

# Shortchanging America's Health

A STATE-BY-STATE LOOK AT HOW PUBLIC  
HEALTH DOLLARS ARE SPENT AND KEY  
STATE HEALTH FACTS



MARCH 2010

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# Introduction

**W**here you live should not determine how healthy you are. But, right now in America, where you live, learn, work, and play make a big difference in how healthy you are. As a result, some communities are much healthier than others, according to a February 2010 report, “The County Health Rankings: Mobilizing Action toward Community Health,” by the Robert Wood Johnson Foundation (RWJF) and the University of Wisconsin Public Health Institute.

A range of factors, like education, employment, income, family and social support, community safety, and the physical environment, impact our health. But in many communities, obstacles also exist that make it hard for people to make healthy choices, and consequently, disease rates are higher in those areas. For instance, if there is not a safe place for children to play in a neighborhood, it makes it difficult for them to get enough exercise, or if there is no accessible grocery store close by, it makes it a challenge to buy nutritious foods.

One big factor in the health of a community is whether or not they have a strong public health system. Public health departments can help improve the health of communities, since they are responsible for finding ways to address the systemic reasons why some communities are healthier than others – and for developing policies and programs to remove obstacles that get in the way of making healthy choices possible.

And yet, our ability to address the geographic and racial/ethnic disparities in health is limited by our failure to invest adequately in creating a modernized public health system. Indeed, as this report shows, state governments have reduced their investment in public health by nearly \$392 million in the last year and federal funding – excluding emergency and stimulus funds – has been flat for the last five years, and actually down, most years, in inflation-adjusted dollars.

The result of this chronic underfunding is that millions of Americans are needlessly suffering from preventable diseases, health care costs have skyrocketed, and our workforce is not as healthy as it needs to be to compete with the rest of the world.

If we are going to improve the health of Americans, we need to fundamentally rethink our approach to managing public health and disease prevention.

To gain a better understanding for how to modernize public health in America, in this report Trust for America’s Health (TFAH) examines public health funding in the United States, key health facts in states, and recommendations for new approaches to promoting health and wellness. The report shows that public health funding is low across the country, but that it is substantially lower in some communities than others, which can exacerbate health differences.

TFAH found a wide variation in federal, state, and local funding for public health, including:

■ **DIFFERENCES IN FEDERAL FUNDING FOR STATES:**

Federal public health spending through the U.S. Centers for Disease Control and Prevention (CDC) averaged out to only \$19.23 per person in FY2009. And the amount of federal funding spent to prevent disease and improve health in communities ranged significantly from state to state, with a per capita low of \$13.33 in Virginia to a high of \$58.65 in Alaska.

■ **DIFFERENCES IN STATE FUNDING:**

This report also examined state funding and found that the median amount in state fiscal years 2008-2009 for public health equaled only \$28.92 per person, with ranges from a low of \$3.55 per person in Nevada to a high of \$169.92 per person in Hawaii.

■ **DIFFERENCES IN LOCAL FUNDING:**

A recent analysis by professors at the Department of Health Policy & Management at the University of Arkansas for Medical Sciences found that local public health spending was \$29.57 per capita for the median community in 2005, and that rate was virtually unchanged in over a decade.<sup>1</sup> Spending in the lowest 20 percent of communities averaged only around \$8 per person, while the top 20 percent spent an average of \$102 per person, which is nearly 13 times higher than in the lowest quintile.

Americans deserve basic health protections, but as this report reveals, it is hard to establish goals and standards when there is such wide variation in how states and localities structure, define, and fund public health. It is particularly hard to analyze how effectively dollars are being used to improve health in those communities.

We do know that a more significant investment toward keeping Americans healthier could have a payoff in terms of sparing millions of Americans from developing preventable diseases and reducing health care costs. A range of studies have shown that effective public health and disease prevention programs can reduce rates of chronic diseases like cancer, heart disease, and diabetes, and preventable infectious diseases that rob people of their quality of life.<sup>2</sup> A 2008 *Prevention for a Healthier America* report by TFAH found that an investment of \$10 per person per year 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. This is a return of \$5.60 for every \$1 spent on prevention.

Currently, hundreds of public health programs around the country have seen results in reducing rates of preventable diseases through targeted efforts like tobacco cessation quit lines, obesity counseling, and programs making nutritious foods more affordable in communities. However, limited resources mean these programs are not widely available throughout the country, leaving millions of Americans without basic services that could give them the opportunity to lead healthier lives.

A 2008 analysis by The New York Academy of Medicine (NYAM) and TFAH, conducted in consultation with a panel of leading experts, found that there has been a shortfall of \$20 billion annually – across state, local, and federal government – in funding for critical U.S. public health programs.<sup>3</sup> The analysis found that federal, state, and local public health departments have been unable to adequately carry out many core functions, including programs to help prevent disease and prepare for health emergencies.

Instead of increases in funding, however, in the past two years, the situation has gotten worse, as state and local governments face severe budget crises, which have led to funding cuts. If health reform passes, the bill that has passed U.S. Senate could provide significant increases for public health, but still at levels below what experts feel is needed to close the gap in funding. For example, the Senate bill includes a Prevention and Public Health Fund, which would provide \$500 million for FY 2010, \$750 million for FY 2011, \$1 billion for FY 2012, \$1.25 billion for FY 2013, \$1.5 billion for FY 2014, and \$2 billion for FY 2015 and each year thereafter for public health and \$10 billion over five years for Community Health Centers and the National Health Service Corps Fund.

Without a more significant investment at the federal, state, and local levels, we will never be able to turn around the health of Americans. All Americans deserve and should expect basic public health services. Until we invest more in the public health system and address key social and economic factors, the health of Americans will continue to needlessly suffer, and some Americans will suffer disproportionately, depending on where they live.



# How Public Health is Funded

## 1 SECTION

**P**ublic health programs are funded through a combination of federal, state, and local dollars.

Each level of government has different, but important responsibilities for protecting the public's health. While this report focuses primarily on federal funding to states, it also provides information about state funding.

TFAH analyzes federal and state funding for public health based on the most complete financial

data currently available. There is a significant delay from the time when a President proposes a fiscal year budget, to when appropriations legislation is signed into law, to the time when the funds are disbursed. Therefore, TFAH uses FY 2009 data for this analysis, which is the budget year for which the data is most complete and accurate.

## A. FEDERAL INVESTMENT IN PUBLIC HEALTH

Information on the amount of federal funding each state receives for a range of public health programs is available online at [www.healthymamericans.org](http://www.healthymamericans.org) along with key health facts for each state. The online State Data pages contain funding information on programs from the U.S. Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration (HRSA), and the Office of the Assistant Secretary for Preparedness and Response (ASPR). A full list of the funding by category is available in Appendices E-F; a list of key health statistics by state is available in Appendices B-D. Notes on data and methodology are available in Appendix A.

HRSA distributes approximately 90 percent of its funding in grants to states and territories, public and private health care providers, health professions training programs and other organizations.<sup>4</sup> HRSA's funding is not distributed on a strictly per capita basis. The bulk of HRSA funds are in its two largest programs, the community and migrant health centers and the Ryan White Act HIV programs, and these dollars are awarded on a competitive basis and/or based on disease burden.

Approximately 75 percent of CDC's budget is distributed to states, localities, and other public and private partners to support services and programs. Some of CDC's funding is based on the number of people in a state or on a need-based formula for priority programs. Other funds are based on competitive grants. States can apply to CDC for funding for a specific program area. Often in these cases, not all states that apply for funds re-

ceive them because there are insufficient funds appropriated to allow all states to receive grants.

Public health funding from CDC has been flat, or has declined, in recent years. After converting each year into 2009 dollars, CDC funding shows 2005 as the peak of distribution during the past five years. CDC distributed \$6.83 billion in 2005, decreased significantly to \$5.38 billion in 2007, and in 2008 the amount remained flat at \$5.33 billion. A slight increase in funds can be seen in 2009 at \$5.79 billion.

Currently, most of the federal funding from CDC for states is distributed by categories, including grants or cooperative agreements for prevention programs.

While each category provides important funding for serious public health concerns, the funding is not allocated based on priority goals the government sets for reducing disease and injury rates, such as those outlined in the Healthy People 2010 initiative, or programs that have shown demonstrated effectiveness in reducing disease. In addition, while many prevention efforts can help with a number of health problems, the funding to support these efforts is not coordinated. For instance, increasing physical activity and improving nutrition can help with obesity, diabetes, and heart disease, yet there are multiple and often stove piped programs targeting these conditions separately. Federal funding is also not reviewed in totality to assess how the funding might strategically work with other federal, state, and local resources.

## WHAT ARE THE FEDERAL GOVERNMENT'S PUBLIC HEALTH OBLIGATIONS?

In partnerships with states and localities, the federal government has an obligation to:

- Assure the capacity for all levels of government to provide essential public health services;
- Act when health threats may span many states, regions, or the whole country;
- Act where the solution may be beyond the jurisdiction of individual states;
- Act to assist the states when they do not have the expertise or resources to mount an effective response in a public health emergency such as a natural disaster, bioterrorism, or an emerging disease;
- Facilitate the formulation of public health goals in collaboration with state and local governments and other relevant stakeholders;
- Be transparent and accountable for public health investments; and
- Disseminate innovation and best practices from state and local public health.

Source: Trust for America's Health. *Public Health Leadership Initiative an Action Plan for Healthy People in Healthy Communities in the 21st Century*.<sup>5</sup>



## Summary of CDC Dollars -- FY 2009

State	CDC Total (All Categories)	CDC Per Capita Total	CDC Per Capita Ranking
Alaska	\$40,962,486	\$58.65	1
Vermont	\$22,993,422	\$36.98	2
Wyoming	\$19,241,822	\$35.35	3
Rhode Island	\$34,537,546	\$32.79	4
New Mexico	\$61,308,375	\$30.51	5
North Dakota	\$19,641,719	\$30.37	6
South Dakota	\$24,502,083	\$30.16	7
Delaware	\$24,130,888	\$27.26	8
Hawaii	\$34,679,791	\$26.78	9
Montana	\$25,932,677	\$26.60	10
Louisiana	\$115,085,251	\$25.62	11
Maryland	\$140,518,569	\$24.65	12
Idaho	\$37,092,734	\$24.00	13
West Virginia	\$43,056,431	\$23.66	14
Maine	\$30,892,892	\$23.43	15
New Hampshire	\$30,948,857	\$23.37	16
Arkansas	\$67,321,531	\$23.30	17 (tie)
Mississippi	\$68,794,778	\$23.30	17 (tie)
New York	\$434,041,405	\$22.21	19
Washington	\$145,190,020	\$21.79	20
Nebraska	\$38,407,310	\$21.38	21
Texas	\$527,314,822	\$21.28	22
Massachusetts	\$138,269,681	\$20.97	23
South Carolina	\$95,388,538	\$20.91	24
Oklahoma	\$76,902,752	\$20.86	25
North Carolina	\$192,126,422	\$20.48	26
Connecticut	\$70,286,699	\$19.98	27
Colorado	\$98,459,583	\$19.59	28
Georgia	\$189,906,125	\$19.32	29
<b>NATIONAL AVERAGE \$19.23</b>			
Alabama	\$89,527,731	\$19.01	30
Nevada	\$49,508,172	\$18.73	31
Arizona	\$122,631,204	\$18.59	32
Illinois	\$236,195,434	\$18.29	33
Utah	\$50,638,243	\$18.19	34
Oregon	\$68,536,816	\$17.92	35
Iowa	\$53,479,906	\$17.78	36
Kansas	\$48,997,449	\$17.38	37
Florida	\$320,229,770	\$17.27	38
California	\$621,447,928	\$16.81	39
New Jersey	\$145,144,429	\$16.67	40
Minnesota	\$86,876,902	\$16.50	41
Tennessee	\$103,311,155	\$16.41	42
Missouri	\$97,317,702	\$16.25	43
Wisconsin	\$90,342,797	\$15.98	44
Michigan	\$159,182,407	\$15.97	45
Kentucky	\$67,163,014	\$15.57	46
Pennsylvania	\$187,352,742	\$14.86	47
Indiana	\$91,509,684	\$14.25	48
Ohio	\$156,027,355	\$13.52	49
Virginia	\$105,081,222	\$13.33	50
D.C.	\$105,441,661	\$NA*	NA*
<b>U.S. TOTAL</b>	<b>\$5,904,094,370</b>	<b>\$19.23</b>	<b>NA**</b>

\*D.C. was not included in the per capita rankings because it receives different funding levels than the 50 states.

