19-year-olds were severely obese.[8]

Adult Obesity in America 2011-12

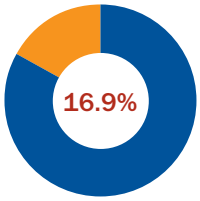


Obese

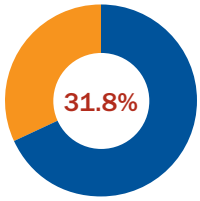


Overweight or Obese

Childhood Obesity in America 2011-12



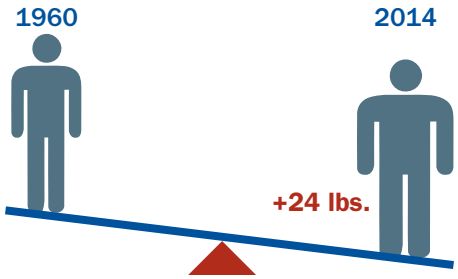
Obese



Overweight or Obese

STABILIZING — AT A HIGH RATE

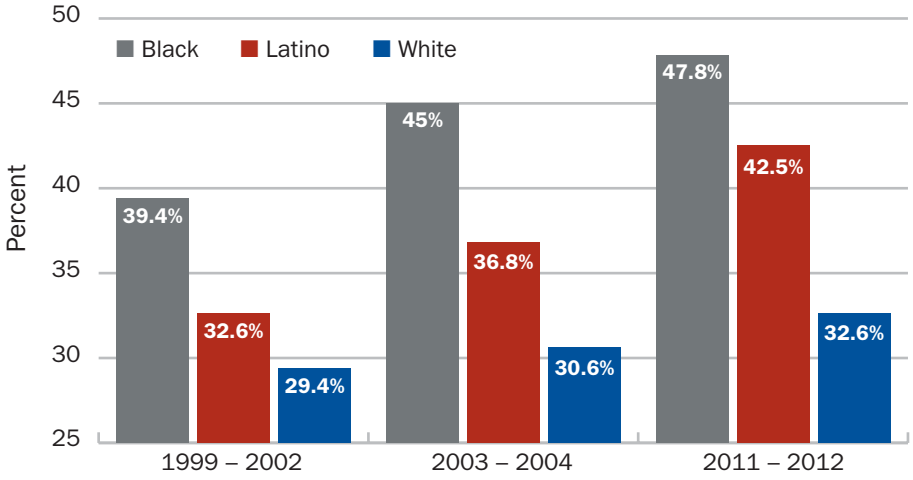
- **Adults:** Over the past 35 years, obesity rates have more than doubled. From 2009 to 2010 to 2011 to 2012, rates remained the same. The average American is more than 24 pounds heavier today than in 1960.[9]
- **Children:** Childhood obesity rates have more than tripled since 1980.[10] The rates have remained the same for the past 10 years.[11]



RACIAL AND ETHNIC INEQUITIES

- **Adults:** 47.8 percent of African Americans, 42.5 percent of Latinos, 32.6 percent of Whites and 10.8 percent of Asian Americans were obese (2011 to 2012).[12]
- **Children:** 20.2 percent of African American, 22.4 percent of Latino and 14.3 percent of White children ages 2 to 19 were obese.[13]
  - 8.5 percent of African American children and 6.6 percent of Latino children were severely obese (1999 to 2012).

OBESITY BY RACE



Sources: Wang Y and Beydoun MA. The Obesity Epidemic in the United States—Gender, Age, Socioeconomic, Racial/Ethnic, and Geographic Characteristics: A Systematic Review and Meta-Regression Analysis. *Epidemiol Rev*, 29: 6-28, 2007. And, CDC/NCHS, National Health and Nutrition Examination Survey, 2011-2012.

Obesity and Overweight Rates for Adults, National Health and Nutrition Examination Survey (NHANES), 2011 to 2012[14, 15]

	White Both Genders	Latino Both Genders	African American Both Genders	White Men	Latino Men	African American Men	White Women	Latino Women	African American Women
Obese	32.6%	42.5%	47.8%	32.4%	40.1%	37.1%	32.8%	44.4%	56.6%
Obese and Overweight Combined	67.2%	77.9%	76.2%	71.4%	78.6%	69.2%	63.2%	77.2%	82%

Note: the Centers for Disease Control and Prevention (CDC) uses the term Hispanic in analysis. White = Non-Hispanic Whites; African Americans = Non-Hispanic African Americans

Obesity and Overweight Rates for Children Ages 2 to 19, NHANES, 2011 to 2012[16]

	Girls	White Girls	Latino Girls	African American Girls	Boys	White Boys	Latino Boys	African American Boys
Severely Obese	N/A	4.8%	7.3%	10.1%	N/A	3.3%	7.9%	10.1%
Obese (including Severely Obese)	17.2%	15.6%	20.6%	20.5%	16.7%	12.6%	24.1%	19.9%
Obese and Overweight Combined	31.6%	29.2%	37%	36.1%	32.0%	27.8%	40.7%	34.4%

Note: CDC uses the term Hispanic in analysis. White = Non-Hispanic Whites; African Americans = Non-Hispanic African Americans

NOTE: Adult Overweight = BMI for 25 to 29.9; Adult Obesity = BMI of 30 or more; Adult Severe Obesity = BMI of 40 or more.

Childhood Overweight = BMI at or above the 85th percentile and lower than the 95th percentile for children of the same age and sex; Childhood Obesity = BMI at or above the 95th percentile for children of the same age and sex; Severe Childhood Obesity = BMI greater than 120 percent of 95th percentile for children of the same age and sex.

A. ADULT OBESITY AND OVERWEIGHT RATES

Two states have adult obesity rates above 35 percent, 20 states have rates at or above 30 percent, 42 states have rates above 25 percent and every state is above 20 percent.

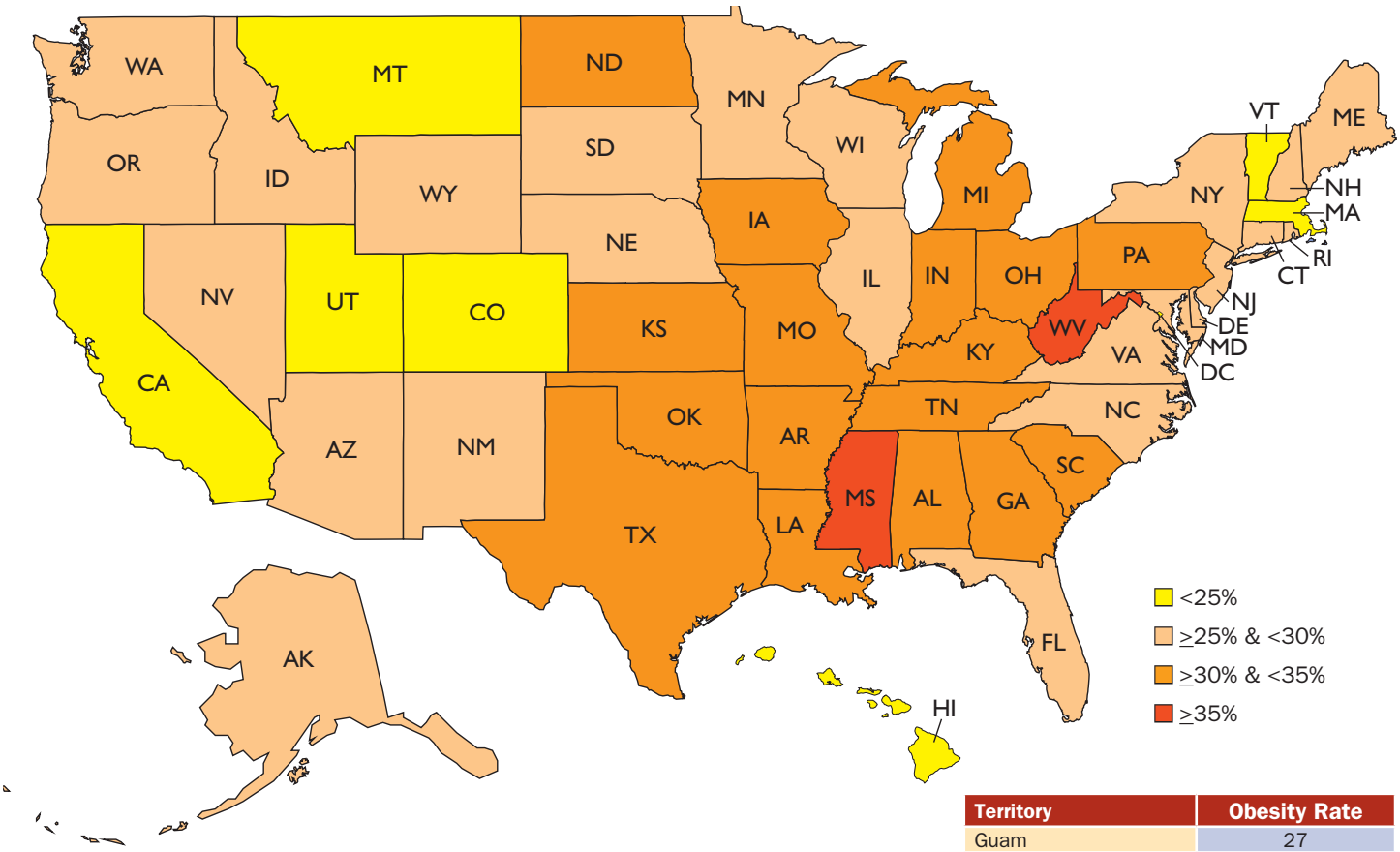
In 1980, no state was above 15 percent; in 1991, no state was above 20 percent; in 2000, no state was above 25 percent; and, in 2007, only Mississippi was above 30 percent.

Since 2005, there has been some evidence that the rate of increase has been slowing across the states. In 2005, every state but one experienced an increase in obesity rates from the previous year; from 2007 to 2008, rates increased in 37 states; from 2009 to 2010, rates increased in 28 states; and, from 2010 to 2011, rates increased in 16 states (in 2011, CDC changed methodologies for the Behavioral Risk Factor Surveillance System (BRFSS)), (see discussion in rates and rankings methodology for more details on the differences). Between 2011 and 2012, only one state had an increase. Between 2012 and 2013, six states had increases.

Mississippi and West Virginia had the highest rates of obesity at 35.1 percent, while Colorado had the lowest rate at 21.3 percent. Nine of the 10 states with the highest rates of obesity are in the South. Northeastern and Western states comprise most of the states with the lowest rates of obesity.[17]

In 2010, the U.S. Department of Health and Human Services (HHS) set a national goal to reduce the adult obesity rate from 33.9 percent to 30.5 percent by 2020, which would be a 10 percent decrease.[18] *Healthy People 2020* also set a goal of increasing the percentage of people at a healthy weight from 30.8 percent to 33.9 percent by 2020; as of 2012, 26 states fell short of that goal.[19]

2013 ADULT OBESITY RATES



Territory	Obesity Rate
Guam	27
Puerto Rico	27.9

(Note: Reflects BRFSS methodological changes made in 2011. Estimates should not be compared to those prior to 2010)[20]

CHART ON OBESITY AND OVERWEIGHT RATES

	ADULTS								
	Obesity		Overweight & Obese	Diabetes		Physical Inactivity		Hypertension	
States	2013 Percentage (95% Conf Interval)	Ranking	2013 Percentage (95% Conf Interval)	2013 Percentage (95% Conf Interval)	Ranking	2013 Percentage (95% Conf Interval)	Ranking	2013 Percentage (95% Conf Interval)	Ranking
Alabama	32.4% (+/-1.7)	8	68.2% (+/-1.7)	13.8% (+/-1.1)*	1	31.5% (+/-1.7)*	6	40.3% (+/-1.7)	2
Alaska	28.4% (+/-1.9)*	28	66.1% (+/-2)	7.1% (+/-1.1)	49	22.3% (+/-1.8)*	43	29.8% (+/-1.9)	39
Arizona	26.8% (+/-2.5)	34	61.8% (+/-2.7)	10.7% (+/-1.6)	15	25.2% (+/-2.5)	28	30.7% (+/-2.4)	32
Arkansas	34.6% (+/-1.9)	3	69.9% (+/-1.9)	11.5% (+/-1.1)	7	34.4% (+/-1.9)*	3	38.7% (+/-1.9)	7
California	24.1% (+/-1.1)	46	60.1% (+/-1.3)	10.2% (+/-0.8)	21	21.4% (+/-1.1)*	45	28.7% (+/-1.1)	45
Colorado	21.3% (+/-0.9)	51	56.4% (+/-1.1)	6.5% (+/-0.5)^	51	17.9% (+/-0.9)	51	26.3% (+/-0.9)	50
Connecticut	25% (+/-1.5)	43	62.5% (+/-1.7)	8.3% (+/-0.8)	43	24.9% (+/-1.5)*	31	31.3% (+/-1.4)	27
Delaware	31.1% (+/-1.8)*	13	64.6% (+/-1.9)	11.1% (+/-1.1)	10	27.8% (+/-1.7)*	14	35.6% (+/-1.7)	10
D.C.	22.9% (+/-1.9)	49	53.8% (+/-2.4)	7.8% (+/-1)	45	19.5% (+/-2)	49	28.4% (+/-1.8)	48
Florida	26.4% (+/-1.1)	37	62.8% (+/-1.2)	11.2% (+/-0.7)	9	27.7% (+/-1.2)*	15	34.6% (+/-1.1)	13
Georgia	30.3% (+/-1.4)	18	65.7% (+/-1.5)	10.8% (+/-0.8)	14	27.2% (+/-1.4)*	17	35% (+/-1.4)	12
Hawaii	21.8% (+/-1.4)	50	55.4% (+/-1.6)	8.4% (+/-0.9)	41	22.1% (+/-1.5)*	44	28.5% (+/-1.5)	47
Idaho	29.6% (+/-1.8)*	23	64.9% (+/-1.9)	8.4% (+/-0.9)	41	23.7% (+/-1.7)*	36	29.4% (+/-1.6)	42
Illinois	29.4% (+/-1.7)	25	64.7% (+/-1.8)	9.9% (+/-1)	23	25.1% (+/-1.7)*	29	30.1% (+/-1.7)	37
Indiana	31.8% (+/-1.2)	9	67.3% (+/-1.3)	11% (+/-0.7)	11	31% (+/-1.2)*	8	33.5% (+/-1.1)	17
Iowa	31.3% (+/-1.4)	12	67% (+/-1.4)*	9.3% (+/-0.7)	30	28.5% (+/-1.4)*	11	31.4% (+/-1.3)	26
Kansas	30% (+/-0.8)	19	65.3% (+/-0.8)	9.6% (+/-0.4)	26	26.5% (+/-0.7)*	23	31.3% (+/-0.7)	27
Kentucky	33.2% (+/-1.4)	5	67.3% (+/-1.4)	10.6% (+/-0.8)	17	30.2% (+/-1.4)	9	39.1% (+/-1.4)	5
Louisiana	33.1% (+/-2.1)	6	67.4% (+/-2.2)	11.6% (+/-1.1)	6	32.2% (+/-2.1)	5	39.8% (+/-2)	4
Maine	28.9% (+/-1.3)	27	64.8% (+/-1.4)	9.6% (+/-0.8)	26	23.3% (+/-1.3)*	40	33.3% (+/-1.3)	19
Maryland	28.3% (+/-1.2)	29	64.1% (+/-1.4)	9.8% (+/-0.7)	24	25.3% (+/-1.2)*	26	32.8% (+/-1.2)	20
Massachusetts	23.6% (+/-1.1)	48	58% (+/-1.3)	8.5% (+/-0.7)	40	23.5% (+/-1.2)*	38	29.4% (+/-1.1)	42
Michigan	31.5% (+/-1.1)	11	66.2% (+/-1.2)	10.4% (+/-0.7)	19	24.4% (+/-1.1)	32	34.6% (+/-1.1)	13
Minnesota	25.5% (+/-1.4)	41	61.1% (+/-1.5)v	7.4% (+/-0.8)	48	23.5% (+/-1.4)*	38	27% (+/-1.3)	49
Mississippi	35.1% (+/-1.6)	1	69.3% (+/-1.7)	12.9% (+/-1)	3	38.1% (+/-1.7)*	1	40.2% (+/-1.6)	3
Missouri	30.4% (+/-1.7)	16	65.5% (+/-1.7)	9.6% (+/-0.9)	26	28.3% (+/-1.6)*	13	32% (+/-1.6)	23
Montana	24.6% (+/-1.2)	45	61.4% (+/-1.4)	7.7% (+/-0.7)	47	22.5% (+/-1.2)*	41	29.3% (+/-1.2)	44
Nebraska	29.6% (+/-1.1)	23	65.5% (+/-1.2)	9.2% (+/-0.7)*	32	25.3% (+/-1.1)*	26	30.3% (+/-1.1)	36
Nevada	26.2% (+/-2.3)	40	64.9% (+/-2.5)	9.6% (+/-1.5)	26	23.7% (+/-2.2)	36	30.6% (+/-2.3)	34
New Hampshire	26.7% (+/-1.5)	35	61.8% (+/-1.7)	9.2% (+/-0.9)	32	22.4% (+/-1.5)*	42	30.1% (+/-1.4)	37
New Jersey	26.3% (+/-1.2)*	39	62.8% (+/-1.3)	9.2% (+/-0.7)	32	26.8% (+/-1.2)*	20	31.1% (+/-1.2)	30
New Mexico	26.4% (+/-1.3)	37	62.7% (+/-1.5)	10.7% (+/-0.9)	15	24.3% (+/-1.3)*	33	29.5% (+/-1.3)	41
New York	25.4% (+/-1.2)	42	61.3% (+/-1.4)	10.6% (+/-0.9)	17	26.7% (+/-1.3)	21	31.5% (+/-1.3)	25
North Carolina	29.4% (+/-1.3)	25	66.1% (+/-1.4)	11.4% (+/-0.8)	8	26.6% (+/-1.3)*	22	35.5% (+/-1.3)	11
North Dakota	31% (+/-1.5)	14	67.6% (+/-1.6)	8.9% (+/-0.8)	37	27.6% (+/-1.5)*	16	29.7% (+/-1.4)	40
Ohio	30.4% (+/-1.2)	16	65.1% (+/-1.4)	10.4% (+/-0.7)v	19	28.5% (+/-1.3)*	11	33.5% (+/-1.2)	17
Oklahoma	32.5% (+/-1.4)	7	67.9% (+/-1.4)	11% (+/-0.8)	11	33% (+/-1.4)*	4	37.5% (+/-1.3)	9
Oregon	26.5% (+/-1.6)	36	59.9% (+/-1.7)	9.2% (+/-0.9)	32	18.5% (+/-1.5)*	50	31.8% (+/-1.5)	24
Pennsylvania	30% (+/-1.2)	19	64.5% (+/-1.2)	10.1% (+/-0.7)	22	26.3% (+/-1.1)*	24	33.7% (+/-1.1)	16
Rhode Island	27.3% (+/-1.5)	31	64.6% (+/-1.7)	9.3% (+/-0.9)	30	26.9% (+/-1.6)*	18	33.8% (+/-1.5)	15
South Carolina	31.7% (+/-1.3)	10	66.5% (+/-1.3)	12.5% (+/-0.8)	4	26.9% (+/-1.2)*	18	38.4% (+/-1.3)	8
South Dakota	29.9% (+/-1.9)	21	67% (+/-1.9)	9.1% (+/-1)	36	23.8% (+/-1.7)	34	30.7% (+/-1.8)	32
Tennessee	33.7% (+/-1.8)*	4	68.4% (+/-1.8)*	12.2% (+/-1.1)	5	37.2% (+/-1.9)*	2	38.8% (+/-1.8)	6
Texas	30.9% (+/-1.4)	15	66.1% (+/-1.5)	10.9% (+/-0.9)	13	30.1% (+/-1.5)*	10	31.2% (+/-1.3)	29
Utah	24.1% (+/-1)	46	59.2% (+/-1.2)	7.1% (+/-0.5)	49	20.6% (+/-1)*	46	24.2% (+/-0.9)	51
Vermont	24.7% (+/-1.4)	44	61.9% (+/-1.6)	7.8% (+/-0.8)	45	20.5% (+/-1.3)*	47	31.1% (+/-1.4)	30
Virginia	27.2% (+/-1.3)	32	64% (+/-1.5)	9.8% (+/-0.8)	24	25.5% (+/-1.3)*	25	32.5% (+/-1.3)	21
Washington	27.2% (+/-1.2)	32	61.4% (+/-1.3)	8.6% (+/-0.6)	38	20% (+/-1.1)	48	30.4% (+/-1.1)	35
West Virginia	35.1% (+/-1.5)	1	68.8% (+/-1.5)	13% (+/-0.9)	2	31.4% (+/-1.4)	7	41% (+/-1.5)	1
Wisconsin	29.8% (+/-1.8)	22	66.5% (+/-1.9)	8.2% (+/-1)	44	23.8% (+/-1.7)*	34	32.3% (+/-1.7)	22
Wyoming	27.8% (+/-1.6)*	30	64.4% (+/-1.8)	8.6% (+/-0.8)	38	25.1% (+/-1.6)*	29	28.7% (+/-1.4)	45

Source: Behavior Risk Factor Surveillance System (BRFSS), CDC. Red and * indicates a statistically significant increase and green and v indicates a statistically significant decrease.

AND RELATED HEALTH INDICATORS IN THE STATES

CHILDREN AND ADOLESCENTS

States	2013 YRBS			2011 PedNSS	2011 National Survey of Children's Health		
	Percentage of Obese High School Students (95% Conf Interval)	Percentage of Overweight High School Students (95% Conf Interval)	Percentage of High School Students Who Were Physically Active At Least 60 Minutes on All 7 Days	Percentage of Obese Low-Income Children Ages 2-4	Percentage of Obese Children Ages 10-17	Ranking	Percentage Participating in Vigorous Physical Activity Every Day Ages 6-17
Alabama	17.1 (+/- 2.7)	15.8 (+/- 2.7)	24.8 (+/- 2.4)	14.1%	18.6% (+/- 3.9)	11	32.7%
Alaska	12.4 (+/- 2.1)	13.7 (+/- 2.6)	20.9 (+/- 2.8)	N/A	14.0% (+/- 3.3)	32	32.9%
Arizona	10.7 (+/- 2.7)	12.7 (+/- 1.9)	21.7 (+/- 2.5)	14.5%	19.8% (+/- 4.6)	7	26.4%
Arkansas	17.8 (+/- 2.2)	15.9 (+/- 2.5)	27.5 (+/- 3.0)	14.2%	20.0% (+/- 4.2)	6	31.6%
California	N/A	N/A	N/A	16.8%v	15.1% (+/- 4.1)	21	25.2%
Colorado	N/A	N/A	N/A	10.0%*	10.9% (+/- 3.6)	47	28.3%
Connecticut	12.3 (+/- 2.3)	13.9 (+/- 1.6)	26.0 (+/- 3.2)	15.8%	15.0% (+/- 3.2)	23	25.8%
Delaware	14.2 (+/- 1.4)	16.3 (+/- 1.7)	23.7 (+/- 2.0)	N/A	16.9% (+/- 4.1)	16	26.5%
D.C.	N/A	N/A	N/A	13.1%	21.4% (+/- 5.5)	3	26.8%
Florida	11.6 (+/- 1.2)	14.7 (+/- 1.2)	25.3 (+/- 1.4)	13.1%v	13.4% (+/- 3.3)	38	31.5%
Georgia	12.7 (+/- 1.7)	17.1 (+/- 2.1)	24.7 (+/- 2.2)	13.2%v	16.5% (+/- 3.8)	17	30.6%
Hawaii	13.4 (+/- 1.9)	14.9 (+/- 2.0)	22.0 (+/- 1.5)	9.2%	11.5% (+/- 2.6)	44	28.7%
Idaho	9.6 (+/- 1.5)	15.7 (+/- 1.3)	27.9 (+/- 2.7)	11.5%v	10.6% (+/- 3.4)	49	25.5%
Illinois	11.5 (+/- 1.8)	14.4 (+/- 1.7)	25.4 (+/- 2.3)	14.7%	19.3% (+/- 3.9)	9	23.5%
Indiana	N/A	N/A	N/A	14.3%	14.3% (+/- 3.7)	28	28.6%
Iowa	N/A	N/A	N/A	14.4%v	13.6% (+/- 3.2)	35	31.2%
Kansas	12.6 (+/- 2.1)	16.3 (+/- 1.8)	38.3 (+/- 2.3)	12.7%v	14.2% (+/- 3.6)	31	28.2%
Kentucky	18.0 (+/- 2.5)	15.4 (+/- 2.1)	22.5 (+/- 2.6)	15.5%	19.7% (+/- 3.9)	8	32.3%
Louisiana	13.5 (+/- 2.7)	16.4 (+/- 1.9)	N/A	N/A	21.1% (+/- 4.0)	4	31.1%
Maine	11.6 (+/- 1.6)	14.2 (+/- 0.9)	22.3 (+/- 1.6)	N/A	12.5% (+/- 3.0)	42	32.0%
Maryland	11.0 (+/- 0.4)	14.8 (+/- 0.4)	21.6 (+/- 0.6)	15.3%v	15.1% (+/- 3.7)	21	24.4%
Massachusetts	10.2 (+/- 1.8)	12.9 (+/- 1.7)	23.0 (+/- 2.3)	16.4%v	14.5% (+/- 3.5)	25	25.5%
Michigan	13.0 (+/- 1.8)	15.5 (+/- 1.3)	26.7 (+/- 2.8)	13.2%v	14.8% (+/- 3.6)	24	27.7%
Minnesota	N/A	N/A	N/A	12.6%v	14.0% (+/- 3.7)	32	28.7%
Mississippi	15.4 (+/- 2.4)	13.2 (+/- 2.6)	25.9 (+/- 3.5)	13.9%v	21.7% (+/- 4.4)	1	27.7%
Missouri	14.9 (+/- 2.8)	15.5 (+/- 2.3)	27.2 (+/- 2.6)	12.9%v	13.5% (+/- 3.0)	36	33.7%
Montana	9.4 (+/- 1.1)	12.9 (+/- 1.2)	27.7 (+/- 1.7)	11.7%	14.3% (+/- 3.4)	28	32.4%
Nebraska	12.7 (+/- 2.0)	13.8 (+/- 1.6)	32.3 (+/- 2.6)	14.3%	13.8% (+/- 3.1)	34	31.3%
Nevada	11.4 (+/- 2.0)	14.6 (+/- 2.5)	24.0 (+/- 2.6)	12.7%	18.6% (+/- 4.2)	11	22.4%
New Hampshire	11.2 (+/- 1.7)	13.8 (+/- 1.6)	22.9 (+/- 2.3)	14.6%v	15.5% (+/- 3.6)	19	28.1%
New Jersey	8.7 (+/- 2.2)	14.0 (+/- 2.2)	27.6 (+/- 3.7)	16.6%v	10.0% (+/- 2.9)	50	25.3%
New Mexico	12.6 (+/- 2.4)	15.0 (+/- 1.8)	31.1 (+/- 2.4)	11.3%v	14.4% (+/- 3.7)	27	29.6%
New York	10.6 (+/- 1.1)	13.8 (+/- 1.1)	25.7 (+/- 3.3)	14.3%v	14.5% (+/- 3.2)	25	24.6%
North Carolina	12.5 (+/- 1.9)	15.2 (+/- 2.2)	25.9 (+/- 2.6)	15.4%	16.1% (+/- 4.0)	18	31.6%
North Dakota	13.5 (+/- 1.8)	15.1 (+/- 1.8)	24.7 (+/- 2.5)	13.1%	15.4% (+/- 3.8)	20	30.4%
Ohio	13.0 (+/- 2.4)	15.9 (+/- 2.0)	25.9 (+/- 3.7)	12.4%	17.4% (+/- 3.7)	14	28.5%
Oklahoma	11.8 (+/- 2.0)	15.3 (+/- 2.4)	38.5 (+/- 3.4)	N/A	17.4% (+/- 3.6)	14	34.9%
Oregon	N/A	N/A	N/A	14.9%	9.9% (+/- 2.8)	51	28.5%
Pennsylvania	N/A	N/A	N/A	12.2%*	13.5% (+/- 3.5)	36	27.0%
Rhode Island	10.7 (+/- 1.3)	16.2 (+/- 2.5)	23.2 (+/- 3.8)	16.6%	13.2% (+/- 3.3)	41	25.2%
South Carolina	13.9 (+/- 2.5)	16.8 (+/- 2.1)	23.8 (+/- 3.0)	N/A	21.5% (+/- 4.1)	2	30.3%
South Dakota	11.9 (+/- 2.3)	13.2 (+/- 1.6)	27.7 (+/- 2.5)	15.2%v	13.4% (+/- 3.3)	38	30.2%
Tennessee	16.9 (+/- 1.9)	15.4 (+/- 2.3)	25.4 (+/- 3.1)	14.2%*	20.5% (+/- 4.2)	5	34.5%
Texas	15.7 (+/- 1.9)	15.6 (+/- 1.6)	30.0 (+/- 2.4)	N/A	19.1% (+/- 4.5)	10	29.0%
Utah	6.4 (+/- 1.9)	11.0 (+/- 2.2)	19.7 (+/- 2.7)	N/A	11.6% (+/- 3.3)	43	18.1%
Vermont	13.2 (+/- 2.1)	15.8 (+/- 1.0)	25.4 (+/- 1.9)	12.9%	11.3% (+/- 2.7)	45	33.3%
Virginia	12.0 (+/- 1.3)	14.7 (+/- 1.4)	23.8 (+/- 1.6)	N/A	14.3% (+/- 3.6)	28	26.1%
Washington	N/A	N/A	N/A	14.0%v	11.0% (+/- 3.1)	46	28.5%
West Virginia	15.6 (+/- 2.3)	15.5 (+/- 2.0)	31.0 (+/- 2.4)	14.0%	18.5% (+/- 3.4)	13	34.1%
Wisconsin	11.6 (+/- 2.1)	13.0 (+/- 1.2)	24.0 (+/- 2.3)	14.0%	13.4% (+/- 3.1)	38	28.3%
Wyoming	10.7 (+/- 1.4)	12.8 (+/- 1.2)	28.2 (+/- 2.0)	N/A	10.7% (+/- 4.2)	48	30.2%

Source: Youth Risk Behavior Survey (YRBS) 2013, CDC. YRBS data are collected every 2 years. Percentages are as reported on the CDC website and can be found at <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>. Note that previous YRBS reports used the term "overweight" to describe youth with a BMI at or above the 95th percentile for age and sex and "at risk for overweight" for those with a BMI at or above the 85th percentile, but below the 95th percentile. However, this report uses the terms "obese" and "overweight" based on the 2007 recommendations from the Expert Committee on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity convened by the American Medical Association. "Physically active at least 60 minutes on all 7 days" means that the student did any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of least 60 minutes per day on each of the 7 days before the survey.

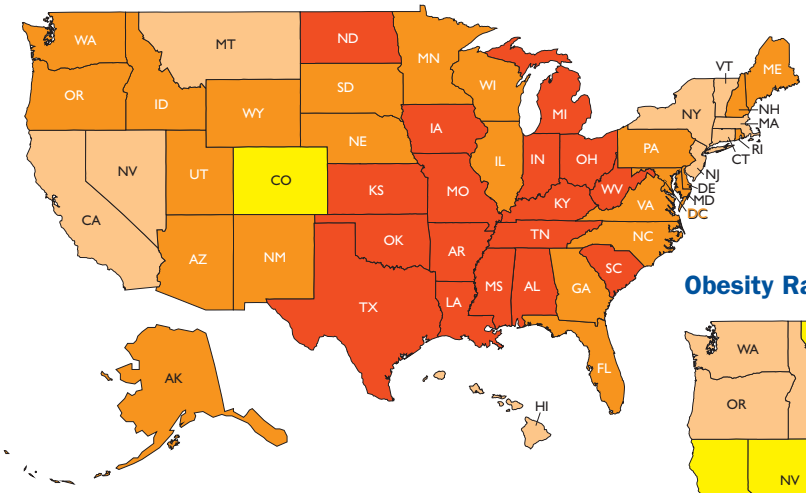
Source: CDC. Obesity Among Low-Income, Preschool-Aged Children–United States, 2008-2011. Vital Signs, 62(Early Release): 1-6, 2013. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm62e0806a1.htm. Red and * indicates a statistically significant increase and green and v indicates a statistically significant decrease from 2008-2011.

Source: National Survey of Children's Health, 2011. Health Resources and Services Administration, Maternal and Child Health Bureau. * & red indicates a statistically significant increase and v & green indicates a statistically significant decrease ($p<0.05$) from 2007 to 2011. Over the same time period, SC had a statistically significant increase in obesity rates, while NJ saw a significant decrease.

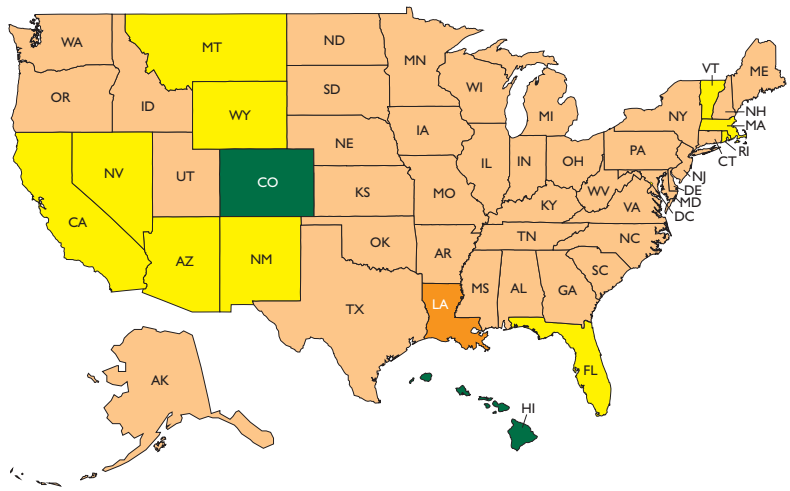
OBESITY RATES BY AGE AND ETHNICITY— 2013

	Obesity Rates by Age								Obesity Rates by Ethnicity					
	18-25 Years Old		26-44 Years Old		45-64 Years Old		65+ Years Old		Obesity among Blacks		Obesity among Latinos		Obesity among Whites	
	2013 Percentage (95% Conf Interval)	Rank	2013 Percentage (95% Conf Interval)	Rank	2013 Percentage (95% Conf Interval)	Rank	2013 Percentage (95% Conf Interval)	Rank	2013 Percentage (95% Conf Interval)	Rank	2013 Percentage (95% Conf Interval)	Rank	2013 Percentage (95% Conf Interval)	Rank
Alabama	20.6% (+/-2.7)	5	34.4% (+/-1.9)	5	38.6% (+/-1.4)	4	27.5% (+/-1.3)	14	41.8% (+/-1.9)	7	27.3% (+/-8.6)	38	29.8% (+/-1)	11
Alaska	15.4% (+/-3)	28	27.4% (+/-2.1)	37	31.7% (+/-1.8)	30	28.8% (+/-2.7)	7	37.9% (+/-9.4)	21	28.4% (+/-6.8)	32	26.1% (+/-1.3)	32
Arizona	18.9% (+/-3.6)	9	26.7% (+/-2.5)	40	30.3% (+/-2)	38	22.6% (+/-1.8)	44	32.5% (+/-7.5)	38	33.8% (+/-3.4)	8	22% (+/-1.2)	48
Arkansas	26.2% (+/-3.9)	1	36.5% (+/-2.4)	3	38% (+/-1.7)	5	26.2% (+/-1.5)	26	42.2% (+/-3.5)	4	34.3% (+/-6.4)	7	32% (+/-1.3)	2
California	13.9% (+/-1.5)	41	25.5% (+/-1.1)	43	29.3% (+/-1)	45	21.5% (+/-1.1)	47	34.8% (+/-3.1)	31	30.7% (+/-1.2)	21	22.4% (+/-0.7)	45
Colorado	11.4% (+/-1.6)	50	21.6% (+/-1.1)	50	24.6% (+/-0.9)	51	19.4% (+/-1)	50	30.5% (+/-4.1)	40	28% (+/-1.8)	35	18.8% (+/-0.6)	50
Connecticut	14.1% (+/-2.7)	40	26.3% (+/-1.6)	41	27.9% (+/-1.3)	48	25.5% (+/-1.4)	35	33.2% (+/-3.3)	36	32.5% (+/-3.1)	13	23.5% (+/-0.9)	43
Delaware	14.6% (+/-2.8)	35	29.4% (+/-2.1)	24	34.7% (+/-1.7)	19	28.4% (+/-1.6)	11	37.3% (+/-2)	24	29.2% (+/-5.3)	30	27.4% (+/-1.1)	23
D.C.	11.3% (+/-3.4)	51	21.1% (+/-2)	51	31.6% (+/-1.9)	31	23% (+/-1.8)	43	35.6% (+/-2)	28	18.5% (+/-5)	51	10% (+/-1.2)	51
Florida	13.8% (+/-2.1)	42	27.7% (+/-1.6)	35	31.3% (+/-1.3)	33	23.7% (+/-1.1)	41	34.8% (+/-2.6)	31	26.4% (+/-2.1)	43	24.5% (+/-0.8)	38
Georgia	17.8% (+/-2.5)	15	30.2% (+/-1.7)	20	34.7% (+/-1.3)	19	25.8% (+/-1.4)	32	37.2% (+/-1.9)	25	28.1% (+/-4)	34	26.2% (+/-1)	30
Hawaii	15.3% (+/-2.3)	29	26.9% (+/-1.7)	39	25.2% (+/-1.4)	50	15.7% (+/-1.3)	51	41.1% (+/-11.2)	8	29.4% (+/-3.5)	29	19.3% (+/-1.5)	49
Idaho	15.9% (+/-3)	24	28.2% (+/-2.1)	32	33.1% (+/-1.7)	28	27.1% (+/-1.7)	16	N/A	N/A	35.3% (+/-4.9)	5	26.8% (+/-1.1)	26
Illinois	13.8% (+/-2.6)	42	28.5% (+/-2)	28	34% (+/-1.6)	25	28.5% (+/-1.7)	9	38.7% (+/-3.5)	16	29.9% (+/-3.7)	24	27% (+/-1)	25
Indiana	20.4% (+/-2.3)	6	31.8% (+/-1.5)	11	37.1% (+/-1.2)	7	28.9% (+/-1.2)	6	42.5% (+/-3.2)	3	33.2% (+/-4.3)	11	30.1% (+/-0.8)	8
Iowa	17.2% (+/-2.3)	19	30.9% (+/-1.6)	16	35.9% (+/-1.2)	15	29.5% (+/-1.2)	4	39.5% (+/-7.1)	12	37.6% (+/-5.3)	1	30.1% (+/-0.8)	8
Kansas	18.5% (+/-1.6)	11	31.8% (+/-1.1)	11	35.1% (+/-0.8)	16	26.1% (+/-0.8)	27	39.2% (+/-3)	15	33.5% (+/-2.7)	10	29.2% (+/-0.5)	13
Kentucky	19.4% (+/-2.5)	7	33.1% (+/-1.6)	10	37.1% (+/-1.3)	7	28% (+/-1.4)	13	42% (+/-4)	5	24.5% (+/-6.6)	48	31% (+/-0.8)	3
Louisiana	17.3% (+/-2.6)	17	36.9% (+/-2.1)	2	39.9% (+/-1.5)	1	30.5% (+/-1.5)	1	41.9% (+/-2.1)	6	32.6% (+/-7)	12	30.4% (+/-1.2)	6
Maine	15.3% (+/-2.1)	29	29.7% (+/-1.5)	22	33% (+/-1)	29	25.9% (+/-1.1)	30	N/A	N/A	24.2% (+/-6.8)	49	28.5% (+/-0.7)	19
Maryland	15.1% (+/-2.4)	32	28.4% (+/-1.5)	31	33.7% (+/-1.2)	27	26.4% (+/-1.3)	24	37.5% (+/-1.7)	23	25.9% (+/-3.9)	45	25.3% (+/-0.8)	36
Massachusetts	13.1% (+/-1.6)	47	22.4% (+/-1.1)	49	28% (+/-0.9)	47	23.1% (+/-1.1)	42	33.6% (+/-2.9)	35	31% (+/-2.2)	19	22.4% (+/-0.6)	45
Michigan	18.1% (+/-1.9)	12	33.2% (+/-1.5)	9	36.1% (+/-1.1)	13	29.7% (+/-1.2)	2	39.3% (+/-2.4)	14	35.4% (+/-4.7)	3	30.1% (+/-0.8)	8
Minnesota	14.4% (+/-1.8)	36	26% (+/-1.3)	42	30.2% (+/-1.1)	40	25% (+/-1.4)	38	29.8% (+/-3.9)	42	30.5% (+/-4.6)	22	25.5% (+/-0.7)	34
Mississippi	25.1% (+/-2.8)	2	37.8% (+/-1.8)	1	39.9% (+/-1.3)	1	28.4% (+/-1.3)	11	42.9% (+/-1.7)	1	28.2% (+/-7)	33	30.7% (+/-1.1)	5
Missouri	18% (+/-2.7)	13	30.7% (+/-1.9)	17	36.4% (+/-1.5)	11	27% (+/-1.5)	18	40% (+/-3.5)	11	33.6% (+/-7.3)	9	28.8% (+/-1)	15
Montana	14.2% (+/-2)	37	24.9% (+/-1.5)	45	29.4% (+/-1.2)	43	22.6% (+/-1.2)	44	N/A	N/A	29.6% (+/-6.1)	28	23.4% (+/-0.7)	44
Nebraska	15.8% (+/-1.5)	26	30% (+/-1.1)	21	34.5% (+/-0.9)	22	27.4% (+/-0.9)	15	33.7% (+/-3.9)	34	30.4% (+/-2.7)	23	28.6% (+/-0.6)	17
Nevada	13.8% (+/-2.9)	42	28.5% (+/-2.3)	28	29.4% (+/-2.1)	43	22.5% (+/-2.2)	46	34.9% (+/-5.4)	30	27.3% (+/-3.2)	38	24.7% (+/-1.3)	37
New Hampshire	14.2% (+/-2.9)	37	28.6% (+/-1.8)	27	30.4% (+/-1.3)	37	25.6% (+/-1.3)	34	27.7% (+/-11.3)	43	24.7% (+/-8.3)	47	27.1% (+/-0.9)	24
New Jersey	13.3% (+/-1.9)	46	24.8% (+/-1.2)	46	28.6% (+/-1)	46	26.1% (+/-1.2)	27	34.5% (+/-2)	33	27.5% (+/-1.8)	36	24.4% (+/-0.8)	40
New Mexico	17.9% (+/-2.2)	14	30.5% (+/-1.5)	18	30.3% (+/-1.1)	38	20.3% (+/-1.2)	49	30.1% (+/-6.8)	41	29.8% (+/-1.2)	25	22.2% (+/-0.9)	47
New York	11.7% (+/-2)	49	24.2% (+/-1.5)	48	29.6% (+/-1.3)	42	25.8% (+/-1.7)	32	32.7% (+/-2.7)	37	27.3% (+/-2.3)	38	23.6% (+/-0.9)	42
North Carolina	19.1% (+/-2.3)	8	30.4% (+/-1.4)	19	34.6% (+/-1.2)	21	25.9% (+/-1.2)	30	40.4% (+/-1.9)	9	27% (+/-3.1)	42	26.6% (+/-0.9)	27
North Dakota	16.3% (+/-2.6)	23	31.5% (+/-1.9)	14	36.2% (+/-1.5)	12	27.1% (+/-1.5)	16	24.7% (+/-11)	46	36.2% (+/-9)	2	29.1% (+/-0.9)	14
Ohio	16.7% (+/-2.2)	21	31.2% (+/-1.4)	15	35.1% (+/-1.1)	16	28.7% (+/-1.2)	8	36% (+/-2.5)	27	30.9% (+/-5.5)	20	29.4% (+/-0.8)	12
Oklahoma	23.8% (+/-2.8)	4	33.5% (+/-1.5)	8	36.9% (+/-1.2)	10	26.7% (+/-1.2)	21	38.7% (+/-3.6)	16	31.3% (+/-3.5)	17	31% (+/-0.9)	3
Oregon	13.5% (+/-2.5)	45	28.8% (+/-1.9)	26	31.2% (+/-1.5)	34	25.4% (+/-1.4)	36	39.5% (+/-11)	12	31.2% (+/-4.6)	18	26.2% (+/-0.9)	30
Pennsylvania	17.3% (+/-1.9)	17	29.4% (+/-1.3)	24	33.8% (+/-1.1)	26	29.1% (+/-1.1)	5	35.6% (+/-2.4)	28	34.8% (+/-3.9)	6	28.7% (+/-0.7)	16
Rhode Island	15.1% (+/-2.8)	32	28.5% (+/-1.8)	28	30% (+/-1.3)	41	24.5% (+/-1.4)	40	31.4% (+/-4.9)	39	27.5% (+/-3.2)	36	25.9% (+/-1)	33
South Carolina	18.8% (+/-2.1)	10	34.3% (+/-1.5)	6	37% (+/-1.2)	9	26.4% (+/-1.2)	24	42.6% (+/-1.5)	2	29.7% (+/-5.2)	26	27.5% (+/-0.8)	21
South Dakota	16.9% (+/-2.7)	20	29.6% (+/-2)	23	34.1% (+/-1.8)	24	27% (+/-1.9)	18	26.1% (+/-12.7)	44	31.5% (+/-7.7)	16	28.1% (+/-1.1)	20
Tennessee	16.4% (+/-3.4)	22	33.8% (+/-2.3)	7	37.7% (+/-1.8)	6	26.6% (+/-1.7)	23	40.4% (+/-3.5)	9	25.6% (+/-9.4)	46	30.2% (+/-1.2)	7
Texas	17.7% (+/-2.1)	16	31.8% (+/-1.4)	11	36% (+/-1.4)	14	27% (+/-1.4)	18	38.2% (+/-2.9)	20	35.4% (+/-1.6)	3	26.5% (+/-1)	28
Utah	12.8% (+/-1.4)	48	24.5% (+/-1)	47	31% (+/-1)	35	25.2% (+/-1.2)	37	26% (+/-7.9)	45	26.1% (+/-2.3)	44	24.1% (+/-0.6)	41
Vermont	14.8% (+/-2.6)	34	25.5% (+/-1.7)	43	27.7% (+/-1.2)	49	24.9% (+/-1.3)	39	20.2% (+/-11.5)	47	27.1% (+/-8.5)	41	24.5% (+/-0.8)	38
Virginia	15.2% (+/-2.5)	31	27.3% (+/-1.6)	38	34.5% (+/-1.4)	22	26.7% (+/-1.5)	21	38.5% (+/-2.4)	18	24.1% (+/-4)	50	26.3% (+/-0.9)	29
Washington	14.2% (+/-1.7)	37	27.8% (+/-1.3)	34	31.6% (+/-1)	31	26.1% (+/-1)	27	37.6% (+/-5)	22	29.7% (+/-2.8)	26	27.5% (+/-0.7)	21
West Virginia	24.3% (+/-3.2)	3	36% (+/-1.8)	4	38.7% (+/-1.4)	3	28.5% (+/-1.5)	9	36.5% (+/-6.4)	26	32.1% (+/-8.6)	15	33.8% (+/-0.9)	1
Wisconsin	15.9% (+/-3.2)	24	28.2% (+/-2.1)	32	34.8% (+/-1.7)	18	29.7% (+/-2)	2	38.5% (+/-5.7)	18	32.4% (+/-8.1)	14	28.6% (+/-1.1)	17
Wyoming	15.5% (+/-2.9)	27	27.7% (+/-1.9)	35	30.6% (+/-1.5)	36	21.5% (+/-1.4)	47	N/A	N/A	29.2% (+/-4.5)	30	25.5% (+/-1)	34