\*\* The U.S. total reflects CDC monies to all 50 states and D.C

### Summary of HRSA Dollars - FY 2009

State	HRSA Total (All Programs)	HRSA Per Capita Total (All Programs)	HRSA Per Capita Ranking
Alaska	\$69,568,707	\$99.60	1
West Virginia	\$99,699,209	\$54.79	2
Montana	\$50,898,803	\$52.20	3
Mississippi	\$144,703,630	\$49.02	4
Maryland	\$266,708,506	\$46.80	5
Hawaii	\$58,510,695	\$45.18	6
Maine	\$55,142,830	\$41.83	7
New Mexico	\$82,562,069	\$41.08	8
Massachusetts	\$266,076,012	\$40.35	9
Vermont	\$23,305,106	\$37.48	10
Rhode Island	\$38,645,857	\$36.69	11
South Dakota	\$28,279,980	\$34.81	12
New York	\$657,945,894	\$33.67	13
Washington	\$214,104,710	\$32.13	14
Alabama	\$146,000,990	\$31.01	15
Louisiana	\$136,295,005	\$30.34	16
Colorado	\$149,795,128	\$29.81	17
Delaware	\$25,950,830	\$29.32	18
South Carolina	\$129,670,548	\$28.43	19
Oregon	\$108,463,928	\$28.35	20
Connecticut	\$94,512,593	\$26.86	21
Wyoming	\$13,839,969	\$25.43	22
Idaho	\$39,124,606	\$25.31	23
Arkansas	\$71,795,871	\$24.85	24
<b>NATIONAL AVERAGE \$24.71</b>			
North Dakota	\$15,778,265	\$24.39	25
Florida	\$447,569,679	\$24.14	26
Missouri	\$143,123,466	\$23.90	27
Kentucky	\$102,733,027	\$23.81	28
Illinois	\$301,438,369	\$23.35	29
Tennessee	\$141,875,380	\$22.53	30
Iowa	\$67,598,929	\$22.47	31
California	\$828,785,701	\$22.42	32
New Hampshire	\$28,529,073	\$21.54	33
Pennsylvania	\$264,627,298	\$20.99	34
New Jersey	\$181,718,164	\$20.87	35
North Carolina	\$188,660,250	\$20.11	36
Georgia	\$196,284,115	\$19.97	37
Nebraska	\$34,172,717	\$19.02	38
Utah	\$52,598,645	\$18.89	39
Oklahoma	\$68,748,942	\$18.65	40
Texas	\$461,532,444	\$18.62	41
Nevada	\$47,976,911	\$18.15	42
Virginia	\$136,570,120	\$17.33	43
Michigan	\$171,724,452	\$17.22	44
Arizona	\$113,469,684	\$17.20	45
Kansas	\$47,272,806	\$16.77	46
Wisconsin	\$91,955,264	\$16.26	47
Minnesota	\$83,418,373	\$15.84	48
Ohio	\$181,528,894	\$15.73	49
Indiana	\$87,574,768	\$13.63	50
D.C.	\$126,582,889	*NA	*NA
<b>US Total</b>	<b>\$7,585,450,101</b>	<b>\$24.71</b>	<b>NA**</b>

\*D.C. was not included in the per capita rankings because total funding for D.C. include funds for a number of national organizations.

\*\* The U.S. total reflects HRSA grants to all 50 states and the District of Columbia.



The House and Senate both passed health reform bills in 2009. Both versions contain provisions that could lead to transformative changes in public health, including significant federal

funding. The following chart outlines the key areas of potential new funding for public health included in the bills.

<b>Proposed Funding for Public Health in Health Reform Bills</b>	
<b>HOUSE VERSION<sup>6</sup></b>	<b>SENATE VERSION<sup>7</sup></b>
<p><b>Public Health Investment Fund</b> Establishes a Public Health Investment Fund (derived from general revenues of the Treasury), including \$4.6 billion for FY 2011, \$5.6 billion for FY 2012, \$6.9 billion for FY 2013, \$7.8 billion for FY 2014, and \$9 billion for FY 2015. Included in these amounts are funds for a Prevention and Wellness Trust, community health centers, and health workforce programs, including the National Health Service Corps.</p> <p><b>Prevention and Wellness Trust</b> Establishes a Trust that authorizes appropriations from the Public Health Investment Fund of \$15.4 billion over FY 2011-FY 2015 to fund Prevention Task Forces, Prevention and Wellness Research, Delivery of Community-Based Prevention and Wellness Services, and Core Public Health Infrastructure and Activities.</p>	<p><b>Prevention and Public Health Fund</b> Establishes a fund, to be administered through the Office of the Secretary at HHS, to provide for an expanded and sustained national investment in prevention and public health programs (over the FY 2008 level). The Fund will support programs authorized by the Public Health Service Act, for prevention, wellness and public health activities, including prevention research and health screenings and initiatives, such as the Community Transformation grant program, the Education and Outreach Campaign for Preventive Benefits, and immunization programs. Funding levels to include \$500 million for FY 2010, \$750 million for FY 2011, \$1 billion for FY 2012, \$1.25 billion for FY 2013, \$1.5 billion for FY 2014, and \$2 billion for FY 2015 and each year thereafter.</p> <p><b>Community Health Centers and the National Health Service Corps Fund</b> includes \$10 billion over five years.</p>
<p><b>School-Based Health Clinics</b> authorizes \$50 million for FY 2011 and such sums as necessary for FY 2012-2015 to award grants to eligible entities.</p>	<p><b>School-Based Health Centers</b> appropriates \$50 million for fiscal years 2010-2013 for facilities and equipment. Directs the Secretary to award grants to support the operation of school-based health centers.</p>
<p><b>Community-based overweight and obesity prevention program</b> authorizes \$10 million for FY 2011 and such sums as may be necessary for FY 2012-2015 to prevent overweight and obesity among children.</p>	<p><b>Funding for Childhood Obesity Demonstration Project</b> CHIPRA established a Childhood Obesity Demonstration Project and authorized \$25 million for FY 2009-2013. The Senate bill would appropriate \$25 million for the Secretary to carry out the demonstration project in FY 2010 – FY 2014.</p>
<p><b>Public Health Workforce Corps</b> establishes a scholarship and loan repayment program for individuals who join the newly created Corps, funds to be appropriated from the Public Health Investment Fund for the Corps.</p>	<p><b>Public Health Workforce Recruitment and Retention Programs</b> authorizes \$195 million in FY 2010 and such sums as necessary for FY 2011-2015 for a public health workforce loan repayment program.</p> <p><b>Training for Mid-Career Public and Allied Health Professionals</b> authorizes \$60 million for scholarship programs in FY 2010 and such sums as necessary for FY 2011-2015.</p>
	<p><b>Establishing a Ready Reserve Corps</b> authorizes \$5 million for FY 2010 to carry out the duties and responsibilities of the Commissioned Corps and \$12.5 million for FY 2010-2014 for the Ready Reserve Corps.</p>
	<p><b>Epidemiology-Laboratory Capacity Grants</b> authorize \$190 million for each FY 2010-2013.</p> <p><b>Fellowship Training in Public Health</b> authorizes for each FY 2010-2013, \$5 million for laboratory fellowship programs; \$5 million for the Public Health Informatics Fellowship Programs; and \$24.5 million for expanding the Epidemic Intelligence Service.</p>
<p><b>Extension of WISEWOMAN Program</b> authorizes \$70 million for FY 2011, \$73.5 million for FY 2012, \$77 million for FY 2013, \$81 million for FY 2014 and \$85 million for FY 2015.</p>	

## B. STATE INVESTMENT IN PUBLIC HEALTH

In FY 2009, per capita public health funding by state governments ranged from \$3.55 per person in Nevada to \$169.92 per person in Hawaii. The median funding amount for public health was \$28.92 per person, close to a \$5.00 decrease from FY 2008, due to state budget cuts caused by the current recession. This comes to nearly a \$392 million, or 3.4 percent, cut in state public health spending.

The majority of funding for public health comes from the state and local levels, although estimates of the percentages vary. In 2000, according to one analysis, state and local spending was 2.5 times the federal level, accounting for 70 percent of all public health spending.<sup>8</sup> According to this analysis, in 2000, combined state and local public health spending was \$44.29 per person while federal spending was \$17.77 per capita.

There are three types of organizational structures for state public health departments: stand alone, umbrella, and mixed function. Stand alone public health agencies are independent from other agencies in the state and have an independent mission. State public health agencies that fall under larger agencies like a State Department of Health Services are called umbrella function agencies. And lastly, mixed function state agencies are those that function independently but perform functions other than just public health, such as Medicaid and health insurance regulation.<sup>9</sup> An outside analysis of TFAH's 2005 state budget data found that state public health agency organizational structure did not play a significant role in the amount of state funding.<sup>10</sup>



## State Public Health Budgets

State	FY 2008-2009	FY 08-09 Per Capita	Per Capita Ranking	Budget change FY 2008 to FY 2009	Structure
Hawaii <sup>2,6</sup>	\$220,071,641	\$169.92	1	-\$1,487,235 (-0.7%)	Stand Alone
D.C.	\$80,457,000	\$134.17	2	\$12,552,858 (18.5%)	Stand Alone
West Virginia	\$162,136,051	\$89.10	3	\$22,326,217 (16.0%)	Umbrella Function
Idaho	\$123,963,500	\$80.19	4	\$6,263,391 (5.3%)	Umbrella Function
Vermont	\$47,624,371	\$76.60	5	\$751,954 (1.6%)	Mixed Function
Oklahoma <sup>1,5</sup>	\$274,350,000	\$74.41	6	\$33,621,879 (14.0%)	Stand Alone
California <sup>5</sup>	\$2,641,262,000	\$71.46	7	-\$436,224,224 (-13.9%)	Stand Alone
New York	\$1,345,066,281	\$68.83	8	\$123,280,215 (10.1%)	Stand Alone
Massachusetts	\$436,059,378	\$66.13	9	-\$6,423,313 (-1.5%)	Stand Alone
Alabama	\$303,458,769	\$64.45	10	\$32,134,865 (11.9%)	Stand Alone
New Mexico <sup>6</sup>	\$124,840,500	\$62.12	11	\$1,251,299 (1.0%)	Stand Alone
Wyoming	\$32,882,486	\$60.42	12	-\$760,839 (-2.3%)	Stand Alone
Delaware <sup>2</sup>	\$46,709,500	\$52.77	13	\$1,161,626 (2.6%)	Umbrella Function
Alaska <sup>2</sup>	\$35,505,100	\$50.83	14	-\$396,463 (-1.1%)	Umbrella Function
Colorado <sup>6</sup>	\$248,876,565	\$49.53	15	\$7,026,558 (2.9%)	Mixed Function
Rhode Island <sup>6</sup>	\$51,478,626	\$48.88	16	-\$2,137,630 (-4.0%)	Stand Alone
Kentucky	\$200,023,979	\$46.37	17	\$19,558,957 (10.9%)	Umbrella Function
Tennessee	\$288,021,800	\$45.74	18	-\$26,212,055 (-8.4%)	Stand Alone
Louisiana	\$192,282,755	\$42.80	19	-\$15,185,774 (-7.3%)	Umbrella Function
Virginia <sup>3</sup>	\$305,328,336	\$38.73	20	-\$16,159,709 (-5.0%)	Stand Alone
Nebraska <sup>6</sup>	\$68,323,285	\$38.03	21	\$3,083,126 (4.7%)	Umbrella Function
Maryland <sup>2</sup>	\$211,160,801	\$37.05	22	-\$5,885,914 (-2.7%)	Mixed Function
Washington <sup>3</sup>	\$243,143,000	\$36.48	23	-\$26,103,358 (-9.7%)	Stand Alone
New Jersey	\$281,987,000	\$32.38	24	-\$22,381,967 (-6.1%)	Mixed Function
Utah <sup>5</sup>	\$84,585,200	\$30.38	25	-\$4,808,463 (-5.4%)	Stand Alone
<b>Median \$28.92</b>					
South Dakota <sup>6</sup>	\$23,492,403	\$28.92	26	\$749,689 (3.3%)	Stand Alone
Arkansas	\$81,107,963	\$28.07	27	\$3,532,191 (4.6%)	Stand Alone
Connecticut <sup>2</sup>	\$95,660,267	\$27.19	28	\$13,316,622 (16.2%)	Stand Alone
Maine <sup>2</sup>	\$33,983,169	\$25.78	29	-\$1,428,434 (-4.0%)	Umbrella Function
Florida <sup>2</sup>	\$474,728,843	\$25.61	30	-\$71,916,866 (-13.2%)	Stand Alone
South Carolina	\$111,826,590	\$24.52	31	-\$31,404,534 (-22.0%)	Mixed Function
Illinois <sup>6</sup>	\$313,937,000	\$24.32	32	\$11,522,558 (3.8%)	Stand Alone
Montana	\$23,096,631	\$23.69	33	-\$1,241,776 (-5.1%)	Umbrella Function
Iowa	\$67,592,075	\$22.47	34	\$1,121,644 (1.7%)	Stand Alone
New Hampshire	\$29,176,603	\$22.03	35	-\$833,251 (-4.0%)	Umbrella Function
Michigan <sup>3</sup>	\$219,277,600	\$21.99	36	\$5,243,106 (2.5%)	Stand Alone
North Dakota <sup>4</sup>	\$13,615,833	\$21.05	37	\$2,757,047 (25.5%)	Stand Alone
Georgia <sup>5,6</sup>	\$193,217,098	\$19.66	38	\$17,762,196 (10.2%)	Umbrella Function
Pennsylvania <sup>2</sup>	\$247,514,000	\$19.64	39	-\$3,055,785 (-1.2%)	Stand Alone
Kansas	\$46,963,389	\$16.66	40	-\$5,527,850 (-10.6%)	Mixed Function
Oregon	\$61,443,808	\$16.06	41	\$6,974,433 (12.8%)	Umbrella Function
Texas <sup>5</sup>	\$392,308,428	\$15.83	42	\$11,891,228 (3.1%)	Mixed Function
Minnesota <sup>2</sup>	\$77,180,000	\$14.66	43	-\$6,451,950 (-7.8%)	Stand Alone
North Carolina <sup>2</sup>	\$132,525,705	\$14.13	44	-\$15,555,396 (-10.5%)	Umbrella Function
Ohio	\$159,789,169	\$13.84	45	-\$8,922,190 (-5.3%)	Stand Alone
Arizona	\$84,324,081	\$12.78	46	-\$27,308,529 (-24.5%)	Umbrella Function
Indiana	\$81,210,931	\$12.64	4	-\$16,727,789 (-17.1%)	Stand Alone
Mississippi <sup>2,5</sup>	\$31,076,047	\$10.53	48	-\$5,904,957 (-16.0%)	Stand Alone
Wisconsin	\$57,865,359	\$10.23	49	-\$1,128,544 (-1.9%)	Umbrella Function
Missouri <sup>5</sup>	\$55,435,291	\$9.26	50	\$3,712,485 (7.2%)	Mixed Function
Nevada <sup>6</sup>	\$9,379,920	\$3.55	51	\$669,629 (7.7%)	Umbrella Function

**Notes:**

- 1 May contain some social service programs, but not Medicaid or CHIP.
- 2 General funds only.
- 3 Budget data taken from appropriations legislation.
- 4 North Dakota's budget data for the 2007-2009 biennium taken from appropriations legislation.

- 5 Excludes one-time funding for antivirals.
- 6 State did not respond to the data check TFAH coordinated with ASTHO that was sent out 10/23/09. States were given until 11/25/09 to confirm or correct the information. The states that did not reply by that date were assumed to be in accordance with the findings.

## WHAT ARE STATE AND LOCAL GOVERNMENTS' PUBLIC HEALTH OBLIGATIONS?

States and localities have an obligation to:

- Fulfill core public health functions such as diagnosing and investigating health threats, informing and educating the public, mobilizing community partnerships, protecting against natural and human-made disasters, and enforcing state health laws;
- Provide relevant information on the community's health and the availability of essential public health services. This information should be integrated with reporting from local hospitals and health care providers to show how well public concerns and health threats are being addressed. These reports should also be publicly available and utilized by public health departments to work collaboratively with hospitals, physicians, and others with a role in public health to set health goals;
- Work collaboratively with the multiple stakeholders who influence public health at the community level in designing appropriate programs and interventions that address key health problems and improve the health of the region; and
- Deal with complex, poorly understood problems by acting as "policy laboratories." States and localities are closer to the people and to the problems causing ill health.

Trust for America's Health. *Public Health Leadership Initiative an Action Plan for Healthy People in Healthy Communities in the 21st Century.*<sup>11</sup>

## C. LOCAL INVESTMENT IN PUBLIC HEALTH

There are approximately 2,800 local health departments in the United States serving a diverse assortment of populations ranging from less than 1,000 residents in some rural jurisdictions to around eight million people, as in the case of the New York City Department of Health.<sup>12</sup> Local health departments (LHDs) are structured differently in each state and may be centralized, decentralized, or mixed function. Therefore, the level of responsibility and services provided by LHDs varies dramatically, and correspondingly, the way resources are determined and allocated differs significantly.

According to a 2008 study by researchers at the University of Arkansas for Medical Sciences, while local public health spending reached \$29.57 per capita for the median community in 2005, funding ranged from an average of \$8 per person in the lowest 20 percent of communities to nearly \$102 per person in the top 20 percent

of communities.<sup>13</sup> The spending in the top 20 percent was 13 times more than the lowest 20 percent. They found that communities in the top quintile of public health spending were likely to operate as decentralized units of government.

In addition, the researchers found that communities with higher rates of medical spending and resources and more physicians per capita spent less on public health, and conversely communities with lower rates of medical spending and resources and numbers of physician spent more on public health. The authors provide possible reasons for this, including that: communities that spend a lot on medical care may not have additional resources for public health; communities with low rates of health insurance may rely more strongly on public health services for their needs; and communities with good preventive services may offset the need for medical care.<sup>14</sup>

# The Economy and Public Health

The economy has had a major effect on public health budgets in states and localities. Most public health funding is considered discretionary, and so in times of economic difficulty, discretionary programs often experience disproportionate cuts at the state and local levels. In February 2010, President Obama signed into law an economic stimulus package (American Recovery and Reinvestment Act) which authorized \$1 billion in resources for public health, but the funding was one-time funding for prevention programs and was not at a level sufficient to offset the deep level of cuts to state budgets. In any event, the bulk of the additional resources will not be disbursed until 2010 and 2011. Overall, the economic situation has drastically hurt public health departments around the country.

## A. THE IMPACT OF THE RECESSION ON STATE AND LOCAL PUBLIC HEALTH

Most states are required to balance their budgets, which means in times of economic distress, many states have tried to close shortfalls by cutting spending, which often means cutting services.<sup>15</sup> According to one analysis, between 2008 and 2009 the majority of states were forced to cut their public health programs as revenue streams dried up. At least 29 states have implemented cuts that will restrict low-income children's or families' eligibility for health insurance or reduce their access to health care services.<sup>16</sup>

The beginning of a new decade has not changed the economic realities on the ground and the Center on Budget and Policy Priorities reports that states face an estimated \$180 billion budget gap for the upcoming fiscal year (FY 2011), which begins July 1, 2010.<sup>17</sup> The report warns that state budget cuts will end up having a harmful effect on public health. For example, in Arizona, the governor's budget eliminates the state's Children's Health Insurance Program which covers 47,000 children and repeals Medicaid coverage for more than 310,000 adults with low incomes and/or serious mental illnesses. In Mississippi, the governor's budget would close four state mental health clinics, while New York's governor would make deep health care cuts.

Meanwhile, the demands on public health departments are only likely to grow. According to a recent survey, a majority of Americans (56 percent) say they have postponed health care over the last 12 months due to cost.<sup>18</sup> These delays mean more

Americans are skipping regular preventive care (35 percent) and recommended medical tests or treatment (28 percent).<sup>19</sup> If these patients were to turn to public health departments, it's unclear if the nation's safety net could support them, especially in light of staff cut backs and furloughs.

According to a 2009 Association of State and Territorial Health Officials (ASTHO) survey, 71 percent of states expected public health budget cuts in fiscal year (FY) 2009, and at least 40 percent of states expect to lose public health staff through layoffs or attrition, and in FY 2010 at least 50 percent of states expect to make cuts as well.<sup>20</sup> According to ASTHO, the recent budget cuts compound a workforce shortage that dates back to 2003, as the public health workforce is aging, budgets have historically been low, and governments struggle with recruiting younger workers who have the training and expertise needed for these jobs. According to a 2007 ASTHO survey, 24 states had 25 percent or more of their state public health workforce eligible to retire within the next five years, while 10 states had 35 percent or more of their state public health workforce eligible. Only seven states had less than 25 percent of their state public health workforce eligible to retire within the next five years. A separate study by the Association of Schools of Public Health estimates that by 2020 state and local health departments will need an additional 250,000 public health workers.<sup>21</sup>

Local health departments (LHDs) are not immune to workforce shortages either. A recent survey from the National Association of County and City Health Officials (NACCHO) found that LHDs lost almost 8,000 staff positions in the first six months of 2009, adding on to the 7,000 jobs lost in 2008, which is approximately a 15 percent cut to LHDs workforce.<sup>22</sup> Meanwhile, a study by Health Management Associates found a variety of cutbacks being taken at the local level, including, but not limited to:<sup>23</sup>

- Personnel cuts, with deeper cuts anticipated in 2010 and 2011.
- 12,000 local health department employees experiencing reduced hours or mandatory furloughs.<sup>24</sup>
- Compounding cuts from year to year. For example the Chicago Department of Health which totaled 2,000 at one time, totaled 1,600 a few years ago, and now is down to 1,000 employees.

The funding deficits and federal and state cutbacks meant the country was ill-prepared for the 2009 H1N1 flu outbreak, and supplemental funds permitted temporary expansion of capacity while public health departments were responding to an emergency situation.

- In Seattle & King County the near-simultaneous arrival of pandemic influenza and economic recession severely stressed the public health workforce, according to Dr. Jeffrey Duchin, Chief, Communicable Disease Epidemiology and Immunization Section. As he recounted in a 2010 IOM report on the challenges of H1N1, Seattle & King County Public Health needed over 200 staff and 40 volunteers for the spring H1N1 response; they re-

ceived about 1,600 calls from health care providers alone, not including the public, over the first six weeks; and they didn't have enough staff for shift work, resulting in a lot of stress on the staff many of whom subsequently received layoff notices, withheld during the outbreak, due to budget cuts.<sup>25</sup>

- In Los Angeles County, public health nurses who normally staff a clinic that screens workers and students for tuberculosis, treats teens for sexually transmitted diseases, and vaccinates children against illnesses, were pulled off those duties to help staff H1N1 vaccination clinics.<sup>26</sup>
- The Saint Paul-Ramsey County Department of Public Health in Minnesota saw a five percent reduction in force in 2009. When H1N1 hit, the county was forced to pull restaurant inspectors off their beat to help staff a mass H1N1 vaccination clinic, which led to missed inspections of some restaurants and other food outlets.<sup>27</sup>
- In Maine, state health officials curtailed home visits by public health nurses to major threats such as tuberculosis or child-abuse cases, as about three-quarters of the department's staff was diverted to work on H1N1.<sup>28</sup>
- In Sacramento County, the same day federal health officials warned of a novel influenza virus that was killing otherwise healthy young adults in Mexico, the county's chief public health officer assembled her staff to deliver some bad news: job cuts were a near certainty due to severe budget crisis facing California and the weak national economy. Over the past two years the Division of Public Health has seen its budget slashed in half – dropping from \$9.8 million to \$5.1 million. The department has been forced to let go more than a quarter of its staff.<sup>29</sup>

## B. PUBLIC HEALTH AND THE ECONOMIC STIMULUS

ARRA provided an unprecedented level of increased investment toward revitalizing and modernizing the public health system.<sup>30</sup> The ARRA funding will result in a one-time additional investment of \$1 billion for public health programs around the country. The ARRA funding will be used to carry out evidence-based clinical and community-based prevention and wellness strategies that deliver specific, measurable health outcomes that address chronic disease rates. Of the \$1 billion for prevention and wellness efforts:

- \$650 million for chronic disease prevention via policies and programs to increase physical activity, improve nutrition, decrease obesity, and decrease smoking.<sup>31</sup> This includes:
  - ▲ \$119.5 million for states and territories to develop and implement policies regarding nutrition, physical activity, and tobacco control;<sup>32</sup> and
  - ▲ \$373 million for local and tribal communities to change systems and environments, improving access to healthy foods and opportunities for physical activity, and putting into place policies, such as clean-indoor-air laws, that will promote the health of populations.<sup>33</sup>

- \$300 million for Section 317 immunization programs, which includes:
  - ▲ \$200 million to acquire and make recommended vaccines available to states and territories;
  - ▲ \$50 million to help state and local governments deliver the vaccines and strengthen vaccination programs;
  - ▲ \$18 million to innovative approaches for vaccination campaigns; and
  - ▲ \$32 million will fund information, communication and education efforts.<sup>34</sup>
- \$50 million to support states in the prevention and reduction of health care associated infections (HAI).<sup>35</sup>

The ARRA funding was essential to help stimulate the economy during the downturn, while maintaining support for key public health programs and staffing. However, the funding was not enough to offset the serious cuts made to state and local budgets, and also is not sustained funding, which is necessary to provide ongoing needed support.







# Conclusion and Recommendations: Modernizing Public Health

**W**ith a renewed commitment to prevention and a revitalized public health system, we could spare millions of Americans from developing otherwise preventable diseases, reduce health costs by billions of dollars, and improve the productivity of the American workforce so it will be competitive with the rest of the world in today's global economy.

But in order to achieve these goals, it will mean that the country cannot continue to practice public health as it has for the past several decades. We need to rethink our priorities, goals, and funding levels so they match today's health challenges.

Provisions included in the health reform bills could help dramatically transform how public health is practiced in the United States, provid-

ing a framework for developing new strategies and significantly increased resources.

Regardless of increased funds or new legislation, there is an urgent need to modernize the public health system. The health reform debate identified a number of ways to address fundamental issues within the public health system so it can be changed to improve the health of Americans and so it can be more accountable for health outcomes.

## A. INCREASE FUNDING

Significant new funds are needed to modernize the public health system. The country should commit to a long-term goal of increased and sustained funding for public health, and federal, state, and local governments should all look for ways to increase support for public health.

An analysis by NYAM and TFAH found that adequately funding public health would require a total of \$55 to \$60 billion annually (approximately \$187 per person) on public health. However, federal, state, and local public health spending is approximately \$35 billion per year – more than \$120 per person.<sup>36</sup> That is an approximate combined \$20 billion shortfall for public health funding at the federal, state, and local level. The NYAM and TFAH analysis recommended that the federal government should

be expected to make up 60 percent of the shortfall (an additional \$12 billion annually) and state and local government should make up 40 percent (\$8 billion annually).

If passed, health reform could provide significant new resources for public health. The Senate bill includes a Prevention and Public Health Fund to include \$500 million for FY 2010, \$750 million for FY 2011, \$1 billion for FY 2012, \$1.25 billion for FY 2013, \$1.5 billion for FY 2014, and \$2 billion for FY 2015 and each year thereafter. In addition, the Senate bill includes a Community Health Centers Fund, which provides \$10 billion over five years for enhanced funding for the Community Health Center program, the National Health Service Corps, and construction and renovation of community health centers.

## B. CREATE A NATIONAL PREVENTION STRATEGY

Regardless of funding, a new approach is needed for strategically prioritizing and tackling the greatest health problems the country faces. Right now, the country's approach to health focuses primarily on treating people after they are already ill instead of trying to keep them healthy in the first place.