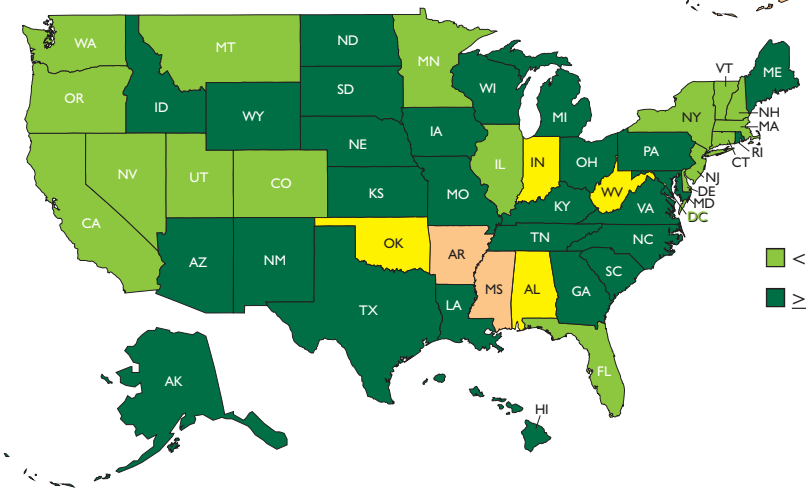
Obesity Rates for Baby Boomers (45-to 64-year-olds)

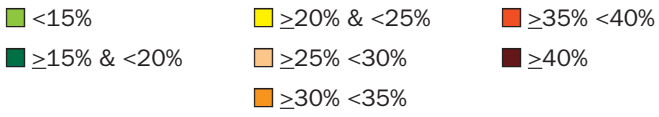


Obesity Rates for Seniors (65-+ year-olds)



Obesity Rates for Young Adults (18- to 25-year-olds)





STATES WITH THE HIGHEST OBESITY RATES		
Rank	**State**	**Percentage of Adult Obesity** (Based on 2013 Data, Including Confidence Intervals)
1	Mississippi	35.1% (+/-1.6)
1 (tie)	West Virginia	35.1% (+/-1.5)
3	Arkansas	34.6% (+/-1.9)
4	Tennessee	33.7% (+/-1.8)
5	Kentucky	33.2% (+/-1.4)
6	Louisiana	33.1% (+/-2.1)
7	Oklahoma	32.5% (+/-1.4)
8	Alabama	32.4% (+/-1.7)
9	Indiana	31.8% (+/-1.2)
10	South Carolina	31.7% (+/-1.3)

Note: For rankings, 1 = Highest rate of obesity.

STATES WITH THE LOWEST OBESITY RATES		
Rank	**State**	**Percentage of Adult Obesity** (Based on 2013 Data, Including Confidence Intervals)
51	Colorado	21.3% (+/-0.9)
50	Hawaii	21.8% (+/-1.4)
49	D.C.	22.9% (+/-1.9)
48	Massachusetts	23.6% (+/-1.1)
46 (tie)	California	24.1% (+/-1.1)
46 (tie)	Utah	24.1% (+/-1)
45	Montana	24.6% (+/-1.2)
44	Vermont	24.7% (+/-1.4)
43	Connecticut	25% (+/-1.5)
42	New York	25.4% (+/-1.2)

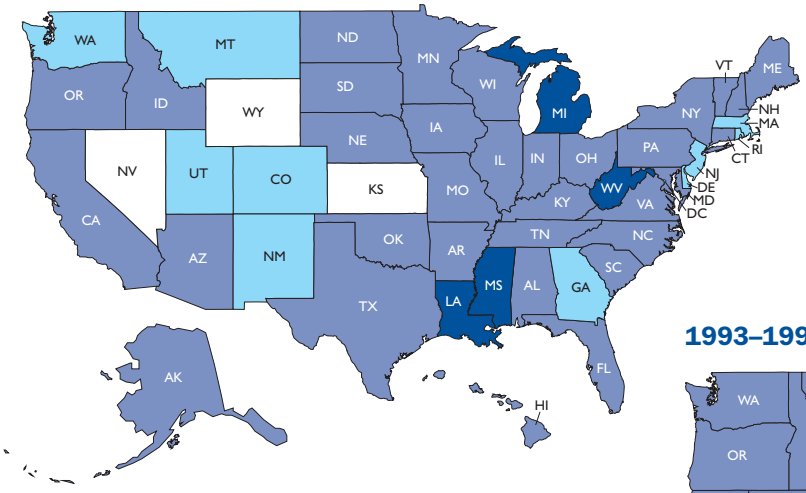
Note: For rankings, 51 = Lowest rate of obesity.

PAST OBESITY TRENDS AMONG U.S. ADULTS

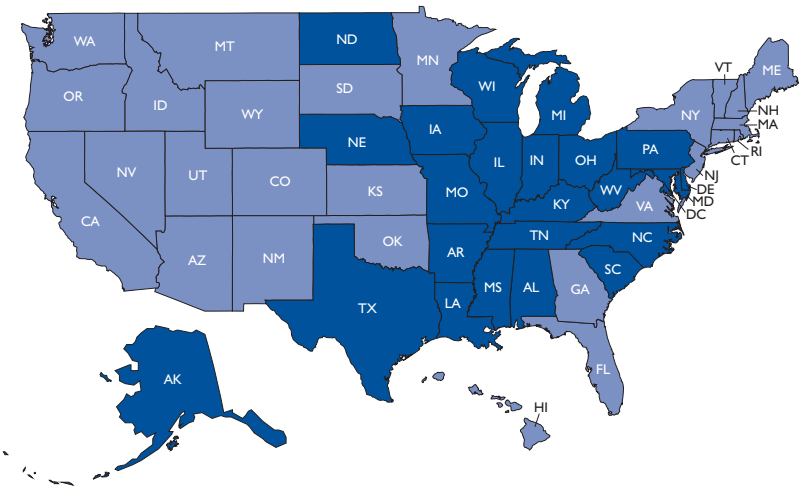
BRFSS: 1991, 1993 to 1995, 1998 to 2000, and 2005 to 2007 Combined Data

(BMI >30, or about 30lbs overweight for 5'4" person)

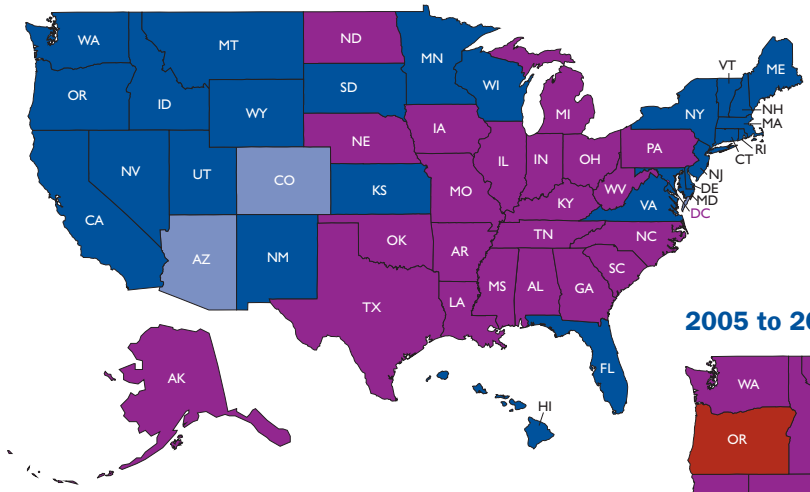
1991



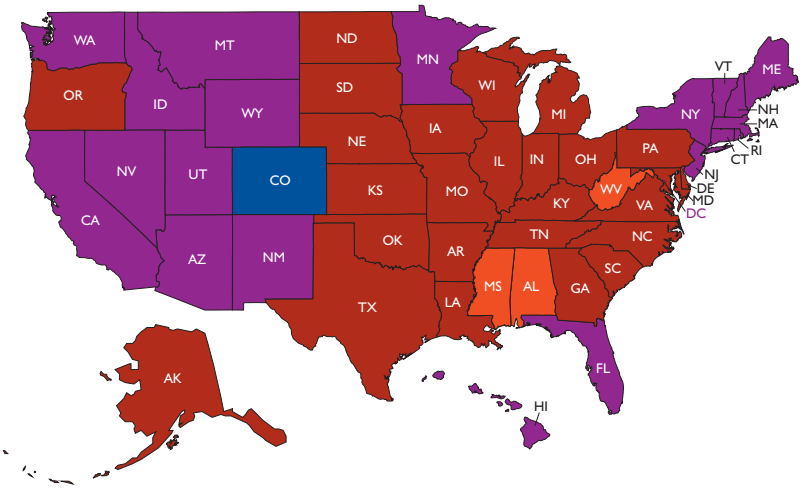
1993–1995 Combined Data



1998 to 2000 Combined Data



2005 to 2007 Combined Data



- No Data
- <10%
- ≥10% & <15%
- ≥15% & <20%
- ≥20% <25%
- ≥25% <30%
- ≥30%

RATES AND RANKINGS METHODOLOGY[11]

The analysis in *The State of Obesity* compares data from the Behavioral Risk Factor Surveillance System.

BRFSS is the largest ongoing telephone health survey in the world. It is a state-based system of health surveys established by CDC in 1984. BRFSS completes more than 400,000 adult interviews each year. For most states, BRFSS is the only source of population-based health behavior data about chronic disease prevalence and behavioral risk factors.

BRFSS surveys a sample of adults in each state to get information on health risks and behaviors, health practices for preventing disease and healthcare access mostly linked to chronic disease and injury. The sample is representative of the population of each state.

Washington, D.C., is included in the rankings because CDC provides funds to the city to conduct a survey in an equivalent way to the states.

The data are based on telephone surveys by state health departments, with assistance from the CDC. Surveys ask people to report their weight and height, which is used to calculate BMI. Experts say rates of overweight and obesity are probably slightly higher than shown by the data because people tend to underreport their weight and exaggerate their height.[22]

BRFSS made two changes in methodology for its dataset starting in 2011 to make the data more representative of the total population. The changes included making survey calls to cell phone numbers and adopting a new weighting method:

- The first change is including and then growing the number of interview calls made to cell phone numbers. Estimates today are that three in 10 U.S. households have only cell phones.
- The second is a statistical measurement change, which involves the way the data are weighted to better match the demographics of the population in the state.

The new methodology means the BRFSS data will better represent lower-income and racial and ethnic minorities, as well as populations with lower levels of formal education. Although generalizing is difficult because of these variables, it is likely that the changes in methods will result in somewhat higher estimates for the occurrence of behaviors that are more common among younger adults and to certain racial and ethnic groups.

The change in methodology makes direct comparisons to data collected prior to 2011 difficult.

More information on the methodology is available in Appendix A.

DEFINITIONS OF OBESITY AND OVERWEIGHT

Obesity is defined as an excessively high amount of body fat or adipose tissue in relation to lean body mass.[23,24] Overweight refers to increased body weight in relation to height, which is then compared to a standard of acceptable weight.[25] Body mass index is a common measure expressing the relationship (or ratio) of weight to height. The equation is:

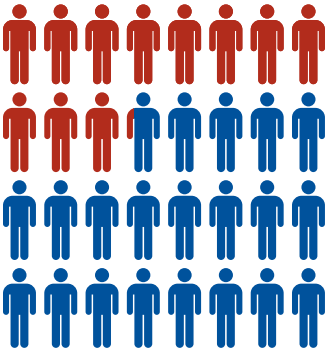
$$\text{BMI} = \left(\frac{\text{Weight in pounds}}{(\text{Height in inches}) \times (\text{Height in inches})} \right) \times 703$$

Adults with a BMI of 25 to 29.9 are considered overweight, while individuals with a BMI of 30 or more are considered obese.

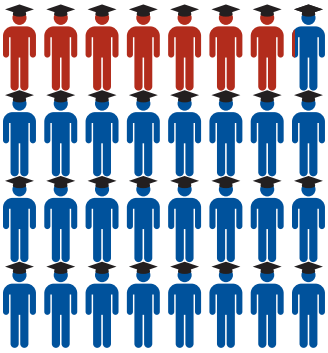
For children, overweight is defined as a BMI at or above the 85th percentile and lower than the 95th percentile for children of the same age and sex; childhood obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex; and severe childhood obesity is defined as a BMI greater than 120 percent of 95th percentile for children of the same age and sex.

BMI is considered an important measure for understanding population trends. For individuals, it is one of many factors that should be considered in evaluating healthy weight, along with waist size, body fat composition, waist-to-hip ratio, blood pressure, cholesterol level and blood sugar.[26]

SOCIOECONOMICS AND OBESITY



35.3% of adults with no high school diploma are obese



22.1% of adults who graduated college or technical college are obese

An analysis of the 2012 BRFSS data looking at income, level of schooling completed and obesity finds strong correlations between obesity and income, and between obesity and education:

- Over 35 percent of adults age 26 and older who did not graduate high school were obese, compared with 22.1 percent of those who graduated from college or technical college.
- Thirty-three percent of adults who earn less than $15,000 per year were obese, compared with 25.4 percent of those who earned at least $50,000 per year.[27]

An analysis of obesity, income and education from the 2005-2008 NHANES found that:[28]

- Among men, obesity prevalence is similar at all income levels whereas among women obesity prevalence increases as income decreases.
- Among men, education level is not significantly related to obesity prevalence, but among women obesity prevalence increases as education decreases.

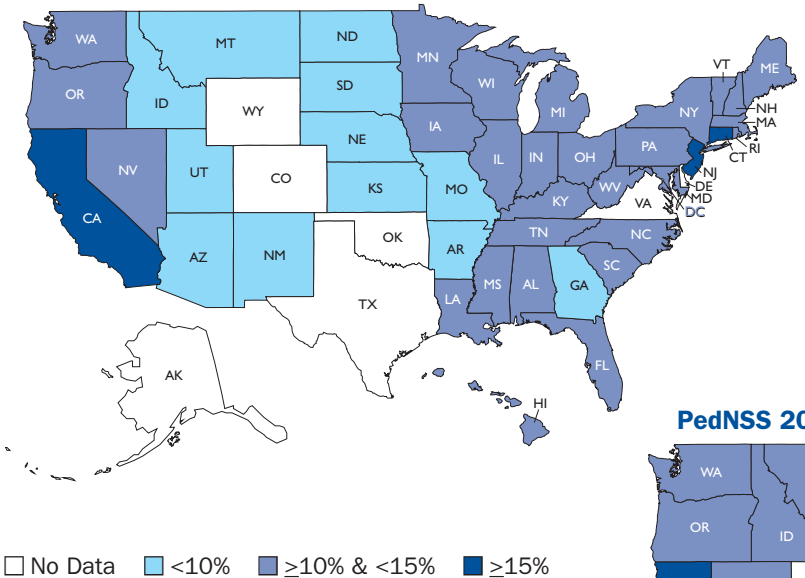
B. CHILDHOOD AND YOUTH OBESITY AND OVERWEIGHT RATES

1. STUDY OF CHILDREN FROM LOW-INCOME FAMILIES (2011)

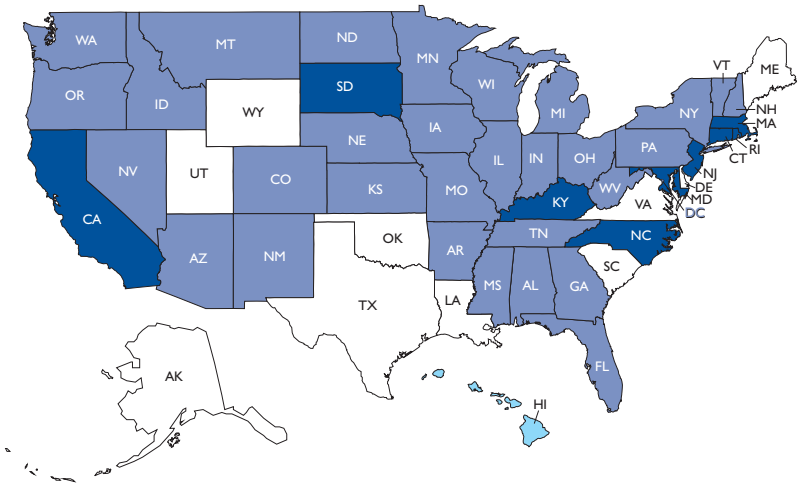
The Pediatric Nutrition Surveillance Survey (PedNSS), which examines children between the ages of 2 and 5 from lower-income families,[29] found that 14.4 percent of this group was obese in 2011, compared with 12.1 percent of all U.S. children of a similar age.[30] The data for PedNSS is based on actual measurements rather than self-reported data.

The obesity rates increased from 1999 (12.7 percent) to 2011 (14.4 percent), although rates have remained stable since 2003. The highest obesity rates were seen among American Indian and Alaska Native children (20.8 percent) and Latino children (17.5 percent). From 2008 to 2011, 18 states out of the 40 states and D.C. that participate in the survey and the U.S. Virgin Islands had a statistically significant decrease, and only three states increased during this time.

PedNSS 1998[31]



PedNSS 2011



2. STUDY OF CHILDREN AGES 10 TO 17 (2011)

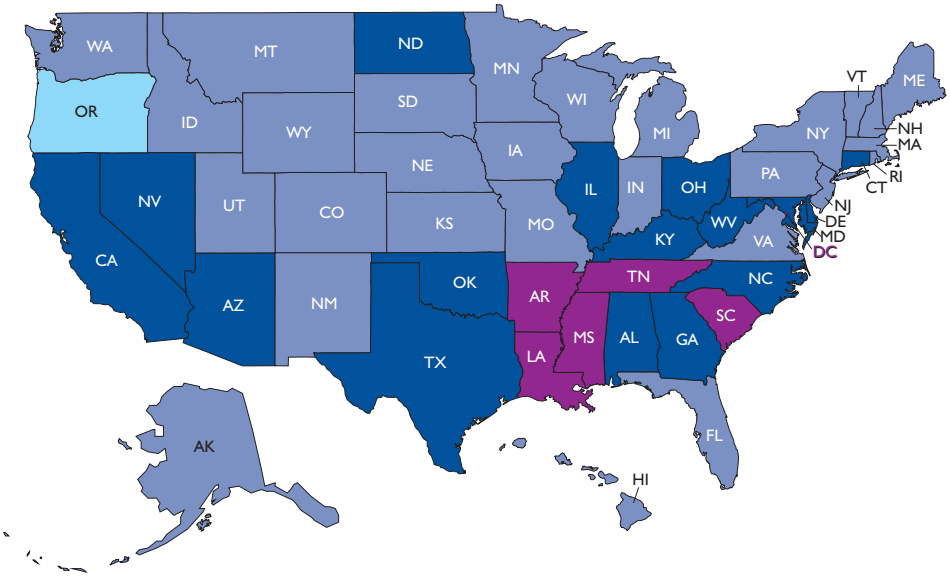
The most recent data for childhood statistics on a state-by-state level are from the 2011 National Survey of Children's Health (NSCH).[32] According to the study, obesity rates for children ages 10 to 17, defined as BMI greater than the 95th percentile for age group, ranged from a low of 9.9 percent in Oregon to a high of 21.7 percent in Mississippi.

Seven of the 10 states with the highest rates of obese children are in the South. Only two states had statistically significant changes for rates of obese children between the 2007 to 2011 surveys: South Carolina saw an increase and New Jersey saw a decrease.

The NSCH study is based on a survey of parents in each state. The data are derived from parental reports, so they are not as reliable as measured data, such as NHANES and PedNSS, but they are the only source of comparative state-by-state data for children.

PROPORTION OF CHILDREN AGES 10 TO 17 CLASSIFIED AS OBESE BY STATE

Obese 10- to 17-Year-Olds, 2011 NSCH



No Data <10% ≥10% & <15% ≥15% & <20% ≥20% <25%
≥25% <30% ≥30%

Source: National Survey on Children's Health, 2011.

STATES WITH THE HIGHEST RATES OF OBESE 10- TO 17-YEAR-OLDS		
Rank	**States**	**Percentage of Obese 10- to 17-year-olds** (95 percent Confidence Intervals)
1	Mississippi	21.7% (+/- 4.4)
2	South Carolina	21.5% (+/- 4.9)
3	D.C.	21.4% (+/- 5.5)
4	Louisiana	21.1% (+/- 4.0)
5	Tennessee	20.5% (+/- 4.2)
6	Arkansas	20.0% (+/- 4.2)
7	Arizona	19.8% (+/- 4.6)
8	Kentucky	19.7% (+/- 3.9)
9	Illinois	19.3% (+/- 3.9)
10	Texas	19.1% (+/- 4.5)

Note: For rankings, 1 = Highest rate of obesity.

STATES WITH THE LOWEST RATES OF OBESE 10- TO 17-YEAR-OLDS		
Rank	**States**	**Percentage of Obese 10- to 17-year-olds** (95 percent Confidence Intervals)
51	Oregon	9.9% (+/- 2.8)
50	New Jersey	10.0% (+/- 2.9)
49	Idaho	10.6% (+/- 3.4)
48	Wyoming	10.7% (+/- 4.2)
47	Colorado	10.9% (+/- 3.6)
46	Washington	11.0% (+/- 3.1)
45	Vermont	11.3% (+/- 2.7)
44	Hawaii	11.5% (+/- 2.6)
43	Utah	11.6% (+/- 3.3)
42	Maine	12.5% (+/- 3.0)

Note: For rankings, 51 = Lowest rate of obesity.

Seven of the states with the highest rates of obese 10- to 17-year-olds are in the South.

© Matt Moyer, used with permission from RWJF

3. STUDY OF HIGH SCHOOL STUDENTS (2013)

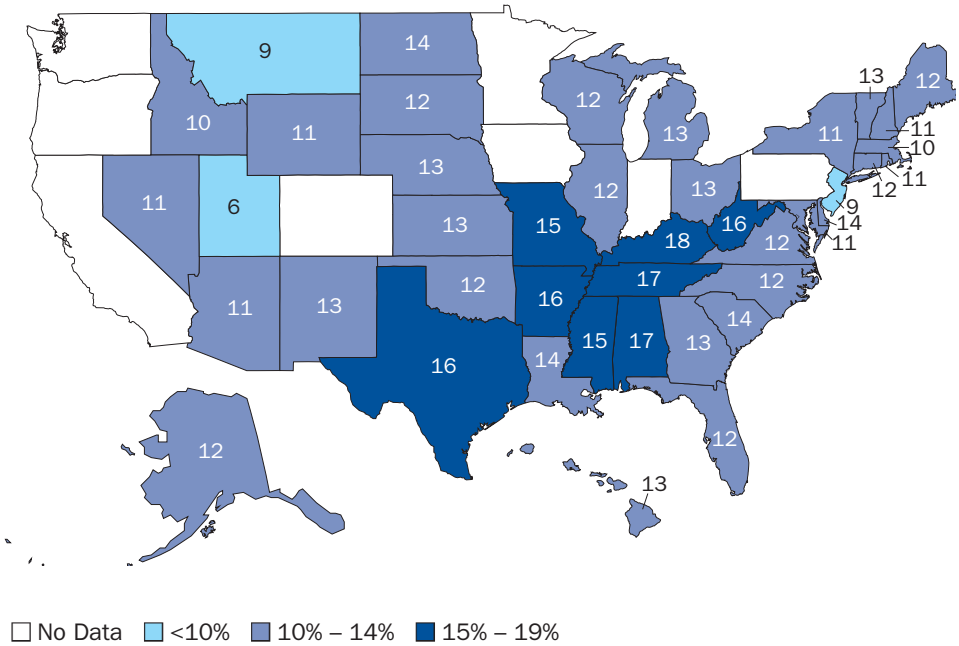
The Youth Risk Behavior Surveillance System (YRBSS) includes both national and state surveys that provide data on adolescent obesity and overweight rates, most recently in 2013.[33] The information from the YRBSS is based on self-reported information.

According to the national survey, 13.7 percent of high school students were obese, and 16.6 percent were overweight.[34]

There was an increase from 1999 to 2013 in the prevalence of students nationwide who were obese (10.6 percent to 13.7 percent) and who were overweight (14.2 percent to 16.6 percent).[35] Students also reported on whether or not they participated in at least 60 minutes of physical activity every day of the week. The most recent state surveys, conducted in 42 states, found a wide range in the percentage of high school students who were physically active for at least 60 minutes per day seven days a week, from a high of 38.5 percent in Oklahoma to a low of 19.7 percent in Utah, with a median prevalence of 25.4 percent.

The latest state surveys also found a range of obesity levels: a low of 6.4 percent in Utah to a high of 18.0 percent in Kentucky, with a median prevalence of 12.4 percent. Overweight prevalence among high school students ranged from a low of 11.0 percent in Utah to a high of 17.1 percent in Georgia, with a median prevalence of 14.9 percent.

PERCENTAGE OF HIGH SCHOOL STUDENTS WHO WERE OBESE — Selected U.S. states, Youth Risk Behavior Surveillance System, 2013



Source: YBRS. Trend maps from 2003 to 2013 are available at: http://www.cdc.gov/healthyyouth/obesity/obesity-youth.htm.

PERCENTAGE OF OBESE AND OVERWEIGHT U.S. HIGH SCHOOL STUDENTS BY SEX		
	Obese	**Overweight**
Female	10.9%	16.6%
Male	16.6%	16.5%
Total	13.7%	16.6%

PERCENTAGE OF OBESE AND OVERWEIGHT U.S. HIGH SCHOOL STUDENTS BY RACE/ETHNICITY		
	Obese	**Overweight**
White*	13.1%	15.6%
Black*	15.7%	19.1%
Latino	15.2 %	18.3%
Total**	13.7%	16.6%

Notes: CDC uses the term Hispanic in their analysis. *Non-Hispanic. **Other race/ethnicities are included in the total but are not presented separately.

PERCENTAGE OF OBESE AND OVERWEIGHT U.S. HIGH SCHOOL STUDENTS BY SEX AND RACE/ETHNICITY				
	Obese		**Overweight**	
	Female	**Male**	**Female**	**Male**
White*	9.7%	16.5%	14.3%	16.9%
Black*	16.7%	14.8%	22.8%	15.2%
Latino	11.4%	19.0%	19.2%	17.4%
Total**	10.9%	16.6%	16.6%	16.5%

Notes: CDC uses the term Hispanic in their analysis. *Non-Hispanic. **Other race/ethnicities are included in the total but are not presented separately.

C. ADDITIONAL TRENDS

The 10 states with the highest rates of type 2 diabetes are all in the South. Alabama had the highest rate at 13.8 percent.

1. TYPE 2 DIABETES

Diabetes rates have nearly doubled in the past 20 years — from 5.5 percent in 1988 to 1994 to 9.3 percent in 2005 to 2010.[36] More than 25 million American adults have diabetes and another 79 million have prediabetes. The CDC projects that one-in-three adults could have diabetes by 2050.[37] More than 80 percent of people with diabetes are overweight or obese.

Approximately 215,000 children (ages 2 to 20) have diabetes and 2 million teens (ages 12 to 19) have prediabetes.[38, 39] Youth type 2 diabetes (ages zero to 19) increased 30.5 percent from 2001 to 2009.[40]

STATES WITH THE HIGHEST RATES OF ADULT DIABETES

Rank	State	Percentage of Adult Diabetes (Based on 2013 Data, Including Confidence Intervals)	Obesity Ranking
1	Alabama	13.8% (+/-1.1)*	8
2	West Virginia	13% (+/-0.9)	1
3	Mississippi	12.9% (+/-1)	1
4	South Carolina	12.5% (+/-0.8)	10
5	Tennessee	12.2% (+/-1.1)	4
6	Louisiana	11.6% (+/-1.1)	6
7	Arkansas	11.5% (+/-1.1)	3
8	North Carolina	11.4% (+/-0.8)	25
9	Florida	11.2% (+/-0.7)	37
10	Delaware	11.1% (+/-1.1)	13

*Note: For rankings, 1 = Highest rate of type 2 diabetes

STATES WITH THE LOWEST RATES OF ADULT DIABETES

Rank	State	Percentage of Adult Diabetes (Based on 2013 Data, Including Confidence Intervals)	Obesity Ranking
51	Colorado	6.5% (+/-0.5)^	51
49 (tie)	Alaska	7.1% (+/-1.1)	28
49 (tie)	Utah	7.1% (+/-0.5)	46
48	Minnesota	7.4% (+/-0.8)	41
47	Montana	7.7% (+/-0.7)	45
45 (tie)	D.C.	7.8% (+/-1)	49
45 (tie)	Vermont	7.8% (+/-0.8)	44
44	Wisconsin	8.2% (+/-1)	22
43	Connecticut	8.3% (+/-0.8)	43
41 (tie)	Hawaii	8.4% (+/-0.9)	50
41 (tie)	Idaho	8.4% (+/-0.9)	23

*Note: For rankings, 51 = Lowest rate of type 2 diabetes

2. HEART DISEASE AND HYPERTENSION

One in four Americans has some form of cardiovascular disease. Heart disease is the leading cause of death — responsible for one in three deaths — in the United States.[41, 42] At least one out of every five U.S. teens has abnormal cholesterol, a major risk factor for heart disease — among obese teens, 43 percent (more than two in five) have abnormal cholesterol.[43]

One in three adults has high blood pressure, a leading cause of stroke.[44] Approximately 30 percent of cases of hypertension may be attributable to obesity, and the figure may be as high as 60 percent in men under age 45.[45]

People who are overweight are more likely to have high blood pressure, high levels of blood fats and high LDL (bad cholesterol), which are all risk factors for heart disease and stroke.[46]

The 10 states with the highest rates of hypertension are all in the South. West Virginia had the highest rate at 41 percent.

STATES WITH THE HIGHEST RATES OF ADULT HYPERTENSION

Rank	State	Percentage of Adult Hypertension (Based on 2013 Data, Including Confidence Intervals)	Obesity Ranking
1	West Virginia	41% (+/-1.5)	1
2	Alabama	40.3% (+/-1.7)	8
3	Mississippi	40.2% (+/-1.6)	1
4	Louisiana	39.8% (+/-2)	6
5	Kentucky	39.1% (+/-1.4)	5
6	Tennessee	38.8% (+/-1.8)	4
7	Arkansas	38.7% (+/-1.9)	3
8	South Carolina	38.4% (+/-1.3)	10
9	Oklahoma	37.5% (+/-1.3)	7
10	Delaware	35.6% (+/-1.7)	13

*Note: For rankings, 1 = Highest rate of hypertension.

STATES WITH THE LOWEST RATES OF ADULT HYPERTENSION

Rank	State	Percentage of Adult Hypertension (Based on 2013 Data, Including Confidence Intervals)	Obesity Ranking
51	Utah	24.2% (+/-0.9)	46
50	Colorado	26.3% (+/-0.9)	51
49	Minnesota	27% (+/-1.3)	41
48	D.C.	28.4% (+/-1.8)	49
47	Hawaii	28.5% (+/-1.5)	50
45 (tie)	California	28.7% (+/-1.1)	46
45 (tie)	Wyoming	28.7% (+/-1.4)	30
44	Montana	29.3% (+/-1.2)	45
42 (tie)	Idaho	29.4% (+/-1.6)	23
42 (tie)	Massachusetts	29.4% (+/-1.1)	48

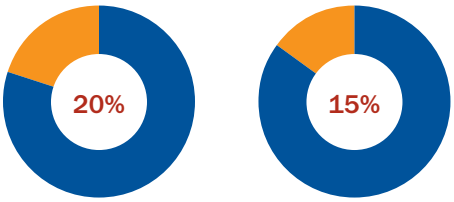
*Note: For rankings, 51 = Lowest rate of hypertension.

3. OTHER HEALTH RISKS

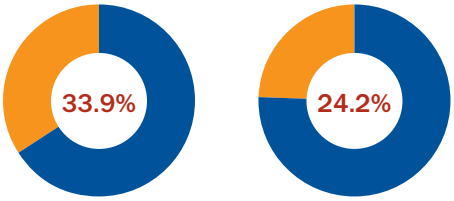
In addition to diabetes, heart disease and hypertension, obesity is related to dozens of serious health problems. For instance:

- A growing body of evidence shows links between maternal health conditions — including obesity, chronic diseases — and increased risks before, during and after childbirth.[47]
- Approximately 20 percent of cancer in women and 15 percent of cancer in men is attributable to obesity.[48]
- An estimated 24.2 percent of kidney disease cases among men and 33.9 percent of cases among women are related to overweight and obesity.[49]
- Almost 70 percent of individuals diagnosed with arthritis are overweight or obese.[50]
- Both overweight and obesity at midlife independently increase the risk of dementia, Alzheimer's disease and vascular dementia.[51, 52]
- Obese adults are more likely to have depression, anxiety and other mental health conditions.[53]

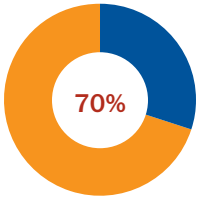
Cancers Attributable to Obesity



Kidney Disease Attributable to Obesity



Arthritis Attributable to Obesity



4. PHYSICAL INACTIVITY IN ADULTS

Eighty percent of American adults do not meet the aerobic and muscle strengthening recommendations for physical activity.[54] Sixty percent of adults are not sufficiently active to achieve health benefits.[55] There are also health risks to being sedentary (physically inactive), including increased risk of mortality and metabolic syndrome.[56] Sedentary adults pay $1,500 more per year in healthcare costs than physically active adults.[57] Studies have also found the more sedentary the mother, the more sedentary the child, and the more physically active the mother, the more physically active the child early in life.[58]

Reports of physical inactivity rates among adults are based on the number of survey respondents who responded that they did not engage in physical activity or exercise during the previous 30 days other than doing their regular jobs.

Mississippi had the highest reported percentage of inactivity among adults at 38.1 percent. Forty states has rising rates of inactive adults in the past year.

STATES WITH THE HIGHEST PHYSICAL INACTIVITY RATES

Rank	State	Percentage of Adult Physical Inactivity (Based on 2013 Data, Including Confidence Intervals)	Obesity Ranking
1	Mississippi	38.1% (+/-1.7)*	1
2	Tennessee	37.2% (+/-1.9)*	4
3	Arkansas	34.4% (+/-1.9)*	3
4	Oklahoma	33% (+/-1.4)*	7
5	Louisiana	32.2% (+/-2.1)	6
6	Alabama	31.5% (+/-1.7)*	8
7	West Virginia	31.4% (+/-1.4)	1
8	Indiana	31% (+/-1.2)*	9
9	Kentucky	30.2% (+/-1.4)	5
10	Texas	30.1% (+/-1.5)*	15

*Note: For rankings, 1 = Highest rate of physical inactivity.

STATES WITH THE LOWEST PHYSICAL INACTIVITY RATES, 2012

Rank	State	Percentage of Adult Physical Inactivity (Based on 2013 Data, Including Confidence Intervals)	Obesity Ranking
51	Colorado	17.9% (+/-0.9)	51
50	Oregon	18.5% (+/-1.5)*	36
49	D.C.	19.5% (+/-2)	49
48	Washington	20% (+/-1.1)	32
47	Vermont	20.5% (+/-1.3)*	44
46	Utah	20.6% (+/-1)*	46
45	California	21.4% (+/-1.1)*	46
44	Hawaii	22.1% (+/-1.5)*	50
43	Alaska	22.3% (+/-1.8)*	28
42	New Hampshire	22.4% (+/-1.5)*	35

*Note: For rankings, 51 = Lowest rate of physical inactivity.

Adults who do not meet the aerobic and muscle strengthening recommendations for physical activity

80%

Adults who are not sufficiently active to achieve health benefits

60%

D. ADULT FRUIT AND VEGETABLE CONSUMPTION, 2011[59]

The foods around us make it difficult to maintain a healthy weight. Making healthy foods the easily available and affordable option will improve our chances to achieve and maintain a healthy weight.[60] Diets high in fruits and vegetables may reduce the risk of cancer and other chronic diseases and also provide essential vitamins and minerals, fiber and other nutrients that are important for good health. Most fruits and vegetables are naturally low in fat and calories and are filling.[61] Increasing consumption of fruits and vegetables is a necessary step to improving overall health.

Nationally, 37.7 percent of adults consume fruits less than one time a day and 22.6 consume vegetables less than one time a day.

© Lynn Johnson, used with permission from RWJF

Physical Activity Before, During and After School

CURRENT STATUS:

National recommendations call for children and adolescents to get at least 60 minutes of physical activity per day, most of which should be moderate or vigorous in intensity.[62] The first U.S. report card on physical activity for children and youth, which was released in April 2014 by the National Physical Activity Plan Alliance and the American College of Sports Medicine, found that only about a quarter of children ages 6 to 15 meet that recommendation.[63] According to the report, America earned a D- for overall physical activity, a C- for school-based physical activity and an F for active transportation, which primarily assessed the percentage of youths who walk or bicycle to school.

Efforts to provide physical education and increase physical activity often focus on schools because that is where school-age children spend a significant portion of their day. There are a number of types of physical activity that schools can support as part of a Comprehensive School Physical Activity Program (CSPAP), which encompasses physical education, interscholastic sports, intermural sports and physical activity clubs, classroom physical activity breaks, before school access to physical activity opportunities or facilities, recess for elementary school students, walking and biking to school, sharing facilities with community physical activity organizations, and opening physical activity facilities to families outside of school hours.

The Carol M. White Physical Education Program (PEP), the only federal funding stream for physical education programs, provides federal grants to school districts and community organizations that implement comprehensive physical fitness and nutrition programs for students designed to help reach state physical education standards. Authorized by the Elementary and Secondary Education Act (ESEA), $74.6 million was appropriated for PEP in Fiscal Year (FY) 2014.[64]

While all 50 states have enacted physical education standards or requirements, the scope of these laws and the degree to which they are funded and enforced varies significantly. Currently, no more than 5 percent of school districts nationwide have a wellness policy that requires the recommended amount of daily physical education time,[65] and children at highest risk for obesity are the least likely to attend schools that offer recess.[66]

The Presidential Youth Fitness Program and Let's Move! Active Schools are two other federal programs that help schools improve students' physical fitness.

ESEA was last reauthorized in 2002 for five years; since 2007, Congress has enacted temporary extensions of the current law. In the interim, proposals have included increasing resources for PEP, providing funding for schools to hire additional physical education teachers and requiring school boards to collect and publish data on the extent to which they have made progress in meeting national physical education and physical activity standards.

The Presidential Youth Fitness Program provides a model for fitness education that helps physical educators assess, track and recognize youth fitness and physical activity. The program provides resources and tools for physical educators to improve their current physical education process, which includes:

- FITNESSGRAM® health-related fitness assessment;
- Instructional strategies to promote student physical activity and fitness;
- Communication tools to help physical educators increase awareness about their work in the classroom; and
- Options to recognize fitness and physical activity achievements.[67]

Hundreds of schools nationwide have already received funding to help bring Presidential Youth Fitness Program resources to their schools.

Let's Move! Active Schools is a program that helps teachers, principals, administrators and parents create environments that enable all students to get and stay active. Schools that sign up for the program are guided through a process that helps them build a team, make a plan and access free in-person trainings, program materials and activation grants, and direct, personal assistance from certified professionals. Once schools achieve their fitness goals, they are publicly recognized and celebrated for their achievement.[68]

Other federal programs are designed to provide additional physical activity opportunities for students and young children. For example, 21st Century Community Learning Centers, administered by the Department of Education, is the exclusive federal funding source for various types of after-school programming, including recreation activities.

In 2011, national standards for physical activity in out-of-school time programs were developed and adopted by the National AfterSchool Association.[69] These standards include a requirement for at least 60 minutes of moderate and vigorous physical activity per day while children are in care for a full-day program and 30 minutes for a half-day program. The YMCA of the USA committed to these standards in its early learning and after-school programming.[70] Starting in 2014, the Boys & Girls Clubs of America and the National Recreation and Park Association agreed to provide at least 30 minutes of physical activity during after-school and summer programs.[71]

The federal government also provides funding for programs supporting physical activity outside of school-based settings. The U.S. Department of Transportation's (DOT) Transportation Alternatives program provides grants to states and localities to fund walking and biking projects. However, overall funding levels for these projects, including Safe Routes to School (SRTS), were reduced when Congress last reauthorized the surface transportation law, known as Moving Ahead for Progress in the 21st Century (MAP-21), in 2012. MAP-21 is authorized through the end of FY 2014; Recently, Congress began consideration of legislation to reauthorize MAP-21 as the current program will expire on October 1, 2014.

More than half of states have adopted Complete Streets policies,[72] which help ensure that road planning considers all users by incorporating features such as sidewalks and bike lanes. A growing number of states also have enacted legislation to facilitate joint-use agreements,[73] which allow community members to use facilities like school athletic fields and playgrounds for physical activity outside of the school day, but approximately 70 percent of school districts nationwide have no policy regarding such agreements.[74] In recent years, 14 states have adopted policies and national standards have been developed to help increase the amount of physical activity youths accumulate while attending after-school programs.[75]

Source: Active Living Research

WHY PHYSICAL ACTIVITY IN AND OUT OF SCHOOL MATTERS:

- Physical activity provides a wide variety of health benefits for young people. Research has shown that regular physical activity can strengthen muscles and bones, help young people maintain a healthy weight and reduce the likelihood of high blood pressure, cholesterol or type 2 diabetes.[76]
- A systematic review of 50 studies found that the majority found a positive association between physical activity and academic performance.[77]
- Regular physical activity also is associated with improved academic performance, enhanced academic focus and better behavior in the classroom.[78]
- Well-structured physical education programs can result in children who are more active.[79] In addition, providing short activity breaks during the school day can increase physical activity in students and improve some measures of health, such as muscle strength, endurance and flexibility.[80]
- Nationwide, more than 8 million children and adolescents participate in after-school programs. Integrating physical activity into the daily routine of such programs can lead to increased physical activity among youths.[81]
- Cooperation between schools and communities also can help. When young people have access to school recreational facilities outside of school hours, they tend to be more active.[82]

Policy Recommendations:

- School districts, with support from federal, state and local governments, should provide regular physical activity opportunities in schools and communities to help children and adolescents be active for at least 60 minutes per day.

- Schools should conduct student fitness assessments to help assess rates of childhood obesity and evaluate the extent to which physical education and/or physical activity programs help students maintain or achieve a healthy weight.

- School wellness policies should address physical education and physical activity in after-school and out-of-school programs, including school partnerships with nonprofit organizations. Wellness programs also should consider the needs of faculty and staff, so they can be role models for students and more healthy and productive educators.

- Schools and communities nationwide should prioritize joint-use agreements to provide access to school facilities for recreational use outside of school hours.

- 21st Century Community Learning Centers and other after-school providers should adopt the National AfterSchool Association's Healthy Eating and Physical Activity standards.

ADDITIONAL RESOURCES:

Institute of Medicine: ***Educating the Student Body: Taking Physical Activity and Physical Education to School:***
http://www.iom.edu/Reports/2013/Educating-the-Student-Body-Taking-Physical-Activity-and-Physical-Education-to-School.aspx

U.S. Department of Health and Human Services: ***Physical Activity Guidelines for Americans Midcourse Report: Strategies to Increase Physical Activity Among Youth:***
http://www.health.gov/paguidelines/

Active Living Research: ***School Policies on Physical Education and Physical Activity:***
http://www.activelivingresearch.org/schoolpolicy

Active Living Research: ***Active Education: Physical Education, Physical Activity and Academic Performance:***
http://www.activelivingresearch.org/activeeducation

Active Living Research: ***Policies and Standards for Promoting Physical Activity in After-School Programs:***
http://www.activelivingresearch.org/afterschool

CDC's ***Comprehensive School Physical Activity Programs: A Guide for Schools.***
http://www.cdc.gov/healthyyouth/physicalactivity/cspap.htm

STATE SCHOOL-BASED PHYSICAL ACTIVITY AND HEALTH SCREENING LAWS

Physical Education and Activity

- **Every state has some physical education requirements for students. However, these requirements are often limited or not enforced, and many programs are inadequate.[83]**

Many states have started enacting laws requiring schools to provide a certain number of minutes and/or a specified difficulty level of physical activity. Twenty-one specifically require schools to provide physical activity or recess during the school day: Arizona, Colorado, Connecticut, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Mississippi, Missouri, Nevada, New Hampshire, North Carolina, North Dakota, Ohio, South Carolina, Tennessee, Texas and Virginia.

Shared-use Agreements

- **Twenty-eight states currently have laws supporting shared use of facilities, including: Alabama, Arizona, Arkansas, California, Delaware, Georgia, Hawaii, Idaho, Indiana, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington and Wisconsin.**

Many communities do not have enough safe and accessible places for people to be physically active, indoors and out. Schools often have gymnasiums, playgrounds, tracks and fields, but they are not accessible to the community. Many schools keep their facilities closed after school hours for fear of liability in the event of an injury, vandalism and the cost of maintenance and security. Some states and communities have laws encouraging or requiring schools to make facilities available for use by the community through shared- or joint-use agreements.[84] These agreements allow school districts, local governments and community-based organizations to overcome common concerns, costs and responsibilities that come along with opening school property to the public after hours.

HEALTH ASSESSMENT AND HEALTH EDUCATION

Physical activity, nutrition and other factors impact the overall health of students. A number of states have instituted legislation to conduct health assessments to help parents, schools and communities understand the health of children and teens, and nearly every state requires some form of health education classes for students.

Health Assessments

- **Twenty-one states currently have legislation that requires BMI screening or weight-related assessments other than BMI.**
  - States with BMI screening requirements: Arkansas, California*, Florida, Illinois, Maine, Missouri, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Vermont and West Virginia.
  - States with other weight-related screening requirements: Delaware, Iowa, Louisiana, Massachusetts, Nevada, South Carolina and Texas.
- As of July 2010, statewide distribution of diabetes risk information to schoolchildren, California Education Code § 49452.7, replaced individual BMI reporting, California Education Code § 49452.6.

BMI and other health assessments are intended to help schools and communities assess rates of childhood obesity, educate parents and students and serve as a means to evaluate obesity prevention and control programs in that school and community. The American Academy of Pediatrics (AAP) recommends that BMI should be calculated and plotted annually for all youth as part of normal health supervision within the child's medical home, and the Institute of Medicine (IOM) recommends annual school-based BMI screenings.[85, 86] CDC has identified safeguards for schools who conduct BMI screenings to ensure they focus on promoting health and positive wellness for children.[87]

Health Education

- **Only two states — Colorado and Oklahoma — do not require schools to provide health education.**

Health education curricula often include community health, consumer health, environmental health, family life, mental and emotional health, injury prevention and safety, nutrition, personal health, prevention and control of disease and substance use and abuse. The goal of school health education is to prevent premature deaths and disabilities by improving the health literacy of students.[88]

According to a 2012 CDC study, health education standards and curricula vary greatly from school to school.[89]

- The percentage of states that require districts or schools to follow national or state health education standards increased from 60.8 percent in 2000 to over 90 percent in 2012; the percentage of districts that required this of their schools increased from 68.8 percent to 82.4 percent.
- Just over 88 percent of states and 39.1 percent of districts required each school to have a school health education coordinator.

Wellness Policies

Wellness policies are written documents that guide a local education agency or school district's process to establish a healthy school environment. Wellness policies were originally required by the Child Nutrition and WIC Reauthorization Act of 2004 and updated and strengthened by the Healthy Hunger-Free Kids Act (HHFKA) of 2010. Each local education agency participating in the National School Lunch Program (NSLP) and/or School Breakfast Program must develop a wellness policy. At a minimum, wellness policies must include specific goals for: nutrition promotion; nutrition education; physical activity; and other school-based activities that promote student wellness. Since the update to the rule in 2010, local education agencies are now required to periodically measure and provide an assessment of the wellness program to the public including the implementation of the wellness policy, the extent to which the schools are in compliance with the policy, how well the policy compares to model policies and a description of the progress made in attaining the wellness policy goals.[90]

STATE ACTIVE TRANSPORTATION LAWS

Safe Routes to Schools

- **Safe Routes to School programs operate in all 50 states and Washington, D.C., benefiting close to 15,000 schools. Every state and Washington, D.C., has an SRTS coordinator.**

SRTS was created by the U.S. Department of Transportation to promote walking and biking to school. The program supports improving sidewalks, bike paths and safe street crossings; reducing speeds in schools zones and neighborhoods; addressing distracted driving; and educating people about pedestrian and bike safety. The program includes a range of partners, such as educators, parents, students, government officials, city planners, business and community leaders, health officials and members of the community. Early studies of the program have shown a positive effect on physically active travel among children and a reduction in crashes involving pedestrians.[91, 92, 93] While every state currently participates in some form of SRTS activities, implementation and funding support varies.

Complete Streets Policies

- **Twenty-eight states and Washington, D.C. have adopted Complete Streets Policies:** California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia and Wisconsin.

Complete Streets policies encourage physical activity and green transportation, walking and cycling and building or protecting urban transport systems that are fuel-efficient, space-saving and promote healthy lifestyles.

School Foods and Beverages

CURRENT STATUS:

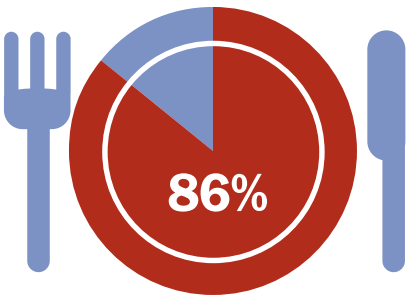
The Healthy, Hunger-Free Kids Act, enacted in December 2010, directed the U.S. Department of Agriculture (USDA) to update the nutrition standards for school meals for the first time in more than a decade, and update standards for school snacks and drinks for the first time in more than 30 years.

The healthier lunch standards went into effect at the beginning of the 2012 to 2013 school year and the healthier breakfast standards started going into effect at the beginning of the 2013 to 2014 school year. By the spring of 2014, 86 percent of schools across the country were certified as serving healthier meals that met the updated nutrition standards, and thus were receiving an additional six cents per meal in federal reimbursement.[94] Meals that meet the standards include more fruits, vegetables and whole grains, low-fat dairy products and fewer unhealthy sugars and fats.

Although the vast majority of schools are meeting the updated standards, many could be doing more easily and efficiently with updated school kitchen equipment. Research conducted in the fall of 2012 found that 88 percent of school food authorities need one or more piece of equipment to help them meet the updated standards.[95] More than 85 percent of these authorities were making do with a less-efficient process or a workaround.

Schools also sell snacks and drinks outside of breakfast and lunch, in vending machines, school stores and à la carte lines. These items, sometimes called competitive foods because they compete with school meals for students' spending, have historically included unhealthy items such as salty chips, candy and sugary drinks.

Schools Serving Healthier Meals That Meet the Updated Nutrition Standards as of Spring 2014



In June 2013, USDA published an interim final rule establishing healthier nutrition standards for competitive foods. These "Smart Snacks in School" standards require schools to provide snacks and beverages with more whole grains, low-fat dairy, fruits, vegetables and lean protein. They also set limits on fat, sugar and salt.[96] Schools are required to begin implementing these standards at the beginning of the 2014 to 2015 school year.[97]

In addition, in November 2013, USDA conducted additional rulemaking under the Healthy, Hunger-Free Kids Act and released a proposed rule that would make it easier for school districts to take advantage of the community eligibility option. Under this statutory requirement, schools with a disproportionately high level of poverty could offer free meals to students without requiring household applications. A final rule has not been published; however, USDA published additional interim guidance in February 2014 to help schools move forward with implementation for the 2014 to 2015 school year.

WHY SCHOOL FOODS AND BEVERAGES MATTER:

- Millions of children rely on the school meals program. For some children, the only reliable meals they have are in school. During the average school day in 2011, more than 31 million children ate school lunch, and 12.5 million ate school breakfast.[98] Children and teens can consume up to half of their total daily calories at school.[99,100]
- Strong school nutrition policies can have a positive impact on children's health. Elementary schools are less likely to sell candy, ice cream, sugary drinks, cookies, cakes and other unhealthy snacks when states or school districts have policies that limit the sale of such items.[101]
- Kids eat less of their lunch, consume more fat, take in fewer nutrients and gain weight when schools sell unhealthy snacks and drinks outside of meals.[102, 103, 104, 105, 106, 107, 108] Children and teens in states with strong laws restricting the sale of unhealthy snack foods and beverages in school gained less weight over a three-year period than those living in states with no such policies.[109]
- Healthier standards also can help schools' budgets. A health impact assessment found that when schools serve healthier snacks and drinks, they generally see their total food service revenues increase.[110]

Average daily number of children who ate school meals in 2011

Breakfast
12.5 million

Lunch
31 million

Percentage of daily calories consumed at school

Policy Recommendations:

- The USDA should continue to monitor state and local implementation of both updated school meal and snack food and beverage standards and provide adequate training and technical assistance where needed to states, localities, industry and school nutrition organizations.

- Adequate funding is important for ensuring schools have the tools and resources they need to provide healthy and appealing meals necessary to meet nutrition standards set by USDA.

- States and localities should consider reinforcing updated national standards by providing additional funding and technical assistance for implementing healthier standards, encouraging inclusion of nutrition goals on school improvement plans, or applying nutrition standards more broadly by extending the standards beyond the school day via an updated school wellness policy.

- School districts should take advantage of the community eligibility option to help ensure students are consuming meals that comply with the updated school meal nutrition standards. The community eligibility option enables school districts with a certain percentage of students qualifying for free or reduced-price meals to provide free meals to all students, reducing paperwork burdens for both families and schools and ensuring all students have easy access to free, healthy meals.

- Free and clean drinking water should be made available to all students throughout the school day.

ADDITIONAL RESOURCES:

Kids' Safe & Healthful Foods Project: ***Health Impact Assessment: National Nutrition Standards for Snack and a la Carte Foods and Beverages Sold in Schools:***
http://www.pewhealth.org/uploadedFiles/PHG/Content_Level_Pages/Reports/KS_HIA_revised%20WEB%20FINAL%2073112.pdf

Kids' Safe & Healthful Foods Project: ***States Need Updated School Kitchen Equipment:***
http://www.healthyschoolfoodsnow.org/states-need-updated-school-kitchen-equipment/

Robert Wood Johnson Foundation: ***Competitive Foods Resources:***
http://www.rwjf.org/en/topics/rwjf-topic-areas/school-snacks.html

Healthy Eating Research: ***Influence of Competitive Food and Beverage Policies on Children's Diets and Childhood Obesity:***
http://www.rwjf.org/en/research-publications/find-rwjf-research/2012/07/influence-of-competitive-food-and-beverage-policies-on-children-.html

Institute of Medicine: ***Nutrition Standards for Foods in Schools: Leading the Way toward Healthier Youth:***
http://www.iom.edu/Reports/2007/Nutrition-Standards-for-Foods-in-Schools-Leading-the-Way-toward-Healthier-Youth.aspx

CDC: ***Implementing Strong Nutrition Standards in Schools: Financial Implications.***
http://www.cdc.gov/healthyyouth/nutrition/pdf/financial_implications.pdf

2012 NATIONAL SCHOOL MEAL STANDARDS

The new requirements are being phased in over five years, starting during the 2012-13 school year. States with standards that are stronger than the new national standards will be able to retain those standards.

FOOD GROUP	PAST REQUIREMENTS	NEW REQUIREMENTS
Fruits and Vegetables	½ to ¾ cup of fruit and vegetables combined per day	¾ to 1 cup of vegetables plus ½ to 1 cup of fruit per day
Vegetables	No specifications as to type of vegetable subgroup	Weekly requirements for: dark green, red/orange, beans/peas, starchy, others (as defined in 2010 Dietary Guidelines)
Meat/Meat Alternate	1.5- to 2-ounce equivalent (daily minimum) (ounce equivalent minimum)	Daily minimum and weekly ranges: Grades K-5: 1-ounce equivalent minimum daily (8 to 10 ounces weekly) Grades 6-8: 1-ounce equivalent minimum daily (9 to 10 ounces weekly) Grades 9-12: 2-ounce equivalent minimum daily (10 to 12 ounces weekly)
Grains	8 servings per week (minimum of 1 serving per day)	Daily minimum and weekly ranges: Grades K-5: 1-ounce equivalent minimum daily (8 to 9 ounces weekly) Grades 6-8: 1-ounce equivalent minimum daily (8 to 10 ounces weekly) Grades 9-12: 2-ounce equivalent minimum daily (10 to 12 ounces weekly)
Whole Grains	Encouraged	At least half of the grains must be whole grain-rich beginning July 1, 2012. Beginning July 1, 2014, all grains must be whole grain-rich.
Milk	1 cup; Variety of fat contents allowed; flavor not restricted	1 cup; Must be fat-free (unflavored/flavored) or 1% low-fat (unflavored)
Sodium	Reduce, no set standards	**TARGET 1: SY 2014-15** **Lunch** ≤1230mg (K-5); ≤1360mg (6-8); ≤1420mg (9-12) **Breakfast** ≤540mg (K-5); ≤600mg (6-8); ≤640mg (9-12) **TARGET 2: SY 2017-18** **Lunch** ≤935mg (K-5) ≤1035mg (6-8); ≤1080mg (9-12) **Breakfast** ≤485mg (K-5); ≤535mg (6-8); ≤570mg (9-12) **TARGET 3: SY 2019-20** **Lunch** ≤640mg (K-5); ≤710mg (6-8); ≤740mg (9-12) **Breakfast** ≤430mg (K-5); ≤470mg (6-8); ≤500mg (9-12)
Water	No set standards	Schools participating in the NSLP are required to make potable water available to children at no charge in the place where lunches are served during the meal service.

Source: Food and Nutrition Service, USDA. Ounce equivalent (ounce equivalent) means the having the same nutritional value as in a standard ounce of that food group. http://www.fns.usda.gov/cnd/Governance/Legislation/comparison.pdf

STATE SCHOOL-BASED NUTRITION AND FOOD LAWS

Competitive Foods

The Healthy, Hunger-Free Kids Act of 2010 required USDA to release new national standards for competitive foods in schools. USDA defines competitive foods as any food or beverage served or sold at school that is not part of the USDA school meals program.[111] These foods are sold in à la carte lines, in school vending machines, in school stores, or through bake sales. The interim final rule for Smart Snacks in School was released in June 2013 and becomes effective during the 2014 to 2015 school year.[112] States with standards that are stronger than the new national standards will be able to retain those standards.

The nonprofit, nonpartisan Bridging the Gap organization conducts an analysis of all current state competitive foods laws, available at http://foods.bridgingthegapresearch.org/#, and recently released a new report examining whether existing state laws are aligned with the new USDA standards. The report found that 38 states have competitive food standards, but none of the states' laws fully met USDA's standards. On average, states met four out of the 18 USDA competitive food provisions and states were more likely to meet the USDA beverage provisions than snack provisions. Overall, the report concluded that implementation and compliance of the new provisions will likely be easier in states with existing laws and that technical assistance should be provided to those areas that have few to no competitive food provisions in place.[113]

SMART SNACKS IN SCHOOL NUTRITION STANDARDS

FOOD/NUTRIENT	STANDARD	EXEMPTION TO STANDARD
General Standard for Competitive Food.	To be allowable, a competitive food item must: 1. Meet all of the proposed competitive food nutrient standards; and 2. Be a grain product that contains 50 percent or more whole grains by weight or have whole grains as the first ingredient*; or 3. Have as the first ingredient*one of the non-grain main food groups: fruits, vegetables, dairy, or protein foods (meat, beans, poultry, seafood, eggs, nuts, seeds, etc.); or 4. Be a combination food that contains at least ¼ cup fruit and/or vegetable; or 5. Contain 10 percent of the Daily Value (DV) of a nutrient of public health concern (i.e., calcium, potassium, vitamin D, or dietary fiber). *If water is the first ingredient, the second ingredient must be one of items 2, 3 or 4 above.	• Fresh fruits and vegetables with no added ingredients except water are exempt from all nutrient standards. • Canned and frozen fruits with no added ingredients except water, or are packed in 100 percent juice, extra light syrup, or light syrup are exempt from all nutrient standards. • Canned vegetables with no added ingredients except water or that contain a small amount of sugar for processing purposes to maintain the quality and structure of the vegetable are exempt from all nutrient standards.
NSLP/School Breakfast Program (SBP) Entrée Items Sold A la Carte	Any entrée item offered as part of the lunch program or the breakfast program is exempt from all competitive food standards if it is sold as a competitive food on the day of service or the day after service in the lunch or breakfast program.	
Sugar-Free Chewing Gum	Sugar-free chewing gum is exempt from all competitive food standards.	
Grain Items	Acceptable grain items must include 50 percent or more whole grains by weight, or have whole grains as the first ingredient.	
Total Fats	Acceptable food items must have ≤ 35 percent calories from total fat as served.	• Reduced fat cheese (including part-skim mozzarella) is exempt from the total fat standard. • Nuts and seeds and nut/seed butters are exempt from the total fat standard. • Products consisting of only dried fruit with nuts and/or seeds with no added nutritive sweeteners or fats are exempt from the total fat standard. • Seafood with no added fat is exempt from the total fat standard. Combination products are not exempt and must meet all the nutrient standards.
Saturated Fats	Acceptable food items must have < 10 percent calories from saturated fat as served.	
Trans Fats	Zero grams of trans fat as served	
Sugar	Acceptable food items must have ≤ 35 percent of weight from total sugar as served.	• Dried whole fruits or vegetables; dried whole fruit or vegetable pieces; and dehydrated fruits or vegetables with no added nutritive sweeteners are exempt from the sugar standard. • Dried whole fruits, or pieces, with nutritive sweeteners that are required for processing and/or palatability purposes (i.e. cranberries, tart cherries, or blueberries) are exempt from the sugar standard. • Products consisting of only exempt dried fruit with nuts and/or seeds with no added nutritive sweeteners or fats are exempt from the sugar standard.

FOOD/NUTRIENT	STANDARD	EXEMPTION TO STANDARD
Sodium	Snack items and side dishes sold a la carte: ≤ 230 mg sodium per item as served, lowered to ≤ 200 mg July 1, 2016. Entrée items sold a la carte: ≤ 480 mg sodium per item as served, including any added accompaniments.	
Calories	Snack items and side dishes sold a la carte: ≤ 200 calories per item as served, including any added accompaniments. Entrée items sold a la carte: ≤ 350 calories per item as served including any added accompaniments.	Entrée items served as an NSLP or SBP entrée are exempt on the day of or day after service in the program meal.
Accompaniments	Use of accompaniments is limited when competitive food is sold to students in school. The accompaniment must be included in the nutrient profile as part of the food item served and meet all proposed standards.	
Caffeine	Elementary and middle school: foods and beverages must be caffeine-free with the exception of trace amounts of naturally occurring caffeine substances. High School: foods and beverages may contain caffeine.	
Beverages	**Elementary School:** • Plain water or plain carbonated water; • Low fat milk, unflavored (≤ 8 fl oz); • Nonfat milk, flavored or unflavored (≤ 8 fl oz), including nutritionally equivalent milk alternatives as permitted by the school meal requirements; • 100 percent fruit/vegetable juice (≤ 8 fl oz); and • 100 percent fruit/vegetable juice diluted with water (with or without carbonation) and no added sweeteners (≤ 8 fl oz). **Middle School** • Plain water or plain carbonated water (no size limit); • Low-fat milk, unflavored (≤12 fl oz); • Non-fat milk, flavored or unflavored (≤12 fl oz), including nutritionally equivalent milk alternatives as permitted by the school meal requirements; • 100 percent fruit/vegetable juice (≤12 fl oz); and • 100 percent fruit/vegetable juice diluted with water (with or without carbonation) and no added sweeteners (≤12 fl oz). **High School** • Plain water or plain carbonated water (no size limit); • Low-fat milk, unflavored (≤12 fl oz); • Non-fat milk, flavored or unflavored (≤12 fl oz), including nutritionally equivalent milk alternatives as permitted by the school meal requirements; • 100 percent fruit/vegetable juice (≤12 fl oz); • 100 percent fruit/vegetable juice diluted with water (with or without carbonation) and no added sweeteners (≤12 fl oz); • Other flavored and/or carbonated beverages (≤20 fl oz)that are labeled to contain ≤5 calories per 8 fl oz, or ≤10 calories per 20 fl oz; and • Other flavored and/or carbonated beverages (≤12 fl oz) that are labeled to contain ≤40 calories per 8 fl oz, or ≤60 calories per 12 fl oz.	

Source: USDA, http://www.fns.usda.gov/sites/default/files/allfoods_summarychart.pdf

WATER AVAILABILITY

Research shows that children are not drinking recommended levels of water during the school day[114] and that children who drink more water consume less sugar and other beverages.[115] Although water fountains have been available in most schools for decades, there are issues that discourage students from drinking water at school. For example, many schools do not have enough water fountains to supply all of the students, and most schools do not make cups available to encourage students to take more water from the fountains. The cost of providing cups may be a barrier in some schools.[116]

The Healthy, Hunger-Free Kids Act of 2010 requires schools to provide easily accessible, clean water to students at no cost. In 2013, the Partnership for a Healthier America launched a "Drink Up" campaign to support increased water availability and consumption everywhere, not just in schools.[117]

According to new research by Bridging the Gap, during the 2011 to 2012 school year 86 percent of elementary, 87 percent of middle, and 89 percent of high school students attended schools that reported meeting the drinking water requirement.[118]

HOW SCHOOLS MET FEDERAL DRINKING WATER REQUIREMENTS, 2011 TO 2012

	Elementary Schools	Middle Schools	High Schools
Fountains only	64.1%	61.9%	60.6%
Dispensers only	13.3%	14.9%	11.9%
Fountains and dispensers	7.5%	9.3%	16.6%
Other combinations	1.4%	1.4%	0.3%
Did not meet requirement	13.6%	12.6%	10.6%

Source: Colabianchi N, Turner L, Hood NE, Chaloupka FJ, Johnston LD. Availability of drinking water in US public school cafeterias. A BTG Research Brief. Chicago, IL: Bridging the Gap, 2014.

FARM-TO-SCHOOL PROGRAMS

Farm-to-school programs have shown results in improving students' nutritional intake.[119] For example, a study by researchers at the University of California, Davis found that farm-to-school programs not only increase consumption of fruits and vegetables, but actually change eating habits, leading students to choose healthier options at lunch.[120] A recent health impact assessment examining the Oregon farm-to-school reimbursement law found that the law would create and maintain jobs for Oregonians, increase student participation in the school meals program, improve household food security and strengthen connections within Oregon's food economy.[121]

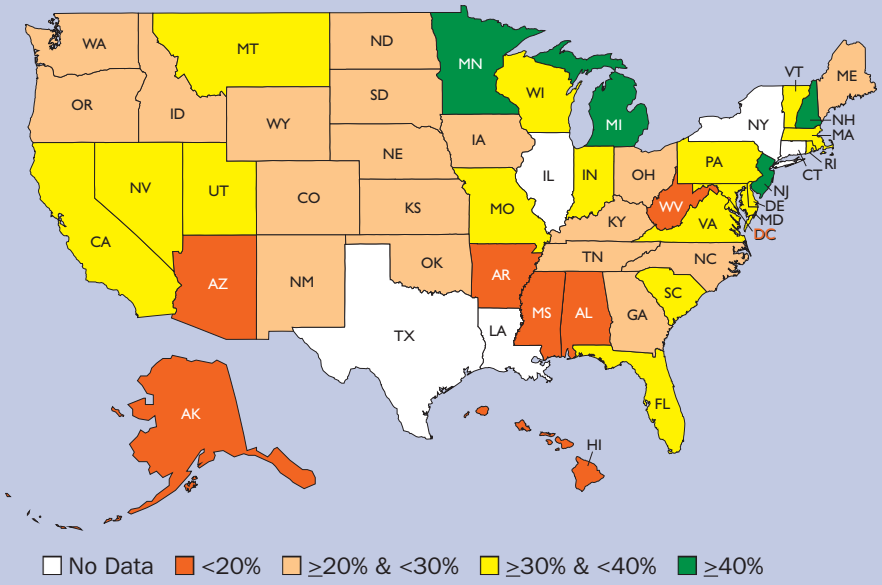
- **All 50 states and Washington, D.C. have farm-to-school programs but only 35 states and Washington, D.C. have established mandatory programs.** Also, within states, many programs cover only select students or schools rather than all students or schools.

SCHOOL HEALTH PROFILES, 2012[i]

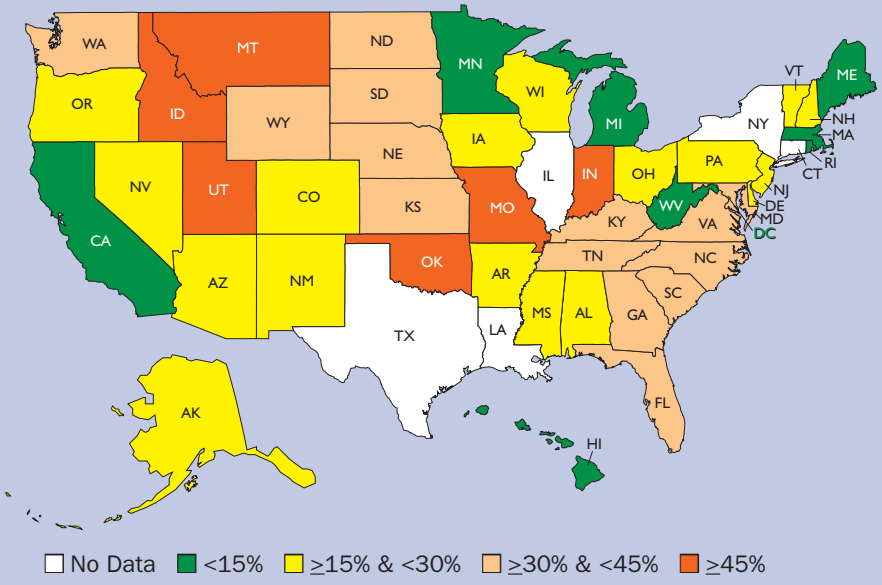
Every other year CDC uses surveys to assess the current status of various school practices and policies among middle schools and high schools in states and a selection of large urban areas. The school profiles follow the status of a range of topics including, but not limited to: school health education requirements and content; physical education and physical activity; tobacco-use prevention; and nutrition. Below is a selection of maps showing what percentage of middle schools and high schools in each state have specific nutrition policies and procedures in place.

Source: Demissie Z, Brener ND, McManus T, Shanklin SL, Hawkins J, Kann L. *School Health Profiles 2012: Characteristics of Health Programs Among Secondary Schools*. Atlanta: Centers for Disease Control and Prevention, 2013.

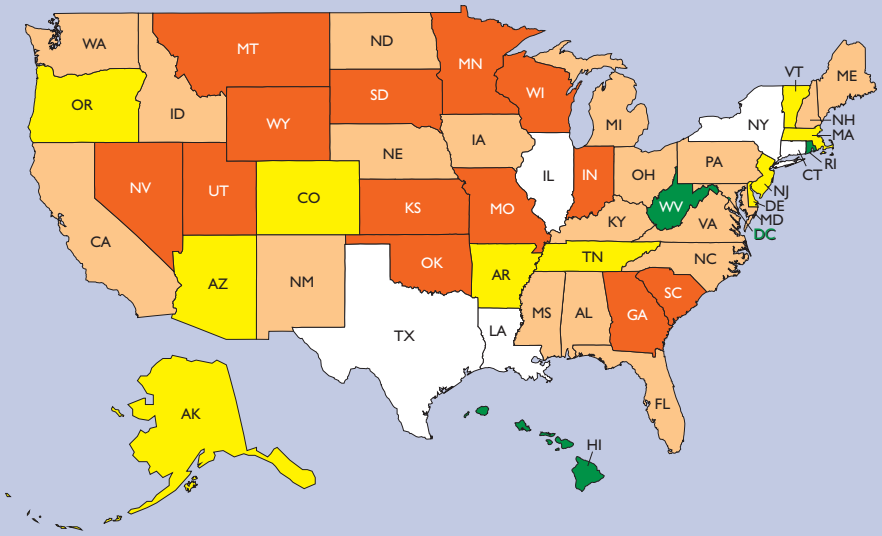
Percentage of Secondary Schools That Allowed Students to Purchase Fruit (not fruit juice) from One or More Vending Machines or at the School Store, Canteen, or Snack Bar.



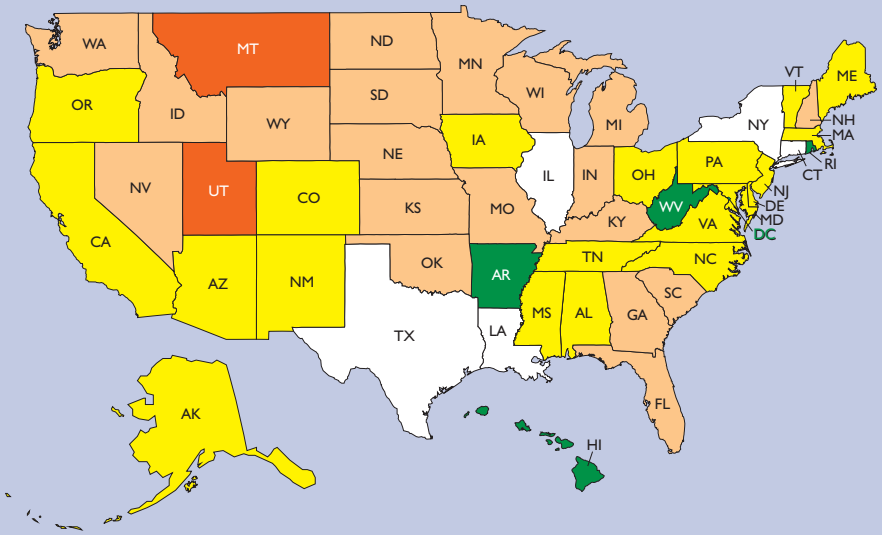
Percentage of Secondary Schools That Allowed Students to Purchase Soda Pop or Fruit Drinks (that are not 100 percent juice) From Vending Machines or at the School Store, Canteen, or Snack Bar.



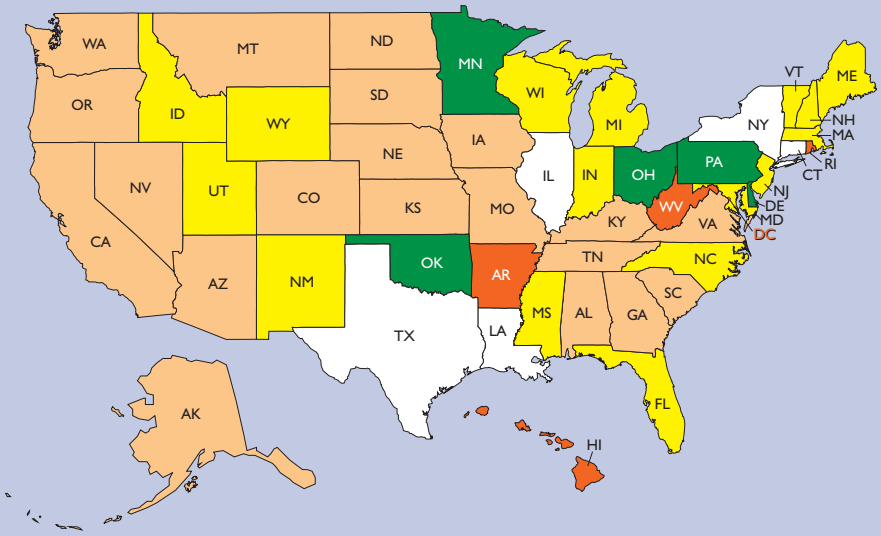
Percentage of Secondary Schools That Allowed Students to Purchase Sports Drinks From Vending Machines or at the School Store, Canteen, or Snack Bar.



Percentage of Secondary Schools That Did Not Sell Baked Goods, Salty Snacks, Candy, Soda Pop or Fruit Drinks (that are not 100 percent juice), or Sports Drinks in Vending Machines, at the School Store, Canteen, or Snack Bar.

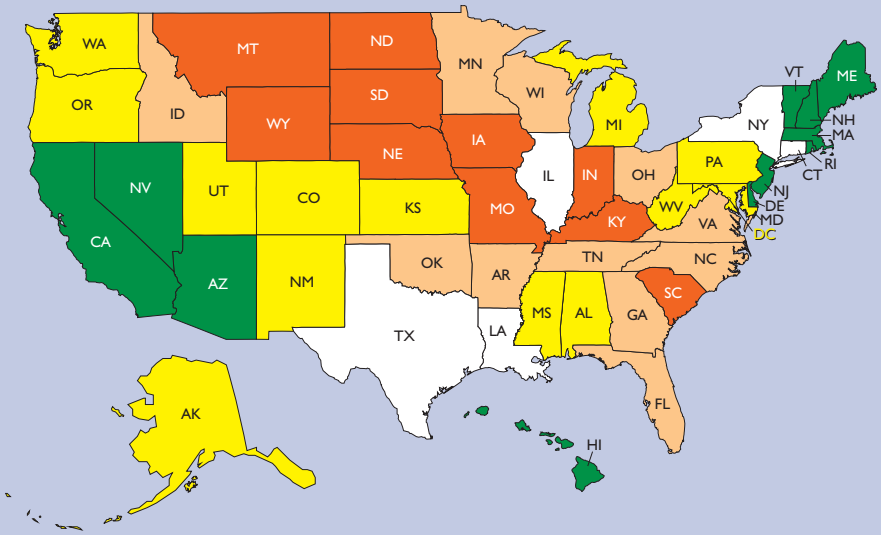


Percentage of Secondary Schools That Priced Nutritious Foods and Beverages at a Lower Cost While Increasing the Price of Less Nutritious Foods and Beverages.



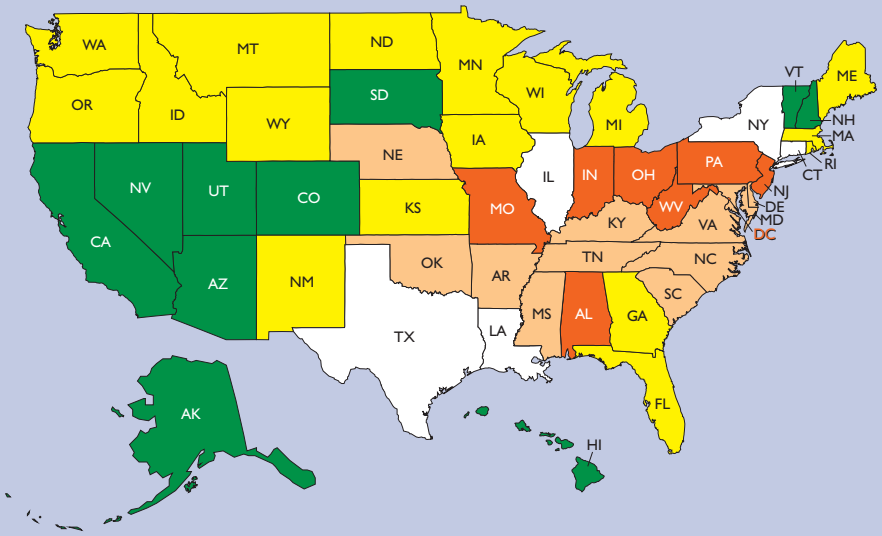
☐ No Data ■ <5% ■ ≥5% & <10% ■ ≥10% & <15% ■ ≥15%

Percentage of Secondary Schools That Prohibited Advertisements for Candy, Fast-Food Restaurants, or Soft Drinks on School Grounds (including on the outside of the school building, on playing fields, or other areas of the campus).



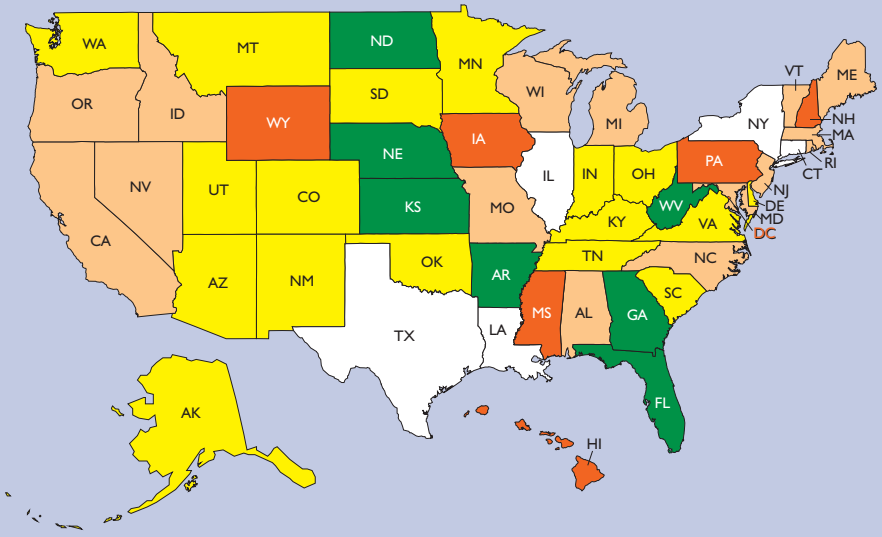
☐ No Data ■ <45% ■ ≥45% & <55% ■ ≥55% & <65% ■ ≥65%

Percentage of Secondary Schools That Permitted Students to Have a Drinking Water Bottle with Them During the School Day in All Locations.



☐ No Data ■ <45% ■ ≥45% & <60% ■ ≥60% & <75% ■ ≥75%

Percentage of Secondary Schools That Offered a Free Source of Drinking Water in the Cafeteria During Meal Times.



☐ No Data ■ <85% ■ ≥85% & <90% ■ ≥90% & <95% ■ ≥95%

Healthy, Affordable Foods

CURRENT STATUS:

More than 29 million Americans lack access to healthy, affordable foods. They live in "food deserts," meaning they do not have a supermarket or supercenter within a mile of their home if they live in an urban area, or within 10 miles of their home if they live in a rural area.[122]

Families living in lower-income neighborhoods and in communities of color are particularly hard hit: ZIP codes with the highest concentration of Blacks have about half the number of chain supermarkets compared with ZIP codes with the highest concentration of Whites, and ZIP codes with the highest concentrations of Latinos have only a third as many.[123] Many of these same neighborhoods also are struggling with high rates of obesity, unemployment and depressed economies. One study evaluating food accessibility on 22 Native American reservations in Washington state observed physical and financial barriers to accessing healthy food: 15 reservations did not have an on-reservation supermarket or grocery store, yet the cost of shopping at off-reservation supermarkets was about 7 percent higher than the national reference cost.[124]

Data from the Bureau of Labor Statistics shows that relative food costs have fallen over the past three decades, but not for lower-income families and individuals. In 2011, the most recent year with data, the poorest Americans spent 16.1 percent of their income on food while middle- and high-income residents spent only 13.2 percent and 11.6 percent respectively.[125] Increasing access to healthy foods has become a priority for policy-makers across the country. One strategy is the use of Healthy Food Financing Initiatives (HFFI), a public-private partnership in which grants and loans are provided to full-service supermarkets or farmers' markets that locate in lower-income urban or rural communities.