A National Prevention Strategy would help the country re-evaluate how we are using our public health resources – to make sure they are being well used to improve the health of Americans. It would help establish realistic goals and objectives for improving health through evidence- and practice-based clinical and community prevention activities. An effective strategy should: evaluate priorities; set clear goals; evaluate efficient deployment of resources to prevent illness; and ensure accountability for outcomes. The U.S. Secretary for Health and Human Services (HHS) should take the lead and consult closely with partners across the federal government, in state and local governments, and private partners, to develop the plan and oversee its implementation.

The Senate health reform bill calls for creation of a National Prevention Strategy. Such a strategy would not just focus on health-specific programs. It should also assess the health impact of policies across the federal government. For instance, transportation and agriculture policies have direct impact on the health in communities. HHS should work across government agencies to ensure health considerations are factored into a range of policy decisions, and determine when health impact assessments should be applied to policy and program decisions. This should also set a model for state and local governments to encourage a greater assessment of how policies and programs impact health.

President Obama recently issued an executive order calling for a national strategy to combat childhood obesity. Regardless of the outcome of the health reform debate, the President could similarly through executive order require all federal agencies to come together to address the range of prevention issues facing Americans.

Community prevention must be prioritized in this strategy as an effective way to protect and improve the health of Americans. Where we live, work, learn, and play directly impacts how healthy we are, and we must do a better job of addressing the obstacles that get in the way of our health. Programs and policies we know that work to reduce disease rates should be expanded, and research and development of new policies and practices should be undertaken. A systematic review should be conducted of all prevention programs currently supported by the federal government to assess their impact on health outcomes. The review should also focus on addressing policy, environmental, and structural change.

A National Prevention Strategy should also consider ways to help the country maintain a higher basic level of preparedness to respond to emerging health threats, such as infectious diseases, including foodborne diseases, natural disasters, and bioterrorism. The current infrastructure is insufficient for responding to threats, so the current default policy is to provide emergency supplemental resources in times of emergencies, instead of being prepared ahead of time. This approach is costly in the long term and also leaves Americans needlessly at risk. A more strategic, all-hazards based approach would mean communities could have a baseline level of preparedness to respond to natural and man-made threats.

## C. INCREASE ACCOUNTABILITY AND IMPROVE HEALTH OUTCOMES

Government at all levels must be held accountable for the health and safety of the American people. And, the government should be held accountable for showing that it is spending public health dollars effectively and in ways that clearly improve the public's health and safety.

Currently, however, it is difficult to assess how effectively and efficiently taxpayer dollars are being used to improve health and reduce disease. Greater assessment must be conducted to determine whether public health programs and agencies are meeting goals for improving health. High rates of preventable diseases and the variations in health among communities around the country shows that the existing system is not effectively meeting today's public health challenges. Assessment of geographic capacity to ensure that every community meets basic health protection needs must be part of any effort to improve accountability.

Health departments should have to demonstrate that they meet minimum accountability standards that emerge from the National Prevention Strategy in order to receive federal funding for such functions. The minimum guidelines should move beyond process measures to focus on quantitative objectives and outcomes. The federal government should compile, analyze, and report on these measures to policymakers and the public on a regular

basis. The County Health Rankings project discussed in the Introduction could be a starting point for determining progress based on health outcomes.

Health Information Technology (HIT) presents an important opportunity for public health, since it could provide increased and improved information about health trends in the United States. Information from HIT could help improve oversight of programs, quality control of health approaches, and opportunities for better targeting public health programs and interventions. Development of new HIT systems are already underway as part of the stimulus ARRA bill, but public health agencies will need financing to be full partners in this effort.

In 2008, TFAH convened a number of experts from government, academic, the private sector and public health organizations to develop recommendations for improving accountability. Their top recommendations included:

- Linking accountability to measurable improvements in the health of communities;
- Creating policies, incentives, and other mechanisms to encourage accountability and continuous quality improvement; and
- Expanding accreditation for public health systems to support accountability.<sup>37</sup>



# APPENDIX A: NOTES ON DATA AND METHODOLOGY

The sources for the funds and indicators come from a variety of publicly available sources. In some cases fiscal years for funding may vary depending on availability of data, and year of health indicators may vary slightly as well.

## Funding References

**CDC Funds for State and Local Health Departments, Universities, & Other Public and Private Agencies** FY 2009 data were all provided by the U.S. Centers for Disease Control and Prevention's Financial Management Office. The total (all categories) was also provided by the CDC; it includes program areas not highlighted here.

**CDC Per Capita Total** FY 2009 calculated by TFAH by dividing CDC Total dollars by July 1, 2009 U.S. Census Bureau population estimates.

**CDC Per Capita Ranking** based on TFAH calculated per capita totals.

**HRSA Health Professions, HIV/AIDS, Maternal & Child Health, and Primary Health Care** FY 2009 funding data come from HRSA's Geospatial Data Warehouse, State Profile Report. <http://datawarehouse.hrsa.gov> (accessed October 29, 2009). The total HRSA dollar amount also came from this source. HRSA key program area totals, however, were calculated by TFAH using Microsoft Excel.

**HRSA Per Capita Total** FY 2009 calculated by TFAH by dividing HRSA Total dollars by July 1, 2009 U.S. Census Bureau population estimates.

**HRSA Per Capita Ranking** based on TFAH calculated per capita totals.

**ASPR Hospital Preparedness Program** FY 2009 funding data from U.S. Department of Health and Human Services: Office of the Assistant Secretary for Preparedness and Response Office of Preparedness and Emergency Operations Division of National Healthcare Preparedness Programs, "FY09 Hospital Preparedness Program Funding Opportunity Announcement."

**State Public Health Budget Methodology** TFAH conducted an analysis of state spending on public health for the last budget cycle, fiscal year 2008-2009. For those states that only report their budgets in biennium cycles, the 2009-2011 period (or the 2008-2010 and 2009-2010 for Virginia and Wyoming respectively) was used, and

the percent change was calculated from the last biennium, 2007-2009 (or 2008-2010 and 2009-2010 for Virginia and Wyoming respectively).

This analysis was conducted from August to October of 2009 using publicly available budget documents through state government web sites. Based on what was made publicly available, budget documents used included either executive budget document that listed actual expenditures, estimated expenditures, or final appropriations; appropriations bills enacted by the state's legislature; or documents from legislative analysis offices.

"Public health" is defined to broadly include all health spending with the exception of Medicaid, CHIP, or comparable health coverage programs for low-income residents. Federal funds, mental health funds, addiction or substance abuse-related funds, WIC funds, services related to developmental disabilities or severely disabled persons, and state-sponsored pharmaceutical programs also were not included in order to make the state-by-state comparison more accurate since many states receive federal money for these particular programs. In a few cases, state budget documents did not allow these programs, or other similar human services, to be disaggregated; these exceptions are noted. For most states, all state funding, regardless of general revenue or other state funds (e.g. dedicated revenue, fee revenue, etc.), was used. In some cases, only general revenue funds were used in order to separate out federal funds; these exceptions are also noted.

Because each state allocates and reports its budget in a unique way, comparisons across states are difficult. This methodology may include programs that, in some cases, the state may consider a public health function, but the methodology used was selected to maximize the ability to be consistent across states. As a result, there may be programs or items states may wish to be considered "public health" that may not be included in order to maintain the comparative value of the data.

## Population Facts

**U.S. Total Population** estimates come from the U.S. Census Bureau, National and State Population Estimates, “Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2009,” released December 2009 and available online at <http://www.census.gov/popest/states/NST-ann-est.html> (accessed January 15, 2010).

**Total Number of U.S. Uninsured, All Ages** estimates come from the U.S. Census Bureau, “Current Population Survey, Table HI06. Health

Insurance Coverage Status by State for All People: 2008.” [http://www.census.gov/hhes/www/cps/tables/032009/health/h06\\_000.htm](http://www.census.gov/hhes/www/cps/tables/032009/health/h06_000.htm) (accessed November 2, 2009).

**Total Number of Uninsured, under 18** estimates come from the U.S. Census Bureau. “Current Population Survey, Table HI05: Health Insurance Coverage Status and Type of Coverage by State and Age for All People: 2008.” [http://www.census.gov/hhes/www/cpstables/032009/health/h05\\_000.htm](http://www.census.gov/hhes/www/cpstables/032009/health/h05_000.htm) (accessed November 2, 2009).

## Adult Health Indicator References

**\*\*Note:** All Behavioral Risk Factor Surveillance System (BRFSS) statistics use three years of combined data to “stabilize” yearly figures. TFAH contracted with Daniel Eisenberg, PhD, Assistant Professor, and Edward Okeke, MBBS, Health Service Organization and Policy Doctoral Student, both with the Department of Health Management and Policy, at the University of Michigan School of Public Health to carry out this data analysis.

**Adult Physical Inactivity Rate 2006-2008 3 Yr Average** data come from the BRFSS Prevalence Data 2006-2008, percent responding “did not engage in any physical activity”. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>

**AIDS Cumulative Cases Aged 13 and Older 2007 Yr End** data come from Table 16, HIV/AIDS Surveillance Report: Reported AIDS Cases and Annual Rates (per 100,000), by area of residence, 2006, 2007 and Cumulative—United States, National Center for HIV, STD, and TB Prevention, CDC. <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/pdf/2007SurveillanceReport.pdf> (accessed October 29, 2009).

**Alzheimer’s Estimated Cases among 65+ (2010)** data come from the Alzheimer’s Association report “Alzheimer’s Disease Facts and Figures 2008.” [http://www.alz.org/national/documents/report\\_alzfactsfigures2009.pdf](http://www.alz.org/national/documents/report_alzfactsfigures2009.pdf) (accessed November 2, 2009). The Alzheimer’s Association derived the estimated numbers of people age 65+ with Alzheimer’s Disease from: L.E. Herbert, et al. “State-specific Projections Through 2025 of Alzheimer Disease Prevalence.” *Neurology* 62 (2004):1645.

**Asthma 2006-2008 3 Yr Average** data come from the BRFSS Prevalence Data 2006-2008, percent responding “ever been told” they have asthma. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control

and Prevention. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>

**Breast Feeding Report Card** data come from “Breastfeeding Report Card, United States: Outcome Indicators.” Centers for Disease Control and Prevention National Immunization Survey, Provisional Data, 2006 births. [http://www.cdc.gov/breastfeeding/data/report\\_card2.htm](http://www.cdc.gov/breastfeeding/data/report_card2.htm) (accessed November 2, 2009).

**Cancer Estimated New Cases 2009** data come from the American Cancer Society’s Cancer Facts and Figures 2009. <http://www.cancer.org/downloads/STT/500809web.pdf> (accessed December 3, 2009).

**Chlamydia Rates per 100,000 Population (2008)** data come from the Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2008. Atlanta, GA: U.S. Department of Health and Human Services; November 2009. Table 2. Chlamydia — Reported cases and rates by state, ranked by rates: United States, 2008. <http://www.cdc.gov/STD/stats08/surv2008-Complete.pdf> (accessed November 16, 2009).

**Diabetes 2006-2008 3 Yr Average** data come from the BRFSS Prevalence Data 2006-2008, percent responding “ever been told” they have diabetes. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>

**Fruit and Vegetable Behavioral Indicator** data come from the BRFSS Prevalence Data 2007, percent who consume the recommended 2+ and 3+ servings of

fruit and vegetables daily. “State Indicator Report on Fruits and Vegetables, 2009. Department of Health and Human Services.” <http://www.fruitandveggiesmatter.gov/downloads/StateIndicatorReport2009.pdf> (accessed November 9, 2009).

**Human West Nile Virus Cases 2009** data come from the U.S. Centers for Disease Control and Prevention, Division of Vector-Borne Infectious Diseases, [http://www.cdc.gov/ncidod/dvbid/westnile/surv&controlCaseCount09\\_detailed.htm](http://www.cdc.gov/ncidod/dvbid/westnile/surv&controlCaseCount09_detailed.htm) (accessed December 4, 2009).

**Hypertension 2003-2007 3 Yr Average** data come from the BRFSS Prevalence Data 2003-2007, percent responding “ever been told” they have high blood pressure. Hypertension data is collected only on odd-numbered years. To stabilize the data, researchers used combined data from 2003, 2005 and 2007. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>

**Obesity 2006-2008 3 Yr Average** data were calculated by contractors using self-reported height and weight measure from the BRFSS Prevalence Data 2006-2008. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>. Obesity was defined as having a BMI greater than or equal to 30.

**Pneumococcal Vaccination Rates 65 and Over 2006-2008 3 Yr Average** data come from the BRFSS

Prevalence Data 2006-2008. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>.

**Seasonal Flu Vaccination Rates 18 and Over 2006-2008 3 Yr Average** data come from the BRFSS Prevalence Data 2006-2008. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>.

**Syphilis Rates per 100,000 Population (2008)** data come from the Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2008. Atlanta, GA: U.S. Department of Health and Human Services; November 2009. Table 24. Primary and secondary syphilis – Reported cases and rates by state, ranked by rates: United States, 2008. <http://www.cdc.gov/STD/stats08/surv2008-Complete.pdf> (accessed November 16, 2009).

**Tobacco Use – Current Smokers 2006-2008 3 Yr Average** data come from the BRFSS Prevalence Data 2006-2008, percent responding they are current smokers. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>.

**Tuberculosis (TB) Number of Cases 2008** data come from “Reported Tuberculosis in the United States, 2008,” CDC, September 2009. [http://www.cdc.gov/tb/statistics/reports/2008/pdf/6\\_MorbRA08.pdf](http://www.cdc.gov/tb/statistics/reports/2008/pdf/6_MorbRA08.pdf) (accessed October 29, 2009).