Difference in Chain Supermarket Distribution between Communities

Predominantly White Communities

50% Less

Predominantly Black Communities

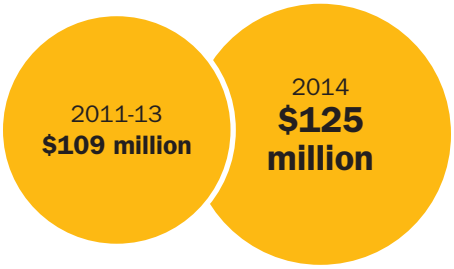
66% Less

Predominantly Latino Communities

Healthy food financing programs are active in 21 states and have been funded with a variety of federal, state, local and philanthropic dollars. For example, the California FreshWorks Fund has raised $272 million to bring grocery stores, fresh produce markets and other healthy food retail stores to communities that do not have them.[126] In New Orleans, the City Council prioritized healthy food retail as a rebuilding strategy after Hurricane Katrina. The Fresh Food Retailer Initiative provides direct financial assistance to retail businesses by awarding forgivable and/or low-interest loans to supermarkets and other fresh food retailers.[127] Most recently, the Circle Foods store — destroyed by Hurricane Katrina — reopened this year with the help of such assistance.

The most successful program to date is the Pennsylvania Fresh Food Financing Initiative (FFFI), which since 2004 has financed supermarkets and other fresh food outlets in 78 urban and rural areas serving 500,000 city residents.[128] In the process, FFFI has created or retained 4,860 jobs in underserved neighborhoods. Home values near new grocery stores have increased from 4 percent to 7 percent, and local tax revenues also have increased.[129]

Increase in HFFI Authorization



The federal government has been funding HFFI grants through the U.S. Department of Health and Human Services and the Department of Treasury since 2011. To date, HFFI has distributed more than $109 million in grants across the country, helping to support the financing of grocery stores and other healthy food retail outlets including farmers' markets, food hubs and urban farms. The Agriculture Act of 2014, known as the Farm Bill, passed in February 2014, authorizes $125 million for the federal HFFI and, for the first time, creates a permanent home for the program in the U.S. Department of Agriculture.

The New Market Tax Credit (NMTC) also encourages investment in lower-income communities. To date, the program has distributed $39.5 billion in federal tax credit authority matched by private sector investments. The NMTC helped finance 49 supermarket and grocery store projects between 2003 and 2010 that improved healthy food access in lower-income communities for more than 345,000 people, including 197,000 children.[130]

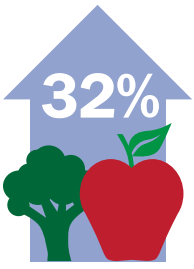
Direct food assistance programs are another strategy to increase access to healthy foods. Nutrition assistance programs comprise more than two-thirds of the federal Farm Bill. The largest is the Supplemental Nutrition Assistance Program (SNAP), which provided $76.06 billion in benefits to 47.6 million Americans in FY 2013.[131] In addition to providing monthly benefits, SNAP's nutrition education component provides federal grants to states for efforts to help participants get the most out of their benefits by encouraging smart shopping and healthy eating habits.[132] SNAP also licenses eligible farmers' markets so participants can use their benefits at those locations. The 2014 law included a variety of reforms to the SNAP program and reduced funding for the program as well. It also included updated stocking requirements for retailers that accept SNAP benefits to help ensure SNAP beneficiaries have healthier options. The law also created the Food Insecurity Nutrition Incentive grant program and provided $100 million to test and evaluate strategies to incentivize SNAP beneficiaries to purchase of fruits and vegetables.

WHY ACCESS TO HEALTHY AFFORDABLE FOOD MATTERS:

23.5 million

Americans don't have access to a supermarket within a mile of their home

Is the distance 70 percent of Mississippi food stamp-eligible families live from the closest large grocery store



Increase in fruit and vegetable consumption for Blacks with each new supermarket in their neighborhood

Source: PolicyLink, The Grocery Gap

- Supermarkets and supercenters provide the most reliable access to a variety of healthy, high-quality products at the lowest cost, and shoppers generally prefer these stores to smaller grocery stores and convenience stores.[133]
- Adults living in neighborhoods with supermarkets or with supermarkets and grocery stores have the lowest rates of obesity (21 percent), and those living in neighborhoods with no supermarkets and access to only convenience stores, smaller grocery stores, or both had the highest rates (32 percent to 40 percent obesity;).[134]
- Blacks living in a census tract with a supermarket are more likely to meet dietary guidelines for fruits and vegetable consumption, and for every additional supermarket in a tract, produce consumption rose 32 percent. Among Whites, each additional supermarket corresponded with an 11 percent increase in produce consumption.[135]
- Adults with no supermarkets within a mile of their homes are 25 percent to 46 percent less likely to have a healthy diet than those with the most supermarkets near their homes.[136]
- New and improved grocery stores can catalyze commercial revitalization in a community. An analysis of the economic impacts of five new stores that opened with FFFI assistance found that, for four of the stores, total employment surrounding the supermarket increased at a faster rate than citywide trends.[137]

Percent of African Americans who live in a census tract with a supermarket

Percent of Whites who live in a census tract with a supermarket

© Jordan Gantz, used with permission from RWJF

Policy Recommendations:

- The federal government, states and cities should continue to prioritize and fund Healthy Food Financing Initiatives efforts as a health and economic strategy.

- Food assistance programs should encourage and incentivize the purchase of healthy foods and evaluate strategies to determine which are most effective at improving consumption and health outcomes.

ADDITIONAL RESOURCES:

Do All Americans Have Access to Healthy Affordable Foods? **Robert Wood Johnson Foundation.** December 2012:
http://www.rwjf.org/en/research-publications/find-rwjf-research/2012/12/do-all-americans-have-equal-access-to-healthy-foods-.html

Healthy Food Access Portal: http://www.healthyfoodaccess.org/

The Grocery Gap: Who Has Access to Healthy Food and Why it Matters **Policy Link and The Food Trust.**
http://www.policylink.org/site/c.lkIXLbMNJrE/b.5860321/k.A5BD/The_Grocery_Gap.htm

Bringing Healthy Foods Home: Examining Inequalities in Access to Food Stores **Healthy Eating Research.** June 2008:
http://www.healthyeatingresearch.org/images/stories/her_research_briefs/her%20bringing%20healthy%20foods%20home_7-2008.pdf

County Health Rankings Food Environment Index:
http://www.countyhealthrankings.org/our-approach/health-factors/diet-and-exercise

STATE SUGAR-SWEETENED BEVERAGE TAXES

A number of studies have shown that relative prices of foods and beverages can lead to changes in how much people consume them.[138, 139, 140] Several studies have estimated that a 10 percent increase in the price of sugar-sweetened beverages (SSBs) (including soft drinks and juices) could reduce consumption of them by 8 percent to 11 percent.[141, 142, 143] As of 2012, the tax rate for every state with a soda tax is 7 percent or below and, of those with a soda tax, 14 states have a tax rate of 5 percent or lower.[144]

Researchers at Yale University estimated that, if a national soda tax of a penny per 12 ounces were instituted, it would generate $1.5 billion a year, and the Congressional Budget Office estimated that a federal excise tax of three cents per 12 ounces of SSBs could have generated an estimated $24 billion in revenue between 2009 and 2013.[145, 146]

- **34 states and Washington, D.C., currently include soda among items for which they charge sales tax:** Alabama, Arkansas, California, Colorado, Connecticut, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia and Wisconsin.[147]

SUGAR-SWEETENED BEVERAGES: CONSUMPTION AND IMPACT

- **Sugar-sweetened beverage consumption:** Consumption of SSBs rose significantly from the 1970s until 1999.[148] From 1999 to 2010, consumption has begun to decline (a decrease of 63 calories for youth and 45 calories for adults.)[149] However, SSB consumption is still high. According to the 2011 BRFSS from six states, almost 25 percent of adults drank SSBs at least once a day and over 10 percent consumed at least two SSBs per day.[150] BRFSS found that odds of drinking SSBs one or more times per day were significantly greater among younger adults; males; Blacks; adults with lower education; low-income adults; and adults who were physically inactive.[151] According to studies through the mid-2000s, 90 percent of children ages 6 to 11 drank an SSB daily, and SSBs were the top calorie source for teens.[152, 153] Nearly half of 2- to 3-year-olds consume a SSB daily, and a quarter to a third consume whole rather than low-fat or nonfat milk.[154, 155, 156, 157] Children ages 2 to 5 are estimated to consume 124 calories per day—7 percent of their total daily energy intake—from SSBs.[158]

- **Increased health risks related to sugar-sweetened beverage consumption:** The growing body of evidence from many studies reveals that regular consumption of SSBs contributes to weight gain and is also a major contributor to obesity and type 2 diabetes.[159] A number of studies have shown a significant link between SSB consumption and weight gain in children.[160] A recent study found that children who consumed a large amount of SSBs (at least five servings per week) were almost 3.5 times more likely to be obese than those who never or almost never consumed SSBs.[161] Adults who drink a soda or more per day are 27 percent more likely to be overweight than those who do not drink sodas, regardless of income or ethnicity. They also have a 26 percent higher risk for developing type 2 diabetes and a 20 percent higher risk for a heart attack.[162, 163, 164]

- **Improved health from lowering sugar-sweetened beverage consumption:** Children who reduced their consumption of added sugar by the equivalent of one can of soda per day had improved glucose and insulin levels. Eliminating one can of soda per day, regardless of any other diet or exercise change, can reduce a child's risk for type 2 diabetes.[165] An analysis from 1999 to 2010 found that among a representative sample of adults in the United States, intake of SSBs has trended down, and several biomarkers of chronic disease have significantly improved over the past 12 years.[166]

Food and Beverage Marketing

CURRENT STATUS:

The food and beverage industry spends nearly $2 billion annually to market foods and beverages to children and adolescents in the U.S., reaching young people in the places where they live, learn and play. A report from the Institute of Medicine concluded that food advertising affects children's food choices, food purchase requests, diets and health.[167] Although there has been some progress in reducing the amount of food marketing directed at children, the majority of foods marketed to children remains unhealthy.[168]

In the last year, some individual companies have made changes regarding their marketing practices. In October 2013, the Produce Marketing Association (PMA) and Sesame Workshop made commitments to the Partnership for a Healthier America (PHA)—an organization dedicated to working with the private sector to address childhood obesity—that will enable PMA to use Sesame Street characters for free to promote fruits and vegetables to children. Subway committed to PHA that its children's menu items would meet nutrition standards and that it would spend $41 million over the next three years on efforts to market the healthier menus and fruit and vegetable options to children.

McDonald's said it would phase out the listing of soda on the kids' meal section of its menu boards.

In addition to steps taken by individual companies, the industry's overall self-regulatory effort, the Children's Food and Beverage Advertising Initiative (CFBAI), has made changes. In January 2014, CFBAI adopted new uniform nutrition criteria for the 17 participating companies.[169] The new standards set stronger limits on the amount of calories, sugar, fats and sodium in the foods marketed to children than did earlier, company-specific standards. But the standards still allow companies to market some unhealthy foods and beverages to young people, including popsicles, fruit-flavored snacks, marshmallow treats and several sugary cereals.

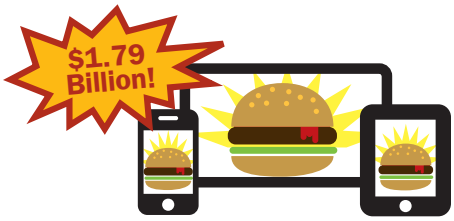
The CFBAI standards also use a narrow definition of marketing. The nutrition criteria do not cover marketing on packages or in stores, toy give-aways and other premiums, many forms of marketing in elementary schools, any marketing in middle and high schools, branded merchandise, or brand advertising—advertising that promotes an overall brand, not a specific product.

Finally, CFBAI only covers children up to age 11, even though recent research shows that adolescents are vulnerable to many of the marketing tactics companies use.[170] Older children and adolescents may be particularly vulnerable to advertising because they are more independent, use more media, and are more likely to eat and drink unhealthy foods and beverages.

One key place where food and beverage companies continue to reach children is through schools. This marketing happens through signs, scoreboards, posters, branded fundraisers, corporate incentive programs, scholarships and education materials. Only 20 percent of public school districts have a policy that addresses food marketing, and only half of those districts specifically prohibit unhealthy food and beverage marketing.[171] To address the problem, the USDA, as part of its rule making for local school wellness policy implementation, included a provision to limit unhealthy food and beverage marketing in schools. Once the rule is finalized, school districts would need to have policies in place that only allow marketing of foods and beverages that meet the updated Smart Snacks in School nutrition standards set by USDA.[172]

WHY FOOD MARKETING MATTERS:

Spending by Food and Beverage Companies on Marketing to 2 to 17 year-olds in 2009



Spending by Food and Beverage Companies' on In-School Marketing in 2009

- Food and beverage companies spent $1.79 billion in 2009 on marketing to young people ages 2 to 17.[173]
- The same year, companies spent $149 million on in-school marketing, the third largest spending category behind television and premiums, or incentives to purchase foods, such as toys with fast-food meals, t-shirts, music downloads, etc.[174]
- During the 2010 to 2011 school year, 10 percent of school districts had strong policies restricting the marketing of unhealthy foods.[175] Ten percent of elementary schools and 30 percent of high schools serve branded fast food weekly; 19 percent of high schools serve it every day.[176]
- Vending contracts remain a major form of in-school marketing, but contribute minimal financial support to schools: approximately $2 to $4 per student annually. Middle and high schools with a high percentage of lower-income students have more vending contracts than other schools.[177]

Policy Recommendations:

- USDA's final local school wellness policy regulation should include strong implementation, monitoring, compliance and reporting requirements for food and beverage marketing.
- Once schools put into place their updated local school wellness policies limiting unhealthy food and beverage marketing on school campuses, school officials, students, parents and other key stakeholders must work to ensure that food and beverage marketing is limited to those foods that meet the USDA's Smart Snacks in School nutrition standards.
- CFBAI should strengthen its nutrition standards for food marketing to children to include a strong positive nutritional requirement, cover children up to age 14, and ensure that all companies' self-regulatory policies cover all media.
- Media and entertainment companies should jointly adopt meaningful, uniform nutrition standards to prevent the marketing of unhealthy foods and beverages to children.
- Government agencies, researchers and independent groups should continue to monitor and evaluate food marketing expenditures and practices, children's exposure to marketing and advertising for unhealthy foods and beverages and the effectiveness of industry's voluntary actions.
- State and local governments should consider regulation of marketing in local communities, including in schools, publicly owned facilities, stores, restaurants and outdoor advertising. Local governments should enforce existing or adopt strong zoning restrictions on marketing, such as limits on signs in store windows.

The 2014 Farm Bill and Obesity Prevention

CURRENT STATUS:

On February 7, 2014, President Obama signed the Agriculture Act of 2014 — known as the Farm Bill — into law.[178] There are several provisions of the Farm Bill, which was last reauthorized in 2008, that have a direct impact on whether American families have access to healthy foods. In fact, the nutrition title (Title IV) comprises 79 percent of the Farm Bill's total authorized funding.[179]

The largest federal nutrition program is the Supplemental Nutrition Assistance Program, formerly known as food stamps, which, in FY 2013, helped approximately 47.6 million low-income individuals put food on the table by providing an average monthly benefit of $133 per person.[180] It also included several provisions that could expand access to healthy, affordable foods for SNAP participants.

SNAP helped approximately 47.6 million low-income individuals put food on the table in FY 2013.

What the Farm Bill Does:

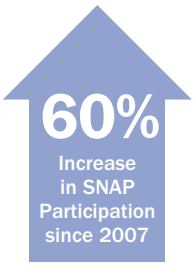
- **Requires SNAP retailers to carry healthier food options.** The Farm Bill changed retailers' "stocking requirements" to include at least seven items in each of four basic food categories — fruits and vegetables, grains, dairy and meat — and perishable items in at least three of these categories.
- **Allows SNAP benefits to be used at more types of retailers.** The Farm Bill permits participants to use SNAP benefits to purchase Community Supported Agriculture shares (CSAs), which allow consumers to pay in advance for a share of a farmer's production and, in return, receive a weekly share of the results, such as a box of fresh fruits and vegetables. It also clarifies that SNAP retailers are responsible for paying for their own Electronic Benefit Transfer (EBT) equipment to help expand participation by farmers' markets, farm stands and other non-traditional retailers.

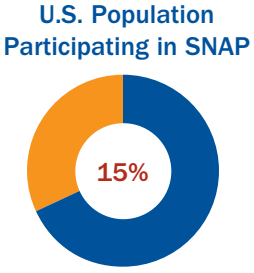
- **Expands nutrition education and obesity prevention activities.** The Farm Bill added promotion of "physical activity" as a component of SNAP's nutrition education program (SNAP-Ed), which provides grants to state SNAP agencies for nutrition education and obesity prevention activities.

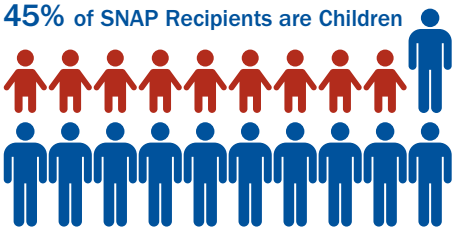
- **Incentivizes expanded access to healthy foods in low-income communities.** The Farm Bill creates numerous grant programs to incentivize expanded access to healthy foods in low-income communities, including 1) $125 million in funding for the federal HFFI to provide grants and tax incentives to food retailers to operate in underserved communities *(for more details see the report section on Healthy, Affordable Foods)*; 2) a pilot program to give up to eight states flexibility in procuring unprocessed fruits and vegetables for school nutrition programs; 3) Food Insecurity Nutrition Incentive grants for SNAP retailers, government agencies and organizations that seek to increase the purchase of fruits and vegetables by SNAP participants through incentives at the point of purchase; 4) a food and agriculture service learning grant program to increase knowledge and improve nutritional health among children in school settings; 5) a grant program to provide up to 50 percent of the costs of local incentive programs that give SNAP participants additional benefits for produce when they purchase fruits and vegetables; and 6) a Pulse School Pilot that provides the U.S. Department of Agriculture $10 million through 2017 to purchase peas, lentils, chickpeas and hummus to use in school breakfasts and lunches.

Another strategy the Farm Bill takes to promote healthier eating is a shift in its approach to subsidies. U.S. farm policy has traditionally encouraged the overproduction and use of cheap commodities, while the prices for fruits and vegetables have steadily increased.[181] In the 2014 Farm Bill, traditional commodity subsidies were cut by more than 30 percent, to $23 billion over 10 years, while funding for fruits and vegetables and organic programs increased by more than 50 percent over the same period, to about $3 billion.[182]

WHY FEDERAL NUTRITION PROGRAMS MATTER:







- Since 2007, participation in SNAP has increased by more than 60 percent and includes about 15 percent of the American population.[183] Almost half of SNAP recipients — 45 percent — are children.[184] In 2012, SNAP lifted 4.9 million Americans — including 2.2 million children — above the poverty line.[185]
- According to USDA data and other studies, SNAP participants consume fewer fruits, vegetables and whole grains.[186] In 2013, only 21 percent of farmers' markets in the United States accepted SNAP benefits.[187]
- An estimated 23.5 million Americans — more than half (13.5 million) of whom are low-income, live in food deserts or areas lacking access to fresh, healthful, affordable food.[188] Only about 70 percent of all census tracts in the country currently have at least one store that offers a variety of affordable fruits and vegetables.[189]
- Twenty-eight states have a farm-to-school or farm-to-preschool policy. Ten states have child care regulations that align with national standards for fruits while four states have child care regulations that align with national standards for vegetables.[190]

Policy Recommendations:

- The Department of Agriculture should implement all nutrition-related provisions of the 2014 Farm Bill in a timely manner.
- Schools and early child care centers should align their food policies with national standards for fruit and vegetable consumption.
- Continued resources to sustain assistance to families in need remain an important strategy moving forward.

EXPERT COMMENTARY

BY MICHEL NISCHAN, CEO and Founder, Wholesome Wave

Improving the Health of Communities by Increasing Access to Affordable, Locally Grown Foods

Wholesome Wave is a 501(c)(3) nonprofit dedicated to making healthy, locally and regionally grown food affordable to everyone, regardless of income.

When my son was diagnosed with type 1 diabetes, I became painfully aware of the direct connection between food and health. As a chef, this realization caused me to transform the way I fed my family and customers. Fresh, nutrient-dense, locally grown foods became the foundation for the type of diet that would give my son and restaurant guests the best long-term health.

Quickly, though, I recognized that not every family can afford to purchase healthy foods. As a result, I founded Wholesome Wave in 2007.

We work collaboratively with underserved communities, nonprofits, farmers, farmers' markets, healthcare providers and government entities to form networks that improve health, increase fruit and vegetable consumption and generate revenue for small and mid-sized farms.

DOUBLE VALUE COUPON PROGRAM

In 2008, we launched the Double Value Coupon Program (DVCP), a network of more than 50 nutrition incentive programs operated at 305 farmers markets in 24 states and Washington, D.C. The program provides customers with a monetary incentive when they spend their federal nutrition benefits at participating farmers markets. The incentive matches the amount spent and can be used to purchase healthy, fresh, locally grown fruits and vegetables.

Farmers and farmers' markets benefit from this approach, and have been key allies as we work towards federal and local policy change. In 2013, federal nutrition benefits and DVCP incentives accounted for $2.45 million in sales at farmers' markets.[191]

Communities also see an increase in economic activity. The $2.45 million spent at local farmers' markets creates a significant ripple effect. In addition to the dollars

spent at markets, almost one-third of DVCP consumers said they planned to spend an average of nearly $30 at nearby businesses on market day, resulting in more than $1 million spent at local businesses. We also see that the demographics of market participants are more diverse — our approach breaks down social barriers and allows consumers who receive federal benefits to be seen as critical participants in local economies.[192]

Equally as important, people are eating healthier. Our 2011 Diet and Behavior Shopping Study indicated 90 percent of DVCP consumers increased or greatly increased their consumption of fresh fruit and vegetables — a behavior change that hopefully continues well after market season ends.[193]

Today, the program reaches more than 35,800 participants and their families and impacts more than 3,500 farmers.

Combined with the new Food Insecurity Nutrition Incentives Program in the latest Farm Bill, this approach is now being scaled up with $100 million allocated for nutrition incentives over five years.

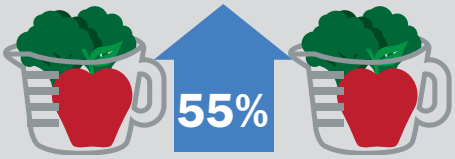
FRUIT AND VEGETABLE PRESCRIPTION PROGRAM

We developed the Fruit and Vegetable Prescription Program (FVRx) to measure health outcomes linked to fruit and vegetable consumption. The four to six month program is designed to provide assistance to overweight and obese children who are affected by diet-related diseases such as type 2 diabetes. In 2013, the program impacted 1,288 children and adults in five states and Washington, D.C. Nearly two-thirds of the participants are enrolled in SNAP and roughly a quarter receive Women, Infants and Children (WIC) benefits.

The model works within the normal doctor-patient relationship. During the visit, the doctor writes a prescription for produce that the patient's family can redeem at participating farmers' markets. The prescription includes at least one serving of produce per day for each patient and each family member — i.e., a family of four would receive $28 per week to spend on produce.

In addition to the prescription, there are follow-up monthly meetings with the practitioner and a nutritionist to provide guidance and support for healthy eating, and to measure fruit and vegetable consumption. Other medical follow-ups are performed, including tracking BMI.

Average Increase in Fruit and Vegetable Consumption



FVRx improves the health of participants. Forty-two percent of child participants saw a decrease in their BMI and 55 percent of participants increased their fruit and vegetable consumption by an average of two cups. In addition, families reported a significant increase in household food security.[194]

Each dollar invested in the program provides healthier foods for participants, boosts income for small and mid-sized farms and supports the overall health of the community. As with the DVCP, there are benefits for producers and communities. In 2012 alone, FVRx brought in $120,000 in additional revenue for the 26 participating markets.[195]

In less than seven years, Wholesome Wave has extended its reach to 25 states and D.C. and is working with more than 60 community-based organizations, community healthcare centers in six states, two hospital systems, and many others. Our work proves that increasing access to affordable healthy food is a powerful social equalizer, health improver, economic driver and community builder.

WHOLESOME WAVE IS WORKING TO CHANGE THE WORLD WE EAT IN. AS THE NUMBER OF ON-THE-GROUND PARTNERS INCREASES, WE GET CLOSER TO A MORE EQUITABLE FOOD SYSTEM FOR EVERYONE. THIS MEANS HEALTHIER CITIZENS AND COMMUNITIES, AND A MORE VIBRANT ECONOMY NATIONWIDE.

Obesity Prevention Inside and Outside The Doctor's Office

CURRENT STATUS:

Many Americans only have doctor's appointments once or twice a year. The rest of the year they are often on their own to try to find ways to follow their doctor's advice in their daily lives. A growing body of evidence shows that Americans cannot achieve health goals — including eating healthier, increasing physical activity and managing obesity and related health problems — without support in their neighborhoods, workplaces and schools.[196]

"Health professionals are adept at treating a vast range of diseases, injuries and other medical conditions. But their training and healthcare delivery incentives do not emphasize addressing the root causes of health problems that occur outside of the healthcare system — factors such as education, access to healthy food, job opportunities, safe housing, environment and toxic stress — that fundamentally shape how long or well people live," according to a report by the RWJF Commission to Build a Healthier America.[197]

© Matt Moyer, used with permission from RWJF

For instance, individuals whose doctors counsel them that they are at risk for health problems related to obesity, such as prediabetes, are often left to try to follow their doctors' advice on their own in their daily lives where nutritious foods are costly and can be hard to access, and it is hard to find time and convenient, safe places for physical activity.

Connecting healthcare inside the doctor's office with community-based health and other social service programs and resources can provide ongoing support, education and opportunities to improve health where people live, learn, work and play.

Approaches can range from doctors providing direction and information for patients, such as writing prescriptions for healthy, active living, including good nutrition and physical activity to educating families about the importance of healthy eating habits, regular activity and sleep at every well-child visit to referring patients to resources or health management programs in their community, such as at their local YMCA or nutrition counseling support.

These approaches, however, are often not taken because the U.S. health system has traditionally focused on covering activities that occur directly within a healthcare setting and are aimed at helping someone who is sick get well. The old, disjointed fee-for-service model and siloed systems have dis-incentivized coordinated care, and have been ineffective at preventing chronic disease and reducing healthcare costs.[198]

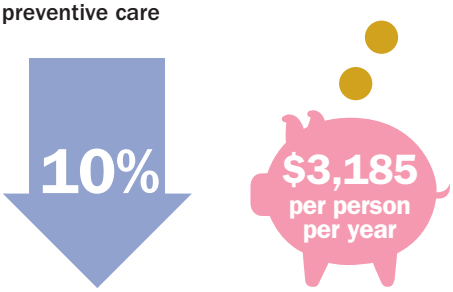
For example, outdated regulations and billing practices have constrained insurers from paying for programs that are not directly delivered by doctors and other licensed medical providers, such as community health workers and obesity counselors, or that help support the health of an entire neighborhood rather than focusing on a specific individual who is tied to a specific diagnosis and billing code. Currently, nearly half of all Americans do not access many commonly recommended preventive services, which can include obesity and nutrition education or prediabetes and blood pressure screenings.[199] Some private insurers cover some evidence-based community prevention programs, such as the Diabetes Prevention Program (DPP), but these efforts are limited and not well known or understood in the provider community.

In response, many public and private insurers are increasingly expanding coverage for proven community-based programs to achieve better results for improving health and reducing obesity rates. One factor that contributed to this was the enactment of the Affordable Care Act (ACA), which has helped create incentives and mechanisms for new models to improve focus on a coordinated continuum of care that begins with a focus on prevention — inside and outside the doctor's office. Several provisions that help support the prevention and control of obesity and related diseases include:

- Requiring new plans (private, self-insurers and Medicare) to cover screening and counseling for obesity with no cost to the patient through co-payments, co-insurance or deductibles.
- Providing incentives to encourage state Medicaid programs to cover more preventive services. In 2013, the Centers for Medicare and Medicaid Services (CMS) issued a rule that would give states greater flexibility in what types of providers could provide recommended preventive services, such as for obesity education and counseling activities.
- Integrating public health and healthcare via new approaches, such as Accountable Care Organizations (ACOs) and global payment and "wellness trust" models. Coordination efforts can increase the focus on improving the overall health of the insurance pool and offer strong incentives to providers to deliver the most effective care strategies possible, and to maximize effectiveness, including community-based prevention programs and services to provide support to patients to be able to follow doctor's advice in their daily lives. ACOs are groups of healthcare providers that prioritize coordinated care and quality goals to achieve improved health for their patients which reduce costs.[200]
- Updating tax-exempt hospitals' community benefit requirement by requiring a community health needs assessment and implementation strategy in order to maintain tax-exempt status. New U.S. Treasury Regulations on community benefit administered by the Internal Revenue Service could address whether a community benefit implementation strategy may include activities related to obesity prevention.

WHY BETTER INTEGRATION OF MEDICAL CARE AND SUPPORT WHERE PEOPLE LIVE, LEARN, WORK AND PLAY MATTERS:

Average monthly savings that individuals with type 2 diabetes achieve with preventive care



Average body weight loss of YMCA's DPP participants

- To maximize effectiveness and better help patients follow their doctors' advice, providers and insurers, including state Medicaid programs, can use an integrated approach that focuses on community-based prevention and public health. For instance, a new model that created an Affordable Care Community (ACC) in Akron, Ohio, involves a coordinated clinical-community prevention approach and has reduced the average cost per month of care for individuals with type 2 diabetes by more than 10 percent per month over 18 months. A second project, a diabetes self-management program, resulted in estimated program savings of $3,185 per person per year.[201] This initiative also led to a decrease in diabetes-related emergency department visits.
- Reviews of the CDC-led National Diabetes Prevention Program, an evidence-based lifestyle change program, show that it can help people cut their risk of developing type 2 diabetes in half. One study found that making modest behavior changes helped program participants lose 5 percent to 7 percent of their body weight (10 to 14 pounds for a 200-pound person). Participants work with a lifestyle coach in a group setting for one year. The program includes 16 core sessions (usually one per week) and six post-core sessions (one per month).[202]
- The American Heart Association published a review of more than 200 studies and concluded that most cardiovascular disease could be prevented or at least delayed until old age (65 and older) through a combination of direct medical care and community-based prevention programs and policies.[203]
- There are approximately 2,900 nonprofit hospitals in the United States and financial benefits to these hospitals from federal, state and local tax preference was estimated to be worth $12.6 billion annually in 2002. Some of this funding can be used to promote population health improvement that extends beyond hospital walls and in to the community.[204]

Policy Recommendations:

- Encourage and incentivize new health system approaches, such as ACOs, to incorporate community obesity prevention programs to help them be successful in improving health and lowering costs.

- Government and private insurers should implement policies and programs to increase the use and improved integration of clinical and community-based preventive services, particularly among communities where services are underutilized.

- Medicaid should provide additional technical assistance and education to increase uptake in use of the new regulations for preventive services that allow states to reimburse a broader array of health providers and entities.

- Medicaid should identify and disseminate community prevention best practices by Medicaid programs, including Medicaid Managed Care Organizations.

- Broader healthcare delivery reform efforts, such as the CMS Innovation Center-funded State Innovation Models, should ensure that community-based prevention to control obesity costs are included.

- The U.S. Department of Treasury should continue to clarify the use of community benefit dollars by nonprofit hospitals to improve population health.

EXAMPLES OF IMPROVING THE CLINICAL-COMMUNITY CONTINUUM OF CARE

- A number of providers have been using the Chronic Disease Self-Management Program (also known as Better Choices, Better Health), which helps doctors connect patients to community-based health workshops. Referred patients have an extended opportunity during a series of workshops to learn about effective exercise, good nutrition, communicating with health professionals and families about needs and other strategies. The program, which is based on an evidence-based model developed at Stanford University, has shown results in improved health outcomes, reduced utilization of healthcare and increase use of self-management techniques.[205]

- A number of health systems and providers are also creating referral systems to connect patients with community-support programs. For example:
  - The Division of Health Promotion and Chronic Disease Prevention in the Iowa Department of Health has partnered with the Iowa Primary Care Association (IPCA) and local boards of health to create a Community Referral Project, so doctors have access and information about programs in their communities and can refer and match patients to those resources.
  - The Boston Medical Center and Boston Bikes have partnered to create a Prescribe-a-Bike program. Doctors and nurses can write prescriptions for the local bike share program, New Balance Hubway, that allow their patients to rent a bike for $5 to $80 less than the regular charge. The program helps support health, equity and access to affordable transportation for more lower-income Boston residents.[206]
- Integrating clinical care with community-based programs is a focus of HHS's Million Hearts®, a national initiative that aims to prevent 1 million heart attacks and strokes by 2017. A key objective is reducing uncontrolled high blood pressure — which obesity can contribute to — by supporting improved nutrition, increased physical activity, integrated medical care and other strategies.

ADDITIONAL RESOURCES:

Total Health: Public Health and Healthcare in Action Case Study. **T. Norris. Kaiser Permanente:**
http://healthyamericans.org/health-issues/prevention_story/total-health-public-health-and-health-care-in-action

Hospital Community Benefits after the ACA: Present Posture, Future Challenges. **The Hilltop Institute Hospital Community Benefit Program:**
http://www.hilltopinstitute.org/publications/HospitalCommunityBenefitsAfterTheACA-PresentFutureIssueBrief8-October2013.pdf

EXPERT COMMENTARY

BY JOHNNA REED, vice president, business development, Bon Secours Health System

Connecting Diabetes Care from the Clinic to the Community

In 2011, the Bon Secours St. Francis Health System in Greenville, South Carolina created a Diabetes Integrated Practice Unit (IPU) to foster a new environment that improves the health of patients with, or at risk of developing, type 2 diabetes.

Since most of the factors that influence health exist outside of the doctor's office, we've learned the importance of connecting our patients to resources in their communities. This helps them in their daily lives and better supports their ongoing medical care.

The goal of the Diabetes IPU is to connect patients with community resources that can help benefit their health through improved nutrition, increased physical activity and support to manage their condition. The program also ensures that physicians and other caregivers have sufficient time to focus on their patient's needed care. This added time also allows providers and patients to work together to understand how obesity, prediabetes and diabetes can affect health and daily life and to set goals that work for each patient's unique circumstances.

The program also emphasizes the importance of prevention, to avoid developing additional health risks or problems in the future. We help prediabetics avoid the progression to diabetes and help diabetics avoid developing additional conditions.

The program is designed around a network of community and clinical resources, providers and technology. While the program hub is at St. Francis Millennium, the programs themselves are delivered where patients are—at work, home, and throughout the community.

The Diabetes IPU includes an extensive coordinated team of care givers, including a primary care physician, ophthalmology, cardiology, nephrology and podiatry services, and an endocrinologist who consults with the primary care physicians regarding innovations in diabetes care and assists with the care of patients facing particular medical challenges.

The medical care is managed by a registered nurse care coordinator. It's also important to note that our care team includes a psychologist, social worker, registered dietician, diabetes educator, pharmacist, and an exercise physiologist to help patients get to a healthy weight. It is not just a clinical-centered approach — it's a total community health approach.

HOW THE IPU WORKS:

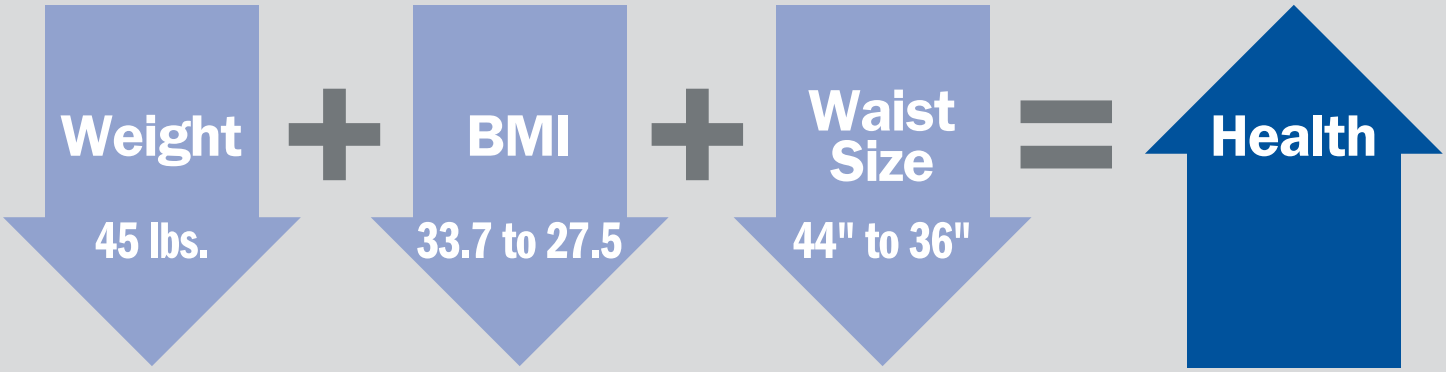
A patient's initial visit with the diabetes team begins with a fasting blood draw to determine blood glucose, HbA1c, cholesterol, and other relevant lab values. Following the blood draw, patients are provided a diabetes-appropriate breakfast. Next, the patient is asked to participate in a small group discussion about issues they have in dealing with diabetes, led by a diabetes educator and nurse. Facilitators are continually surprised at the level of engagement in these groups — patients tend to share readily and openly.

The group discussion not only introduces patients to others who share similar health and lifestyle challenges—including being overweight or obese and struggling to engage in physical activity and eat healthy—but also enables the nurse facilitator to determine the best match for the patient with individual caregivers. After the discussion, the entire group receives an introduction to exercise with an exercise physiologist who provides an easy, low stress overview of exercise options.

In the course of this first morning, the patient sees the primary physician, psychologist, diabetes educator, and registered dietitian. Each patient also receives a retinal scan and foot exam. Finally, patients are served a diabetes-friendly lunch with the clinical team present to answer questions about the food or anything else related to diabetes.

However, our work doesn't stop when the patient leaves the clinic. Because the needs of patients with type 2 diabetes require support and resources in the community, our diabetes program provides worksite and home services. After their visit, a team member meets with patients in their home to assess the support network available and to identify

From the patient perspective, the most important measure is improvement in the ability to live



areas where patients will face particular challenges. Our teams then work with family and employers to inform and facilitate improvements in the home and work environments and sometimes in the local grocery stores and pharmacies.

Often, the care team conducts a thorough workplace assessment to determine how each patient's work setting impacts his or her health. For example, if there is no access to healthy foods, we work with the employer to improve the food options at a worksite. It might be surprising that employers have been incredibly supportive, however they fully understand the importance of having a healthy, happy, and productive workforce.

From the patient perspective, the most important measure is improvement in the ability to live (i.e., to work, participate in family life, attend important events, and enjoy daily activities). With each patient, the care team identifies capabilities that are motivating and meaningful and track their improvement. While these measures require greater effort to quantify, they are often the drivers of people's long-term commitment to lifestyle change and health.

Patients have responded incredibly well. A recent patient entered the program hoping to improve his health, get off regular insulin and lose about 60 lbs. With the diabetes team's help, he understood the need to deny barriers and stressors, such as fast food and sugary drinks, and was very successful.

Through the program, he increased glucose monitoring from to three to four times daily; went from not exercising at all to exercising four times a week at the facility we recommended to him; attended all prescribed education opportunities and shared medical group appointments; and engaged often with our dietician. While he hasn't yet reached all his top-level goals, he lost more than 45 lbs., reduced his BMI from 33.7 to 27.5 and his waist size from 44 to 36, and no longer needs mealtime insulin coverage.

The most successful patients are the ones who receive a continuum of care from the clinic to their community. Our model improves a physician's capability by bringing all of the necessary community resources together. Research shows that what happens outside the doctor's office can have a major impact—either positive or negative—on our health. That's why we began the Diabetes IPU model and why we'll continue using it to fight obesity and improve the care of individuals with prediabetes or diabetes.

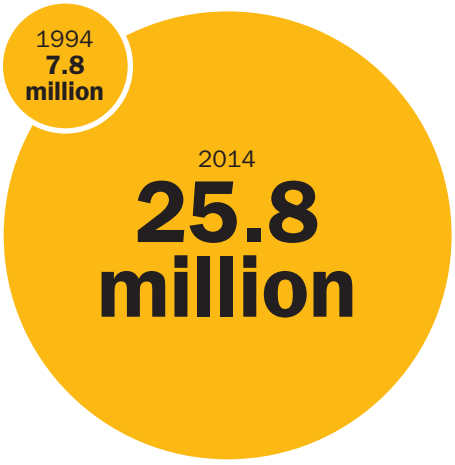
Cost Containment and Obesity Prevention

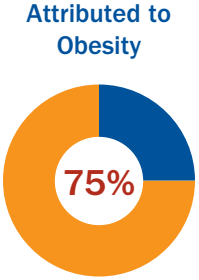
CURRENT STATUS:

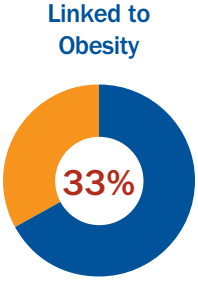
Obesity is one of the biggest drivers of preventable chronic diseases and healthcare costs in the United States. Currently, estimates for these costs range from $147 billion to nearly $210 billion per year.[207] In addition, job absenteeism related to obesity costs $4.3 billion annually.[208]

If obesity rates continue on their current trajectory, by 2030, combined medical costs associated with treating preventable obesity-related diseases are estimated to increase by between $48 billion and $66 billion per year, and the loss in economic productivity could be between $390 billion and $580 billion annually.[209]

As obesity rates rise, the risk of developing obesity-related health problems — type 2 diabetes, coronary heart disease and stroke, hypertension, arthritis and obesity-related cancer — increases exponentially.[210] Twenty years ago, only 7.8 million Americans had been diagnosed with diabetes but, today, approximately 25.8 million Americans have the disease.[211] More than 75 percent of hypertension cases can be attributed to obesity.[212] And, approximately one-third of cancer deaths are linked to obesity or lack of physical activity.[213]





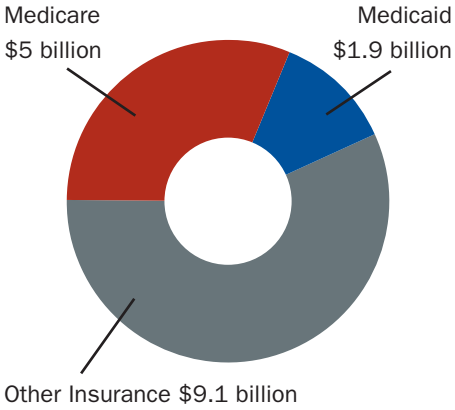


However, if obesity trends were lowered by reducing the average adult BMI by only 5 percent, millions of Americans could be spared from serious health problems and preventable diseases, and the country could save $29.8 billion in five years, $158 billion in 10 years and $611.7 billion in 20 years.[214]

Reducing obesity and improving health can help lower costs through fewer trips to the doctor's office, tests, prescription drugs, sick days, emergency room visits and admissions to the hospital, and lowered risk for a wide range of diseases.