## Adolescent and Child Health Indicators

**AIDS Cumulative Cases Under 13 and 2007 Yr End** data come from Table 16, HIV/AIDS Surveillance Report: Reported AIDS Cases and Annual Rates (per 100,000), by area of residence, 2006, 2007 and Cumulative – United States, National Center for HIV, STD, and TB Prevention, CDC. <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2007report/pdf/2007SurveillanceReport.pdf> (accessed October 29, 2009).

**Asthma 2007 High School Students** data come from the Youth Risk Behavior Surveillance System, Comprehensive Results 2007, percent responding “ever been told” they have asthma. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>. (accessed December 11, 2008).

**Fruit and Vegetable Behavioral Indicator** data come from the Youth Risk Behavior Surveillance System, Comprehensive Results 2007, percent who

consume the recommended 2+ and 3+ servings of fruit and vegetables daily. “State Indicator Report on Fruits and Vegetables, 2009. Department of Health and Human Services.” <http://www.fruitandveggiesmatter.gov/downloads/StateIndicatorReport2009.pdf> (accessed November 9, 2009).

**Immunization Gap: Children Aged 19 to 35 Months without all Immunizations 2008** data come from “National, State, and Local Area Vaccination Coverage Among Children Aged 19-35 Months—United States—2008.” <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5833a3.htm> (accessed October 29, 2009). TFAH used the data for the 4:3:1:3:3:1 series which is the CDC-recommended series for children aged 19-35 months.<sup>38</sup> The 4:3:1:3:3:1 series is used to evaluate progress toward one of the Healthy People 2010 objectives, which aims to achieve greater than 80% coverage with the series among children ages 19-35 months.<sup>39</sup>

**Infant Mortality per 1,000 Live Births 2006** data come from “Deaths: Final Data for 2006” Na-

tional Vital Statistics Reports; 57(14). National Center for Health Statistics, Hyattsville, Maryland: 2009. Table 32: Number of infant and neonatal deaths and mortality rates, by race for the United States, each state, Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Marianas, and by sex for the United States, 2006. [http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57\\_14.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57_14.pdf) (accessed October 30, 2009).

**Low Birthweight Babies 2007** data come from “Births: Preliminary Data for 2007, State-specific Detailed Tables for 2007.” National Vital Statistics Reports; 56(12). National Center for Health Statistics, Hyattsville, Maryland: 2009. Table 13: Percentage of low birthweight: United States and each state and territory, final 2006 and preliminary 2007. [http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57\\_12.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57_12.pdf) (accessed January 15, 2010).

**Overweight High School Students 2007** data come from the Youth Risk Behavior Surveillance System, Comprehensive Results 2005. National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>.

**Overweight 10 to 17 Year Olds 2007** data come from the National Survey of Children’s Health,

## Other Public Health Indicators

**Health Professions Shortage Areas: Primary Care, Mental Health, Dental Care FY 2009** data come from HRSA’s Geospatial Data Warehouse, State Profile Report. <http://datawarehouse.hrsa.gov> (accessed October 29, 2009).

## Pandemic Preparedness Key Facts

**Potential # of Deaths During a Severe Pandemic** estimates in each state used the same assumptions of a 30 percent attack rate and a 2.5 percent case-fatality rate. The rates were calculated using the Flu Aid computer modeling program developed by CDC, which also considers the age and health risk factors of a state’s population.<sup>40</sup> It should be noted that Flu Aid is limited in its ability to account for density issues, such as how close people live together in cities versus rural areas.

**Potential # of Episodes of Illness During a Severe Pandemic** estimates in each state used the same assumptions of a 30 percent attack rate and a 2.5 percent case-fatality rate. The rates were calculated using the Flu Aid computer modeling program developed by CDC, which also considers the age and health risk factors of a state’s population. It should be noted that Flu

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://mchb.hrsa.gov/nsch07/index.html> (accessed October 29, 2009).

**Pre-Term Births as Percent of Live Births 2007** data comes from “Births: Preliminary Data for 2007”, National Vital Statistics Reports; 57(12). National Center for Health Statistics, Hyattsville, Maryland: 2009. Table 15: Percentage of births preterm: United States, each state and territory, final 2006 and preliminary 2007. [http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57\\_12.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57_12.pdf) (accessed January 15, 2010).

**Tobacco: Current Smokers High School Students 2007** data come from the Youth Risk Behavior Surveillance System, Comprehensive Results 2005, percent of “students who smoked cigarettes on one or more of the past 30 days.” National Center for Chronic Disease Prevention & Health Promotion, Centers for Disease Control and Prevention. Available at [http://www.cdc.gov/HealthyYouth/yrbs/pdf/yrbss07\\_mmwr.pdf](http://www.cdc.gov/HealthyYouth/yrbs/pdf/yrbss07_mmwr.pdf) (accessed December 11, 2008).

**Projected Supply vs. Demand for RNs (2010)** data comes from the National Center for Health Workforce Analysis in the Bureau of Health Professions, Health Resources and Services Administration paper “What Is Behind HRSA’s Projected Supply, Demand and Shortage of Registered Nurses?” Washington, D.C.: September 2004.

Aid is limited in its ability to account for density issues, such as how close people live together in cities versus rural areas.

**Potential Financial Loss during a Severe Pandemic, % of GDP** data comes from: Trust for America’s Health. Pandemic Flu and the Potential for U.S. Economic Recession. Washington, D.C.: Trust for America’s Health, 2007. Available at: <http://healthyamericans.org/reports/flurecession/>.

**Potential Financial Loss during a Severe Pandemic, dollar amount** data comes from: Trust for America’s Health. Pandemic Flu and the Potential for U.S. Economic Recession. Washington, D.C.: Trust for America’s Health, 2007. Available at: <http://healthyamericans.org/reports/flurecession/>.

## APPENDIX B: ADULT HEALTH INDICATORS

### STATE-BY-STATE HEALTH INDICATORS ADULT HEALTH INDICATORS

State	2009 Census Population Estimates	% Uninsured, All Ages (2008)	Adult Physical Inactivity Rate 2006-2008 3 Yr Average (95% Conf Interval)	AIDS Cumulative Cases Aged 13 and Older - 2007 Yr End	Alzheimer's Estimated Cases among 65+ (2010)	Asthma 2006-2008 3 Yr Average (95% Conf Interval)	Percent Exclusive Breastfeeding at 6 Months -- from Births 2006 <sup>^</sup>	Cancer Estimated New Cases - 2009	Chlamydia Rates per 100,000 Population (2008)	Diabetes 2006-2008 3 Yr. Ave. Percentage (95% Conf Interval)
Alabama	4,708,708	11.9	29.5% (+/-1.0)	9,015	91,000	13.0% (+/- 0.8)	6.3%	24,090	535.0	10.5% (+/-0.6)
Alaska	698,473	19.8	21.8% (+/-1.5)	682	5,000	14.8% (+/- 1.4)	16.9%	2,530	711.2	6.2% (+/-0.8)
Arizona	6,595,778	19.5	22.6% (+/-1.4)	10,929	97,000	14.5% (+/- 1.2)	11.9%	27,600	390.8	8.2% (+/-0.8)
Arkansas	2,889,450	17.8	28.8% (+/-0.9)	4,083	60,000	12.1% (+/- 0.7)	6.3%	14,800	498.7	9.0% (+/-0.5)
California	36,961,664	18.6	23.1% (+/-0.8)	148,274	480,000	13.1% (+/- 0.6)	18.6%	152,170	407.1	8.1% (+/-0.5)
Colorado	5,024,748	15.9	17.9% (+/-0.6)	9,098	72,000	12.7% (+/- 0.6)	22.6%	20,340	394.5	5.5% (+/-0.3)
Connecticut	3,518,288	10.0	20.7% (+/-0.8)	15,216	70,000	13.8% (+/- 0.7)	14.4%	20,650	357.4	6.8% (+/-0.4)
Delaware	885,122	10.8	22.6% (+/-1.1)	3,715	14,000	13.3% (+/- 1.0)	7.5%	4,690	447.3	8.3% (+/-0.6)
D.C.	599,657	10.0	21.5% (+/-1.0)	18,008	9,100	15.7% (+/- 0.9)	13.3%	2,600	1,177.0	8.0% (+/-0.6)
Florida	18,537,969	20.0	25.5% (+/-0.8)	107,980	450,000	10.9% (+/- 0.6)	11.9%	102,210	389.1	8.9% (+/-0.5)
Georgia	9,829,211	17.8	24.2% (+/-0.9)	33,607	120,000	12.6% (+/- 0.7)	14.8%	39,080	446.6	9.7% (+/-0.5)
Hawaii	1,295,178	7.8	19.0% (+/-0.8)	3,002	27,000	15.3% (+/- 0.8)	22.4%	6,400	466.1	8.0% (+/-0.5)
Idaho	1,545,801	15.6	20.5% (+/-0.8)	626	26,000	13.0% (+/- 0.7)	17.7%	6,800	279.7	7.2% (+/-0.5)
Illinois	12,910,409	12.9	24.5% (+/-0.9)	34,783	210,000	13.0% (+/- 0.8)	11.9%	60,960	460.4	8.4% (+/-0.5)
Indiana	6,423,113	12.3	25.8% (+/-1.0)	8,572	120,000	13.3% (+/- 0.8)	10.6%	31,320	349.1	8.7% (+/-0.5)
Iowa	3,007,856	9.5	23.1% (+/-0.8)	1,802	69,000	10.2% (+/- 0.6)	10.6%	16,740	313.6	7.0% (+/-0.4)
Kansas	2,818,747	12.1	23.7% (+/-0.7)	2,919	53,000	12.5% (+/- 0.6)	16.8%	13,080	331.7	7.6% (+/-0.4)
Kentucky	4,314,113	16.0	30.4% (+/-1.0)	4,869	80,000	13.0% (+/- 0.7)	9.4%	24,060	286.8	9.9% (+/-0.5)
Louisiana	4,492,076	20.1	30.3% (+/-0.9)	18,480	83,000	10.8% (+/- 0.7)	5.0%	22,170	527.8	10.0% (+/-0.5)
Maine	1,318,301	10.4	21.3% (+/-0.8)	1,156	25,000	15.0% (+/- 0.7)	18.1%	9,000	198.0	7.7% (+/-0.5)
Maryland	5,699,478	12.1	23.3% (+/-0.8)	31,611	86,000	13.5% (+/- 0.7)	10.1%	26,650	439.1	8.3% (+/-0.4)
Massachusetts	6,593,587	5.5	21.4% (+/-0.6)	19,819	120,000	14.9% (+/- 0.5)	13.5%	36,080	271.4	7.0% (+/-0.3)
Michigan	9,969,727	11.7	22.9% (+/-0.8)	15,558	180,000	14.8% (+/- 0.7)	10.7%	53,550	446.0	9.0% (+/-0.5)
Minnesota	5,266,214	8.7	16.3% (+/-0.9)	5,016	94,000	11.5% (+/- 0.8)	15.0%	23,670	276.1	5.8% (+/-0.4)
Mississippi	2,951,996	17.9	31.8% (+/-0.9)	6,976	53,000	11.3% (+/- 0.7)	4.6%	14,150	728.1	11.1% (+/-0.5)
Missouri	5,987,580	12.6	25.5% (+/-1.0)	11,585	110,000	13.1% (+/- 0.9)	8.5%	30,090	422.2	8.2% (+/-0.6)
Montana	974,989	16.1	20.7% (+/-0.8)	401	21,000	13.4% (+/- 0.7)	20.5%	5,340	323.7	6.5% (+/-0.4)
Nebraska	1,796,619	11.9	22.6% (+/-0.8)	1,561	37,000	11.0% (+/- 0.7)	11.9%	8,810	314.0	7.4% (+/-0.4)
Nevada	2,643,085	18.8	26.4% (+/-1.2)	6,095	29,000	13.1% (+/- 1.0)	9.7%	12,020	376.9	8.1% (+/-0.7)
New Hampshire	1,324,575	10.2	20.1% (+/-0.7)	1,124	22,000	15.1% (+/- 0.7)	20.6%	7,630	160.3	7.3% (+/-0.4)
New Jersey	8,707,739	14.1	26.7% (+/-0.8)	49,907	150,000	12.6% (+/- 0.6)	13.2%	47,920	257.9	8.4% (+/-0.4)
New Mexico	2,009,671	23.7	22.7% (+/-0.9)	2,712	31,000	13.5% (+/- 0.7)	14.0%	8,830	470.2	7.7% (+/-0.5)
New York	19,541,453	14.1	25.6% (+/-0.9)	179,116	320,000	13.7% (+/- 0.7)	9.6%	101,550	457.9	8.1% (+/-0.5)
North Carolina	9,380,884	15.4	24.2% (+/-0.6)	17,007	170,000	11.6% (+/- 0.5)	13.1%	42,270	414.0	9.2% (+/-0.3)
North Dakota	646,844	11.8	23.3% (+/-0.9)	151	18,000	11.0% (+/- 0.8)	11.1%	3,200	300.3	6.8% (+/-0.5)
Ohio	11,542,645	11.5	25.0% (+/-0.9)	15,698	230,000	13.6% (+/- 0.8)	9.1%	62,420	410.9	8.7% (+/-0.4)
Oklahoma	3,687,050	14.0	30.3% (+/-0.8)	5,079	74,000	13.8% (+/- 0.6)	8.4%	18,110	409.2	10.1% (+/-0.4)
Oregon	3,825,657	16.3	17.6% (+/-0.8)	6,229	76,000	15.3% (+/- 0.8)	20.8%	19,210	286.7	6.8% (+/-0.5)
Pennsylvania	12,604,767	9.9	24.0% (+/-0.8)	35,120	280,000	12.8% (+/- 0.7)	10.1%	74,170	339.7	8.7% (+/-0.5)
Rhode Island	1,053,209	11.8	24.1% (+/-1.0)	2,648	24,000	15.4% (+/- 0.9)	8.7%	6,250	313.6	7.3% (+/-0.5)
South Carolina	4,561,242	15.8	25.5% (+/-0.8)	14,055	80,000	12.7% (+/- 0.6)	9.6%	22,100	597.2	9.8% (+/-0.5)
South Dakota	812,383	12.5	24.5% (+/-0.9)	270	19,000	10.7% (+/- 0.7)	17.6%	4,120	371.3	6.6% (+/-0.4)
Tennessee	6,296,254	15.1	29.8% (+/-1.2)	13,114	120,000	12.2% (+/- 0.8)	12.8%	32,570	455.4	11.0% (+/-0.7)
Texas	24,782,302	25.1	28.4% (+/-0.9)	72,434	340,000	12.5% (+/- 0.7)	14.2%	98,200	422.0	9.3% (+/-0.5)
Utah	2,784,572	13.2	19.5% (+/-0.9)	2,363	32,000	13.3% (+/- 0.8)	24.0%	8,880	227.6	5.9% (+/-0.4)
Vermont	621,760	9.3	18.5% (+/-0.7)	468	11,000	14.5% (+/- 0.7)	23.5%	3,550	191.5	6.4% (+/-0.4)
Virginia	7,882,590	12.4	22.3% (+/-1.1)	17,431	130,000	13.7% (+/- 1.0)	18.8%	34,150	404.8	7.8% (+/-0.6)
Washington	6,664,195	12.4	18.1% (+/-0.4)	12,202	110,000	14.7% (+/- 0.4)	25.3%	32,290	330.9	7.0% (+/-0.2)
West Virginia	1,819,777	15.0	28.3% (+/-1.0)	1,575	44,000	12.6% (+/- 0.8)	8.4%	10,230	183.0	11.6% (+/-0.6)
Wisconsin	5,654,774	9.6	20.3% (+/-0.9)	4,716	110,000	13.3% (+/- 0.8)	16.8%	27,560	374.8	6.6% (+/-0.5)
Wyoming	544,270	13.6	22.7% (+/-0.8)	242	10,000	13.3% (+/- 0.7)	16.8%	2,500	301.6	6.9% (+/-0.4)
<b>U.S. Total</b>	<b>307,006,550</b>	<b>15.4</b>	<b>N/A*</b>	<b>989,099</b>	<b>4,844,100</b>	<b>N/A*</b>	<b>13.6%</b>	<b>1,479,350</b>	<b>401.3</b>	<b>N/A*</b>