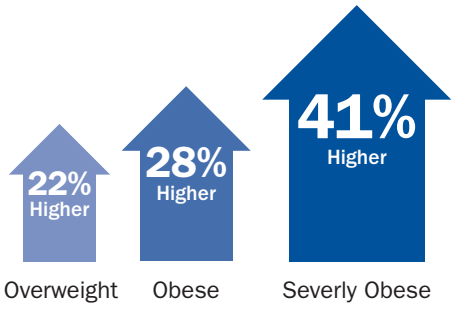
To date, there has not been a sustained strong national focus on prevention to deliver the potential results despite a growing number of studies that demonstrate the positive returns many strategies and programs can deliver for improving health and productivity and lowering costs.[215] For instance, a 2008 study by the Urban Institute, The New York Academy of Medicine (NYAM) and TFAH found that an investment of $10 per person in proven community-based programs to increase physical activity, improve nutrition and prevent smoking and other tobacco use could save the country more than $16 billion annually within five years. That's a return of $5.60 for every $1 invested.[216] Out of the $16 billion, Medicare could save more than $5 billion and Medicaid could save more than $1.9 billion. Expanding the use of prevention programs would better inform the most effective, strategic public and private investments that yield the strongest results.

FIVE-YEAR ROI ON $10 PER PERSON COMMUNITY-BASED INVESTMENT

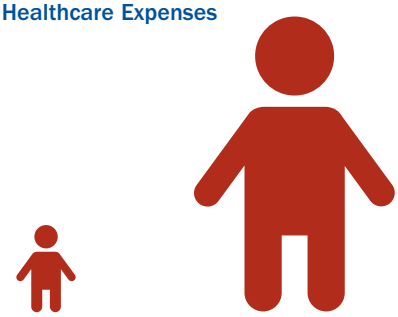


WHY CONTAINING OBESITY-RELATED HEALTHCARE COSTS MATTERS:

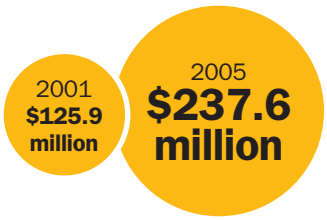
Difference in Emergency Room Costs for Patients Presenting With Chest Pains Compared with a Normal-weight Patient



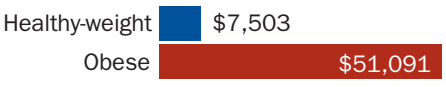
Total Annual Private Insurance Child Healthcare Expenses



Obesity-related Hospitalization Costs for Children and Youths



Annual Medical Claims per 100 Full-time Employees



HIGHER HEALTHCARE COSTS FOR ADULTS

- Obese adults spend 42 percent more on direct healthcare costs than healthy-weight people.[217]
- Per capita healthcare costs for severely or morbidly obese (BMI >40) were 81 percent greater than for normal weight adults.[218] Around $11 billion was spent on medical expenditures for morbidly obese U.S. adults in 2000.
- Moderately obese (BMI between 30 and 35) individuals are more than twice as likely as normal weight individuals to be prescribed prescription pharmaceuticals to manage medical conditions.[219]
- Costs for patients presenting at emergency rooms with chest pains were 41 percent higher for severely obese patients, 28 percent higher for obese patients and 22 percent higher for overweight patients than for normal-weight patients.[220]

HIGHER HEALTHCARE COSTS FOR CHILDREN

- Obesity contributes an estimated incremental lifetime medical cost of $19,000 per 10-year-old child when compared with a normal-weight 10-year-old child. When multiplied by the number of obese 10-year-olds in the United States, lifetime medical costs for just this cohort would amount to approximately $14 billion in direct medical costs.[221, 222]
- Obese children had $194 higher outpatient visit expenditures, $114 higher prescription drug expenditures and $25 higher emergency room expenditures, based on a two-year Medical Expenditure Panel Survey.[223]
- Overweight and obesity in childhood is associated with $14.1 billion in additional prescription drug, emergency room and outpatient visit costs annually.
- The average total health cost for a child treated for obesity under private insurance is $3,743, while the average health cost for all children covered by private insurance is $1,108.[224]
- Hospitalizations of children and youths with a diagnosis of obesity nearly doubled between 1999 and 2005, while total costs for children and youths with obesity-related hospitalizations increased from $125.9 million in 2001 to $237.6 million in 2005 (in 2005 dollars).[225]

DECREASED WORKER PRODUCTIVITY AND INCREASED ABSENTEEISM

- Obesity-related job absenteeism costs $4.3 billion annually.[226]
- Obesity is associated with lower productivity while at work (presenteeism), which costs employers $506 per obese worker per year.[227]
- As a person's BMI increases, so do the number of sick days, medical claims and healthcare costs associated with that person.[228] Obese women used 5.19 more sick days and obese men used an excess of 3.48 sick days compared with normal weight individuals, according to a 2014 German study.[229]

HIGHER WORKERS' COMPENSATION CLAIMS

- A number of studies have shown obese workers have higher workers' compensation claims.[230, 231, 232, 233, 234, 235] Medical claims cost $7,503 for healthy-weight workers and $51,091 for obese workers (annual costs, United States).[236]

Policy Recommendations:

- Preventing obesity and its related chronic diseases should be a major focus of healthcare cost-containment efforts.

- Funding for obesity-prevention programs will be important to achieve results in improving health and reducing healthcare costs. Programs and policies should include a wide range of partners to ensure success, including businesses, schools, community- and faith-based organizations, economic and community developers and health and social service providers.

- Because community-based obesity- and disease-prevention programs can significantly cut healthcare costs, funding for evidence-based programs at all levels of government will continue to be important.

- Community-based programs must include the ability to evaluate effectiveness and cost savings, and demonstrate how savings can be shared among partners, including businesses and the healthcare system, and reinvested to continue to support and expand prevention activities.

ADDITIONAL RESOURCES:

Bending the Obesity Cost Curve. **Trust for America's Health. February 2012:**
http://healthyamericans.org/assets/files/TFAH%202012ObesityBrief06.pdf

Return on Investments in Public Health Saving Lives and Money. **The Robert Wood Johnson Foundation.**
December 2013: http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/12/return-on-investments-in-public-health.html

Assessing the Economics of Obesity and Obesity Interventions. M.J. O'Grady and J.C. Capretta.
Campaign to End Obesity. March 2012: http://www.rwjf.org/en/about-rwjf/newsroom/newsroom-content/2012/03/new-report-shows-importance-of-calculating-full-cost-savings-of-.html

FEDERAL FUNDING FOR OBESITY PREVENTION

Public health programs are funded through a combination of federal, state and local dollars. Analyses from a number of organizations, including the IOM, NYAM, CDC and a range of other experts have found that public health has been severely underfunded for decades and does not receive sufficient support to carry out many core functions, including programs to prevent disease and obesity.[237]

Much of the federal support for obesity prevention is through grants to states distributed through CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP).

Federal funding for chronic disease prevention reached an all-time high of $1.16 billion in FY 2012, but then experienced a 17 percent cut in FY 2013. The FY 2014 Omnibus Appropriations Bill restored $185 million to chronic disease programs, largely as part of Prevention and Public Health Fund dollars — to reach a total of $1.15 billion.

Despite the increase, the overall limited nature of funding for prevention has meant decreased and inconsistent support for the various categorical disease-prevention and health-promotion programs.

For example, while the Division of Nutrition, Physical Activity and Obesity (DNPAO)—a division that specifically focuses on the obesity epidemic, improving nutrition, and increasing activity within NCCDPHP—received total amounts of ($47.5 million) in FY 2013 and ($49.5 million) in FY 2014, the division experienced a 21 percent cut to its core activities. Instead of adding to the funding base to be able to focus on high-priority initiatives, including breastfeeding, early child care education and a new "high-risk" obesity initiative that provides $5 million in competitive grants to communities where obesity rates are above 40 percent, the funds to support these efforts have been carved out from DNPAO's overall budget, leaving significantly less money for grants to states and core program activities.

DIVISION OF NUTRITION, PHYSICAL ACTIVITY AND OBESITY FY 2013 TO 2014 FUNDING

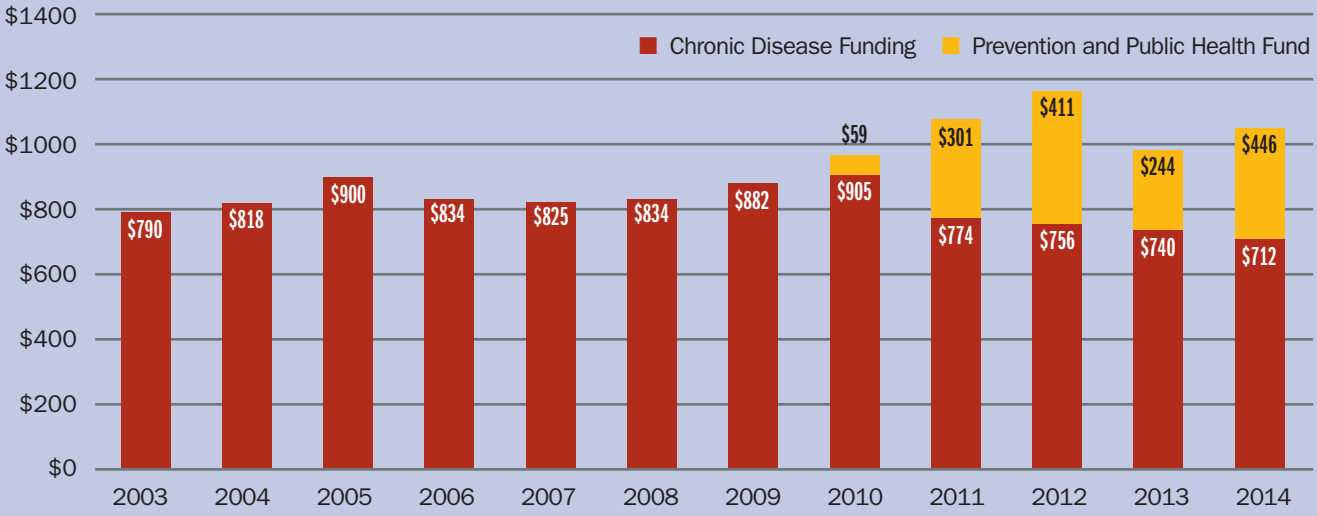
	FY 2013	FY 2014
DNPAO Total	$47.5 million	$49.5 million
· Breastfeeding initiative	$2.5 million	$8 million
· Early child care education (ECE)	$4 million	$4 million
· High-risk obesity	n/a	$5 million
Total unrestricted for core activities	$41 million	$32.5 million

*21 percent decrease in unrestricted funds from FY 2013 to 2014

Although the *State Public Health Actions* funding opportunity announcement (FOA) provides funding to all 50 states and D.C. to conduct public health functions related to obesity prevention such as epidemiology and surveillance activities, DNPAO funding for state level obesity prevention strategies with expanded reach and impact related to nutrition and physical activity has decreased and are funded at lower levels that those related to diabetes and heart disease. For example, in FY2013 DNPAO provided $16.7 million to states for obesity prevention, while diabetes and heart disease received $20.7 million and $23.3 million, respectively. Currently, CDC does not have sufficient or sustained funds to maintain obesity prevention activities or to build upon or scale effective programs.

In FY 2013, NCCDPHP released a FOA that brings together four programs that were previously standalone programs: heart disease and stroke; nutrition, physical activity and obesity; school health; and diabetes. The FOA, entitled *State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health,* aims to efficiently implement cross-cutting strategies in a variety of settings that improve multiple chronic diseases and conditions, while maintaining categorical appropriation funding levels and performance targets. Coordination is intended to improve the impact of efforts to prevent obesity and conditions related to obesity, such as diabetes and heart disease.

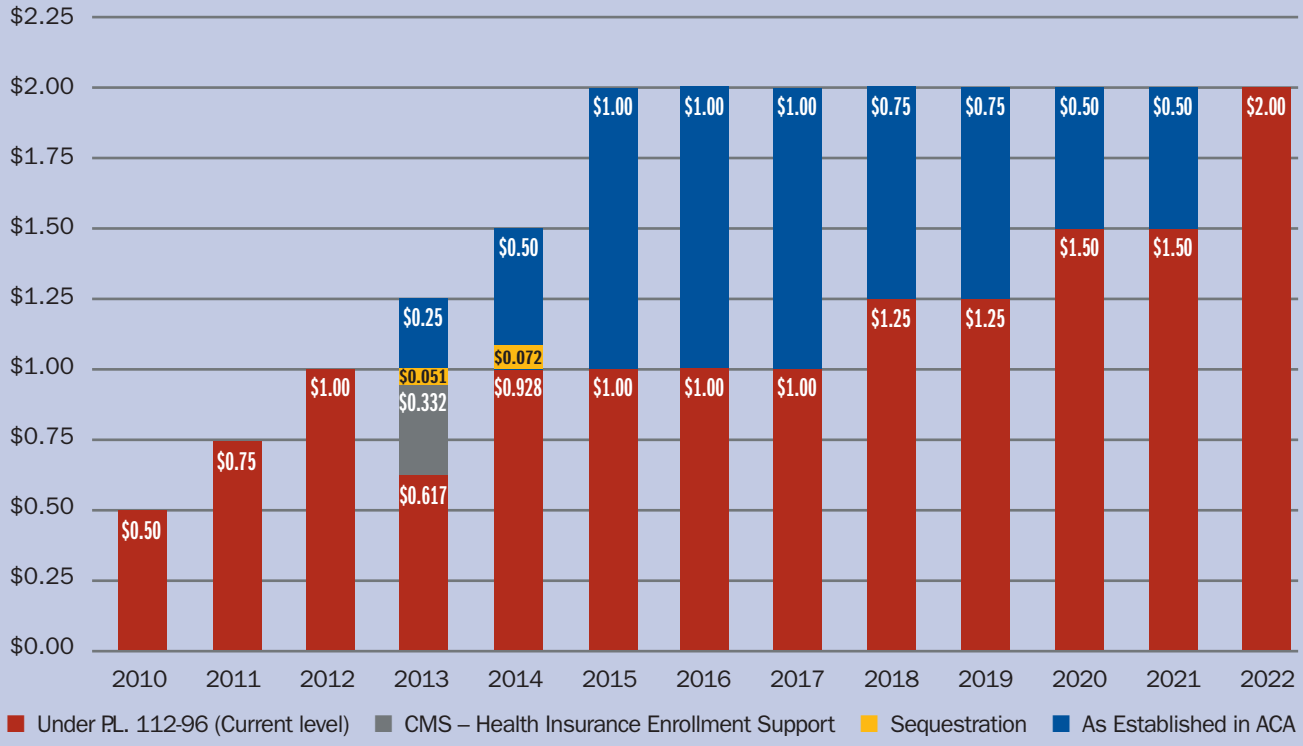
CDC CHRONIC DISEASE FUNDING FROM FY 2003 TO FY 2014 ($ IN MILLIONS)



* FY 2010 to 2014 values are supplemented by the Prevention and Public Health Fund

PREVENTION AND PUBLIC HEALTH FUND ALLOCATIONS (FY 2010 TO 2022): ACTUAL CURRENT FUNDING [UNDER P.L. 112-96] VS. INTENDED FUNDING ESTABLISHED BY ACA

The Prevention and Public Health Fund was created to supplement, not supplant, support for prevention programs. The Prevention Fund supports many measures aimed at obesity prevention, including the CDC's Division of Nutrition, Physical Activity and Obesity Prevention. However, discretionary funding for chronic disease prevention experienced cuts between FY 2009 and 2013. In addition, the Fund also experienced cuts from the originally intended allocation levels. The ACA originally allocated $21 billion for the Prevention Fund from FY 2010 to FY 2022. The Fund has experienced cuts or reallocations of nearly one-third, dropping it to $14.5 billion, nearly a 32.3 percent cut.



DIVISION OF NUTRITION, PHYSICAL ACTIVITY AND OBESITY

DNPAO supports healthy eating, active living and obesity prevention by creating healthy options in our nation's child care centers, schools, worksites, cities and communities. Partnerships with state, local, territorial and tribal health departments, private enterprise, nonprofit organizations and healthcare professionals and coordination with other agencies extend their work and reinforce consistent public health recommendations with promising practice.

The division focuses on improving dietary quality to support healthy child development and reduce chronic disease; increasing physical activity for people of all ages; and decreasing prevalence of obesity through prevention of weight gain and maintenance of healthy weight.

DIVISION OF POPULATION HEALTH, SCHOOL HEALTH BRANCH

CDC's Division of Population Health (DPH), School Health Branch addresses nutrition, physical activity and obesity in schools. In addition to research and evaluation activities, the School Health Branch in DPH supports the school specific activities in the CDC Funding Opportunity Announcement, *State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health*. With this funding, the division supports all 50 states by funding state health departments to address nutrition and physical activity in schools. It also provides additional enhanced funding to 32 of the 50 states to support even more work around policies and practices around school physical activity, nutrition and managing chronic conditions in schools, including obesity.

CUTS TO STATE PUBLIC HEALTH FUNDING

In addition to the funding cuts at the national level, state-level public health funding has also experienced significant cuts, with median per capita spending decreasing from $33.71 in FY 2008 to $27.49 in FY 2013. This represents a cut of more than $1.3 billion, based on the total states' budgets from those years, adjusted for inflation.[238] Budget cuts have led state and local health departments to cut more than 45,700 jobs across the country since 2008.[239]

STATE GRANTS CHART

CDC funds many state and local efforts to prevent and control obesity and related diseases. The table below provides a summary of these grants.

	State Public Health Actions: Enhanced Component	School Health Grants[1]	REACH[1, 2]	Community Transformation Grants[1]
Alabama		✓	✓	
Alaska		✓		
Arizona	✓	✓	✓	
Arkansas	✓	✓		
California	✓	✓	✓	✓
Colorado	✓	✓	✓	✓
Connecticut	✓	✓	✓	✓
Delaware		✓		✓
D.C.		✓		✓
Florida	✓	✓	✓	✓
Georgia		✓	✓	✓
Hawaii		✓	✓	
Idaho	✓	✓		
Illinois		✓	✓	✓
Indiana	✓	✓	✓	✓
Iowa	✓	✓		✓
Kansas	✓	✓	✓	✓
Kentucky	✓	✓	✓	✓
Louisiana		✓	✓	✓
Maine	✓	✓		✓
Maryland	✓	✓	✓	✓
Massachusetts	✓	✓	✓	✓
Michigan	✓	✓	✓	✓
Minnesota	✓	✓		✓
Mississippi	✓	✓		✓
Missouri	✓	✓		✓
Montana	✓	✓		✓
Nebraska	✓	✓		✓
Nevada		✓		✓
New Hampshire		✓		
New Jersey	✓	✓	✓	✓
New Mexico		✓	✓	✓
New York	✓	✓	✓	✓
North Carolina	✓	✓	✓	✓
North Dakota		✓		✓
Ohio		✓	✓	✓
Oklahoma		✓		✓
Oregon	✓	✓	✓	✓
Pennsylvania	✓	✓	✓	✓
Rhode Island	✓	✓		
South Carolina	✓	✓	✓	✓
South Dakota		✓		✓
Tennessee	✓	✓	✓	
Texas		✓	✓	✓
Utah	✓	✓	✓	✓
Vermont		✓		✓
Virginia	✓	✓	✓	✓
Washington	✓	✓	✓	✓
West Virginia		✓		✓
Wisconsin	✓	✓	✓	✓
Wyoming		✓		
# of States	32	50*	30	40

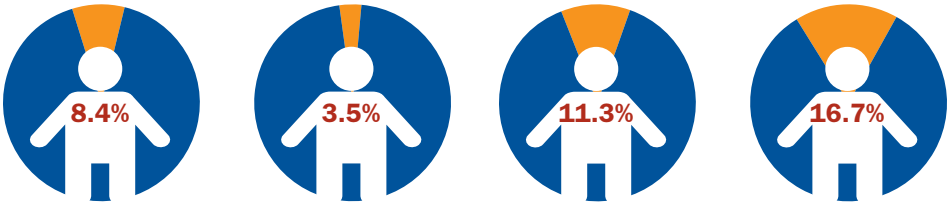
** The new Funding Opportunity Announcement (FOA) (launched Oct 1 2014) — State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and associated Risk Factors, and promote School Health — provides a basic level of funding to all 50 states ((School health range: $46,000- $76,000); and an enhanced level of funding to 32 states ((school health range: $78,000-$223,000).*

Early Care and Education (ECE) and Obesity

CURRENT STATUS:

More than 8 percent of preschoolers in the United States were obese in 2011 to 2012, and an additional 23 percent of children ages 2 to 5 were overweight.[240]

OBESE — 2 TO 5 YEARS, 2011 TO 2012 — NHANES[241]



According to PedNSS, the obesity rate among preschool children from low-income families is higher than the national average, but there are signs of progress. In 2011, 14.4 percent of 2- to 4-year-olds from low-income families were obese — an increase from 12.7 percent in 1999. However, from 2008 to 2011, obesity rates among this population decreased in 18 states and the U.S. Virgin Islands, and increased in only three states.[242]

A number of strategies to reduce obesity among young children focus on improving nutrition, increasing physical activity and reducing screen time in child care and early education settings — since more than half of American children between the ages of zero and 5 regularly spend a significant amount of time in non-parental child care settings. [243]

The IOM has recommended including specific requirements related to physical activity, sedentary activity and feeding in child care regulations.[244] The American Academy of Pediatrics, American Public Health Association (APHA) and National Resource Center for Health and Safety in Child Care and Early Education have identified 50 components that all types of early care and education settings—including centers and family child care homes—should include in standards for infant feeding, nutrition, physical activity and screen time.[245]

SOME KEY RECENT EFFORTS AND PROGRAMS TO IMPROVE CHILD CARE QUALITY WITH RESPECT TO OBESITY PREVENTION INCLUDE:

- **Lets' Move! Child Care** encourages ECE providers to meet a basic set of best practices in five goal areas:

  1) Physical activity: provide one to two hours of physical activity throughout the day, including outside play when possible;

  2) Screen time: none for children under age 2 and for those 2 years and older, limit screen time to 30 minutes per week during child care and no more than one to two hours per day at home;

  3) Food: serve fruits or vegetables at every meal, eat meals family-style whenever possible and avoid serving fried foods;

  4) Beverages: give water during meals and throughout the day and avoid sugary drinks. For children two years and older, serve low- or non-fat milk and four to six ounces maximum of 100 percent juice a day; and

  5) Infant feeding: provide breast milk to infants of mothers who wish to breastfeed, welcome mothers to nurse mid-day and support parents' decisions with infant feeding.[246]

  The Department of Defense, General Services Administration, Bright Horizons, Knowledge Universe, the Learning Care Group, New Horizons, YMCA, the Boys and Girls Clubs of America and others have made commitments to meet the Let's Move! Child Care goals as part of the Partnership for a Healthier America.[247]

- **The Child and Adult Care Food Program (CACFP)** is a federal nutrition assistance entitlement program that provides reimbursement for meals and snacks for more than 3.2 million children from low-income families in child care centers and child care services provided in family homes. CACFP regulates meal patterns and portion sizes, provides nutrition education and offers sample menus and training in meal planning and preparation to help providers comply with nutrition standards.[248]

  ECE programs or facilities that are not required to meet CACFP meal pattern standards can do so voluntarily to ensure that meals and snacks meet the nutritional needs of infants and children.[249] The Healthy, Hunger-Free Kids Act directed USDA to improve and better align the CACFP nutrition standards with the dietary guidelines, though updated standards have not yet been proposed.

- **The Child Care and Development Block Grant (CCDBG)** is the primary federal funding stream for child care in the United States, providing subsidies for low-income families to obtain child care so parents can pursue work, education, or training opportunities.[250] CCDBG offers broad guidance and flexibility to states for creating both the child care assistance program and a program of basic regulation for child care operations.

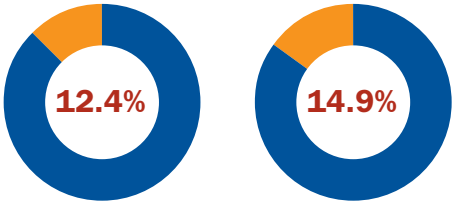
  The CCDBG Reauthorization Act of 2014 (S.1086) would reauthorize the program through FY 2020. For the first time, the bill includes provisions for child care provider training around healthy eating and physical activity as an allowable activity for quality improvement and would allow states to make healthy eating and physical activity a part of their health and safety requirements. The bill cleared the Senate in March 2014 but has not yet been considered by the House as of July 2014.

  Additionally, in May 2013, the Administration for Children and Families proposed a rule to require states to provide pre-service training to participating providers regarding "age-appropriate nutrition, feeding, including support for breastfeeding and physical activity" as a component of the minimum health and safety training. The public comment period has closed, but the final rule is still pending.

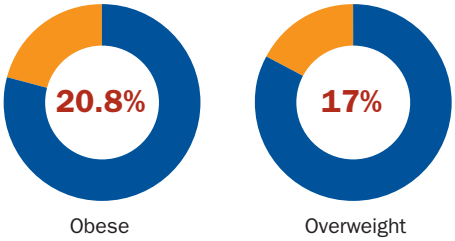
- **Head Start** is a federal child development program that serves more than one million children between the ages of 3 to 5 from low-income families.[251] Head Start's focus on school readiness includes health, nutrition, education, social services and parental engagement components. Head Start programs are required to adhere to federal regulations that ensure: 1) parents receive guidance on nutrition and physical activity; 2) facilities participate in the CACFP; 3) meals and snacks provide one-third to one-half of the daily nutritional needs of children in part- or full-day programs; 4) staff model healthy eating behaviors and attitudes for children; and 5) facilities provide opportunities for outdoor and indoor active play.[252]

- **The 2014 Farm Bill** includes a provision requiring that, by 2020, the Dietary Guidelines for Americans include nutrition and dietary guidelines designed specifically for children from birth until age 2. In addition, SNAP-Ed dollars can be delivered to childcare centers if the majority of children meet the general low-income standard (household incomes of <185 percent of the Federal Poverty Guidelines).[253]

Obese or Overweight in Kindergarten



Obese or Overweight in 8th Grade



WHY OBESITY RATES AMONG YOUNG CHILDREN MATTER:

- Children who are overweight or obese are likely to be obese as adults. Being overweight or obese can put them at higher risk for health problems — such as heart disease, hypertension, type 2 diabetes, stroke, asthma and osteoarthritis — during childhood and as they age.[254]

- A study of more than 7,700 children found that a third of the children who were overweight in kindergarten were obese by eighth grade. When the children entered kindergarten, 12.4 percent were obese and another 14.9 percent were overweight; in eighth grade, 20.8 percent were obese and 17 percent were overweight. Overweight 5-year-olds were four times as likely as normal-weight children to become obese.[255]

- Children who are overweight or obese are likely to score poorer academically in math than their normal-weight peers.[256]

Policy Recommendations:

- Child care providers and early childhood educators should provide opportunities for physical activity and healthy eating for the children they serve, including:
  - Entering into shared-use agreements with community partners to utilize outdoor space for physical activity.
  - Identifying creative ways to purchase and prepare healthy foods and physical activity equipment at a lower cost, including local sourcing, purchasing cooperatives, group purchasing organizations and central kitchens.
  - Establishing gardens and participating in farm-to-child care programs, if available.
  - Engaging families in menu planning and physical activity events.
- USDA should issue updated meal patterns for CACFP, as per the Healthy, Hunger-Free Kids Act.
- The Office of Head Start should ensure that nutrition and physical activity standards and initiatives are reviewed and updated regularly to ensure they reflect current national recommendations.
- Obesity prevention strategies should be incorporated into the licensing of child care facilities and states should integrate obesity prevention (nutrition, physical activity, screen time, professional development and parent and family engagement) into their Quality Rating and Improvement System (QRIS) — a state's voluntary, comprehensive approach that incentivizes quality improvement of ECE programs.
- States and localities should provide comprehensive obesity prevention pre-service training as well as technical assistance and continuing education for child care and early education providers.

CASE STUDIES

- Maryland requires all child care providers, including home-based care, to follow CACFP nutrition guidelines and additional nutrition standards, including 1) making water available inside and outside; 2) serving skim or one percent milk to children over 2-years-old; 3) serving whole milk to 1- to 2-year-olds who are not on breast milk or formula, or 2 percent milk to those at risk for obesity or hypercholesterolemia; and 4) developing a plan for introducing age-appropriate solid foods. Maryland's success in implementing the guidelines has been attributed to its collaborative work and to its regular dissemination of information and resources to child care providers across the state. The state's education and health departments work together in partnership with outside organizations and local child care resource and referral agencies.[257]

- The Texas Farm to Child Care program's goal is to improve the health and nutrition of children in child care and early education settings by encouraging the purchase of local produce. In 2010, USDA's Food and Nutrition Service awarded $1 million in CACFP grants to the Texas Department of Agriculture. A portion of the grant was used to establish Farm to Child Care initiatives in centers and home-based day care across the state. The grants were used to establish connections with local growers and farmers, to develop direct purchasing relationships to buy local fruits and vegetables for CACFP snacks and meals and sustain change in child care settings.The initiative reached 292 child care centers and day care homes serving more than 14,000 preschool children and their parents or guardians. Caregivers partnered with parents to bring some of the same lessons being taught in school to homes — such as teaching children and parents how to start their own gardens so they could serve more fruits and vegetables.[258]

- California's CACFP has created a recognition program called Preschools Shaping Healthy Impressions through Nutrition and Exercise (SHINE). An early child care facility can become a Preschools SHINE site if they require online training, attend training forums, conduct self-assessments of their environments and develop policies and practices related to enhanced nutrition standards, mealtime environments, classroom nutrition education, edible gardens, physical activity, wellness policies, professional development, partnerships and leadership teams.[259]

CDC AND ECE PROGRAMS

CDC has made obesity prevention in early care and education a high priority. The agency provides funding, training and technical assistance to a variety of state and community agencies and other organizations to implement obesity prevention efforts targeting ECE settings. Some key projects include:

- Development of a framework and technical assistance materials for obesity prevention efforts targeting ECE settings and regular convening of stakeholders working on these efforts and dissemination of resources.[260]
- **State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health:** This five-year cooperative agreement funds all 50 states and Washington, D.C. for chronic disease prevention efforts. All grant recipients are required to promote physical activity in ECE settings and many are also implementing nutrition standards.
- **National Early Care and Education Learning Collaboratives Project:** This five-year cooperative agreement, launched in 2012, funds Nemours to establish and implement ECE learning collaboratives in states to make improvements in nutrition, breastfeeding support, physical activity and screen time. Participating providers exchange ideas with peers, learn from experts, share tools and receive training to assist them in improving their policies and practices. Year one (FY 2012) provided funding to Arizona, Florida, Indiana, Kansas, Missouri and New Jersey and year two (FY 2013) funding expanded the project to Kentucky, Los Angeles County and Virginia. By the end of FY 2014, Nemours expects to reach almost 64,000 children in 717 centers across nine states.[261]
- **Childhood Obesity Research Demonstration Project (CORD):** This four-year cooperative agreement provides funding to four grantees to improve nutrition and physical activity behaviors among children ages 2 to 12 years covered by the Children's Health Insurance Program. CORD project grantees are working with 60 ECEs in Texas, California and Massachusetts to provide training, technical assistance and support.

Nemours: Childhood Obesity Prevention Toolkit for Rural Communities

Children living in rural areas are 25 percent more likely than those living in metropolitan areas to be obese or overweight.[262] Often, long distances separate the home from opportunities for physical activity or healthy eating, as well as from healthcare providers, which can prevent families from addressing obesity and promoting health.[263]

To help rural communities address these barriers, Nemours, a foundation that operates an integrated children's health system, prepared a Childhood Obesity Prevention Toolkit for Rural Communities. The toolkit provides a range of strategies and success stories to assist practitioners in child-serving sectors, including: early care and education, schools, out-of-school time, community initiatives and healthcare. The toolkit also includes policy recommendations and an overview of their evaluation process.

Obesity prevention initiatives profiled in the toolkit incorporate the following elements: dynamic leadership from within the community; multi-sector partnerships focused on shared goals and culturally appropriate messages; youth empowerment and family engagement; training for providers; hands-on learning techniques for children and families; leveraging of public and private funding; and creative solutions. The profiled communities leverage their unique rural resources and benefit from close community bonds to improve children's health.

ADDITIONAL RESOURCES:

Let's Move! Child Care. Nemours:
http://www.healthykidshealthyfuture.org/welcome.html

Preventing Childhood Obesity in Early Care and Education Programs. American Academy of Pediatrics, American Public Health Association and National Resource Center for Health and Safety in Child Care and Early Education:
http://nrckids.org/default/assets/File/PreventingChildhoodObesity2nd.pdf

Childhood Obesity Prevention Toolkit for Rural Communities. Nemours:
http://www.nemours.org/content/dam/nemours/wwwv2/filebox/service/healthy-living/growuphealthy/nhps/Childhood%20Obesity%20Prevention%20Strategies%20for%20Rural%20Communities.pdf

EXPERT COMMENTARY

BY DEBRA POOLE, owner, Georgetowne Home Preschool

Good Nutrition is Key to a Good Start for Children

When I started Georgetowne Home Preschool in Ocala, Florida 20 years ago, I was more than 100 pounds overweight and had little understanding of how important eating healthy was to happiness, health and success.

I was raised with poor nutritional habits in a poor family — we seemingly didn't have the money or the information we needed to buy healthy foods.

This all changed when I started to take care of other people's children. Part of my preparation for becoming a child care provider included reviewing an incredibly helpful nutrition curriculum and additional healthy eating information supplied by the state of Florida. I started to realize the importance of diverse and healthy foods. As I began practicing good nutrition, my eating habits changed and my activity levels improved dramatically. I lost 100 pounds as a result.

I had to bring this good feeling to my kids. I joined Florida's Child Care Food Program (CCFP) to help these children eat healthy and improve their overall learning skills. Thankfully, our state's nutrition standards are quite strong—for more than a decade, CCFP has limited sugary foods and drinks and has required fruit and vegetables at breakfast and snack time.

Florida's efforts were ahead of its time! In 2010, the Healthy, Hunger-Free Kids Act required the USDA to develop standards for CACFP meals that are consistent with the Dietary Guidelines for Americans. This new national standard will help preschools in other states with less rigorous standards than Florida's.

I guarantee that once preschools fully buy into providing nutritious meals and snacks, their children will be happier, healthier and more productive.

Of course, we need to ensure kids buy into this concept of eating healthy. When some parents bring me their little 4-year-olds, they say things like "my son is a picky eater. He only eats mac 'n cheese or chicken nuggets and doesn't like fruits or vegetables."

Quite frankly, I think we underestimate a child's ability to adapt and willingness to explore.

For example, when I start teaching and working with the children, I show them a plate and say, "let's put a lima bean on there." If they say they don't want it, I turn it into a fun adventure and tap into their imagination. I get out the magnifying glasses and have them check their tongues for the "lima bean taste bud" or tell them it will give them superpowers—which, when you think about the health benefits of fruits and vegetables, isn't so far off. They love it! Sure enough, an adventurous and tough 4-year-old volunteers and the rest follow suit — and soon everyone is eating lima beans and other fruits and vegetables.

WE MAKE ALL OF OUR OWN FOOD ON SITE WITH THE KIDS. THE CHILDREN SMELL AND TOUCH AND INTERACT WITH FOODS.

We put up pictures of fruits and vegetables they've never seen before. And then we set up a "grocery store" in the kitchen and the kids go shopping and pretend to buy these things.

Typical days also include as much physical activity as possible, including stretching, dancing, playing, bike riding and swimming. And, of course, we focus on learning from start to finish, with kindergarten preparatory assignments, computer work, 3-D projects, or dramatic play (acting out grocery store shopping, for instance) and group action games on our circle time rug.

People always want to know how all this is possible on a tight budget. First, I serve everything family style, which teaches responsibility and gives me the opportunity to introduce foods at the right pace and portion size for each child. I also shop at warehouses and roadside stands and avoid canned foods — buying fresh or frozen is typically healthier and tastes better, too.

I've found that my parents are highly supportive of this approach—they appreciate what it means for their kids, and have been inspired to eat healthier at home as well

Our emphasis on nutrition is the foundation on which our success has been built. It's all about giving children the tools and skills they need to make healthy choices and grow up healthy.

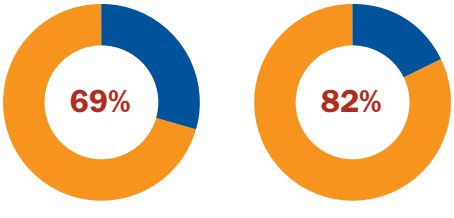
Obesity Prevention in Black Communities

CURRENT STATUS:

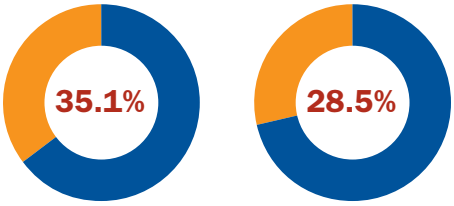
Inequities in a range of factors — income, stable and affordable housing, access to quality education and others — all influence a person's chance to live a longer, healthier life.[264] These inequities and disparate access to affordable, healthy food or safe places to be physically active, contribute to higher rates of obesity and related illnesses in Black communities.

- African American adults are nearly 1.5 times as likely to be obese compared with White adults. Approximately 47.8 percent of African Americans are obese (including 37.1 percent of men and 56.6 percent of women) compared with 32.6 percent of Whites (including 32.4 percent of men and 32.8 percent of women).[265] More than 75 percent of African Americans are overweight or obese (including 69 percent of men and 82.0 percent of women) compared with 67.2 percent of Whites (including 71.4 percent of men and 63.2 percent of women).[266]

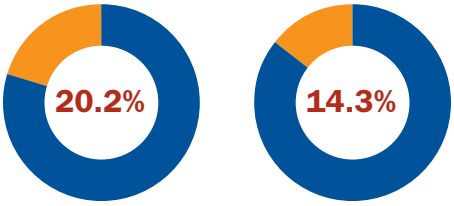
African American Obesity or Overweight



Overweight Children Ages 2 to 19
1999 – 2012



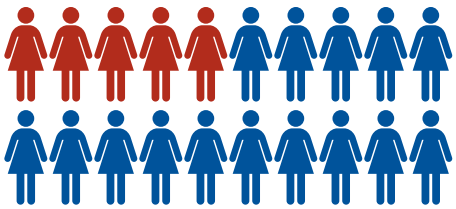
Obese Children Ages 2 to 19
1999 – 2012



- Overweight and obesity rates also tend to be higher among African American children compared with White children, with obesity rates increasing faster at earlier ages and with higher rates of severe obesity. From 1999 to 2012, 35.1 percent of African American children ages 2 to 19 were overweight, compared with 28.5 percent of White children; and 20.2 percent were obese compared with 14.3 percent of White children.[267]
- Nationally, in 2011 to 2012, 20.5 percent of African American girls were obese compared with 15.6 percent of White girls, and 19.9 percent of African American boys were obese compared with 12.6 percent of White boys.[268]
- More than 8 percent of African American children ages 2 to 19 were severely obese, compared with 3.9 percent of White children (BMI greater than 120 percent of the weight and height percentiles for an age rage) as of 2012.[269]
- More than 11 percent of African American children ages 2 to 5 were obese, compared with 3.5 percent of White children. By ages 6 to 11, 23.8 percent of African American children were obese compared with 13.1 percent of Whites.[270] Three-quarters of the difference in rates that arise between African American and White children happens between the third and eighth grades.[271]

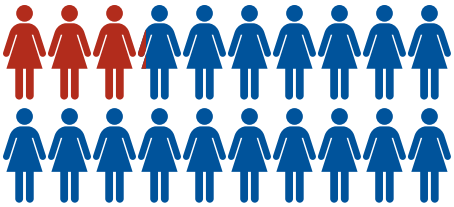
Addressing these disparities requires making healthier choices easier in people's daily lives by removing obstacles that make healthy, affordable food less accessible and ensuring communities have more safe and accessible places for people to be physically active.

Obese African American Girls 2011



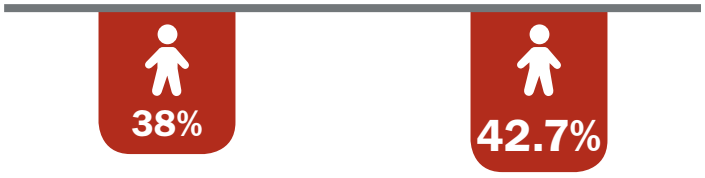
20.5%

Obese White Girls 2011



15.6%

African American Children Living Below the Poverty Line



African American children under the age of 18

African American children under the age of 5

Americans Living in Communities With One or More Supermarkets

Black White

- **Access to affordable, healthy food:** Lower-incomes and poverty correlate strongly with an increase in obesity, since less nutritious, calorie-dense foods are often less expensive than healthier foods.[272] African American families have earned $1 for every $2 earned by White families for the past 30 years.[273] More than 38 percent of African American children under age 18 and 42.7 percent of children under age 5 live below the poverty line,[274] and more than 12 percent of African American families live in deep poverty (at less than 50 percent of the federal poverty threshold).[275] One in four African American families are food insecure (not having consistent access to adequate food due to lack of money or other resources), compared with 11 percent of White households.[276]

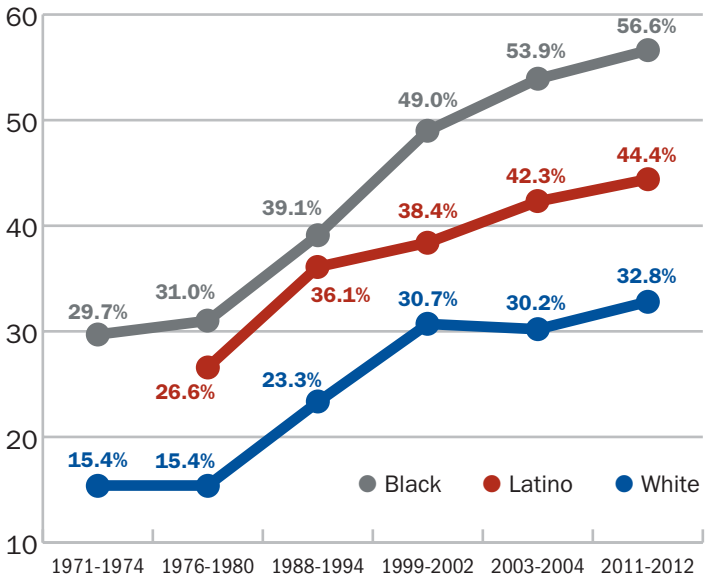
  Families in predominantly minority and low-income neighborhoods have limited access to supermarkets and fresh produce. A study of selected communities found that only 8 percent of African American residents lived in areas with one or more supermarkets, compared with 31 percent of White residents.[277] When compared with other neighborhoods, without regard to income, predominantly Black neighborhoods have the most limited access to supermarkets and to the healthier foods such markets sell.[278] According to the 2013 YRBS, 11.3 percent of Black youths did not eat vegetables during the prior week, compared to 4.5 percent of White youths.[279] Black high school students are almost twice as likely to not eat breakfast daily compared with their White peers, which can be a contributing factor to less healthy eating patterns overall, weight gain and poorer performance in school.[280]

- **Higher exposure to marketing of less nutritious foods:** Each day, African American children see twice as many calories advertised in fast food commercials as White children.[281] The products most frequently marketed to African Americans are high-calorie, low-nutrition foods and beverages. Billboards and other forms of outdoor advertisements, which often promote foods of low nutritional value, are 13 times denser in predominantly African American neighborhoods than White neighborhoods.[282]

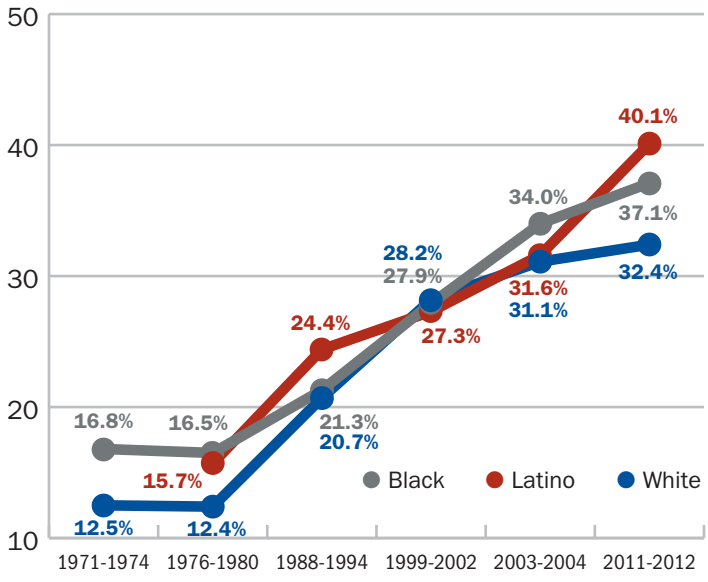
- **Limited access to safe places to be physically active:** Achieving a healthy energy balance also requires engaging in sufficient amounts of physical activity.[283] As of 2010, African Americans were 70 percent less likely to engage in physical activity than Whites.[284] According to the 2013 YRBS, 21.5 percent of Black youth did not participate in at least one hour of daily physical activity during the prior week, compared with 12.7 percent of White youth.[285]

  Children in neighborhoods that lack access to parks, playgrounds and recreation centers have a 20 percent to 45 percent greater risk of becoming overweight.[286] National-based studies show that access to public parks, public pools and green space is much lower in neighborhoods largely occupied by African Americans.[287] Safety concerns also further limit outdoor activities among African American children. Sidewalks in African American communities are 38 times more likely to be in poor condition According to a recent study, how African American mothers perceive neighborhood safety, and specifically the threat of violence, strongly influences the amount of daily outdoor play in which their young daughters participate.[288]

FEMALE OBESITY BY RACE/ETHNICITY

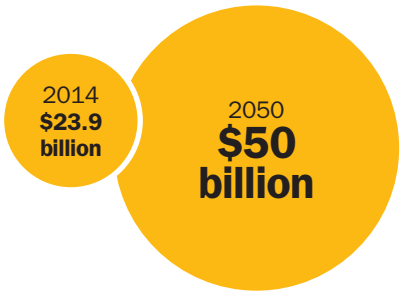


MALE OBESITY BY RACE/ETHNICITY



WHY INEQUITIES IN OBESITY RATES MATTER:

Obesity Related Healthcare Costs for Preventable Diseases



- The rates of deaths from heart disease and stroke are almost twice as high among African Americans than Whites.[289]
- More than 80 percent of people with type 2 diabetes are overweight. African American adults are twice as likely as White adults to have been diagnosed with diabetes by a physician.[290]
- The annual medical costs associated with obesity have been estimated as high as $190 billion (in 2005 dollars) — accounting for 21 percent of all medical spending.[291] High rates of chronic illnesses, which in many cases are preventable, are among the biggest drivers of healthcare costs and reduce worker productivity. A study by the Urban Institute found that the differences in rates among Latinos, African Americans and Whites for a set of preventable diseases (diabetes, heart disease, high blood pressure, renal disease and stroke — many of which are often related to obesity) cost the healthcare system $23.9 billion annually.[292] Based on current trends, by 2050, this is expected to double to $50 billion a year.
- Eliminating health inequalities — closing the gaps in the health differences by race and ethnicity — could lead to reduced medical expenditures of $54 billion to $61 billion a year and recover $13 billion annually due to work lost as a result of illness and around $250 billion per year due to premature deaths, according to a study of 2003 to 2006 spending.[293, 294]

Policy Recommendations:

- All public and private investments in community prevention should directly involve local communities throughout the process, including partnering with Black residents and organizations, as well as understanding the assets and resources within each community, to determine priorities and develop culturally relevant and sustainable solutions.

- Equity should be a criterion and measure for grants authorized to address obesity in communities in order to ensure that addressing disparities is a priority goal for a given project or program, and that grantees are held accountable for addressing disparities. For example, at the outset, a program's needs assessments should identify gaps in health outcomes, behaviors and other community features, and evaluation plans should include measures to demonstrate progress toward closing those gaps. Grant requirements must be assessed for feasibility in all communities, to ensure the goals are appropriate and match the existing resources of communities with high percentages of racial and ethnic minorities and low-income populations.

- Support should be increased at the federal, state and local levels to address racial and ethnic inequities in obesity.

- Policies should require that health programs include culturally sensitive communications and language, and a variety of communication methods and channels — including social media — should be used to most effectively reach communities of color.

Policy Recommendations:

- Strategies and programs need to be developed in conjunction with and led by community leaders and members, including the implementation of common practices, such as joint-use agreements, to allow community members to use playgrounds and fields when school is not in session and improving zoning rules for increased grocery stores in low-income communities.

- Increase grant programs encouraging minority business owners to open grocery stores in low-income communities and ensure that initiatives are sustainable and provide the appropriate support — ranging from financing initiatives to safe, accessible transportation for members of the community — to keep groceries stores open.

- Standards should be set to limit the amount of advertising of foods and beverages of low nutritional value, particularly advertising targeting Black children, via television, radio, new digital media (internet, social media, digital apps, mobile phones, tablets, etc.), outdoor ads and point-of-sale product placements. Policies should help encourage increased marketing of healthy foods and beverages to children and families.

EXAMPLES OF STRATEGIES AND CASE STUDIES:

- Nutrition assistance programs can help lower-income families gain access to more affordable food and provide information about healthy eating. In 2011, more than 3.9 million African American families received SNAP benefits,[295] and, as of 2012, 20 percent of women and children enrolled in the WIC program were African American.[296] Programs such as SNAP-Ed, a partnership between USDA and the states that provides education to help families learn how to eat healthier within a limited budget, and revisions to the WIC food packages that include healthier options, have resulted in increased consumption of more nutritious foods among participants.[297, 298]

- Over the last decade, Philadelphia has implemented a comprehensive strategy to reduce obesity rates among children. Between 2006 and 2010, the city experienced nearly a 5 percent reduction in the obesity rates among children in grades K through 12. The biggest declines were reported among kids and teens of color: the obesity rate among African American boys dropped by 7.6 percent. The city created strategies to help improve access to healthy foods and increase physical activity and engaged a wide-range of partners. Efforts included removing all sodas and sugar-sweetened drinks from public school vending machines; implementing a comprehensive, district-wide school wellness policy; banning deep fryers in school kitchens and switching to 1 percent and skim milk; and requiring chain restaurants to post calorie information on menus and menu boards. In addition, they targeted interventions in neighborhoods most in need, such as providing education to public school students whose families were eligible for SNAP and creating new financing methods to attract grocers to open stores in lower-income neighborhoods and supporting safe recreation spaces.

- The state of Mississippi passed a law in 2012 authorizing local schools boards to allow school property to be used by the public for recreation and sports during nonschool hours. The NAACP Mississippi State Conference is working to implement shared-use agreements with their partner organizations in majority minority school districts. Their initial efforts have been focused in the Jackson and Indianola school districts. Although the work of the NAACP Mississippi State Conference has been health-focused, they have helped leverage shared-use agreements to help improve health at the same time they help meet other needs within the community. This has spoken directly to the needs of the communities they serve.

- For decades, Tennessee's childhood obesity rates have steadily increased, while equity gaps between Black and White children widen. In Tennessee, 43.9 percent of African American children are obese compared with 21.1 percent of White children.[299] To address childhood obesity, the NAACP Tennessee State Conference developed an advocacy action plan that expands existing competitive foods guidelines in Jackson-Madison and Haywood County School Districts. This policy addresses competitive food sales at school activities such as fundraisers and concessions. To gain support for the competitive food sales policy, the NAACP Tennessee State Conference developed partnerships with key stakeholders, including parents and families, faith- and community-based organizations, businesses, and others, and engaged the NAACP youth councils to help with proposed alternative food and non-food options for school fundraisers. Many states, including Tennessee, have existing policies on the built environment, school-based policies and competitive foods. However, many of these policies are not being implemented or expanded. Closing persistent disparities requires advocates and public health professionals to build upon existing policies and hold the responsible entities accountable for implementing them and measuring progress.

ADDITIONAL RESOURCES:

NAACP Childhood Obesity Advocacy Manual: http://action.naacp.org/page/s/childhood-obesity-manual

Office of Minority Health: U.S. Department of Health and Human Services. http://minorityhealth.hhs.gov/

GREENBERG QUINLAN ROSNER RESEARCH

Maximizing The Impact of Obesity-Prevention Efforts In Black Communities:

KEY FINDINGS AND STRATEGIC RECOMMENDATIONS

MAY 2014

On behalf of the Trust For America's Health, the Robert Wood Johnson Foundation and the NAACP, Greenberg Quinlan Rosner Research conducted a set of nine one-on-one, in-depth-interviews among public health leaders in Black communities across the country. The participants represent both the public and private sectors and include health professionals, academics and community organizers, among others. The study was designed to evaluate barriers to and pinpoint solutions for reducing obesity in Black communities. All interviews were conducted between April 29 and May 8, 2014.

Black health leaders and activists are deeply aware of the challenges they face in combating the obesity epidemic that disproportionately affects Black communities. They come to the debate with very clear insight into these challenges, from specific barriers at the community level to broader, systemic hurdles that extend state- and nationwide.

These health leaders generally feel that many identified policy approaches to prevent and control obesity offer strong promise, but that there have been a number of hurdles that get in the way of these policies being successfully implemented in Black communities.

They identified three key areas to work on to improve the implementation of policies, including:

1. **Addressing socioeconomic and environmental factors,** particularly less access to healthy, affordable foods and a shortage of safe, accessible spaces for physical activity;
2. **Providing increased education about healthy choices and how to make these choices more relevant to their daily lives;**
3. **Developing partnerships and sustained programs,** including the need to 1) engage leaders to feel and take shared ownership of the long-term success of an initiative; and 2) create models where local, state and national organizations form lasting collaborations, access to ongoing resource and a shared set of priorities and goals.

Many work with low-income individuals living in food deserts or food "swamps" (where there is a glut of unhealthy fast food options) and if healthy food is available, it is usually not economical.

ADDRESSING SOCIOECONOMIC AND ENVIRONMENTAL FACTORS TO PROMOTE HEALTHY, AFFORDABLE NUTRITION AND ACCESS TO SAFE PLACES TO BE ACTIVE.

Recommendation: Focus on making existing policy initiatives more scalable, sustainable and equitable across all neighborhoods and income levels.

The health leaders interviewed felt there is a lot of attention on making healthier foods more affordable and accessible, and developing safe, accessible places for people to be physically active — but the hurdles to achieving these goals are still very steep.

While the general policy approaches toward obesity prevention and control are viewed favorably, there is a strong sense that the initiatives introduced on the ground level are not scalable or sustainable in their current forms. There is also recognition that the resources invested in these solutions are often short-term grants and are woefully insufficient to match the scope of the problems.

Some key policies the health leaders stressed included:

- Allowing the community to use school facilities for non-school recreational activities before and after school hours.
- Making healthy foods more affordable and available in all neighborhoods.
- Adopting public safety and crime reduction initiatives to give families safe access to recreational facilities and parks.
- Focusing on improving nutrition and increasing activity for young children, such as through efforts or regulations in daycare centers.

They stressed the importance of developing strategies for the range of other factors that impact health — such as accessible, safe, affordable transportation and housing — as a coordinated part of any successful effort to address obesity.

They also quickly point out the need to find improved ways to make these initiatives equitable — across all neighborhoods. There is an acute sense of the different resources available in higher-income versus lower-income neighborhoods — ranging from well-kept green spaces to quality grocery stores. And there is a desire for continued focus on policy changes that help improve resources for everyone, which, they believe, will help an entire community thrive. For instance, the leaders emphasized that the inability to access healthy food was both a financial and geographical hurdle. Many work with low-income individuals living in food deserts or food "swamps" (where there is a glut of unhealthy fast food options) and if healthy food is available, it is usually not economical.

These leaders also stress the importance of designing or redesigning the physical infrastructure of a neighborhood to incorporate safe, accessible sidewalks, public transportation options, parks and exercise trails.

ACCESSIBLE, AFFORDABLE HEALTHY NUTRITION

"We need to increase the opportunity for healthy food. All healthy options are concentrated in one area of my city; availability is different, based on different neighborhoods."

"The access is there, but for people with limited resources, they can't afford it."

"A healthy community should have some place that's safe and welcoming. And the ability for all family members to be outdoors, to exercise openly in a safe environment."

SAFE, ACCESSIBLE PLACES TO BE ACTIVE

"Equitable access to green space. On the more affluent side of my city, there are sidewalks—a lot of them have been redone. There are biking lanes. And then you have other areas; we have three income-based housing projects within a half mile radius, and there's not much green space available there. There is also a city park, but it's been largely neglected."

The participants also emphasized a real need to increase education attainment to combat the greater socioeconomic and environmental factors at play.

EDUCATING ABOUT HEALTHY CHOICES AND MAKING THEM MORE RELEVANT TO DAILY LIFE

Recommendation: Focus on policies and programs that are social, enjoyable and integrated into daily life and routines.

The health leaders raised concerns that there is not enough information available in many Black communities about why and how to make healthy choices. Specifically, there was concern about the lack of education provided by both schools and the medical community. Giving a community funding to combat obesity is not enough—Black community leaders are quick to point out that change cannot start to take hold unless there is a proper education campaign to accompany these resources.

Another challenge is that conversations about the obesity epidemic often focus on the issue of weight rather than on health. For example, education about how good nutrition and increased physical activity can reduce risk for or help manage type 2 diabetes, heart disease and stress is lacking. There also is not enough information about ways to manage buying healthy food within a budget.

The participants also emphasized a real need to increase education attainment to combat the greater socioeconomic and environmental factors at play. For instance, the health leaders emphasized the need to increase education to promote good nutrition and increased physical activity to counter the fact that food of lower nutritional value is often more easily available and cheaper, and there is such heavy intensity of marketing junk food in these communities.

The health leaders stressed that some of the most important ingredients to creating successful, long-lasting programs are often not addressed: making them social, enjoyable and integrated into daily life and routines.

For instance, the health leaders in these Black communities place a high premium on the need to teach healthy behaviors in a social atmosphere. As an example, some of the most effective programs they highlighted—or would like to see implemented in their own communities—are healthy cooking classes, and taking advantage of shared-use agreements to start walking clubs, athletic teams and dance classes for both children and adults.

In addition, they emphasized the need to meet people where they are, and make efforts fit into people's needs. Every person, neighborhood, or community has different needs; a "one size fits all" approach to reducing obesity is not sustainable. This goes hand in hand with the social aspect —the programs need to be relevant to the specific community. Many of the participants highlighted cooking classes as an effective way to reach Black communities, not just for the social aspect but also for the usefulness in teaching nutrition and even food budgeting. "This needs to become part of the lifestyle. We need to figure out ways to make Southern cuisine healthier. There has to be a way to retain some of the style and tradition, but with healthier options," said one participant.

INCREASED EDUCATION ABOUT HEALTH AND HEALTHY CHOICES

"There's very little preventive advice. Most times, people aren't getting any advice on how to get healthy and make small changes, even from their doctor."

"Schools need to educate students about nutrition, so they can make better choices. Parents need to be educated because they did not have the advantage of schools that were providing that sort of information...I think we can all become better advocates for promoting healthy options."

"It takes commitment from the community to see that this is not fly by night. We need to continue to work with young people to get them to see, early on in life, that if you're healthier, you feel better, you learn better."

MAKING INITIATIVES SOCIAL AND FUN

"For kids, [these efforts] would work if you make it fun and social, if you did it around games, activities and sports. Kids want to be part of the group; it's social for them."

"There was a man in our community that was working on losing some weight, and so he was getting on the radio, encouraging and challenging parents, students, everybody, to come walk with him. And he wanted a really, really large group of people—they would walk for 30 minutes, and for kids, every time you walked, you got to put your name in for a drawing. That worked really well."

DEVELOPING PARTNERSHIPS AND SUSTAINABILITY

Recommendations: Focus on building lasting programs and community engagement — including buy-in from the outset, shared ownership and goals, coordination with existing assets and efforts and providing programs and services that help connect with the needs and interests of the members of the community — from the outset.

The health leaders reported feeling that many of the obesity initiatives introduced in their communities do not have built-in goals of sustainability, long-term focus or strategies that engage people within the community to take ownership. They report there is a need to improve the connection between state and national agencies and local communities, including mechanisms to get "buy-in" from individuals within the community, as well as from policymakers and other change agents.

Building sustainable programs in a community requires this buy-in at the outset. National and state groups often have the ability to develop and evaluate particular approaches and provide financial resources, but unless the community has shared ownership and a shared sense that an initiative is a priority or fit for that community, there is little likelihood that the initiative will gain traction or be successful. Local health leaders have a strong interest in partnering with national and state groups because they recognize the expertise and resources those groups provide. Yet local health leaders also are calling for more shared priority-setting and additional support for technical assistance aimed at engaging and training leaders in communities to take ownership of initiatives.

The leaders reported the main procedural barrier to programs comes from a lack of coordination — which could be addressed by ensuring there is a shared vision from the outset and that there is clear, consistent communication across groups. It is also important to learn about the organizations and agencies already in a neighborhood or community. In many cases, there are groups — such as initiatives by other community- and faith-based organizations or are provided through education or other social service systems — that already exist with shared visions, but there may be limited or no attempts to understand, connect and coordinate with their efforts. The leaders stress the importance of making sure public health officials consult with the communities about existing assets, structures and processes as an essential ingredient when trying to make systemic changes.

The leaders discussed examples of effective programs, which included having a community leader or organization heavily involved in the effort and a sense that the initiative was helping support multiple objectives within a community, such as a shared-use agreement that supports youth sports or walking clubs, which can help foster stronger social and community connections, provide a safe afterschool environment and serve as a crime prevention strategy. The most positive examples of policies and activities focused on making healthy decisions part of a daily routine for both adults and children.

The leaders acknowledge there is often a lot of discussion about community engagement as part of public health initiatives and underscore the importance of having a shared definition of what this means from the community's perspective.

The leaders discussed examples of effective programs, which included having a community leader or organization heavily involved in the effort and a sense that the initiative was helping support multiple objectives within a community, such as a shared-use agreement that supports youth sports or walking clubs…

BUILDING SUSTAINABILITY

"I think, when you have these parachute programs where they kind of drop in, do work and disappear, that's not effective. But when there's an investment in empowering the community to become the program, and become leaders of the program, that's very effective."

"I think what works is when groups and organizations, and even individuals, get community buy-in. That's very important, because when you look at it from the standpoint of implementing programs or policies, then it has to be sustainable...so even if funding runs out, then you've made inroads within the community."

IMPROVING PARTNERSHIPS AND COORDINATION

"Someone has to step up, take the lead, and say, 'Here's what we'd like to do, would you like to sit at the table with us?'"

"There's sometimes a general lack of engagement between organizations. Organizations become sort of a silo, and I'm thinking it becomes siloed because of funding. Everybody wants to identify funding sources and go out and do the work. But the challenge in that is that even if you're competing against organizations—in some sense—to get the funding, you want to hold on to what you have. And...they don't fully engage other organizations in a way where everybody benefits from it."

"For me, from start to finish, the process has to include community engagement and data engagement. So, every decision that we make along the way, we make it based on community input AND data input. And let both tell us where we need to go."

"I think we need to get the word out in a way that the community understands. And I think, often, the state agencies don't drill it down, or they don't know how to get it to the folks that need it the most."

ADDITIONAL RESOURCES:

NAACP Childhood Obesity Advocacy Manual.:
http://action.naacp.org/page/s/childhood-obesity-manual

Office of Minority Health,: U.S. Department of Health and Human Services.
http://minorityhealth.hhs.gov/

Overweight and Obesity Among African American Youth. Leadership for Healthy Communities. Spring 2014.
http://www.leadershipforhealthycommunities.org/resources-mainmenu-40/fact-sheets/700-overweight-and-obesity-among-african-american-youths

EXPERT COMMENTARY

BY LEON T. ANDREWS, Jr., Senior Fellow,
National League of Cities

The Next Step in Reducing Obesity in Cities, Towns and Counties: Focusing on Vulnerable Populations

Not too long ago, managing obesity was seen solely as an individual responsibility. However, as obesity rates began their steady climb upward over the last decade or so, local leaders and residents began to understand more fully the risks obesity can pose to their neighborhoods, communities and cities, and the role good government policy and action can have in helping people get and stay healthy.

The most effective policies have been put in place by local leaders that were able to tap into specific community resources.

As this shift in public consciousness grew, mayors in cities across the country began to champion public policies that promote healthy eating and active living. These policies are meant to create more walkable, bikeable and transit-accessible neighborhoods, and to encourage better use of and increased connectivity between recreation centers and parks. They have commonly been implemented through shared-use agreements, land use agreements, community gardening initiatives and complete streets and active transportation policies.

Clearly, mayors have an important role to play in forming partnerships and using their influence to put policies aimed at reducing obesity in motion. They are uniquely positioned to encourage citywide implementation of policies and programs that promote healthy communities.

Today, policies to increase healthy eating and active living are being implemented all across the country. For instance, in Philadelphia, Mayor Michael Nutter has led a number of policies that have revamped how the city approaches public health through food financing. The mayor, his staff and partners have forged public-private partnerships and provided incentives resulting in almost 20 retail sites offering fresh fruits and vegetables to low-income neighborhoods in Philadelphia. Elsewhere in Pennsylvania and across the country, we've seen the Fresh Food Financing Initiative become a major model for assisting lower income people gain access to fresh, affordable food.

We've also seen shared-use agreements welcomed wholeheartedly in communities throughout the South. In larger southern cities, complete streets policies have been incredibly important, while in both large and smaller communities mayors have worked to maximize community gardens and farmers markets. In particular, mayors have embraced policies that require farmers markets to accept Women, Infants and Children and Supplemental Nutrition Assistance Program benefits.

For example, in Mississippi, communities have particularly embraced land use protection for community gardens. And Jackson, Miss. is one of a few cities to really look at how their city is oriented and figure out ways to improve walking and biking.

There is similar work going on in Hernando and Tupelo, Miss., Charleston, S.C., Little Rock, Ark., and Baton Rouge, La. Some of these cities don't get mentioned as often as they should, but they are definitely leading the way in making policy changes that result in healthier communities.

At the same time, while the creation and support for these polices are great wins in the battle against obesity, it's unclear whether they are actually reaching and benefiting those in the most vulnerable neighborhoods. Complete streets policies, for example, have helped cities redesign their downtown, but often left other neighborhoods — where more economically disadvantaged people reside — largely untouched.

The next step in the fight against obesity is moving from action to evaluating impact, i.e., making sure that health-promoting policies reach the communities that need them the most. There is far more to be done in this arena — mayors want to know how to target policies to ensure they are reaching their most vulnerable citizens.

Unfortunately, we aren't there yet, but the conversations are happening and the wheels are starting to turn faster. And there is reason for optimism.

One notable example is Let's Move! Cities, Towns and Counties (LMCTC), which is focused on several important areas connected to health disparities, including: training early childcare and education providers to promote physical activity and healthy eating; providing healthy foods to school-aged children before, during and after school and/or during the summer; increasing access to healthy foods where cities offer and sell food; and ensuring appropriate city lands are optimized for play.

So far, 425 local elected officials are engaged in LMCTC and moving forward important policy work focused on children and vulnerable populations. Also, there is a strong southern presence — Arkansas, Mississippi, Alabama and other states, which is particularly important given that region's high obesity rates and poverty levels. These are exactly the places we need to reach to truly stem the tide of obesity.

LMCTC is just one opportunity for mayors to maximize their leadership and use their voice in addressing the health of their community, and, in particular, the health of vulnerable populations. When we talk about moving the needle, this is the logical progression.

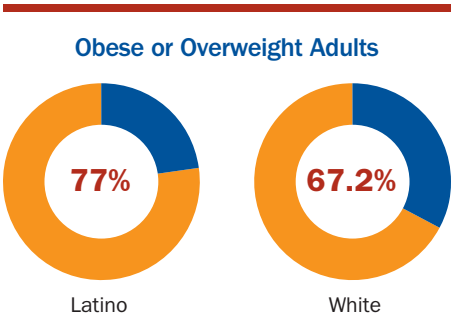
Obesity Prevention in Latino Communities

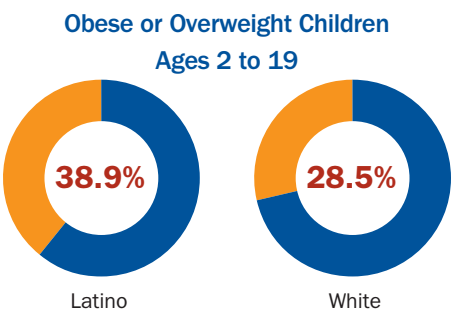
CURRENT STATUS:

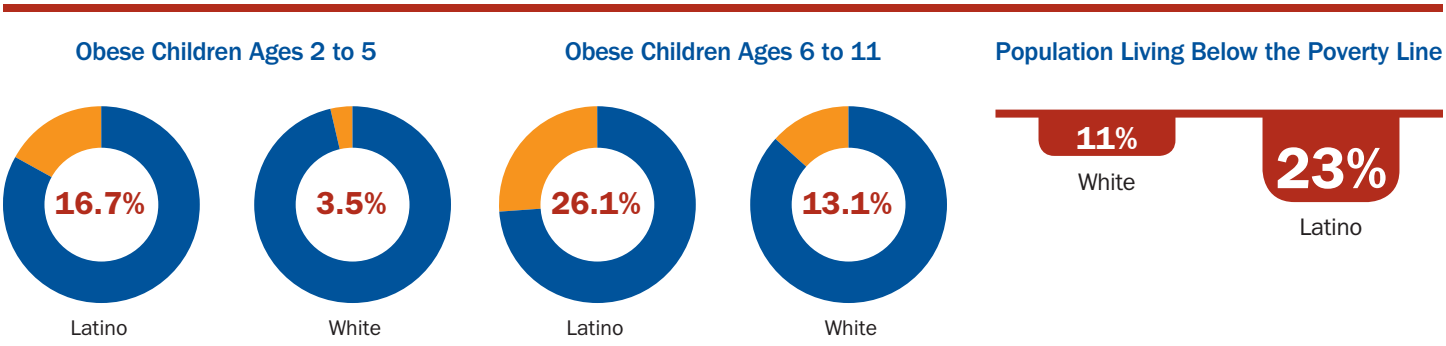
Inequities in access to healthcare, the quality of care received and opportunities to make healthy choices where people live, learn, work and play all contribute to the rates of obesity being higher for Latino adults and children compared to Whites. Also contributing to the higher rates of obesity is the fact that Latino communities experience higher rates of hunger and food insecurity, limited access to safe places to be physically active and targeted marketing of less nutritious foods.[300, 301]

Latinos are the fastest growing population in the United States — it is estimated that nearly one in three children will be Latino by 2030 — so addressing these disparities is essential for the well-being of individuals and families and to help contain skyrocketing U.S. healthcare spending and increase the nation's productivity.[302]

- 42 percent of Latino adults are obese compared with 32.6 percent of Whites.[303] More than 77 percent of Latino adults are overweight or obese, compared with 67.2 percent of Whites.
- 22.4 percent of Latino children ages 2 to 19 are obese, compared with 14.3 percent of White children.[304] More than 38.9 percent of Latino children are overweight or obese, compared with 28.5 percent of White children.
- Rates of severe obesity (BMI greater than 120 percent of the weight and height percentiles for an age rage) are also higher among Latino children ages 2 to 19 (6.6 percent) compared with White children (3.9 percent).[305]







- And, the obesity rates for Latino children are much higher starting at a young age — for 2 to 5 year olds, the rates are more than quadruple those of Whites (16.7 percent compared with 3.5 percent).[306] By ages 6 to 11, 26.1 percent of Latino children are obese compared with 13.1 percent of Whites. Almost three-quarters of differences in the rates between Latino and White children happens by third grade.[307]

Strategies to address these disparities must include a sustained and comprehensive approach — targeting the challenges that stem from neighborhoods, schools, workplaces and marketing environments that make it difficult to access healthy affordable foods and be physically active.

- **Lack of access to affordable healthy food:** Nearly one in four Latino households are considered food insecure (when having consistent access to adequate food is limited by lack of money or other resources), compared with 11 percent of White households.[308] Approximately 23 percent of Latino families are living in poverty,[309] and over the past 30 years in the United States, White families have earned $2 for every $1 that Latino families earned.[310]

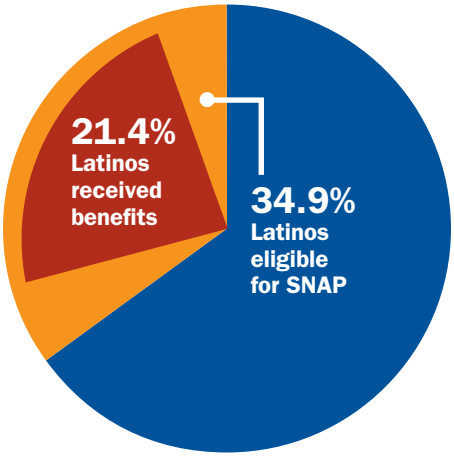
A number of studies have shown that when Latino families do not have enough money for everyone to eat full and nutritious meals, there is an increased risk of obesity, particularly among the children in the household.[311] Latino children consume higher amounts of sugar-sweetened beverages than other children,[312] and one study in Houston, from 2000 to 2004, found that two out of every three foods Latino children consumed included pizza, chips, desserts, burgers or soda/juice.[313]

In part, this is because there is a link between income and food choice—often the less expensive options that are purchased to help stretch budgets are lower in nutritional quality. Low-income Latino families spend about one-third of their income on food, and much of the food purchased is calorie-dense, low in fiber and high in fat, sodium and carbohydrates.[314]

Lack of access to healthy foods in neighborhoods is also a problem. Greater accessibility to supermarkets is consistently linked to decreased rates of overweight and obesity.[315] Studies have found that there is less access to supermarkets and nutritious, fresh foods in many urban and lower-income neighborhoods and less healthy items are also often more heavily marketed at the point-of-purchase through product placement in these stores.[316, 317] Latino neighborhoods have one-third the number of supermarkets as non-Latino neighborhoods.[318] According to the 2013 YRBS, 9.3 percent of Latino youths did not eat vegetables during the prior week, compared to 4.5 percent of White youths.[319]

In addition to food access issues at home and in their neighborhoods, Latino students also tend to have increased access to unhealthy foods at school.[320] A number of studies have found that schools with a higher proportion of Latino students tend to have weaker policies regarding access to competitive foods in schools, and may be less likely to implement nutritional guidelines for competitive foods.[321]

SNAP Participation by Latinos in 2011



STUDIES HAVE FOUND THAT 84 PERCENT OF YOUTH-TARGETED FOOD ADVERTISING ON SPANISH-LANGUAGE TV PROMOTES FOOD OF LOW NUTRITIONAL VALUE.

- **Barriers due to language, culture and immigration status:** Several factors can prevent many Latinos from participating in programs that could provide increased access to healthier choices. Health education and programs — including ones designed to improve nutrition, increase activity and prevent obesity-related health problems — are often not made available in Spanish and not sensitive to cultural differences. In addition, many health education workers have not been trained to work with Latino populations. Often access to needed programs is further impeded when immigration status is related to eligibility for different nutrition and health programs, or when potential beneficiaries fear involvement of immigration officials. There can be limited information and lack of understanding by the potential participants and the workers in the programs themselves, who also may not be trained to understand how to provide services for people of different immigration status or for Spanish speakers. Finally, there exists a history of issues and stigma within systems, which can make it harder for many Latinos to choose to take advantage of available benefits. In 2011, 34.9 percent of all Latinos were eligible for SNAP but only 21.4 percent received benefits.[322, 323]

- **Higher exposure to marketing of less nutritious foods:** Latinos are a major and increasing target for food marketers, particularly due to their increasing proportion of the U.S. population and relative spending power. Between 2010 and 2013, fast food restaurants increased their overall advertising expenditures on Spanish-language TV by 8 percent. Latino preschoolers viewed almost one fast food ad on Spanish-language TV every day in 2013, a 16 percent increase from 2010. In addition, low-income Latino neighborhoods have up to nine times the density of outdoor advertising for fast food and sugary drinks as high-income White neighborhoods,[324] and Latino children are more likely to attend a school that is close to fast-food restaurants and convenience stores.[325]

Only one-third of Latinos live within walking distance of a park — compared with almost half of all Whites.

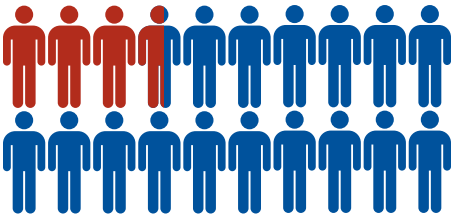
- **Limited access to safe places to be physically active:** Physical activity is important for maintaining a healthy energy balance.[326] Studies have found trends showing Latinos often have less access to safe places to play or be active.

In 2011, Latino adults were 30 percent less likely to engage in physical activity as Whites.[327] According to the 2013 YRBS, 16.2 percent of Latino youth did not participate in at least one hour of daily physical activity during the prior week, compared with 12.7 percent of White youth.[328]

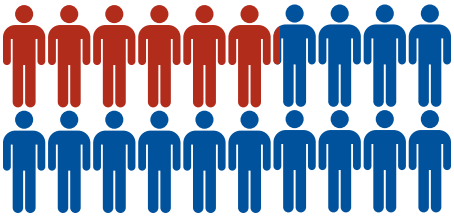
Elementary schools with a majority of Latino students are less likely than those with a majority of White students to have 20 minutes of recess daily or 150 minutes of physical education a week.[329] Latino children are less likely to be in after-school activities where they are physically active, due to factors including cost of participation, transportation and language barriers.[330] And, more than 80 percent of Latino neighborhoods did not have an available recreational facility, compared to 38 percent of White neighborhoods, according to a 2003 to 2004 study.[331]

WHY INEQUITIES IN OBESITY RATES MATTER:

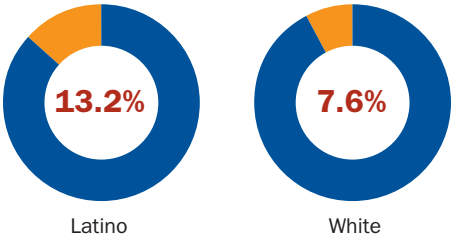
U.S. Latino Population in 2012 = 18%



U.S. Latino Population in 2060 > 30%



Population Over 18 with Diabetes



- Reducing health disparities among Latinos is important for the future health of the country — and can help save billions of dollars in healthcare costs — because the U.S. Latino population is expected to grow from 18 percent in 2012 to more than 30 percent in 2060.[332]
- Latinos are disproportionately affected by diabetes, with 13.2 percent of Latinos over age 18 having diabetes, compared with 7.6 percent of Whites in the same age group.[333]
- Latinos are more likely to suffer a stroke compared to other ethnic groups. Specifically, Mexican Americans suffer 43 percent more from stroke — the leading cause of disability and the third-leading cause of death — than Whites.[334]
- High rates of chronic illnesses, which in many cases are preventable, are among the biggest drivers of healthcare costs and reduced worker productivity. A study by the Urban Institute found that the differences in rates among Latinos, African Americans and Whites for a set of preventable diseases (diabetes, heart disease, high blood pressure, renal disease and stroke — many of which are often related to obesity) cost the healthcare system $23.9 billion annually.[335] Based on current trends, by 2050, this is expected to double to $50 billion a year.
- Eliminating health inequalities could lead to reduced medical expenditures of $54 billion to $61 billion a year, and recover $13 billion annually due to work lost by illness and about $250 billion per year due to premature deaths, according to a study of 2003 to 2006 spending.[336, 337]

Policy Recommendations:

- Ensure community-based obesity prevention and control strategies are culturally and linguistically appropriate and use sustained and comprehensive interventions to maximize effectiveness. Policy solutions must consider and target the variety of factors that impact an individual's environment. Efforts must be culturally competent and include English- and Spanish-language communications campaigns and delivery of social services that use respected, trusted messengers and appropriate channels.

- Increase access to and utilization of promotores (community health workers, peer leaders and health advocates) who more effectively connect Latino communities with public health services, the healthcare system and other social services. Promotores play an important role in promoting community-based health education and prevention in a manner that is culturally and linguistically appropriate.[338] New Medicaid regulations permitting reimbursement of community health workers should be leveraged to increase the role of promotores in obesity prevention.

- Provide education to Latino parents about childhood obesity, and the importance of healthy eating and physical activity, in a culturally sensitive way. Education should include information about enrolling in federal programs designed to ensure healthy and adequate nutrition, such as SNAP.

Policy Recommendations:

- Standards should be set to limit the amount of advertising of foods of low nutritional value, particularly advertising targeting Latino children, via television, radio, new digital media (internet, social media, digital apps, mobile phones, tablets, etc.), outdoor ads and point-of-sale product placements. Policies should help encourage increased marketing of healthier food products to children and families.

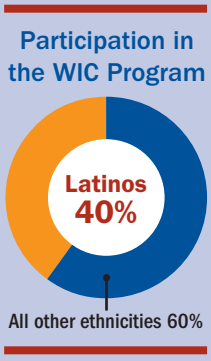
- Healthy food financing initiatives should help to recruit additional grocery stores and support the availability of affordable, healthy products within existing stores in predominately Latino communities.

- Partnerships between government, businesses, faith-based groups, community organizations, schools and others should be promoted to increase access to healthy, affordable food and safe places for physical activity in Latino communities and neighborhoods. These partnerships should leverage the local resources and abilities of each of these partners.

- Support for addressing racial and ethnic inequities in obesity — at the federal, state and local levels — should be increased.

EXAMPLES OF STRATEGIES AND CASE STUDIES

- A number of nutrition assistance programs, including SNAP, the WIC program, CACFP and school meal programs, can help increase access to affordable food and provide education about how to eat healthier food on a limited budget.
  - The National Council of La Raza (NCLR) estimates that 17 percent of SNAP beneficiaries are Latino.[339] Participation in SNAP can help provide access to healthier foods. For instance, one study found that Mexican American children living in food-insecure homes were more likely to be at risk for becoming overweight (more than 42 percent) than Mexican American SNAP children coming from homes without food security challenges (36 percent).[340] Another component of SNAP, SNAP-Ed, can help participants choose budget-friendly, healthier foods.[341] SNAP-Ed is a partnership between USDA and the states that aims to provide SNAP participants or eligible non-participants with the skills and knowledge to make healthy choices within a limited budget and choose active lifestyles consistent with federal dietary guidance. Researchers and local implementers report positive behavior changes and gains in food security as a result of SNAP-Ed.[342]
  - Latinos comprise approximately 40 percent of participants in the WIC program.[343] Studies have shown that revisions to WIC food packages to offer healthier foods improved availability, variety and sales of healthy food and increased consumption of fruits, vegetables, whole grains and low-fat milk.[344] Latino children in families receiving WIC benefits were more likely to be at a healthy height and weight compared with Latino children who were eligible for benefits but not participating in WIC.[345]



- Active Living Logan Square was designed to increase physical activity among Latino children in Chicago and promote partnerships between school administrators, local policymakers and community members. With city approval, the partnership piloted three Open Streets events, closing four to eight miles of road to motorized vehicles, for use by over 10,000 residents from five diverse communities, in order to help create safe, inviting places for physical activity in a predominantly Latino urban community. Today, additional pilot programs have been launched throughout the country. Part of the success of the program is attributed to the use of social and culturally competent media among planners and program staff, and the delivery of information to the residents by other bilingual community members.[346]
- New York City's Healthy Bodega Initiative recruited approximately 1,000 bodegas to increase their offerings of low-fat milk and 450 bodegas to increase their offerings of fruits and vegetables. The city provided promotional and educational materials to encourage consumers to buy the healthier products and call on their local bodega to participate. The campaign led to increased sales of low-fat milk in 45 percent of participating bodegas, increased sales of fruits in 32 percent of participating bodegas, and increased sales of vegetables in 26 percent of bodegas.[347]
- Healthy RC Kids Partnership focused on Southwest Cucamonga, a predominantly Latino community in California with high rates of poverty, where two-thirds of residents are considered obese or overweight. The area had few neighborhood amenities—there were no grocery stores selling fresh produce and residents had limited access to safe, open space for physical activity. Healthy RC Kids was established by the city and included collaboration with residents and more than 50 community stakeholders to identify barriers to healthy eating and active living. As a result, more community gardens and farmers' markets were created and the City Council amended the development code to allow vacant land to be used to grow produce and to allow farmers' markets in expanded areas of the city. This eventually led to a new farmers' market in Rancho Cucamonga and plans to open one in Southwest Cucamonga. A United Way grant allowed the Partnership to implement the "Bringing Health Home Program," which provides matching subsidies of up to $50 a month to help Southwest Cucamonga residents purchase fresh produce at local farmers' markets. The city also provides incentives and information for farmers' markets to accept payments from food assistance program recipients.[348]

COMER BIEN[349]

In an effort to gain greater understanding of the food environment among Latino families, NCLR conducted a video and story-banking project that captured the experiences of Latino parents and caregivers around the country in feeding their families. The stories feature individuals who range from multigenerational U.S. citizens to first-generation immigrants raising their U.S.-born children. Respondents talked to NCLR about buying and preparing food, community resources and the health of their children. The interviews help gain perspective into the barriers Latinos face in feeding their families and strategies for how to improve nutrition, ranging from monthly budgeting to learning to cook traditional cultural foods in healthier ways.

PROMOTORES: USING LATINO COMMUNITY HEALTH WORKERS TO REACH VULNERABLE POPULATIONS

Promotores play an important role in promoting community-based health education and prevention in a manner that is culturally and linguistically appropriate, particularly among populations that have been historically underserved and uninsured.[350] *Promotores* are especially important because they typically share the ethnicity, language, socioeconomic status and life experience of the community members they serve.[351]

Evidence shows that *promotores* help improve intervention outcomes. A systematic review of evidence-based obesity treatment interventions for Latino adults in the U.S. found that the two interventions with the largest effect sizes used promotores.[352] Both studies involved promotores as the intervention implementers in the community.[353, 354]

In 2011, HHS launched the *Promotores de Salud* Initiative in an effort to educate the Latino community about available healthcare services and other benefits made possible by the ACA. Since the launch, the HHS *Promotores de Salud* Steering Committee has worked to improve Latino access to health information and services.[355]

Salud America![356, 357, 358]

Salud America! is an RWJF-funded research network that aims to prevent obesity among Latino children. Since the start of *Salud America!* in 2007, the network has developed essential scientific evidence, research, communications and a wealth of information to raise awareness of Latino childhood obesity, build the field of researchers working to reduce the epidemic and empower stakeholders to take action and create change.

Salud America! works to improve Latino children's health by targeting six key areas that could make the greatest advances in reducing obesity in the least amount of time: sugary drinks, healthier marketing, active play, active spaces, better food in the neighborhood and healthier school snacks.

Salud America! launched a Growing Healthy Change initiative to bring together evidence, new policies, success stories, social media and resources to help individuals and communities develop capacity to create healthy policy changes in the six key areas. The Growing Healthy Change website allows you to input your address and find concrete policy initiatives happening in your neighborhood, school, city or state to improve nutrition, physical activity and marketing aimed at Latino kids. The website also offers many resources, success stories and videos of real-life *Salud* Heroes of change to inspire and help individuals, groups and communities to create their own change.