Notes \*BRFSS data is not an accurate source of national-level data.



Fruit and Vegetable Intake, 2007 (95% Conf Interval)	Human West Nile Virus Cases 2009	Hypertension 2005-2007 3 Yr Average (95% Conf Interval)	Obesity 2006-2008 3 Yr. Ave. Percentage (95% Conf Interval)	Pneumococcal Vaccination Rates 65 and Over 2006-2008 (95% Conf Interval)	Seasonal Flu Vaccination Rates 18 and Over 2006-2008 (95% Conf Interval)	Syphilis Rates per 100,000 Population (2008)	Tobacco Use - Current Smokers 2006-2008 3 Yr Average (95% Conf Interval)	Tuberculosis Number of Cases -- 2008
9.8% (+/- 1.1)	0	33.5% (+/- 1.0)	31.2% (+/-1.1)	64.0% (+/- 1.8)	37.9% (+/- 1.9)	9.7	22.6% (+/- 1.1)	176
13.9% (+/- 2.3)	0	23.9% (+/- 1.4)	27.2% (+/-1.6)	64.0% (+/- 4.4)	35.2% (+/- 2.8)	0.1	22.6% (+/- 1.6)	50
16.1% (+/- 2.0)	18	24.2% (+/- 1.2)	24.8% (+/-1.5)	68.2% (+/- 2.3)	34.8% (+/- 2.6)	5.0	17.9% (+/- 1.4)	227
11.2% (+/- 1.1)	4	31.5% (+/- 0.9)	28.6% (+/-0.9)	64.2% (+/- 1.5)	40.1% (+/- 1.8)	7.3	22.8% (+/- 0.9)	83
16.1% (+/- 1.3)	103	27.2% (+/- 0.9)	23.6% (+/-0.8)	61.0% (+/- 1.9)	30.8% (+/- 1.1)	6.0	14.4% (+/- 0.7)	2,695
15.2% (+/- 0.9)	101	21.7% (+/- 0.7)	18.9% (+/-0.6)	72.6% (+/- 1.3)	40.4% (+/- 1.2)	2.6	18.1% (+/- 0.7)	103
16.2% (+/- 1.3)	0	25.7% (+/- 0.8)	21.3% (+/-0.8)	66.6% (+/- 1.4)	41.1% (+/- 1.8)	1.0	16.1% (+/- 0.7)	98
12.3% (+/- 1.9)	0	29.2% (+/- 1.1)	27.3% (+/-1.2)	70.0% (+/- 2.1)	38.8% (+/- 2.2)	1.9	19.5% (+/- 1.1)	23
20.1% (+/- 1.7)	0	27.9% (+/- 1.2)	22.3% (+/-1.0)	54.4% (+/- 2.3)	38.2% (+/- 2.0)	24.8	17.1% (+/- 1.0)	54
15.6% (+/- 1.0)	3	29.3% (+/- 0.9)	24.1% (+/-0.8)	62.4% (+/- 1.3)	31.4% (+/- 1.7)	5.7	19.3% (+/- 0.7)	954
13.3% (+/- 1.2)	4	29.4% (+/- 0.8)	27.9% (+/-0.9)	64.0% (+/- 1.6)	31.8% (+/- 1.7)	9.6	19.6% (+/- 0.8)	478
17.5% (+/- 1.3)	0	26.1% (+/- 0.9)	21.8% (+/-0.9)	67.9% (+/- 1.8)	44.2% (+/- 1.7)	2.3	16.6% (+/- 0.8)	124
13.0% (+/- 1.2)	37	25.4% (+/- 0.9)	24.8% (+/-0.9)	64.7% (+/- 1.8)	33.0% (+/- 1.7)	0.5	17.6% (+/- 0.9)	11
13.7% (+/- 1.2)	4	26.7% (+/- 0.9)	25.9% (+/-1.0)	59.6% (+/- 1.7)	31.9% (+/- 1.7)	4.3	20.6% (+/- 1.0)	469
13.5% (+/- 1.2)	4	28.1% (+/-0.8)	27.4% (+/-0.9)	66.9% (+/- 1.7)	34.1% (+/- 1.9)	2.2	24.7% (+/- 1.0)	118
12.3% (+/- 1.2)	5	26.3% (+/- 0.8)	26.7% (+/-0.9)	70.1% (+/- 1.5)	44.8% (+/- 1.7)	0.5	20.0% (+/- 0.8)	49
10.6% (+/- 0.9)	10	25.6% (+/- 0.7)	27.2% (+/-0.7)	68.5% (+/- 1.2)	38.9% (+/- 1.4)	1.1	18.6% (+/- 0.7)	57
10.8% (+/- 1.4)	3	30.1% (+/- 0.9)	29.0% (+/-1.0)	65.2% (+/- 1.6)	38.6% (+/- 1.7)	2.2	27.3% (+/- 1.0)	101
11.5% (+/- 1.1)	20	30.9% (+/- 1.0)	28.9% (+/-0.9)	66.3% (+/- 1.7)	38.2% (+/- 1.6)	16.5	22.2% (+/- 0.8)	227
17.7% (+/- 1.2)	0	27.6% (+/- 1.0)	24.7% (+/-0.9)	70.5% (+/- 1.7)	40.6% (+/- 1.5)	0.8	19.7% (+/- 0.9)	9
15.4% (+/- 1.2)	2	27.7% (+/- 0.8)	26.0% (+/-0.8)	66.1% (+/- 1.6)	38.5% (+/- 1.4)	6.7	16.5% (+/- 0.7)	278
16.4% (+/- 0.8)	0	25.8% (+/- 0.6)	21.2% (+/-0.6)	69.6% (+/- 1.1)	40.5% (+/- 1.1)	3.3	16.7% (+/- 0.6)	261
11.8% (+/- 1.0)	0	28.7% (+/- 0.8)	28.8% (+/-0.9)	65.8% (+/- 1.4)	35.7% (+/- 1.3)	2.1	21.3% (+/- 0.8)	188
11.6% (+/- 1.2)	4	22.6% (+/- 0.9)	25.3% (+/-1.0)	70.8% (+/- 1.7)	46.6% (+/- 2.0)	2.2	17.4% (+/- 0.9)	211
8.8% (+/- 1.0)	52	34.5% (+/- 0.9)	32.5% (+/-0.9)	66.8% (+/- 1.4)	35.5% (+/- 1.5)	6.3	23.9% (+/- 0.9)	118
11.2% (+/- 1.2)	3	29.1% (+/- 1.1)	28.1% (+/-1.1)	67.3% (+/- 1.9)	39.2% (+/- 2.0)	3.8	24.2% (+/- 1.1)	107
14.5% (+/- 1.3)	5	24.5% (+/- 0.9)	22.7% (+/-0.9)	71.2% (+/- 1.5)	37.8% (+/- 1.7)	0.7	19.0% (+/- 0.8)	9
14.0% (+/- 1.4)	51	25.5% (+/- 0.8)	26.9% (+/-0.9)	70.2% (+/- 1.3)	45.2% (+/- 1.6)	0.8	19.0% (+/- 0.9)	33
11.8% (+/- 1.5)	12	26.0% (+/- 1.2)	25.1% (+/-1.2)	66.1% (+/- 2.4)	25.5% (+/- 1.8)	3.0	21.9% (+/- 1.2)	102
16.2% (+/- 1.2)	0	24.9% (+/- 0.8)	24.1% (+/-0.8)	71.2% (+/- 1.5)	42.6% (+/- 1.6)	1.5	18.4% (+/- 0.8)	19
14.9% (+/- 1.3)	2	27.2% (+/- 0.7)	23.4% (+/-0.8)	63.5% (+/- 1.4)	34.8% (+/- 1.3)	2.6	16.6% (+/- 0.7)	422
12.5% (+/- 1.1)	8	24.0% (+/- 0.8)	24.6% (+/-0.9)	64.6% (+/- 1.6)	38.6% (+/- 1.8)	2.2	20.1% (+/- 0.8)	60
16.5% (+/- 1.3)	6	27.0% (+/- 0.8)	24.5% (+/-0.8)	63.3% (+/- 1.6)	37.6% (+/- 1.5)	6.3	18.0% (+/- 0.8)	1,200
10.8% (+/- 0.8)	0	29.8% (+/- 0.7)	28.3% (+/-0.6)	68.8% (+/- 1.0)	40.4% (+/- 1.2)	3.2	21.9% (+/- 0.7)	335
13.3% (+/- 1.4)	1	25.1% (+/- 0.9)	26.7% (+/-1.0)	69.4% (+/- 1.7)	42.1% (+/- 1.9)	0.0	19.5% (+/- 1.0)	3
12.2% (+/- 0.9)	2	28.2% (+/- 0.9)	28.6% (+/-1.0)	68.4% (+/- 1.7)	37.1% (+/- 1.3)	3.1	21.9% (+/- 1.0)	213
9.3% (+/- 0.9)	8	30.7% (+/- 0.7)	29.5% (+/-0.8)	71.1% (+/- 1.3)	41.8% (+/- 1.4)	2.4	25.2% (+/- 0.8)	100
15.6% (+/- 1.3)	7	25.5% (+/- 0.8)	25.4% (+/-1.0)	73.2% (+/- 1.5)	35.3% (+/- 1.7)	0.7	17.2% (+/- 0.9)	75
15.1% (+/- 1.2)	0	28.2% (+/- 0.8)	26.7% (+/-0.8)	69.7% (+/- 1.4)	38.3% (+/- 1.4)	2.2	21.3% (+/- 0.8)	387
14.6% (+/- 1.5)	0	29.2% (+/- 1.0)	21.7% (+/-0.9)	71.8% (+/- 1.6)	42.0% (+/- 2.0)	1.7	17.9% (+/- 1.0)	36
9.3% (+/- 0.8)	3	31.3% (+/- 0.7)	29.7% (+/-0.8)	64.0% (+/- 1.4)	36.3% (+/- 1.6)	2.2	21.4% (+/- 0.8)	188
10.1% (+/- 1.0)	21	25.8% (+/- 0.7)	26.9% (+/-0.9)	64.7% (+/- 1.4)	49.2% (+/- 1.8)	0.1	19.2% (+/- 0.8)	16
13.1% (+/- 1.5)	7	32.1% (+/- 1.1)	30.2% (+/-1.3)	65.4% (+/- 1.9)	39.5% (+/- 2.1)	6.7	23.3% (+/- 1.1)	282
14.3% (+/- 0.9)	104	26.9% (+/- 0.7)	27.9% (+/-0.9)	63.7% (+/- 1.6)	35.4% (+/- 1.5)	5.9	18.6% (+/- 0.8)	1,501
13.2% (+/- 1.4)	0	20.3% (+/- 0.8)	22.5% (+/-0.9)	68.0% (+/- 1.9)	39.8% (+/- 1.8)	0.9	10.3% (+/- 0.7)	27
17.9% (+/- 1.2)	0	24.6% (+/- 0.8)	22.1% (+/-0.7)	69.0% (+/- 1.4)	40.2% (+/- 1.5)	1.8	17.5% (+/- 0.7)	6
14.2% (+/- 1.4)	0	27.3% (+/- 1.0)	25.4% (+/-1.2)	68.1% (+/- 2.0)	40.7% (+/- 2.4)	3.4	18.1% (+/- 1.0)	292
15.1% (+/- 0.6)	36	25.4% (+/- 0.4)	25.4% (+/-0.5)	70.0% (+/- 0.8)	38.0% (+/- 0.9)	2.8	16.5% (+/- 0.4)	228
10.3% (+/- 1.1)	0	33.2% (+/- 1.0)	31.1% (+/-1.0)	66.9% (+/- 1.8)	39.1% (+/- 1.8)	0.7	26.4% (+/- 1.0)	28
13.7% (+/- 1.3)	1	25.9% (+/- 0.9)	26.0% (+/-1.0)	70.5% (+/- 1.8)	40.5% (+/- 2.0)	1.2	20.1% (+/- 0.9)	68
14.6% (+/- 1.2)	12	25.2% (+/- 0.8)	24.3% (+/-0.8)	70.3% (+/- 1.5)	39.5% (+/- 1.4)	0.6	21.0% (+/- 0.8)	5
<b>14.0% (+/- 0.2)</b>	<b>663</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>N/A*</b>	<b>4.5</b>	<b>N/A*</b>	<b>12,904</b>

^ The AAP Section on Breastfeeding, American Academy of Family Physicians, World Health Organization, United Nations Children's Fund, and many other health organizations recommend exclusive breastfeeding for the first 6 months of life.