© AP Images/Paul Chou

ADDITIONAL RESOURCES:

Salud America!: The RWJF Research Network to Prevent Obesity Among Latino Children: http://salud-america.org/

Salud America! Growing Healthy Change: http://www.communitycommons.org/salud-america/

Comer Bien. National Council of La Raza:
http://www.nclr.org/index.php/issues_and_programs/health_and_nutrition/healthy_foods_families/comer_bien/

Office of Minority Health, U.S. Department of Health and Human Services: http://minorityhealth.hhs.gov/

GREENBERG QUINLAN ROSNER RESEARCH

Maximizing The Impact of Obesity-Prevention Efforts In Latino Communities:

KEY FINDINGS AND STRATEGIC RECOMMENDATIONS

MAY 2014

On behalf of Trust For America's Health and Salud America!, Greenberg Quinlan Rosner Research conducted a set of 10 one-on-one, in-depth-interviews among public health leaders in Latino communities across the country. The participants represent both the public and private sectors and include academics, health professionals and community and business leaders, among others. The study was designed to assess barriers to and identify solutions for reducing and preventing obesity in Latino communities. All interviews were conducted between April 22 and May 1, 2014.

Health leaders interviewed for the study are acutely aware of how the Latino community is disproportionately affected by America's obesity epidemic — but they are also optimistic about how well-thought-out and effectively implemented policies can help achieve better health. Overall, they feel the general policy approaches that have been identified for how to respond to the obesity epidemic are on the right track but policy development is only half the battle, and the implementation of those policies has been relatively limited in the Latino community.

The interviews revealed two core issues that must be addressed to improve implementation:

1. **Community engagement needs to happen simultaneously with investment of resources, or else the investment will not bring the level of cultural change that is needed.** This includes making community input, leadership, accountability and sustainability priority goals at the outset — and building programs that match the interests of the community and will motivate participation.

2. **Prevention efforts must be true partnerships between national/state organizations and communities.** Resources and technical assistance typically flow from top down, but effective implementation requires understanding and integrating with the priorities, perspectives and existing resources within those communities. This means going beyond prescriptive measures and grants by improving coordination and synergies with other efforts, establishing shared goals and ownership and providing training and assistance to build leadership within the community.

NUTRITION, ACTIVITY AND SOCIOECONOMICS

BARRIER: Socioeconomic factors amplify the barriers that can get in the way of physical activity and access to healthy food.

RECOMMENDATION: Help make healthier choices easier by increasing access to and opportunities for physical activity and healthy eating — but don't stop there.

The leaders in the Latino communities were very supportive of a wide range of obesity prevention policy approaches — ranging from healthy food financing initiatives to improving the built environment to improving nutrition and activity in schools to improving and increasing public education initiatives to supporting shared-use agreements to allow members of the community to have access to school and community centers for recreational purposes during off-hours.

But they unanimously agreed that: 1) more resources are needed to support these efforts; 2) these programs must become more focused and efficient, and also be developed within the context of programs that address other socioeconomically linked issues, such as quality housing, education, crime reduction and transportation; and 3) efforts must proactively engage members of the community. For example, instead of just opening schools for community use during non-school hours, soccer leagues, walking clubs, community cooking classes and other organized social programs should be developed so the community has a way to make use of these expanded resources.

In addition, a number of the leaders recommended focusing on solutions that improve health along with overall quality of life, including:

- Helping people integrate health into their daily lives by making communities more walkable and improving public transit.
- Making opportunities for good health fun and social, such as cooking classes, walking clubs and community gardens.

AFFORDABLE, ACCESSIBLE FOOD AND SAFE PLACES TO BE ACTIVE

Socioeconomics

"We have healthy food in close proximity, but we don't have AFFORDABLE, healthy food."

"The built environment doesn't make healthy choices easy for individuals. There aren't safe parks for kids to play. As a result, poor choices are made. We need safe and fun recreational activities."

"The obstacles are finances, which is not unique. But we also have less access to healthy food; stores don't have healthy products."

Structural Concerns and Building Motivation

"Awesome. Improving nutrition and increasing activity for young children, such as through efforts or regulations in daycare centers] would work, because little kids want to be part of the group. Make it social."

"I would definitely support [shared use agreements], and I think it would work. I think a significant number of people in my community can't afford a gym, so it's important for them to have access. A place to walk, do laps, get moving. But there's also a need to have a structure and organization in place—groups walking together, for example. We need to put a motivation and structure in place, along with access."

"[Making water available as an alternative to sugary drinks is] good, but there needs to be a lot more. You need infrastructure — new pipes because the water tastes bad or is unsafe. You need education on why water is better."

"Good. But [shared-use agreements] would be most effective if schools have an active role in organizing and supporting it."

EDUCATION AND CULTURE

BARRIER: Education and cultural differences contribute to less knowledge about nutrition and activity. Many people do not understand which options are healthier or why they should choose healthier options. This is reinforced by disproportionate marketing of unhealthy foods in these communities.

RECOMMENDATION: Keep educating and raising awareness; make it relevant to people's lives.

The Latino health leaders emphasized that simply putting the physical resources into place is not enough. Physical resources need to go hand-in-glove with education campaigns that focus on how to eat healthier and be more physically active—and how eating well and being active can be enjoyable, help reduce stress, and lower risk for or help manage type 2 diabetes and other chronic diseases. The health leaders noted the importance of personal responsibility, but also acknowledged that there needs to be increased education about which resources are available and how to be healthy, including how to make healthy choices easier even within the context of economic constraints. In fact, increasing education was viewed as even more important to give people the tools and information about resources to combat economic barriers — particularly to actively promote healthy foods in areas where unhealthy options are often more easily available and viewed as cheaper.

Neither cultural nor language barriers were raised organically during the interviews, but when asked directly, the leaders responded that cultural issues in particular contribute to obesity. For instance, many Latino families work to maintain cultural food traditions, but then the problem is exacerbated by habits rooted in U.S. culture, including driving more instead of walking, adopting bigger portion sizes, buying more processed foods or using less healthy ingredients because they are readily available. While the leaders acknowledge that immigration status can impact access to healthcare, they universally agreed that the bigger concern is that the less healthy habits adopted by many immigrants after they come to the United States have a negative impact on their health. The leaders largely reported that most of the information about nutrition and physical activity was available in both Spanish and English, but they were concerned about getting useful information in a sustained and supportive way to the people who could most benefit from it.

The health leaders stressed the importance of tailoring policies and approaches in ways that make better nutrition and increased physical activity relevant to people's daily lives. For instance, one participant explained that some activities, like soccer and dancing, are often more popular, are more social and have more cultural resonance than others, such as weightlifting.

Investing in a social component for obesity prevention initiatives is also important. A number of health leaders raised concerns about a lack of social cohesion in the Latino community, which takes away the motivation to learn from others, positive peer pressure influences and the ability to join in community activities. For example, shared-use agreements can help serve as an impetus for getting members of the community together and creating groups like recreational sports, walking or exercise groups, or cooking clubs, where healthy activities are combined with positive social experiences.

Education

"There definitely needs to be more education for kids, but also older adults. We need to make it part of normal daily activities, integrate it into school and home life. They need to hear this message everywhere, that it's OK and important—they need to hear at school, church, at the doctor, in retail, on TV and in the media. A lot of times there are resources, but people don't know about them."

Cultural Influences

"The question is how to improve while still retaining cultural aspects—you can be healthy eating Latino food."

"As an immigrant, I think it's more about a later adoption of unhealthy, American eating habits. The longer you're here, you start to pick up on unhealthy habits like fast food."

Social Solutions

"We need people to come together. There almost needs to be a social pressure that everyone feels, that they need to get on board. There has to be a social element."

"The programs most embraced are the ones that are free and open to everyone. Also the ones that are fun. People want to feel better — they may not know they need to lose weight or have diabetes, but they are willing to try riding a bike to feel better generally. Fun and accessible, people will respond to."

"We have failed a lot. But what has finally worked is the social aspect. We created social programs where we eat together, exercise together, play, laugh, experience life together. And while we're gathering, we tackle the issues that contribute to obesity."

COLLABORATION, SHARED OWNERSHIP AND SUSTAINABILITY

BARRIER: Programs and efforts often 1) are based on short-term initiatives or grants and 2) do not include community input or leadership recruitment, coordination with other efforts within the given community or partnership building at the outset. As a result, programs do not gain traction and are not sustainable.

RECOMMENDATION: Make sustainability, continuity and community input primary goals at the outset.

Health leaders emphasized that if people from the communities themselves are not empowered to have ownership of obesity-prevention initiatives, the programs are not viable. Currently, there is not a systemic or widely successful replicable model for how to create empowerment and leadership within local communities. There is a weak connection to state and national entities, where the local groups are appreciative of resources, but there is also a feeling that these organizations and funding mechanisms tend to drop in and out, leaving local leaders overwhelmed and unable to create lasting change alone.

At the same time, local communities also need support and technical assistance that the national and state groups can provide. Policies must strike a balance that allows local leaders to identify priorities and approaches that are most appropriate within their own community and also builds on the expertise and support provided by national research and initiatives.

In addition, many times new initiatives are introduced without considering existing programs, resources and expertise in a given community. These initiatives are not coordinated with or built on existing local efforts, identified priorities or the culture of a given area. Health leaders expressed that improved coordination and context would help programs be more efficient and gain traction more quickly with community members who are already invested. For instance, if a community has worked hard to build a crime reduction effort that has gained momentum and community engagement within a neighborhood, then it would be most efficient to find ways to build physical activity programs, such as neighborhood walking programs or improving parks, within the context of that existing movement.

Health leaders also emphasized the need to consider the sustainability of programs over time, rather than focus on short-term initiatives. This requires thinking about ongoing funding opportunities, tying new resources with ongoing programs and creating partnerships within a community to ensure that communities are fully invested in efforts. Getting upfront input and ownership is also key to sustainability. The leaders expressed the importance of letting the community itself be part of the oversight and evaluation of a program to ensure efforts are efficiently and effectively meeting the community's goals. The fact that resources are scarce and critical, but often not well spent, is a great source of frustration.

Coordination and Thoughtful Planning

"Right now there is a lot of activity going on across the country, but it's very chaotic. And within each community there's not typically much alignment of interests. Resources get diluted quickly. Or there are too many things being done with too few resources. There's too much going on and not enough coordination and organization."

"There are a lot of people doing similar things. Some groups take ownership and that's great. But there's not a lot of communication between groups trying to do the same thing. It creates duplication."

Sustainability

"Making individuals part of the process. Build community participation so it doesn't stop when the grant is over. The question is how do we get a relatively small grant to have an afterlife?"

"A lot of things are two-year grants that just go away. Those are not successful."

Upfront Community Engagement and Shared Ownership

"We often fail to identify natural community leaders that can organize and mobilize people."

"The things that work are when the programming includes training the community members and empowering people who participate so they can take over. Need to encourage them to go on and start their own walking club."

"The only way is if the people who participate take ownership. It's not fair to fund two-year programs—results won't happen in that short a window. There needs to be longer periods of time to implement and educate. We need time to start to see the benefits—once people see that they can take ownership and go help others."

Coordination and Improved Efficiency and Effectiveness

"We don't need national groups to prescribe the remedy, but we do need help in determining a roadmap for achieving it."

"What makes it work is a very well-oiled and coordinated infrastructure—at the national level or local level—but the best examples are happening at both levels. The infrastructure has the money and know-how to provide support to local communities."

"We need to define what each sector is doing so it's in synergy with what other sectors are doing. So everyone's action is coordinated instead of being a mixed basket."

EXPERT COMMENTARY

BY DR. ROSE GOWEN, MD, Commissioner At-large, Brownsville, Texas

Tu Salud Si Cuenta: How Improving Health Benefits the Entire Community

In 2000, the University of Texas School of Public Health placed a satellite campus in Brownsville, a largely Latino city on the Texas-Mexico border. Researchers set to work—identifying the health risks our community faced and designing creative solutions for our unique population.

The researchers found that 80 percent of Brownsville residents were overweight or obese and one-third were diabetic—half of those people didn't even know they had diabetes.

One of the first things the research team did in response was launch "Tu Salud Si Cuenta," a Spanish-language program on local TV and radio stations. Dr. Belinda Reininger, an assistant professor at the School of Public Health, developed the program. She understood the importance of educating people about their health, but she also knew she and her team had to do more.

That's when Dr. McCormick, dean of the Brownsville campus invited me to participate in their efforts. He and his team believed it was critical to involve clinicians in public health. At the time, I was a practicing physician and the day I met Dr. McCormick my public health education began.

I started by writing a weekly column in the newspaper. I wrote about playing outside at my grandmother's house when I was a kid and the healthy meals she'd cook for us—activities that had fallen by the wayside with time. I challenged community leaders to make sidewalks and bicycle trails a priority instead of building tollways. The column captured attention and the community began to listen and learn.

CULTIVATING ACCESS TO HEALTHY FOODS

We also backed our words with action. Dr. Reininger suggested starting a farmers' market to help make fresh fruits and vegetables more affordable and accessible. We looked at examples of successful farmers' markets as we considered where to locate; what shoppers would purchase; and how to attract growers. Our goal was to create a certified Texas farmers' market in a city park, which meant navigating a great deal of "red tape" and securing a modest amount of funding.

© AP Images/Paul Chou

When Su Clinica, a local Federally Qualified Health Center, wrote the Brownsville Farmers' Market into a grant to reduce obesity, we launched the market. That grant allowed us to create a voucher program to entice people to try the produce. Community workers distributed vouchers that could be redeemed at the farmer's market to schools, homeless shelters, wound care centers and other places to reach those most at risk. Opening day was embraced by all and we sold 50 dozen farm eggs in 30 minutes! The market has been very successful, now operates year long, and has spawned the creation of two sister markets in neighboring cities.

Our wellness coalition then started a community garden program, which was sparked by a grower who received a grant for mentoring and developing neighborhood gardens.

To help launch the "Tres Angeles" garden, promotoras went door-to-door in the Buena Vida neighborhood. Interest was huge: plots sold for $15 a season and sold out fast.

Our gardeners have not only been able to feed themselves, they also sell the excess at the farmers' market and earn $200 a week. That's a big deal in a neighborhood where the average monthly income is $400.

A second garden is now in place, a third is being built and a fourth is being planned. The gardens are in low-income areas spread throughout the city. They are supervised, include nutrition education programs and have replaced empty lots with welcoming gathering spaces filled with smiles and hope. This initiative is not just about health and nutrition; it is very much about economic and community building.

HELPING PEOPLE BE MORE ACTIVE

Kids who were only a block or two from school had to take a bus each day because their streets were not safe for walking or biking.

In addition to helping people eat healthier, we also needed to make it as easy as possible for them to be active. This was challenging because in many parts of the city, sidewalks were nonexistent, in disrepair or disconnected.

We passed complete streets, sidewalk and safe-passing ordinances. Then we began a Build a Better Block Project (BBB). The BBB concept involves turning a block into an optimal version of itself—wide sidewalks, street lights, bicycle lanes, engaging storefronts—for a day. The idea is to let people "try it on for size."

At first, we chose a block downtown in need of revitalization. To prepare for BBB, the School of Public Health's dietician worked with restaurants to develop healthier options and streets were transformed into pedestrian-only spaces. Businesses on the block and even those several blocks away saw increased foot traffic and earned more money in one day than they usually do in a month.

We looked further at the built environment and designed the Belden Trail. By using grants and leveraging additional funds from the city, community and national foundations, we turned a dangerous alleyway into a well-lit mile-long concrete path that connects several schools in a low-income neighborhood.

The biggest lesson we've learned about addressing health among the Latino community in Brownsville is that we can't just talk about health. We have to explain how good health benefits all. Healthy children are happier and do better in school. Businesses see more customers when it's safe and easy for people to walk and bicycle around town. Farmers' markets and gardens stimulate local economies and help families on tight budgets.

Working collaboratively and proactively is working in Brownsville. Together we're making changes that will benefit our children today and future generations to come.

© AP Images/Paul Chou

Methodology for Behavioral Risk Factor Surveillance System for Obesity, Physical Activity and Fruit and Vegetable Consumption Rates

Methodology for Obesity and Other Rates Using BRFSS

Annual Data

Data for this analysis was obtained from the Behavioral Risk Factor Surveillance System dataset (publicly available on the web at www.cdc.gov/brfss). The data were reviewed and analyzed for TFAH and RWJF by Daniel Eisenberg, PhD, Associate Professor, Health Management and Policy at the University of Michigan School of Public Health.

BRFSS is an annual cross-sectional survey designed to measure behavioral risk factors in the adult population (18 years of age or older) living in households. Data are collected from a random sample of adults (one per household) through a telephone survey. The BRFSS currently includes data from 50 states, the District of Columbia, Puerto Rico, Guam and the Virgin Islands.

Variables of interest included BMI, physical inactivity, diabetes, hypertension and consumption of fruits and vegetables five or more times a day. BMI was calculated by dividing self-reported weight in kilograms by the square of self-reported height in meters. The variable 'obesity' is the percentage of all adults in a given state who were classified as obese (where obesity is defined as BMI greater than or equal to 30). Researchers also provide results broken down by race/ethnicity — researchers report results for Whites, Blacks and Latinos — and gender. Another variable, 'overweight' was created to capture the percentage of adults in a given state who were either overweight or obese. An overweight adult was defined as one with a BMI greater than or equal to 25 but less than 30. For the physical inactivity variable a binary indicator equal to one was created for adults who reported not engaging in physical activity or exercise during the previous thirty days other than their regular job. For diabetes, researchers created a binary variable equal to one if the respondent reported ever being told by a doctor that he/she had diabetes. Researchers excluded all cases of gestational and borderline diabetes as well as all cases where the individual was either unsure, or refused to answer.

To calculate prevalence rates for hypertension, researchers created a dummy variable equal to one if the respondent answered "Yes" to the following question: *"Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?"* This definition excludes respondents classified as borderline hypertensive and women who reported being diagnosed with hypertension while pregnant.

Endnotes

1 *The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity.* Rockville, MD: U.S. Department of Health and Human Services, 2001.

2 Robbins JM, Mallya G, Polansky M, Schwarz DF. Prevalence, Disparities, and Trends in Obesity and Severe Obesity Among Students in the Philadelphia, Pennsylvania, School District, 2006–2010. *Prev Chronic Dis*, 9, 2012.

3 Defining Overweight and Obesity. In *Centers for Disease Control and Prevention.* http://www.cdc.gov/obesity/adult/defining.html (accessed May 2014).

4 Centers for Disease Control and Prevention. National Health and Nutrition Examination Survey, 2011-2012. Prevalence of Obesity among Adults: United States, 2011-2012.

5 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA.* 2014;311(8):806-814.

6 Centers for Disease Control and Prevention. National Health and Nutrition Examination Survey, 2011-2012. Prevalence of Obesity among Adults: United States, 2011-2012.

7 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA.* 2014;311(8):806-814.

8 Skinner AC, Skelton J, Prevalence and Trends in Obesity and Severe Obesity Among Children in the United States, 1999-2012. *JAMA Pediatrics*, doi:10.1001/jamapediatrics.2014.21, 2014.

9 Odgen CL. Childhood Obesity in the United States: The Magnitude of the Problem. Power Point. http://www.cdc.gov/about/grand-rounds/archives/2010/download/GR-062010.pdf (accessed June 2013).

10 Fryar CD, Carroll MD and Ogden, CL. *Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults: United States, Trends 1960-1962 Through 2009-2010.* National Center for Health Statistics, September 2012. http://www.cdc.gov/nchs/data/hestat/obesity_adult_09_10/obesity_adult_09_10.htm (accessed May 2013).

11 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesityin the United States, 2011-2012. *JAMA.* 2014;311(8):806-814.

12 Ibid.

13 Ibid.

14 Ibid.

15 An R. Prevalence and Trends of Adult Obesity in the US, 1999-2012. *Obesity*, 2014.

16 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA.* 2014;311(8):806-814.

17 Census regions of the United States. Northeast: CT, ME, MA, NH, NJ, NY, PA, RI, VT; Midwest: IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI; South: AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, VA, TN, TX, VA, WV; West: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY.

18 Nutrition and Weight Status. In *Healthypeople 2020.* http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=29 (accessed June 2013).

19 Prevalence and Trends Data, Overweight and Obesity (BMI)—2012. In *Centers for Disease Control and Prevention.* http://apps.nccd.cdc.gov/brfss/list.asp?cat=OB&yr=2012&qkey=8261&state=All (accessed May 2014).

20 Pregnant women were included in calculations of BMI prior to 2011 and the height standards also changed in that year. Users can see that the calculated variables changed from _BMI4 to _BMI5 (and _BMI4CAT and _BMI5CAT). They can also see that the variable for height used in the calculations changed in that year. Data users are cautioned against trending before and after 2011. Documentation on the changes can be found on the BRFSS website in the calculated variable reports for the respective years.

21 Description of BRFSS and changes in methodology provided by CDC.

22 Merrill RM and Richardson JS. Validity of Self-reported Height, Weight, and Body Mass Index: Findings from the National Health and Nutrition Examination Survey, 2001-2006. *Preventing Chronic Disease*, 6(4):2009. http://www.cdc.gov/pcd/issues/2009/oct/08_0229.htm (accessed March 2010).

23 Stunkard AJ and Wadden TA. *Obesity: Theory and Therapy*. Second ed. New York, NY: Raven Press, 1993.

24 National Research Council. *Diet and Health: Implications for Reducing Chronic Disease Risk*. Washington, D.C.: National Academy Press, 1989.

25 Ibid.

26 Parker-Pope T. "Watch Your Girth." *The New York Times* May 13, 2008.

27 Trust for America's Health and Robert Wood Johnson Foundation. *F as in Fat: How Obesity Threatens America's Future, 2013*

28 Ogden CL, Lamb MM, Carroll MD, Flegal KM. Obesity and Socioeconomic Status in Adults: United States, 2005-2008. NCHS Data Brief, 50, 2010.

29 PedNSS uses existing data from the following public health programs for nutrition surveillance: Special Supplemental Nutrition Program for Women, Infants and Children (WIC); Early and Periodic Screening, Diagnosis and Treatment (EPSDT) Program; and Title V Maternal and Child Health Program (MCH).

30 Ogden CL, Carroll MD, Kit BK and Flegal KM. Prevalence of obesity and trends in body mass index among U.S. children and adolescents, 1999-2010. *Journal of the American Medical Association*, 307(5): 483-490, 2012.

31 U.S. Centers for Disease Control and Prevention. Obesity Prevalence Among Low-Income, Preschool-Aged Children—United States, 1998-2008. Morbidity and *Mortality Weekly Report*, 58(28): 769-773, 2009.

32 National Survey of Children's Health, 2007. *Overweight and Physical Activity Among Children: A Portrait of States and the Nation 2009*, Health Resources and Services Administration, Maternal and Child Health Bureau. http://www.cdc.gov/nchs/slaits/nsch.htm (accessed May 24, 2011).

33 U.S. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2013. *Morbidity and Mortality Weekly Report*, 63(SS04): 1-168, 2014.

34 Ibid.

35 U.S. Centers for Disease Control and Prevention. *Youth Online: High School YRBS* http://nccd.cdc.gov/youthonline/App/Default.aspx (Accessed June 2014).

36 Selvin E, Parrinello CM, Sacks DB, Coresh J. Trends in Prevalence and Control of Diabetes in the United States, 1988-1994 and 1999-2010. *Annals of Internal Medicine*, 160: 517-525, 2014.

37 U.S. Centers for Disease Control and Prevention, (2010). Number of Americans with Diabetes Projected to Double or Triple by 2050. [Press Release]. http://www.cdc.gov/media/pressrel/2010/r101022.html (accessed March 2011).

38 Total Prevalence of Diabetes & Pre-Diabetes. In *American Diabetes Association*. http://diabetes.org/diabetes-statistics/prevalence.jsp (accessed April 2008).

39 Ibid.

40 Dabelea D, et al. Prevalence of Type 1 and Type 2 Diabetes Among Children and Adolescents From 2001 to 2009. *JAMA*, 311(17): 1778-1786, 2014.

41 American Heart Association. *Heart Disease and Stroke Statistics — 2006 Update*. Dallas: American Heart Association, 2006.

42 Roger VL, Go AS, Lloyd-Jones DM, et al. *Heart disease and stroke statistics — 2011 update: a report from the American Heart Association*. Circulation, 123:e18—209, 2011.

43 U.S. Centers for Disease Control and Prevention. Prevalence of Abnormal Lipid Levels among Youths — United States, 1999-2006. *Morbidity and Mortality Weekly Report*, 59(2): 29-33, 2010.

44 American Heart Association. *Heart Disease and Stroke Statistics — 2006 Update*. Dallas: American Heart Association, 2006.

45 Obesity Statistics — U.S. Trends. In *The Obesity Society*. http://www.obesity.org/statistics/obesity_trends.asp (accessed April 2008).

46 What Are the Health Risks of Overweight and Obesity? In *National Heart, Lung, and Blood Institute*. http://www.nhlbi.nih.gov/health/dci/Diseases/obe/obe_risks.html (accessed May 14, 2010).

47 Trust for America's Health. *Healthy Women: The Path to Healthy Babies: The Case for Preconception Care*. Washington, D.C.: TFAH, 2008.

48 Obesity and Cancer Risk. In *National Cancer Institute at the National Institutes of Health*. http://www.cancer.gov/cancertopics/factsheet/Risk/obesity (accessed May 2014).

49 Wang Y, Chen X, Song Y, Caballero B, Cheskin LJ. Association between Obesity and Kidney Disease. *Kidney International*, 73: 19-33, 2008.

50 NHIS Arthritis Surveillance. In *U.S. Centers for Disease Control and Prevention*. http://www.cdc.gov/arthritis/data_statistics/national_data_nhis.htm#excess (accessed June 2008).

51 Beydoun et al. Obesity and Central Obesity as Risk Factors for Incident Dementia and Its Subtypes: A Systematic Review and Meta-Analysis. *Obes Rev*, 9(3): 204-218, 2008.

52 Xu WL, Atti AR, Gatz M, et al. Midlife overweight and obesity increases late-life dementia risk: A population-based twin study. *Neurology*, 76(18): 1568-1574, 2011.

53 Petry NM, Barry D, Pietrzak RH, Wagner JA. Overweight and obesity are associated with psychiatric disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Psychosom Med,* 70:288–297, 2008.

54 U.S. Centers for Disease Control and Prevention, (2013). One in Five Adults Meet Overall Physical Activity Guidelines. [Press Release]. http://www.cdc.gov/media/releases/2013/p0502-physical-activity.html (accessed June 2013).

55 U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, and Division of Nutrition and Physical Activity. *Promoting Physical Activity: A Guide for Community Action*. Vol. 1. Champaign, IL: Human Kinetics, 1999.

56 Rezende LF, Rey-López JP, Matsudo VK, Luiz OD. Sedentary behavior and health outcomes among older adults: a systematic review. *BMC Public Health*, 14(1):333, 2014.

57 Anderson LH, Martinson BC, Crain AL, et al. Healthcare Charges Associated with Physical Inactivity, Overweight, and Obesity. *Preventing Chronic Disease*, 2(4): A09, 2005.

58 KR, et al. Activity levels in mothers and their preschool children. *Pediatrics*, 133(4):e973-80, 2014.

59 Centers for Disease Control and Prevention. *State Indicator Report on Fruits and Vegetables, 2013*. Atlanta, GA: Centers for Disease Control and Prevention, 2013.

60 Institute of Medicine. *Accelerating Progress in Obesity Prevention: Food and Drink*. Washington, D.C.: National Academies, 2012. http://www.iom.edu/Reports/2012/Accelerating-Progress-in-Obesity-Prevention/~/media/Files/Report%20Files/2012/APOP/IOM_FoodDrink_brief_v4.pdf (accessed May 2014).

61 Nutrition for Everyone: Fruits and Vegetables. In *Centers for Disease Control and Prevention*. http://www.cdc.gov/nutrition/everyone/fruitsvegetables/index.html?s_cid=tw_ob191 (accessed May 2014).

62 2008 Physical Activity Guidelines for Americans. In *U.S. Department of Health and Human Services*. http://www.health.gov/paguidelines/guidelines/summary.aspx (accessed June 2013).

63 National Physical Activity Plan. *The 2014 United States Report Card on Physical Activity for children and Youth*. https://www.informz.net/acsm/data/images/NationalReportCard_longform_final%20for%20web%282%29.pdf (accessed April 2014)..

64 Department of Education Fiscal Year 2014 Congressional Action Table. In *U.S. Department of Education*. http://www2.ed.gov/about/overview/budget/budget14/14action.pdf (accessed April 2014).

65 Chriqui JF, Resnick EA, Schneider L, Schermbeck R, Adcock T, Carrion V, Chaloupka FJ. *School District Wellness Policies: Evaluating Progress and Potential for Improving Children's Health Five Years after the Federal Mandate. School Years 2006–07 through 2010-11*. Volume 3. Chicago, IL: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2013, www.bridgingthegapresearch.org.

66 Active Living Research. Increasing Physical Activity Through Recess, Research Brief, January 2012. http://www.activelivingresearch.org/files/ALR_Brief_Recess.pdf

67 Presidential Youth Fitness Program: About. In *Presidential Youth Fitness Program*. http://pyfp.org/about/index.shtml (accessed June 2014).

68 About Us. In *Let's Move! Active Schools*. http://letsmoveschools.org/about/ (accessed June 2014).

69 National AfterSchool Alliance. *Standards for Healthy Eating and Physical Activity in Out-of-School Time Settings*. http://naaweb.org/images/HEPAStandards8-4-11final.pdf (accessed April 2014)

70 YMCA of the USA, (2011). The Y Makes Commitment to Advance First Lady's Efforts to keep Kids Healthy. [Press Release]. http://www.ymca.net/news-releases/20111130-KeepingKidsHealthy.html (accessed April 2014).

71 Partnership for a Healthier America, (2014). PHA Announces BGCA and NRPA Commitment to Create Healthier Environment for Kids [Press Release]. http://ahealthieramerica.org/media/news-releases/#5482,news (accessed April 2014).

72 Policy Atlas. In *National Complete Streets Coalition*. http://www.smartgrowthamerica.org/complete-streets/changing-policy/complete-streets-atlas (accessed April 2014).

73 National Conference of State Legislatures. *State Actions to Promote Healthy Communities and Prevent Childhood Obesity, 2012*. http://www.rwjf.org/content/dam/farm/reports/reports/2012/rwjf73173 (accessed June 2013).

74 Chriqui JF, Resnick EA, Schneider L, Schermbeck R, Adcock T, Carrion V, Chaloupka FJ. *School District Wellness Policies: Evaluating Progress and Potential for Improving Children's Health Five Years after the Federal Mandate. School Years 2006–07 through 2010-11*. Volume 3. Chicago, IL: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2013, www.bridgingthegapresearch.org.

75 Active Living Research. *Policies and Standards for Promoting Physical Activity in After-School Programs, 2012*. http://activelivingresearch.org/files/ALR_Brief_Afterschool_May2012_0.pdf (accessed March 2014).

76 *Physical Activity Guidelines for Americans Midcourse Report: Strategies to Increase Physical Activity Among Youth*. Washington, D.C.: U.S. Department of Health and Human Services, 2012. http://www.health.gov/paguidelines/midcourse/pag-mid-course-report-final.pdf (accessed June 2013).

77 Centers for Disease Control and Prevention. *The association between school based physical activity, including physical education, and academic performance*. Atlanta, GA: U.S. Department of Health and Human Services; 2010

78 Active Living Research. *Active Education: Physical Education, Physical Activity and Academic Performance, 2009*. http://www.activelivingresearch.org/files/ALR_Brief_ActiveEducation_Summer2009.pdf (accessed June 2013).

79 Luepker RV, Perry CL, McKinlay SM, et al. Outcomes of a field trial to improve children's dietary patterns and physical activity. The Child and Adolescent Trial for Cardiovascular Health. CATCH collaborative group. *Journal of American Medical Association*, 275(10):768–778, 1996.

80 Active Living Research. *Do Short Physical Activity Breaks in Classrooms Work?* 2013. http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/02/do-short-physical-activity-breaks-in-classrooms-work-.html (accessed June 2013).

81 Gortmaker SL, et al. Impact of an Afterschool Intervention on Increases in Children's Physical Activity. *Medicine & Science in Sports & Exercise*, 44(3):450–57, 2012.

82 Active Living Research. *Promoting Physical Activity Through the Shared Use of School and Community Recreational Resources, 2012*. http://activelivingresearch.com/files/ALR_Brief_SharedUse_April2012.pdf (accessed June 2013).

83 Johnston LD, O'Malley PM, Terry-McElrath YM, & Colabianchi N. *School policies and practices to improve health and prevent obesity: National secondary school survey results, school years 2006–07 through 2009 –10*. Volume 2. Ann Arbor, MI: Bridging the Gap Program, Survey Research Center, Institute for Social Research, 2012.

84 Model Joint Use Agreement Resources: Increasing physical activity by opening up school grounds. In *ChangeLab Solutions*. http://changelabsolutions.org/publications/model-JUAs-national (accessed May 2013).

85 American Academy of Pediatrics. Policy Statement: Prevention of Pediatric Overweight and Obesity. Pediatrics, 112(2):424-430, 2003 and Murray R. Response to 'Parents' Perceptions of Curricular Issues Affecting Children's Weight in Elementary Schools. *Journal of School Health*, 77(5): 223-230, 2007.

86 Institute of Medicine. *Preventing Childhood Obesity: Health in the Balance*. Washington, D.C.: The National Academies Press, 2005.

87 Nihiser et al. Body Mass Index Measurement in Schools. *J Sch Health*. 2007;77(10):651.

88 American Association of Health Education. Comprehensive School Health Education: A Position Statement of the American Association of Health Education, 2003.

89 SHPPS 2012: School Health Policies and Practices Study. In *U.S. Centers for Disease Control and Prevention*. http://www.cdc.gov/healthyyouth/shpps/ (accessed May 2014).

90 Local School Wellness Policy Implementation Under the Healthy, Hunger-Free Kids Act of 2010: Summary of the Proposed Rule. In *United States Department of Agriculture*. http://www.fns.usda.gov/sites/default/files/LWPpropruleSummary.pdf (accessed May 2014).

91 Chillon P, et al. A Systematic Review of Interventions for Promoting Active Transportation to School. *International Journal of Behavioral Nutrition and Physical Activity*, 8(10), 2011. http://www.ijbnpa.org/content/8/1/10 (accessed April 2013).

92 Wendel AM, Dannenberg AL. Reversing declines in walking and bicycling to school. *Preventive Medicine*, 48(6):513-15, 2009.

93 Dumbaugh E, Frank L. Traffic Safety and Safe Routes to Schools: Synthesizing the Empirical Evidence. *Transportation Research Record*, 2009(1):89-97, 2007.

94 National School Lunch Program: Participation and Lunches Served (Data as of March 7, 2014) In *U.S. Department of Agriculture, Food and Nutrition Service*. http://www.fns.usda.gov/pd/child-nutrition-tables (accessed March 2014).

95 *Kids' Safe and Healthful Foods Project. Serving Health School Meals: Schools need updated kitchen equipment*. The Robert Wood Johnson Foundation and The Pew Charitable Trusts: 2013. http://www.healthyschoolfoodsnow.org/wp-content/uploads/2013/12/KITS_Equipment_Report.pdf (accessed May 2014).

96 United States Department of Agriculture, (2013). Agriculture Secretary Vilsack Highlights New "Smart Snacks in School" Standards; Will Ensure School Vending Machines, Snack Bars Include Healthy Choices. [Press Release]. http://www.usda.gov/wps/portal/usda/usdahome?contentid=2013/06/0134.xml (accessed May 2014).

97 United States Department of Agriculture. National School Lunch Program and School Breakfast Program: Nutrition Standards for All Foods Sold in School as Required by the Healthy, Hunger-Free Kids Act of 2010; Interim Final Rule. *Federal Register*, 78(125), 2013. http://www.gpo.gov/fdsys/pkg/FR-2013-06-28/pdf/2013-15249.pdf (accessed May 2014).

98 National School Lunch Program. In *United States Department of Agriculture*. http://www.fns.usda.gov/cnd/Lunch/AboutLunch/NSLPFactSheet.pdf (accessed June 2013).

99 Gleason P and Suitor C. *Food for thought: children's diets in the 1990s*. Princeton, NJ: Mathematica Policy Research, Inc., 2001.

100 Briefel RR, Wilson A, Gleason PM. Consumption of low-nutrient, energy-dense foods and beverages at school, home, and other locations among school lunch participants and nonparticipants. *J Am Diet Assoc*,109:Suppl-90, 2009.

101 Chriqui JF, Turner L, Taber DR, Chaloupka FJ. Association between district and state policies and US public elemenary school competitive food and beverage environments. *JAMA Pediatr.*, 167(8): 714-722, 2013. http://archpedi.jamanetwork.com/article.aspx?articleid=1696280 (accessed May 2014).

102 Larson N, Story M. Are Competitive Foods Sold at Schools Making Our Children Fat? *Health Affairs*, 29(3):430?435, 2010.

103 Fox MK, Gordon A, Nogales R, Wilson A. Availability and Consumption of Competitive Foods in US Public Schools. *Journal of the American Dietetic Association*, 109: S57?S66, 2009.

104 Cullen KW, Zakeri I. Fruits, Vegetables, Milk, and Sweetened Beverages Consumption and Access to a la Carte/Snack Bar Meals at School. *American Journal of Public Health*, 94: 463–467, 2004.

105 Kubik MY, Lytle LA, Hannan PJ, Perry CL, Story M. The Association of the School Food Environment with Dietary Behaviors of Young Adolescents. *American Journal of Public Health*, 93: 1168?1173, 2003.

106 Kakarala M, Keast DR, Hoerr S. Schoolchildren's Consumption of Competitive Foods and Beverages, Excluding a la Carte. *Journal of School Health*, 80: 429?435, 2010.

107 Rovner AJ, Nansel TR, Wang J, Iannotti RJ. Food Sold in School Vending Machines Is Associated with Overall Student Dietary Intake. *Journal of Adolescent Health*, 48: 13?19, 2011.

108 Schwartz MB, Movak SA, Fiore SS. The Impact of Removing Snacks of Low Nutritional Value from Middle Schools. *Health Education & Behavior*, 36(6): 999?1011, 2009.

109 Taber DR, Chriqui JF, Perna FM, Powell LM, Chaloupka FJ. Weight Status Among Adolescents in States That Govern Competitive Food Nutrition Content. *Pediatrics*, 130: 437-444, 2012.

110 Kids Safe and Healthful Foods Project, (2012). School Budgets, Student Health to Benefit from Higher Nutrition Standards. [Press Release]. http://www.healthyschoolfoodsnow.org/school-budgets-student-health-to-benefit-from-higher-nutrition-standards/ (accessed June 2013).

111 U.S. Government Accountability Office. *School Meal Programs: Competitive Foods Are Available in Many Schools; Actions Taken to Restrict Them Differ by State and Locality*. Washington, D.C.: U.S. Government Accountability Office, 2004. http://www.gao.gov/new.items/d04673.pdf (accessed May 2009).

112 School Meals: Smart Snacks in School. In *U.S. Department of Agriculture Food and Nutrition Service*. http://www.fns.usda.gov/school-meals/smart-snacks-school (accessed April 2014).

113 Chriqui JF, et al. USDA Snack food and beverage standards: how big of a stretch for the states? Bridging the Gap Brief, 2014.

114 Hudson W. "For Schoolchildren, Where's the Water?" CNN April 18, 2011. http://www.cnn.com/2011/HEALTH/04/18/water.school.children/ (accessed April 2011).

115 Kant AK and Graubard BI. Contributors of water intake in US children and adolescents: associations with dietary and meal characteristics—National Health and Nutrition Examination Survey 2005-2006. *Am J Clin Nutr*, 92(4): 887-96, 2010.

116 Hudson W. "For Schoolchildren, Where's the Water?" *CNN* April 18, 2011. http://www.cnn.com/2011/HEALTH/04/18/water.school.children/ (accessed April 2011).

117 Drink Up. In *Partnership for a Healthier America*. http://www.youarewhatyoudrink.org/ (accessed May 2014).

118 Hood NE, Turner L, Colabianchi N, Chaloupka FJ, Johnston LD. Availability of drinking water in US public school cafeterias. *J of the Academy of Nutr & Dietetics*, doi.org/10.1016/j.jand.2014.02.001, 2014.

119 Joshi A., Kalb M, Beery M. *Going Local: Paths to Success for Farm to School Programs*. Los Angeles: Occidental College and Community Food Security Coalition, 2006. http://departments.oxy.edu/uepi/cfj/publications/goinglocal.pdf (accessed March 19, 2009).

120 Ibid.

121 Upstream Public Health. *HB 2800: Oregon Farm to School and School Garden Policy*. May 2011. http://www.upstreampublichealth.org/F2SHIA (accessed August 2012).

122 Ver Ploeg M, Breneman V, Dutko P, et al. Access to Affordable and Nutritious Food: Updated Estimates of Distance to Supermarkets Using 2010 Data, ERR-143, U.S. Department of Agriculture, Economic Research Service, 2012. http://www.ers.usda.gov/media/956784/err143.pdf (accessed June 2013).

123 Morton LW. Access to Affordable & Nutritious Food: Understanding Food Deserts. USDA ERS Workshop Powerpoint, 2008. http://www.farmfoundation.org/news/articlefiles/450-Morton.pdf (accessed April 2014).

124 O'Connell, M., Buchwald, D.S., Duncan, G.E. Food Access and Cost in American Indian Communities in Washington State. *Journal of the American Dietetic Association*, Vol. 111, 2011.

125 100 Years of U.S. Consumer Spending: Data for the Nation, New York City, and Boston. In *Bureau of Labor Statistics*. http://www.bls.gov/opub/uscs/ (accessed April 2014). 126 Healthy Food. Close to Home. In Freshworks. http://www.cafreshworks.com/ (accessed April 2014).

127 New Orleans Fresh Food Retailer Initiative. In *Hope Enterprise Corporation*. http://www.hope-ec.org/index.php/new-orleans-fresh-food-retailer-initiative (accessed April 2014).

128 Treuhaft S and Karpyn A. *The Grocery Gap: How Has Access to Healthy Food and Why It Matters*. Policy Link and The Food Trust, 2010. www.policylink.org/atf/cf/%7B97C6D565-BB43-406D-A6D5-ECA3BBF35AF0%7D/FINALGroceryGap.pdf (accessed April 2014).

129 The Reinvestment Fund. *Reinvestment Brief: The Economic Impacts of Supermarkets on their Surrounding Communities*. The Reinvestment Fund, 2006.

130 Ernst & Young (EY). The Campaign to End Obesity. *The New Markets Tax Credit: Opportunities for Investment in Healthy Foods and Physical Activity, 2013*. http://campaigntoendobesity.org//documents/ExecutiveSummaryofNMTCStudy.pdf

131 Supplemental Nutrition Assistance Program Fiscal Summary. In *U.S. Department of Agriculture*. http://www.fns.usda.gov/pd/34snapmonthly.htm (accessed April 2014).

132 Supplemental Nutrition Assistance Program Facts. In *U.S. Department of Agriculture*. http://www.nal.usda.gov/snap/SNAP-EdFactsheet2012.pdf (accessed April 2014).

133 Healthy Eating Research. *Bringing Healthy Foods Home: Examining Inequalities in Access to Food Stores, 2008*. http://healthyeatingresearch.org/wp-content/uploads/2013/12/HER-Bringing-Healthy-Foods-Home_7-2008.pdf (accessed April 2014).

134 Morland K, Roux A, Wing S. Supermarkets, Other Food Stores, and Obesity: The Atherosclerosis Risk in Communities Study. *American Journal of Preventive Medicine*, 30(4): 333-339, 2006.

135 Morland K, Wing S, Roux A. The Contextual Effect of the Local Food Environment on Residents' Diets: The Atherosclerosis Risk in Communities Study. *American Journal of Public Health*, 92(11): 1761-1767, 2002.

136 Moore L, Roux A, Nettleton J, and Jacobs D. Associations of the Local Food Environment with Diet Quality—A Comparison of Assessments Based on Surveys and Geographic Information Systems: The Multi-Ethnic Study of Atherosclerosis. *American Journal of Epidemiology* 167: 917-924, 2008.

137 The Reinvestment Fund. *The Economic Impacts of Supermarkets on their Surrounding Communities*, Philadelphia, PA: The Reinvestment Fund, 2008.

138 Andreyeva, T, Long M, Brownell K. The Impact of Food Prices on Consumption: a Systematic Review of Research on Price and Elasticity of Demand for Food. *American Journal of Public Health*, 2009.

139 Yen S, Lin B, Smallwood D, et al. Demand for Non-alcoholic Beverages: the Case of Low-income Households. *Agribusiness*, 20(3): 309-321, 2004.

140 Raper, K, Wanzala M, Nayga R. Food Expenditures and Household Demographic Composition in the US: a Demand Systems Approach. *Applied Economics*, 34(8): 981-992, 2002.

141 Bergtold J, Akobundo E, Peterson E. The FAST Method: Estimating Unconditional Demand Elasticities for Processed Foods in the Presence of Fixed Effects. *Journal of Agricultural and Resource Economics*, 29(2): 276-295, 2004.

142 Yen S, Lin B, Smallwood D et al. Demand for Non-alcoholic Beverages: the Case of Low-income Households. *Agribusiness*, 20(3): 309-321, 2004.

143 Bahl R, Bird R, Walker M. The Uneasy Case Against Discriminatory Excise Taxation: Soft Drink Taxes in Ireland. *Public Finance Review*, 31(5): 510-533, 2003.

144 Healthy Eating Research and Bridging the Gap. Sugar-Sweetened Beverage Taxes and Public Health, 2009. http://www.healthyeatingresearch.org/images/stories/her_research_briefs/ssb_taxes_and_public_health_herresearch_brief_7.31.09_final.pdf (accessed June 2013).

145 Jacobson MH and Brownell KD. Small Taxes on Soft Drinks and Snack Foods to Promote Health. *American Journal of Public Health*, 90(6): 854-57, 2000.

146 Congressional Budget Office. *Healthcare Budget Options, Volume 1.* Washington, D.C.: U.S. Congress, 2008, p. 206.

147 Chriqui JF, Eidson SS, Chaloupka FJ. State Sales Taxes on Regular Soda (as of January 1, 2014) — BTG Fact Sheet. Chicago, IL: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2014. http://www.bridgingthegapresearch.org (accessed April 2014).

148 Bleich SN, Wang CY, Wang Y et al. Increasing consumption of sugar-sweetened beverages among US adults: 1988–1994 to 1999–2004. *Am J Clin Nutr*, 89: 372–381, 2009.

149 Kit BK, et al. Trends in sugar-sweetened beverage consumption among youth and adults in the United States: 1999-2010. *Am J Clin Nutr*, 2013.

150 Park S, Pan L, Sherry B, Blanck HM. Consumption of Sugar-Sweetened Beverages Among US Adults in 6 States: Behavioral Risk Factor Surveillance System, 2011

151 Park S, Pan L, Sherry B, Blanck HM. Consumption of Sugar-Sweetened Beverages Among US Adults in 6 States: Behavioral Risk Factor Surveillance System, 2011

152 Lasater G, Piernas C, Popkin BM. Beverage patterns and trends among school-aged children in the US, 1989-2008. *Nutr J.*, 10: 103, 2011.

153 Mean Intake of Energy and Mean Contribution (kcal) of Various Foods Among US Population, by Age, NHANES 2005–06. In *National Cancer Institute.* ,http://riskfactor.cancer.gov/diet/foodsources/ (accessed June 2012).

154 Fox MK, Reidy K, Novak T, Ziegler P. Sources of energy and nutrients in the diets of infants and toddlers. *J Am Diet Assoc*, 106(1 Suppl 1):S28-42, 2006.

155 Devaney B, Ziegler P, Pac S, Karwe V, Barr SI. Nutrient intakes of infants and toddlers. *J Am Diet Assoc*, 104(1 Suppl 1):s14-21, 2004.

156 Skinner JD, Ziegler P, Ponza M. Transitions in infants' and toddlers' beverage patterns. *J Am Diet Assoc*, 104(1 Suppl 1):s45-50, 2004.

157 Fox MK, Pac S, Devaney B, Jankowski L. Feeding infants and toddlers study: What foods are infants and toddlers eating? *J Am Diet Assoc*, 104(1 Suppl 1):s22-30, 2004.

158 Wang YC, Bleich SN, Gortmaker SL. Increasing caloric contribution from sugar-sweetened beverages and 100% fruit juices among US children and adolescents, 1988–2004. *Pediatrics*, 121(6):e1604-e1614, 2008.

159 Hu FB. Resolved: there is sufficient scientific evidence that decreasing sugar-sweetened beverage consumptions will reduce the prevalence of obesity and obesity-related disease. *Obesity Reviews*, 14: 606-619, 2013.

160 Malik VS, Willett WC, Hu FB. Sugar-sweetened beverages and BMI in children and adolescents: reanalyses of a meta-analysis. *Am J Clin Nutr*, 89:438-9; author reply 9-40, 2009.

161 Martin-Calvo N, et al. Sugar-sweetened carbonated beverage consumption and childhood/adolescent obesity: a case-control study. *Public Health Nutr*, 31: 1-9, 2014.

162 Babey SH, Jones M, Yu H and Goldstein H. *Bubbling Over: Soda Consumption and Its link to Obesity in California.* UCLA Center for Health Policy Research, 2009.

163 Malik VS, Popkin BM, Bray GA, Despres JP, Willett WC, Hu FB. Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes: a meta-analysis. *Diabetes Care*, 33:2477-83, 2010.

164 de Koning L, Malik VS, Kellogg MD, Rimm EB, Willett WC, Hu FB. Sweetened beverage consumption, incident coronary heart disease, and biomarkers of risk in men. *Circulation*, 125:1735-41, S1, 2012.

165 Bremer AA, Auinger P, and Byrd RS. Relationship between Insulin Resistance–Associated Metabolic Parameters and Anthropometric Measurements with Sugar-Sweetened Beverage Intake and Physical Activity Levels in U.S. Adolescents. Findings from the 1999-2004 National Health and Nutrition Examination Survey. *Archives and Pediatric and Adolescent Medicine*, 163(4): 328-35, 2009.

166 Hert KA, Fisk PS, Rhee YS, Brunt AR. Decreased consumption of sugar-sweetened beverages improved selected biomarkers of chronic disease risk among US adults: 1999 to 2010. *Nutrition Research*, 34: 58-65, 2014.

167 Institute of Medicine. *Food Marketing to Children: Threat or Opportunity?* Washington, DC: National Academies Press, 2006.

168 Powell LM, Schermbeck RM, Chaloupka FJ. Nutritional content of food and beverage products in television advertisements seen on children's programming. *Child Obes.*, 2013.

169 CFBAI uniform standards: CFBAI's Category Specific Uniform Nutrition Criteria: http://www.bbb.org/storage/16/documents/cfbai/CFBAI%20Uniform%20Nutrition%20Criteria%20Fact%20Sheet%20-FINAL.pdf (accessed May 2014).

170 Harris/Rudd recent brief. Older but still vulnerable: All children need protection from unhealthy food marketing.http://www.yaleruddcenter.org/resources/upload/docs/what/reports/Protecting_Older_Children_3.14.pdf (accessed May 2014).

171 Chriqui JF, Resnick EA, Schneider L, Schermbeck R, Adcock T, Carrion V, Chaloupka FJ. School District Wellness Policies: Evaluating Progress and Potential for Improving Children's Health Five Years after the Federal Mandate. Volume 3. Chicago, IL: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2013.

172 United States Department of Agriculture. Local School Wellness Policy Implementation under Healthy, Hunger-Free Kids Act of 2010. *Federal Register*, 79(38): 10693-10706, 2014.

173 Federal Trade Commission. A review of food marketing to children and adolescents—follow-up report. Washington, D.C.: Federal Trade Commission, 2012. http://www.ftc.gov/sites/default/files/documents/reports/review-food-marketing-children-and-adolescents-follow-report/121221foodmarketingreport.pdf (accessed May 2014).

174 Federal Trade Commission. A review of food marketing to children and adolescents—follow-up report. Washington, D.C.: Federal Trade Commission, 2012. http://www.ftc.gov/sites/default/files/documents/reports/review-food-marketing-children-and-adolescents-follow-report/121221foodmarketingreport.pdf (accessed May 2014).

175 Chriqui JF, Resnick EA, Schneider L, Schermbeck R, Adcock T, Carrion V, Chaloupka FJ. School District Wellness Policies: Evaluating Progress and Potential for Improving Children's Health Five Years after the Federal Mandate. School Years 2006–07 through 2010–11. Volume 3. Chicago, IL: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2013. http://www.bridgingthegapresearch.org/research/district_wellness_policies/ (accessed May 2014).

176 Terry-McElrath YM, Turner L, Sandoval A, Johnston LD, Chaloupka FJ. Commercialism in US elementary and secondary school nutrition environments: trends from 2007 to 2012. *JAMA Pediatrics*, 168(3), 2014.

177 Terry-McElrath YM, Turner L, Sandoval A, Johnston LD, Chaloupka FJ. Commercialism in US elementary and secondary school nutrition environments: trends from 2007 to 2012. *JAMA Pediatrics*, 168(3), 2014.

178 HR 2642

179 2014 Farm Bill Drill Down: The Bill by the Numbers. In *National Sustainable Agriculture Coalition*. http://sustainableagriculture.net/blog/2014-farm-bill-by-numbers/ (accessed May 2014).

180 Supplemental Nutrition Assistance Program. In *U.S. Department of Agriculture*. http://www.fns.usda.gov/pd/SNAPsummary.htm (accessed May 2014).

181 Schoonover H, Muller M. *Food Without Thought: How U.S. Farm Policy Contributes to Obesity*. Minneapolis, MN: Institute for Agriculture and Trade Policy, 2006.

182 Steinhauer J. "Farm Bill Reflects Shifting American Menu and a Senator's Persistent Tilling." *The New York Times* March 8, 2014. http://www.nytimes.com/2014/03/09/us/politics/farm-bill-reflects-shifting-american-menu-and-a-senators-persistent-tilling.html?_r=0 (accessed May 2014).

183 United States Department of Agriculture. *Building a Healthy America: A Profile of the Supplemental Nutrition Assistance Program*. Alexandria, VA: United States Department of Agriculture Food and Nutrition Services, 2012.

184 United States Department of Agriculture. *Building a Healthy America: A Profile of the Supplemental Nutrition Assistance Program*. Alexandria, VA: United States Department of Agriculture Food and Nutrition Services, 2012.

185 Rosenbaum D. "Ryan Budget Would Slash SNAP by $137 Billion Over 10 Years." Center on Budget and Policy Priorities April 4, 2014. http://www.cbpp.org/cms/?fa=view&id=4118 (accessed May 2014).

186 United States Department of Agriculture. *Building a Healthy America: A Profile of the Supplemental Nutrition Assistance Program*. Alexandria, VA: United States Department of Agriculture Food and Nutrition Services, 2012.

187 U.S. Centers for Disease Control and Prevention. State Indicator Report on Fruits and Vegetables. Atlanta, GA: CDC, 2013. http://www.cdc.gov/nutrition/downloads/State-Indicator-Report-Fruits-Vegetables-2013.pdf (accessed May 2014).

188 Food Deserts. In *U.S. Department of Agriculture*. http://apps.ams.usda.gov/fooddeserts/foodDeserts.aspx (accessed May 2014).

189 U.S. Centers for Disease Control and Prevention. *State Indicator Report on Fruits and Vegetables*. Atlanta, GA: CDC, 2013. http://www.cdc.gov/nutrition/downloads/State-Indicator-Report-Fruits-Vegetables-2013.pdf (accessed May 2014).

190 U.S. Centers for Disease Control and Prevention. *State Indicator Report on Fruits and Vegetables*. Atlanta, GA: CDC, 2013. http://www.cdc.gov/nutrition/downloads/State-Indicator-Report-Fruits-Vegetables-2013.pdf (accessed May 2014).

191 2009-2012 Outcomes and Trends Full Report. In *Wholesome Wave's Double Value Coupon*. https://drive.google.com/file/d/0B9xO2Xo4OIC4UU12c2JQV0VhdnM/edit?pli=1 (accessed May, 2014).

192 Ibid.

193 Ibid.

194 2012 Project Report, Executive Summary. In Wholesome Wave's Fruit and Vegetable Prescription Program. https://drive.google.com/file/d/0B9xO2Xo4OIC4QXFRczZ2dVl2dVU/edit?pli=1 (accessed May, 2014).

195 Ibid.

196 Robert Wood Johnson Foundation. *Time to Act: Investing in the Health of Our Children and Communities*. Princeton, NJ: RWJF, 2014. http://www.rwjf.org/content/dam/farm/reports/reports/2014/rwjf409002 (accessed May 2014).

197 Ibid.

198 State Health Care Cost Containment Commission. *Cracking the Code on Health Care Costs*. Charlottesville, VA: Miller Center, University of Virginia, 2014. http://web1.millercenter.org/commissions/healthcare/HealthcareCommission-Report.pdf (accessed May 2014).

199 Centers for Disease Control and Prevention. Use of Selected Clinical Preventive Services Among Adults—United States, 2007-2010. *MMWR*, 61, 2012.

200 Accountable Care Organizations (ACO). In *Centers for Medicare and Medicaid Services*. http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/ (accessed May 2014).

201 Healthier by Design: Creating Accountable Care Communities. In *Accountable Care Community*. http://www.abiakron.org/1accountable-care-community (accessed May 2014).

202 National Diabetes Prevention Program. In *Centers for Disease Control and Prevention*. http://www.cdc.gov/diabetes/prevention/about.htm (accessed May 2014).

203 Weintrub WS et al. AHA Policy Statement: Value of Primordial and Primary Prevention for Cardiovascular Disease. *Circulation*, 124: 967-990, 2011.

204 The Hilltop Institute. *What are Hospital Community Benefits?* 2013. http://www.hilltopinstitute.org/publications/WhatAreHCBsTwoPager-February2013.pdf (accessed May 2014).

205 Chronic Disease Self-Management Program (Better Choices, Better Health Workshop). In *Stanford Patient Education Resource Center*. http://patienteducation.stanford.edu/programs/cdsmp.html (accessed May 2014).

206 City of Boston, Boston Bikes. *State of the Hub: Boston Bikes 2013 Update* Presented March 2014. http://www.cityofboston.gov/images_documents/2013%20reportfinal_tcm3-44028.pdf (accessed April 2014).

207 Cawley J and Meyerhoefer C. The Medical Care Costs of Obesity: An Instrumental Variables Approach. *Journal of Health Economics*, 31(1): 219-230, 2012; And Finkelstein, Trogdon, Cohen, et al. Annual Medical Spending Attributable to Obesity. Health Affairs, 2009.

208 Cawley J, Rizzo JA, Haas K. Occupation-specific Absenteeism Costs Associated with Obesity and Morbid Obesity. *Journal of Occupational and Environmental Medicine*, 49(12):1317–24, 2007.

209 Wang YC et al. Health and Economic Burden of the Projected Obesity Trends in the USA and the UK. *The Lancet*, 378, 2011.

210 Trust for America's Health and Robert Wood Johnson Foundation. *F as in Fat: How Obesity Threatens America's Future*. Washington, D.C.: Trust for America's Health, 2012.

211 Ibid.

212 Health Effects of Obesity. In *Obesity Society*. http://www.obesity.org/ (accessed June 2013).

213 American Cancer Society. C*ancer Facts and Figures, 2012*. Atlanta, GA: American Cancer Society, 2012.

214 For individuals, obesity is defined as a body mass index rate above 30. On an individual level, an adult reducing BMI by one percent is the equivalent to a weight loss of 2.2 pounds (for an adult of average weight). According to CDC, the average weight of men is 194.7 and women is 164.7. http://www.cdc.gov/nchs/fastats/bodymeas.htm

215 Return on Investments in Public Health: Saving Lives and Money. In *Robert Wood Johnson Foundation*, April 2013. http://rwjf.org/content/dam/farm/reports/issue_briefs/2013/rwjf72446 (accessed May 2013).

216 Trust for America's Health. *Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities, 2008*. http://healthyamericans.org/reports/prevention08/ (accessed April 2013).

217 Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual Medical Spending Attributable to Obesity: Payer-and Service-Specific Estimates. *Health Affairs*, 28(5): w822-831, 2009.

218 Arterburn DE, Maciejewski ML, Tsevat J. Impact of morbid obesity on medical expenditures in adults. *Int J Obes*, 29(3): 334-339, 2005.

219 Teuner CM, Menn P, Heier M, Holle R, John J, Wolfenstetter SB. Impact of BMI and BMI change on future drug expenditures in adults: results from the MONICA/KORA cohort study. *BMC Health Services Research*, 13(424), 2013.

220 Peitz GW, et al. Association of body mass index with increased cost of care and length of stay for emergency department patients with chest pain and dyspnea. *Circ Cardiovasc Qual Outcomes*, 7(2): 292-298, 2014.

221 Finkelstein EA, Graham WC, Malhotra R. Lifetime direct medical costs of childhood obesity. *Pedatrics*, DOI: 10.1542/peds.2014-0063, 2014.

222 Trasande L. and Chatterjee S. The Impact of Obesity on Health Service Utilization and Costs in Childhood. *Obesity*, 17(9):1749–54, 2009.

223 Trasande L and Chatterjee S. The Impact of Obesity on Health Service Utilization and Costs in Childhood. *Obesity*, 17(9): 1749-1754, 2009.

224 Marder W and Chang S. *Childhood Obesity: Costs, Treatment Patterns, Disparities in Care, and Prevalent Medical Conditions.* Thomson Medstat Research Brief, 2006. http://www.medstat.com/pdfs/childhood_obesity.pdf (accessed March 2010.)

225 Trasande L, Liu Y, Fryer G, et al. Effects of Childhood Obesity On Hospital Care and Costs, 1999–2005. *Health Affairs*, 28(4): w751–60, 2009.

226 Trasande L, Liu Y, Fryer G, et al. Effects of Childhood Obesity On Hospital Care and Costs, 1999–2005. Health Affairs, 28(4): w751–60, 2009.227 Gates D, Succop P, Brehm B, et al. Obesity and Presenteeism: The Impact of Body Mass Index on Workplace Productivity. *Journal of Occupational and Environmental Medicine*, 50(1):39-45, 2008.

228 The Robert Wood Johnson Foundation, the American Stroke Association, and the American Heart Association. *A Nation at Risk: Obesity in the United States, A Statistical Sourcebook.* Dallas, TX: American Heart Association, 2005. http://www.americanheart.org/downloadable/heart/1114880987205NationAtRisk.pdf (accessed April 14, 2008).

229 Lehnert T, et al. Sick leave days and costs associated with overweight and obesity in Germany. *JOEM*, 56(1): 20-27, 2014.

230 Ostbye T, Dement JM, Krause KM. Obesity and Workers' Compensation: Results from the Duke Health and Safety Surveillance System. *Archives of Internal Medicine*, 167(8): 766-73, 2007.

231 Pronk NP, Martinson B, Kessler RC, et al. The Association between Work Performance and Physical Activity, Cardiorespiratory Fitness, and Obesity. *Journal of Occupational and Environmental Medicine*, 46(1):19-25, 2004.

232 Aldana SG and Pronk NP. Health Promotion Programs, Modifiable Health Risks, and Employee Absenteeism. *Journal of Occupational and Environmental*, 43(1): 36-46, 2001.

233 Gordian Health Solutions. *Managing the Obesity Problem: A Case Study with Measurable Results.* Nashville, TN: Gordian Health Solutions, 2007.

234 Wang F, McDonald T, Champagne LJ, et al. Relationship of Body Mass Index and Physical Activity to Healthcare Costs among Employees. *Journal of Occupational and Environmental Medicine*, 46(5): 428-36, 2004.

235 Burton WN, Chen CY, Schultz AB, et al. The Economic Costs Associated with Body Mass Index in a Workplace. *Journal of Occupational and Environmental Medicine*, 40(9): 786-92, 1998.

236 Burton WN, Chen CY, Schultz AB, et al. The Economic Costs Associated with Body Mass Index in a Workplace. *Journal of Occupational and Environmental Medicine*, 40(9): 786-92, 1998.

237 Institute of Medicine. *The Future of the Public's Health in the 21st Century*. Washington, D.C, 2003. U.S. Centers for Disease Control and Prevention. *Public Health's Infrastructure — A Status Report.* Atlanta, Georgia, 2001 and Trust for America's Health. *Blueprint for a Healthier America: Modernizing the Federal Public Health System to Focus on Prevention and Preparedness, 2008.*

238 Trust for America's Health. I*nvesting in America's Health: A State-By-State Look at Public Health Funding and Key Health Facts, 2014.* http://www.healthyamericans.org/report/83/ (accessed May 2014).

239 Association of State and Territorial Health Officials. Budget Cuts Continue to Affect the Health of Americans: Update August 2012. http://www.astho.org/Research/Data-and-Analysis/ASTHO-Budget-Cuts-Impact-Research-Brief-Update-(August-2012)/ (accessed December 2012).

240 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA*, 311(8): 806-814, 2014.

241 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA*, 311(8): 806-814, 2014.

242 Progress on Childhood Obesity, August 2013. In *Centers for Disease Control and Prevention.* http://www.cdc.gov/vitalsigns/childhoodobesity/ (accessed May 2014).

243 Child Care. In *Public Health Law Center.* http://publichealthlawcenter.org/topics/healthy-eating/child-care (accessed May 2014).

244 Institute of Medicine. *Early Childhood Obesity Prevention Policies.* Washington, DC: National Academies Press, 2011.

245 American Academy of Pediatrics, American Public Health Association, and National Resource Center for Health and Safety in Child Care and Early Education. 2012. *Preventing Childhood Obesity in Early Care and Education: Selected Standards from Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition.* http://nrckids.org/CFOC3/PDFVersion/preventing_obesity.pdf (accessed May 2014).

246 What are the Main Goals? In *Let's Move Child Care.* http://www.healthykidshealthyfuture.org/home/startearly/thegoal.html (accessed May 2014).

247 Our Partners. In *Partnership for a Healthier America.* http://ahealthieramerica.org/our-partners/ (accessed May 2014).

248 U.S. Department of Agriculture. *Building for the Future*. http://www.fns.usda.gov/sites/default/files/4Future.pdf (accessed May 2014).

249 National Resource Center. *Preventing Childhood Obesity*. http://nrckids.org/default/assets/File/PreventingChildhoodObesity2nd.pdf (accessed May 2014).

250 S.1086 - Child Care and Development Block Grant Act of 2014. In *Congress.gov*. http://beta.congress.gov/bill/113th-congress/senate-bill/1086 (accessed May 2014).

251 About Head Start. In *Head Start: An Office of the Administration for Children and Families Early Childhood Learning and Knowledge Center*. http://eclkc.ohs.acf.hhs.gov/hslc/hs/about (accessed May 2014).

252 Head Start Program Performance Standards and Other Regulations. In *Head Start: An Office of the Administration for Children and Families Early Childhood Learning and Knowledge Center*. http://eclkc.ohs.acf.hhs.gov/hslc/standards/Head%20Start%20Requirements (accessed May 2014).

253 Snap-Ed Guidance. In *U.S. Department of Agriculture*. http://snap.nal.usda.gov/snap/Guidance/GuidingPrinciples2015.pdf (accessed June 2014).

254 Freedman DS, Kettel L, Serdula MK, Dietz WH, Srinivasan SR, Berenson GS. The relation of childhood BMI to adult adiposity: The Bogalusa Heart Study. Pediatrics, 115: 22-27, 2005.

255 Cunningham SA, Kramer MR, Narayan V. Incidence of Childhood Obesity in the United States. *N Engl J Med*, 370: 403-411, 2014.

256 Gable S, Krull JL, Chang Y. Boys' and girls' weight status and math performance from kindergarten entry through fifth grade: A mediated analysis. *Child Development*, doi: 10.1111/j.1467-8624.2012.01803.x, 2012

257 Let's Move! Childcare Checklist Quiz is Incorporated Into Maryland's Quality Rating Improvement System (QRIS) and CACFP Program. In *Let's Move! Child Care*. http://www.healthykidshealthyfuture.org/home/resources/success/maryland-qris.html (accessed May 2014).

258 Farm to Child Care Takes Root in Texas. In *Let's Move! Child Care*. http://www.healthykidshealthyfuture.org/home/resources/success/texas-ftc.html (accessed May 2014).

259 Food Research and Action Center. *Improving Nutrition and Promoting Wellness in Child Care with CACFP*. Washington, DC: FRAC, http://frac.org/pdf/cacfp_improving_nutrition_report_print.pdf (accessed May 2014).

260 Spectrum of Opportunities for Obesity Prevention in the Early Care and Education Setting (ECE) CDC Technical Assistance Briefing Document. In *U.S. Centers for Disease Control and Prevention*. http://www.cdc.gov/obesity/downloads/spectrum-of-opportunities-for-obesity-prevention-in-early-care-and-education-setting_tabriefing.pdf (accessed May 2014).

261 National Early Care and Education Learning Collaboratives. In *Nemours*. http://www.healthykidshealthyfuture.org/home/collaborate/ecelcproject/about.html (accessed March 2014).

262 Lutfiyya, MN, Lipsky, MS, Wisdom-Behounek, J, Inpanbutr-Martinkus. (2007). Is rural residency a risk factor for overweight and obesity for U.S. children? *Obesity*. 15(9): 2348-2356.

263 Hawley SR, Beckman H, Bishop T. Development of an obesity prevention and management program for children and adolescents in a rural setting. *Journal of Community Health Nursing*, 23(2): 69–80, 2006.

264 National Research Council, *U.S. Health Perspective: Shorter Lives, Poorer Health*. Washington: DC: The National Academies Press, 2013.

265 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity among adults: United States, 2011–2012. NCHS data brief, no. 131. Hyattsville, MD: National Center for Health Statistics, 2013.

266 An R. Prevalence and Trends of Adult Obesity in the US, 1999-2012. *Obesity*, 2014.

267 Skinner AC, Skelton J, Prevalence and Trends in Obesity and Severe Obesity Among Children in the United States, 1999-2012. *JAMA Pediatrics*, doi:10.1001/jamapediatrics.2014.21, 2014.

268 Skinner AC, Skelton J, Prevalence and Trends in Obesity and Severe Obesity Among Children in the United States, 1999-2012. *JAMA Pediatrics*, doi:10.1001/jamapediatrics.2014.21, 2014.

269 Skinner AC, Skelton J, Prevalence and Trends in Obesity and Severe Obesity Among Children in the United States, 1999-2012. *JAMA Pediatrics*, doi:10.1001/jamapediatrics.2014.21, 2014.

270 Skinner AC, Skelton J, Prevalence and Trends in Obesity and Severe Obesity Among Children in the United States, 1999-2012. *JAMA Pediatrics*, doi:10.1001/jamapediatrics.2014.21, 2014.

271 Rendall MS, Weden MM, Fernandes M, Vaynman I. Hispanic and black US children's paths to high adolescent obesity prevalence. *Pediatric Obesity*, 7: 423-435, 2012.

272 Trust for America's Health. *F as in Fat: How Obesity Threatens America's Health*. Washington, D.C.: Trust for America's Health, 2013.

273 McKernan S, Ratcliffe C, Steuerle E, Zhang S. *Less Than Equal: Racial Disparities in Wealth Accumulation*. Washington, D.C.: Urban Institute, 2013. http://www.urban.org/UploadedPDF/412802-Less-Than-Equal-Racial-Disparities-in-Wealth-Accumulation.pdf (accessed May 2014).

274 U.S. Census Bureau Current Population Survey (CPS).

275 DeNavas-Walt C, Proctor BD, Smith JC. *Income, Poverty, and Health Insurance Coverage in the United States: 2012.* U.S. Census Bureau, 2013.

276 Coleman-Jensen A, Nord M, Singh A. Household Food Security in the United States in 2012, Table 2. USDA ERS, 2013.

277 Childhood Obesity. In *Children's Defense Fund*. http://www.childrensdefense.org/policy-priorities/childrens-health/child-nutrition/childhood-obesity.html (accessed May 2014).

278 Johns Hopkins Hub staff report, 12/9/13 NEED MORE INFO HERE

279 U.S. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2013. Morbidity and *Mortality Weekly Report*, 63(SS04): 1-168, 2014

280 U.S. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2013. *Morbidity and Mortality Weekly Report*, 63(SS04): 1-168, 2014

281 Harris JL. Fast food FACTS: Evaluating fast food nutrition and marketing to youth. Rudd Center for Food Policy and *Obesity*, 2010.

282 Yancey AK, Cole BL, et al. A cross-sectional prevalence study of ethnically targeted and general audience outdoor-related advertising. *Milbank Q*, 2009: 87(1): 155-184, 2009.

283 National Recreation and Park Association. *Parks and Recreation in Underserved Areas: A Public Health Perspective*. Ashburn, VA: National Recreation and Park Association, 2013. http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/Parks-Rec-Underserved-Areas.pdf (accessed May 2014).

284 Obesity and African Americans. In *U.S. Department of Health and Human Services Office of Minority Health*. http://minorityhealth.hhs.gov/templates/content.aspx?ID=6456 (accessed May 2014).

285 U.S. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2013. *Morbidity and Mortality Weekly Report*, 63(SS04): 1-168, 2014

286 Armah N. "Making Equity Count in the Built Environment." *NAACP Blog* April 7, 2014. http://www.naacp.org/blog/entry/making-equity-count-in-the-built-environment (accessed May 2014).

287 National Recreation and Park Association. P*arks and Recreation in Underserved Areas: A Public Health Perspective*. Ashburn, VA: National Recreation and Park Association, 2013. http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/Parks-Rec-Underserved-Areas.pdf (accessed May 2014).

288 Dias JJ, Whitaker RC. Black mothers' perceptions about urban neighborhood safety and outdoor play for their preadolescent daughters. *Journal of Health Care Poor & Underserved*, 24(1): 206-219, 2013.

289 Obesity and African Americans. In *U.S. Department of Health and Human Services Office of Minority Health*. http://minorityhealth.hhs.gov/templates/content.aspx?ID=6456 (accessed May 2014).

290 Obesity and African Americans. In *U.S. Department of Health and Human Services Office of Minority Health*. http://minorityhealth.hhs.gov/templates/content.aspx?ID=6456 (accessed May 2014).

291 Consequences of Adult and Overweight Obesity. In *Food Research and Action Center*. http://frac.org/initiatives/hunger-and-obesity/what-are-the-consequences-of-adult-overweight-and-obesity/ (accessed May 2014).

292 Waidmann T. E*stimating the Cost of Racial and Ethnic Health Disparities*. Washington, D.C.: The Urban Institute, 2009. http://www.urban.org/UploadedPDF/411962_health_disparities.pdf (accessed May 2014).

293 LaVeist TA, Gaskin D, Richard P. Estimating the economic burden of racial health inequalities in the United States. *Int J Health Serv*, 41(2): 231-238, 2011.

294 LaVeist TA, Gaskin D, Richard P. Estimating the economic burden of racial health inequalities in the United States. *Int J Health Serv*, 41(2): 231-238, 2011.

295 U.S. Census Bureau, American Fact Finder, 2011 American Community Survey 1-Year Estimates

296 WIC Program Racial and Ethnic Data, April 2010, published February 2012.

297 Food Research and Action Center. *A Review of Strategies to Bolster SNAP's Role in Improving Nutrition as well as Food Security*. Washington, D.C.: FRAC, 2013. http://frac.org/wp-content/uploads/2011/06/SNAPstrategies.pdf (accessed May 2014).

298 Bridging the Gap and Salud America! Better Food in the Neighborhood and Latino Kids, Issue Brief June 2013. https://salud-america.org/sites/saludamerica/files/Better-Food-in-the-Neighborhood-Issue-Brief.pdf (accessed March 2014).

299 Tennessee Department of Education. *Tennessee Coordinated School Health 2008-2009 Executive Summary*. Available from: http://www.tennessee.gov/education/schoolhealth/

300 Profiles of Latino Health: A Closer Look at Latino Child Nutrition. In *National Council of La Raza*. http://www.nclr.org/index.php/issues_and_programs/health_and_nutrition/health_care_reform/hcrarchive/healthprofiles/nutritionprofiles/ (accessed May 2014).

301 Research Packages. In *Salud America!* https://salud-america.org/research (accessed May 2014).

302 Population by Race and Hispanic Origin: 2012 to 2060. In *U.S. Census Bureau*. http://www.census.gov/newsroom/releases/img/racehispanic_graph.jpg (accessed May 2014).

303 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity among adults: United States, 2011–2012. NCHS data brief, no. 131. Hyattsville, MD: National Center for Health Statistics, 2013.

304 Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA*, 311(8): 806-814, 2014.

305 Skinner AC, Skelton J, Prevalence and Trends in Obesity and Severe Obesity Among Children in the United States, 1999-2012. *JAMA Pediatrics*, doi:10.1001/jamapediatrics.2014.21, 2014.

306 Skinner AC, Skelton J, Prevalence and Trends in Obesity and Severe Obesity Among Children in the United States, 1999-2012. *JAMA Pediatrics*, doi:10.1001/jamapediatrics.2014.21, 2014.

307 Rendall MS, Weden MM, Fernandes M, Vaynman I. Hispanic and black US children's paths to high adolescent obesity prevalence. *Pediatric Obesity,* 7: 423-435, 2012.

308 Coleman-Jensen A, Nord M, Singh A. Household Food Security in the United States in 2012, Table 2. USDA ERS, 2013.

309 Macartney S, Bishaw A, Fontenot K. *Poverty Rates for Selected Detailed Race and Hispanic Groups by State and Place: 2007-2011*. Washington, D.C.: U.S. Census Bureau, 2013. http://www.census.gov/prod/2013pubs/acsbr11-17.pdf (accessed May 2014).

310 McKernan S, Ratcliffe C, Steuerle E, Zhang S. *Less Than Equal: Racial Disparities in Wealth Accumulation.* Washington, D.C.: Urban Institute, 2013. http://www.urban.org/UploadedPDF/412802-Less-Than-Equal-Racial-Disparities-in-Wealth-Accumulation.pdf (accessed May 2014).

311 National Council of La Raza. *Profiles of Latino Health: A Closer Look at Latino Child Nutrition, Issue 5: The Links Between Food Insecurity and Latino Child Obesity*, 2010.

312 Bridging the Gap and Salud America! *Sugar Drinks and Latino Kids*, Issue Brief September 2013. https://salud-america.org/sites/salud-america/files/Sugary-Drinks-issue-brief.pdf (accessed March 2014).

313 Wilson TA, Adolph AL, Butte NF. Nutrient adequacy and diet quality in non-overweight and overweight Hispanic children of low socioeconomic status: the Viva la Familia Study. *J Am Diet Assoc.*, 109(6): 1012-1021, 2009.

314 Cortes DE. Improving Food Purchasing *Selection Among Low-Income Spanish-Speaking Latinos.* Salud America!, 2011. http://salud-america.org/sites/salud-america/files/grantee-research/Cortes2011-research-brief_0.pdf (accessed May 2014).

315 Bridging the Gap and Salud America! Better Food in the Neighborhood and Latino Kids, Issue Brief June 2013. https://salud-america.org/sites/saludamerica/files/Better-Food-in-the-Neighborhood-Issue-Brief.pdf (accessed March 2014).

316 Economic Research Service (ERS), U.S. Department of Agriculture (USDA). *Food Access Research Atlas*, http://www.ers.usda.gov/data-products/food-access-research-atlas.aspx (accessed June 2013).

317 Dahl S, Eagle L, Baez C. Analyzing advergames: Active diversions or actually deception. An exploratory study of online advergames content. *Young Consumers*, 10(1): 46-59, 2009.

318 U.S. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2013. *Morbidity and Mortality Weekly Report*, 63(SS04): 1-168, 2014

319 U.S. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2013. *Morbidity and Mortality Weekly Report*, 63(SS04): 1-168, 2014

320 Beam CK. *Competitive Foods and Beverages Among Latino Students.* Salud America!, 2013. http://salud-america.org/sites/saludamerica/files/Healthier%20School%20Snacks%20-%20Research%20Review.pdf (accessed May 2014).

321 Ibid.

322 Nord M, Andrews M, Carlson S. *Household Food Security in the United States, 2008.* Washington, D.C.: Economic Research Services, U.S. Department of Agriculture, 2009; Wolkwitz K. Detailed Tables of Food Stamp Program Participation Rates: 2000-2005. Food and Nutrition Service, Office of Research and Analysis. Alexandria, VA: U.S. Department of Agriculture, 2008.

323 Fact Sheet: Hunger and Poverty in the Hispanic Community. In *Bread for the World.* http://www.bread.org/ol/2012/domestic-nutrition/pdf/fact-sheet-latino-hunger-and-poverty.pdf (accessed May 2014).

324 Bridging the Gap and Salud America!, Healthier Marketing and Latino Kids, Issue Brief, August 2013

325 Bridging the Gap and Salud America!, Healthier School Snacks and Latino Kids, Issue Brief, May 2013

326 National Recreation and Park Association. Parks and Recreation in Underserved Areas: A Public Health Perspective. Ashburn, VA: National Recreation and Park Association, 2013. http://www.nrpa.org/uploadedFiles/nrpa.org/Publications_and_Research/Research/Papers/Parks-Rec-Underserved-Areas.pdf (accessed May 2014).

327 Obesity and African Americans. In *U.S. Department of Health and Human Services Office of Minority Health.* http://minorityhealth.hhs.gov/templates/content.aspx?ID=6456 (accessed May 2014).

328 U.S. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2013. *Morbidity and Mortality Weekly Report*, 63(SS04): 1-168, 2014

329 Bridging the Gap and Salud America!, Active Play and Latino Kids, Issue Brief, July 2013

330 After-school fitness programs can improve children's health. In *Salud America!* http://salud-america.org/grantee-research/309 (accessed May 2014).

331 Bridging the Gap and Salud America!, Active Spaces and Latino Kids, Issue Brief, July 2013

332 Population by Race and Hispanic Origin: 2012 to 2060. In *U.S. Census Bureau*. http://www.census.gov/newsroom/releases/img/racehispanic_graph.jpg (accessed May 2014).

333 CDC 2012, *Summary Health Statistics for US Adults: 2010*.

334 Rodriguez CY. "Beautiful but deadly: Latinos' curves put them at risk." *CNN*. com October 17, 2013. http://www.cnn.com/2013/10/15/health/latino-cardiovascular-disparities/ (accessed May 2014).

335 Waidmann T. *Estimating the Cost of Racial and Ethnic Health Disparities*. Washington, D.C.: The Urban Institute, 2009. http://www.urban.org/UploadedPDF/411962_health_disparities.pdf (accessed May 2014).

336 LaVeist TA, Gaskin D, Richard P. Estimating the economic burden of racial health inequalities in the United States. *Int J Health Serv*, 41(2): 231-238, 2011.

337 LaVeist TA, Gaskin D, Richard P. Estimating the economic burden of racial health inequalities in the United States. *Int J Health Serv*, 41(2): 231-238, 2011.

338 HHS Promotores de Salud Initiative. In *U.S. Department of Health and Human Services*. http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlid=207 (accessed April 2014).

339 Nevarez G. Latinos Impacted By $5 Billion Cut To Food Stamps Program. *Huffington Post* November 3, 2013. http://www.huffingtonpost.com/2013/11/03/latinos-food-stamps_n_4208305.html (accessed May 2014).

340 Casey PH, et al. The Association of Child and Household Food Insecurity with Childhood Overweight Status. *Pediatrics*, 118(5): e1406-e1413, 2006.

341 Cortes DE. *Improving Food Purchasing Selection Among Low-Income Spanish-Speaking Latinos*. Salud America!, 2011. http://salud-america.org/sites/salud-america/files/grantee-research/Cortes2011-research-brief_0.pdf (accessed May 2014).

342 Food Research and Action Center. A Review of Strategies to Bolster SNAP's Role in Improving Nutrition as well as Food Security. Washington, D.C.: FRAC, 2013.

343 Connor P, et al. *WIC Participant and Program Characteristics 2008*. Food and Nutrition Service, Office of Research and Analysis. Alexandria, VA: U.S. Department of Agriculture, 2010.

344 Bridging the Gap and Salud America! Better Food in the Neighborhood and Latino Kids, Issue Brief June 2013. https://salud-america.org/sites/saludamerica/files/Better-Food-in-the-Neighborhood-Issue-Brief.pdf (accessed March 2014).

345 Children's Sentinel Nutrition Assessment Program. *The Impact of Food Insecurity on the Development of Young Low-Income Black and Latino Children*. Washington, D.C.: Joint Center for Political and Economic Studies Health Policy Institute, 2006.

346 Salud America! *Increasing Out-of-School and Out-of-Class Physical Activity among Latino Children*. Princeton, NJ: Robert Wood Johnson Foundation, 2013.

347 Salud America! *Food Retail and Financing Initiatives to Address Obesity in Latino Communities*. Princeton, NJ: Robert Wood Johnson Foundation, 2013.

348 California Obesity Prevention Community Grants 2011 Case Studies. In *California Department of Public Health*. http://www.cdph.ca.gov/programs/COPP/Documents/COPP-CaseStudies-2010-2011.pdf; www.healthykidshealthycommunities.org (accessed May 2014).

349 Comer Bien. In *National Council of La Raza*. http://www.nclr.org/index.php/issues_and_programs/health_and_nutrition/healthy_foods_families/comer_bien/ (accessed April 2014).

350 HHS Promotores de Salud Initiative. In *U.S. Department of Health and Human Services*. http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlid=207 (accessed April 2014).

351 Ayala GX, et al. Longitudinal intervention effects on parenting of the Aventuras para Ninos Study. *Am J Prev Med,* 38(2): 154-162, 2010.

352 Perez LG, et al. Evidence-based obesity treatment interventions for Latino adults in the U.S.: A systematic review. *Am J Prev Med*, 44(5): 550-560, 2013.

353 Avila P, Hovell MF. Physical activity training for weight loss in Latinas: a controlled trial. *Int J Obes Relat Metab Disord*, 18(7): 476-482, 1994.

354 Keller C, Cantue A. Camina por Salud: walking in Mexican-American women. *Appl Nurs Res*, 21(2): 110-113, 2008.

355 Snapshot of Promotores de Salud Initiative Activities/Accomplishments. In *U.S. Department of Health and Human Services*. http://minorityhealth.hhs.gov/templates/content.aspx?ID=9505&lvl=3&lvlID=577 (accessed April 2014).

356 Ramirez AG, Gallion KJ, Despres CE, Adeigbe RT. Salud America!: a national research network to build the field and evidence to prevent Latino childhood obesity. *American Journal of Preventive Medicine*, 44, (Suppl 3), S178-S185, 2013.

357 Ramirez AG, Gallion KJ, Despres CE, Adeigbe RT. Salud America!: a national research network to build the field and evidence to prevent Latino childhood obesity. *American Journal of Preventive Medicine*, 44, (Suppl 3), S178-S185, 2013.

358 Ottoson JM, Ramirez AG, Green LW, Gallion KJ. Exploring potential research contributions to policy: the Salud America! Experience. *American Journal of Preventive Medicine*, 44, (Suppl 3), S282-S289, 2013.

Trust for America's Health
WWW.HEALTHYAMERICANS.ORG

1730 M Street, NW, Suite 900
Washington, DC 20036
(t) 202-223-9870
(f) 202-223-9871

Robert Wood Johnson Foundation

www.rwjf.org
Route 1 and College Road East
P.O. Box 2316
Princeton, NJ 08543-2316