## APPENDIX C: CHILD AND ADOLESCENT HEALTH INDICATORS

STATE-BY-STATE HEALTH INDICATORS CHILD					
State	2009 Census Population Estimates	% Uninsured, under 18 (2008)	AIDS Cumulative Cases Under Age 13 - 2007 Yr End	Asthma - 2007 High School Students (95% Conf Interval)	Fruit and Vegetable Indicator - 2007 (95% Conf Interval)
Alabama	4,708,708	3.6	76	N/A	N/A
Alaska	698,473	14.5	7	18.2% (+/- 2.0)	7.0% (+/- 1.5)
Arizona	6,595,778	16.0	46	23.0% (+/- 2.1)	7.4% (+/- 2.0)
Arkansas	2,889,450	9.2	36	21.1% (+/- 3.3)	5.2% (+/- 1.3)
California	36,961,664	10.5	675	N/A	N/A
Colorado	5,024,748	12.3	31	N/A	N/A
Connecticut	3,518,288	5.4	183	27.4% (+/- 2.5)	10.4% (+/- 1.9)
Delaware	885,122	9.1	26	N/A	N/A
D.C.	599,657	6.3	188	N/A	8.8% (+/- 1.8)
Florida	18,537,969	16.7	1,544	19.6% (+/- 1.4)	10.9% (+/- 1.2)
Georgia	9,829,211	10.5	240	22.1% (+/- 2.1)	7.9% (+/- 1.6)
Hawaii	1,295,178	5.4	17	28.7% (+/- 3.4)	9.2% (+/- 2.4)
Idaho	1,545,801	8.9	2	18.5% (+/- 2.6)	8.9% (+/- 2.1)
Illinois	12,910,409	6.4	283	20.0% (+/- 2.2)	10.0% (+/- 1.7)
Indiana	6,423,113	6.0	56	22.5% (+/- 3.0)	8.8% (+/- 1.8)
Iowa	3,007,856	5.3	13	15.4% (+/- 2.6)	8.3% (+/- 1.3)
Kansas	2,818,747	11.0	14	20.1% (+/- 2.5)	10.1% (+/- 2.1)
Kentucky	4,314,113	10.0	35	26.1% (+/- 1.6)	6.1% (+/- 1.1)
Louisiana	4,492,076	11.3	132	N/A	N/A
Maine	1,318,301	5.7	7	25.8% (+/- 3.2)	10.0% (+/- 1.9)
Maryland	5,699,478	6.0	320	23.7% (+/- 3.5)	7.2% (+/- 1.8)
Massachusetts	6,593,587	3.4	218	N/A	N/A
Michigan	9,969,727	4.7	114	23.5% (+/- 2.0)	7.4% (+/- 1.3)
Minnesota	5,266,214	6.6	28	N/A	N/A
Mississippi	2,951,996	13.4	56	17.2% (+/- 2.0)	7.9% (+/- 1.2)
Missouri	5,987,580	6.8	61	20.8% (+/- 2.6)	8.1% (+/- 1.9)
Montana	974,989	10.5	3	20.9% (+/- 1.7)	8.0% (+/- 1.1)
Nebraska	1,796,619	10.1	11	N/A	N/A
Nevada	2,643,085	19.1	29	N/A	8.3% (+/- 0.6)
New Hampshire	1,324,575	3.6	10	N/A	10.1% (+/- 1.5)
New Jersey	8,707,739	11.3	787	N/A	N/A
New Mexico	2,009,671	16.1	9	24.9% (+/- 3.0)	8.6% (+/- 1.9)
New York	19,541,453	7.1	2,345	23.9% (+/- 1.8)	N/A
North Carolina	9,380,884	9.3	120	20.3% (+/- 2.4)	6.0% (+/- 0.8)
North Dakota	646,844	7.9	2	19.4% (+/- 2.0)	7.8% (+/- 1.4)
Ohio	11,542,645	5.8	140	21.3% (+/- 1.7)	7.2% (+/- 1.1)
Oklahoma	3,687,050	7.2	26	20.0% (+/- 1.8)	7.0% (+/- 1.1)
Oregon	3,825,657	11.6	19	N/A	N/A
Pennsylvania	12,604,767	6.7	369	N/A	N/A
Rhode Island	1,053,209	7.9	28	25.8% (+/- 1.8)	8.6% (+/- 1.1)
South Carolina	4,561,242	12.8	108	22.5% (+/- 2.3)	6.3% (+/- 1.3)
South Dakota	812,383	9.9	5	16.1% (+/- 2.6)	7.5% (+/- 1.5)
Tennessee	6,296,254	9.4	59	20.2% (+/- 2.1)	7.9% (+/- 1.6)
Texas	24,782,302	17.9	394	19.7% (+/- 2.4)	8.3% (+/- 0.8)
Utah	2,784,572	9.5	20	22.7% (+/- 4.6)	7.4% (+/- 1.9)
Vermont	621,760	3.8	6	N/A	11.4% (+/- 2.4)
Virginia	7,882,590	6.9	177	N/A	N/A
Washington	6,664,195	6.8	35	N/A	N/A
West Virginia	1,819,777	6.3	11	24.6% (+/- 3.3)	8.6% (+/- 1.6)
Wisconsin	5,654,774	5.8	33	21.5% (+/- 1.9)	6.7% (+/- 1.3)
Wyoming	544,270	8.8	2	23.1% (+/- 2.1)	8.7% (+/- 1.3)
<b>U.S. Total</b>	<b>307,006,550</b>	<b>9.9</b>	<b>9,156</b>	<b>21.4</b>	<b>9.5% (+/- 1.0)</b>

## AND ADOLESCENT HEALTH INDICATORS

Immunization Gap, % of Children Aged 19 to 35 Months Without All Immunizations - 2008	Infant Mortality - 2006 Per 1,000 Live Births	% Low Birthweight Babies - 2007 Preliminary Data	Overweight - 2007 High School Students (95% Conf Interval)	Obese and Overweight: % of 10 to 17 Year Olds (2007)	Pre-Term Births % of live births 2007 Preliminary Data	Tobacco: Current Smokers High School Students 2007 (95% Conf Interval)
24.9%	9.0	10.4	N/A	36.1% (+/- 4.6)	16.6	N/A
30.8%	6.9	5.7	16.2% (+/- 2.7)	33.9% (+/- 4.4)	10.4	24.1% (+/- 2.5)
23.6%	6.4	7.1	14.2% (+/- 2.3)	30.6% (+/- 4.9)	12.7	N/A
24.5%	8.5	9.1	15.8% (+/- 2.3)	37.5% (+/- 4.2)	13.9	28.3% (+/- 3.6)
21.3%	5.0	6.9	N/A	30.5% (+/- 6.4)	10.9	N/A
20.6%	5.7	9.0	N/A	27.2% (+/- 5.1)	12.2	N/A
30.2%	6.2	8.1	13.3% (+/- 1.9)	25.7% (+/- 3.7)	10.5	N/A
28.2%	8.3	9.3	17.5% (+/- 1.7)	33.2% (+/- 4.1)	14.3	24.6% (+/- 2.0)
22.4%	11.3	11.1	17.8% (+/- 2.1)	35.4% (+/- 4.8)	15.6	N/A
20.1%	7.3	8.7	15.2% (+/- 1.3)	33.1% (+/- 6.1)	13.8	20.2% (+/- 1.6)
28.1%	8.1	9.1	18.2% (+/- 2.1)	37.3% (+/- 5.6)	13.6	26.2% (+/- 2.3)
22.6%	5.6	8.0	14.3% (+/- 2.7)	28.5% (+/- 4.1)	12.4	N/A
39.6%	6.8	6.5	11.7% (+/- 2.6)	27.5% (+/- 3.9)	10.5	26.1% (+/- 4.1)
25.2%	7.3	8.5	15.7% (+/- 2.0)	34.9% (+/- 4.1)	13.1	25.3% (+/- 3.3)
24.5%	8.0	8.5	15.3% (+/- 1.8)	29.9% (+/- 4.3)	12.9	29.3% (+/- 4.8)
25.3%	5.1	6.8	13.5% (+/- 2.2)	26.5% (+/- 4.3)	11.6	25.5% (+/- 3.9)
23.3%	7.1	6.0	14.4% (+/- 2.2)	31.1% (+/- 4.2)	11.5	25.2% (+/- 2.0)
25.9%	7.5	9.3	16.4% (+/- 1.6)	37.1% (+/- 4.1)	15.2	33.6% (+/- 2.8)
18.1%	9.9	11.0	N/A	35.9% (+/- 4.6)	16.5	N/A
26.4%	6.3	6.3	13.1% (+/- 2.4)	28.2% (+/- 3.8)	10.6	21.3% (+/- 3.4)
19.8%	8.0	9.1	15.2% (+/- 2.8)	28.8% (+/- 4.2)	13.4	20.4% (+/- 4.6)
17.7%	4.8	7.9	14.6% (+/- 2.0)	30.0% (+/- 4.6)	11.2	24.4% (+/- 3.1)
25.5%	7.4	8.2	16.5% (+/- 2.0)	30.6% (+/- 4.3)	12.2	24.8% (+/- 3.9)
25.4%	5.2	6.7	N/A	23.1% (+/- 4.0)	10.4	N/A
24.2%	10.6	12.3	17.9% (+/- 1.9)	44.4% (+/- 4.3)	18.3	25.6% (+/- 3.0)
27.1%	7.4	7.8	14.3% (+/- 1.5)	31.0% (+/- 4.1)	12.5	29.6% (+/- 6.1)
40.8%	5.8	7.2	13.3% (+/- 1.3)	25.6% (+/- 3.7)	11.9	30.0% (+/- 2.9)
28.5%	5.6	7.0	N/A	31.5% (+/- 4.6)	11.9	N/A
32.2%	6.4	8.2	14.5% (+/- 1.9)	34.2% (+/- 5.4)	14.3	N/A
19.0%	6.1	6.3	14.4% (+/- 2.0)	29.4% (+/- 3.9)	9.4	26.6% (+/- 3.0)
31.5%	5.5	8.5	N/A	31.0% (+/- 4.5)	12.7	N/A
23.0%	5.8	8.8	13.5% (+/- 2.1)	32.7% (+/- 5.0)	12.8	30.2% (+/- 4.0)
26.7%	5.6	8.2	16.3% (+/- 1.3)	32.9% (+/- 4.4)	12.3	17.7% (+/- 2.0)
29.2%	8.1	9.2	17.1% (+/- 1.9)	33.5% (+/- 4.5)	13.3	N/A
30.2%	5.8	6.3	13.7% (+/- 3.3)	25.7% (+/- 3.3)	11.6	27.4% (+/- 3.2)
18.2%	7.8	8.7	15.0% (+/- 3.3)	33.3% (+/- 4.7)	13.2	N/A
28.3%	8.0	8.2	15.2% (+/- 1.9)	29.5% (+/- 4.1)	13.5	31.3% (+/- 4.0)
29.0%	5.5	6.1	N/A	24.3% (+/- 3.9)	10.3	N/A
22.3%	7.6	8.4	N/A	29.7% (+/- 4.8)	11.8	N/A
22.5%	6.1	8.0	16.2% (+/- 1.8)	30.1% (+/- 4.2)	12.0	21.6% (+/- 4.5)
21.6%	8.4	10.1	17.1% (+/- 2.3)	33.7% (+/- 4.2)	15.5	24.2% (+/- 3.9)
22.6%	6.9	7.0	14.5% (+/- 2.1)	28.4% (+/- 3.9)	12.6	N/A
18.8%	8.7	9.4	18.1% (+/- 2.1)	36.5% (+/- 4.3)	14.2	32.8% (+/- 4.2)
22.2%	6.2	8.4	15.6% (+/- 2.0)	32.2% (+/- 5.6)	13.6	26.8% (+/- 3.0)
23.4%	5.1	6.7	11.7% (+/- 2.5)	23.1% (+/- 4.2)	10.9	8.9% (+/- 3.4)
35.5%	5.5	6.2	14.5% (+/- 2.8)	26.7% (+/- 4.5)	9.2	N/A
27.1%	7.1	8.6	N/A	31.0% (+/- 4.2)	12.1	N/A
26.5%	4.7	6.3	N/A	29.5% (+/- 5.0)	10.6	N/A
23.5%	7.4	9.5	17.0% (+/- 3.2)	35.5% (+/- 3.9)	13.9	34.5% (+/- 4.4)
20.4%	6.4	7.0	14.0% (+/- 1.4)	27.9% (+/- 3.8)	11.1	27.5% (+/- 2.0)
35.4%	7.0	9.1	11.4% (+/- 1.4)	25.7% (+/- 4.0)	12.7	N/A
23.9%	6.7	8.2	N/A**	N/A*	12.7	N/A**

## APPENDIX D: OTHER PUBLIC HEALTH INDICATORS

STATE-BY-STATE HEALTH INDICATORS					
State	OTHER PUBLIC HEALTH INDICATORS				
	2009 Census Population Estimates	Health Professions Service Areas Primary Care (As of 10/22/09)	Health Professions Service Areas Mental Health (As of 10/22/09)	Health Professions Service Areas Dental Care (As of 10/22/09)	Nursing Shortage Estimates (2010)
Alabama	4,708,708	86	49	62	-200
Alaska	698,473	72	52	45	-2,300
Arizona	6,595,778	140	62	105	-12,500
Arkansas	2,889,450	93	41	45	-2,700
California	36,961,664	554	268	302	-47,600
Colorado	5,024,748	113	45	79	-10,900
Connecticut	3,518,288	41	20	40	-11,100
Delaware	885,122	12	6	8	-1,300
D.C.	599,657	14	8	9	-3,000
Florida	18,537,969	255	142	212	-32,700
Georgia	9,829,211	193	65	137	-16,400
Hawaii	1,295,178	31	29	27	-4,500
Idaho	1,545,801	68	26	63	-800
Illinois	12,910,409	265	121	170	-9,300
Indiana	6,423,113	98	46	39	-8,200
Iowa	3,007,856	101	41	109	-3,400
Kansas	2,818,747	152	46	118	-1,000
Kentucky	4,314,113	138	84	61	1,200
Louisiana	4,492,076	126	87	89	100
Maine	1,318,301	81	41	72	-2,500
Maryland	5,699,478	53	34	40	-7,000
Massachusetts	6,593,587	74	49	66	-16,100
Michigan	9,969,727	216	108	133	-3,100
Minnesota	5,266,214	124	46	78	-4,400
Mississippi	2,951,996	110	41	103	-500
Missouri	5,987,580	186	54	136	-12,900
Montana	974,989	97	54	59	-500
Nebraska	1,796,619	91	36	48	-2,400
Nevada	2,643,085	60	23	24	-4,100
New Hampshire	1,324,575	26	19	20	-3,300
New Jersey	8,707,739	37	30	32	-19,600
New Mexico	2,009,671	92	45	63	-3,100
New York	19,541,453	182	133	113	-21,500
North Carolina	9,380,884	115	61	107	-8,100
North Dakota	646,844	78	43	28	-900
Ohio	11,542,645	125	62	97	-12,100
Oklahoma	3,687,050	205	92	93	-500
Oregon	3,825,657	100	52	75	-5,300
Pennsylvania	12,604,767	179	98	141	-21,100
Rhode Island	1,053,209	19	16	16	-3,000
South Carolina	4,561,242	97	41	66	-5,200
South Dakota	812,383	91	46	52	-200
Tennessee	6,296,254	122	52	132	-18,500
Texas	24,782,302	427	307	238	-41,900
Utah	2,784,572	59	31	50	-1,500
Vermont	621,760	28	19	20	-600
Virginia	7,882,590	120	75	90	-11,000
Washington	6,664,195	153	105	106	-8,800
West Virginia	1,819,777	100	51	63	700
Wisconsin	5,654,774	118	108	76	500
Wyoming	544,270	39	23	24	-1,200
<b>U.S. Total</b>	<b>307,006,550</b>	<b>6,156</b>	<b>3,233</b>	<b>4,181</b>	<b>-405,800</b>

**PANDEMIC PREPAREDNESS KEY FACTS**

Potential # of Deaths During a Severe Pandemic	Potential # of Sick During a Severe Pandemic	Potential Financial Loss During a Severe Pandemic, % of GDP	Potential Financial Loss During a Severe Pandemic, \$ amount
37,000	1,350,000	5.45%	\$8.3 Billion
4,000	192,000	6.59%	\$2.6 Billion
38,000	1,766,000	5.52%	\$12.0 Billion
22,000	823,000	5.81%	\$5.0 Billion
253,000	10,713,000	5.36%	\$86.9 Billion
30,000	1,381,000	5.40%	\$11.7 Billion
29,000	1,039,000	5.23%	\$10.1 Billion
6,000	250,000	5.32%	\$3.0 Billion
5,000	162,000	4.62%	\$3.8 Billion
149,000	5,254,000	5.74%	\$38.7 Billion
57,000	2,688,000	5.46%	\$19.8 Billion
10,000	365,000	6.60%	\$3.6 Billion
9,000	425,000	5.42%	\$2.6 Billion
99,000	3,787,000	5.60%	\$31.3 Billion
49,000	1,863,000	5.87%	\$14.0 Billion
26,000	878,000	5.90%	\$6.7 Billion
22,000	810,000	5.58%	\$5.9 Billion
33,000	1,232,000	5.87%	\$8.2 Billion
35,000	1,339,000	6.03%	\$10.1 Billion
11,000	391,000	5.38%	\$2.4 Billion
41,000	1,656,000	5.09%	\$12.5 Billion
55,000	1,895,000	5.20%	\$16.9 Billion
82,000	3,003,000	5.39%	\$20.3 Billion
39,000	1,526,000	5.44%	\$12.8 Billion
22,000	864,000	5.99%	\$4.9 Billion
47,000	1,717,000	5.74%	\$12.4 Billion
7,000	277,000	5.86%	\$1.8 Billion
14,000	520,000	6.22%	\$4.4 Billion
13,000	720,000	8.08%	\$9.0 Billion
10,000	389,000	5.30%	\$2.9 Billion
71,000	2,585,000	5.42%	\$23.4 Billion
13,000	571,000	5.42%	\$3.7 Billion
157,000	5,706,000	5.20%	\$49.8 Billion
62,000	2,556,000	5.48%	\$19.0 Billion
6,000	186,000	5.71%	\$1.4 Billion
96,000	3,396,000	5.54%	\$24.4 Billion
28,000	1,046,000	5.55%	\$6.7 Billion
28,000	1,082,000	5.46%	\$7.9 Billion
113,000	3,675,000	5.50%	\$26.9 Billion
9,000	318,000	5.29%	\$2.3 Billion
31,000	1,256,000	5.62%	\$7.9 Billion
6,000	229,000	5.71%	\$1.8 Billion
45,000	1,767,000	5.98%	\$13.7 Billion
146,000	6,789,000	5.57%	\$55.1 Billion
14,000	737,000	5.49%	\$5.0 Billion
5,000	185,000	5.65%	\$1.3 Billion
54,000	2,208,000	5.13%	\$18.1 Billion
45,000	1,853,000	5.36%	\$14.3 Billion
17,000	537,000	5.69%	\$3.0 Billion
44,000	1,643,000	5.56%	\$12.0 Billion
4,000	150,000	6.40%	\$1.7 Billion
<b>2,250,000</b>	<b>87,750,000</b>	<b>5.51%</b>	<b>\$683 Billion</b>





## APPENDIX F: HRSA FUNDING BY STATE

FY 2009 HRSA Grants to States by Key Program Area (Selected Programs)							
State	Health Professions	HIV/AIDS	Maternal & Child Health	Primary Health Care	HRSA Total (All Programs)	HRSA Per Capita Total (All Programs)	HRSA Per Capita Ranking
Alabama	\$17,887,316	\$27,200,468	\$17,863,948	\$65,775,648	\$146,000,990	\$31.32	15
Alaska	\$4,859,019	\$2,053,339	\$2,445,016	\$48,862,663	\$69,568,707	\$101.37	1
Arizona	\$7,803,885	\$25,937,848	\$9,961,405	\$64,930,782	\$113,469,684	\$17.46	44
Arkansas	\$6,424,835	\$9,143,546	\$9,685,435	\$38,956,981	\$71,795,871	\$25.14	24
California	\$61,579,057	\$276,151,551	\$60,594,334	\$402,207,436	\$828,785,701	\$22.55	31
Colorado	\$11,265,041	\$25,443,555	\$12,041,684	\$83,624,160	\$149,795,128	\$30.33	17
Connecticut	\$3,467,479	\$33,564,899	\$9,306,159	\$44,879,478	\$94,512,593	\$26.99	21
Delaware	\$2,848,610	\$6,548,476	\$2,977,005	\$10,556,344	\$25,950,830	\$29.72	18
D.C.	\$12,208,431	\$69,177,272	\$26,089,323	\$17,740,808	\$126,582,889	*NA	*NA
Florida	\$22,751,060	\$218,308,556	\$26,781,823	\$167,861,082	\$447,569,679	\$24.42	26
Georgia	\$15,290,943	\$77,608,584	\$23,322,387	\$71,851,555	\$196,284,115	\$20.27	37
Hawaii	\$6,329,544	\$3,995,786	\$4,910,960	\$39,104,593	\$58,510,695	\$45.42	6
Idaho	\$1,164,939	\$2,118,836	\$4,325,004	\$28,814,593	\$39,124,606	\$25.68	23
Illinois	\$16,480,455	\$80,854,272	\$38,035,276	\$149,825,682	\$301,438,369	\$23.36	29
Indiana	\$5,008,842	\$17,851,335	\$17,137,923	\$42,879,878	\$87,574,768	\$13.73	50
Iowa	\$5,979,659	\$4,536,083	\$9,360,613	\$31,481,922	\$67,598,929	\$22.51	32
Kansas	\$4,462,418	\$4,918,753	\$7,792,800	\$23,443,727	\$47,272,806	\$16.87	46
Kentucky	\$6,220,077	\$12,270,145	\$13,869,777	\$50,707,351	\$102,733,027	\$24.06	28
Louisiana	\$10,344,607	\$46,317,813	\$17,657,913	\$54,007,869	\$136,295,005	\$30.90	16
Maine	\$1,306,245	\$2,662,033	\$6,065,730	\$31,881,052	\$55,142,830	\$41.89	7
Maryland	\$6,730,193	\$181,415,406	\$22,469,398	\$49,076,220	\$266,708,506	\$47.34	5
Massachusetts	\$28,598,577	\$107,751,856	\$26,159,359	\$93,322,161	\$266,076,012	\$40.95	9
Michigan	\$16,977,211	\$30,515,469	\$28,640,855	\$2,510,800	\$171,724,452	\$17.17	45
Minnesota	\$8,717,203	\$14,135,117	\$13,353,249	\$32,079,646	\$83,418,373	\$15.98	48
Mississippi	\$4,869,689	\$19,065,979	\$11,192,465	\$65,027,363	\$144,703,630	\$49.24	4
Missouri	\$11,959,861	\$29,749,917	\$18,557,913	\$70,179,341	\$143,123,466	\$24.21	27
Montana	\$4,450,325	\$1,654,237	\$3,441,770	\$29,421,226	\$50,898,803	\$52.61	3
Nebraska	\$5,060,705	\$3,209,458	\$8,157,558	\$12,828,622	\$34,172,717	\$19.16	39
Nevada	\$3,417,418	\$16,230,328	\$3,417,316	\$14,641,523	\$47,976,911	\$18.45	42
New Hampshire	\$1,800,493	\$2,249,732	\$4,114,802	\$16,069,465	\$28,529,073	\$21.68	33
New Jersey	\$11,943,592	\$84,629,791	\$15,991,645	\$61,190,929	\$181,718,164	\$20.93	35
New Mexico	\$3,643,662	\$5,835,787	\$8,971,075	\$56,695,331	\$82,562,069	\$41.61	8
New York	\$33,647,258	\$354,913,033	\$54,950,287	\$190,734,628	\$657,945,894	\$33.76	13
North Carolina	\$15,021,373	\$50,309,931	\$25,187,204	\$87,409,841	\$188,660,250	\$20.46	36
North Dakota	\$2,715,500	\$350,440	\$2,849,774	\$5,023,712	\$15,778,265	\$24.60	25
Ohio	\$24,368,751	\$30,597,904	\$29,314,125	\$85,919,488	\$181,528,894	\$15.80	49
Oklahoma	\$3,736,257	\$11,433,159	\$10,893,899	\$38,876,100	\$68,748,942	\$18.87	41
Oregon	\$6,743,900	\$12,988,897	\$10,915,788	\$61,144,212	\$108,463,928	\$28.62	20
Pennsylvania	\$35,536,677	\$71,664,720	\$37,000,827	\$99,155,736	\$264,627,298	\$21.26	34
Rhode Island	\$2,277,273	\$5,568,092	\$2,901,042	\$22,579,925	\$38,645,857	\$36.78	11
South Carolina	\$4,194,110	\$37,876,965	\$15,165,396	\$68,406,858	\$129,670,548	\$28.95	19
South Dakota	\$2,740,003	\$1,218,780	\$5,166,556	\$14,595,496	\$28,279,980	\$35.17	12
Tennessee	\$19,168,602	\$34,082,021	\$16,310,932	\$64,321,704	\$141,875,380	\$22.83	30
Texas	\$32,235,241	\$156,444,661	\$43,668,676	\$199,851,900	\$461,532,444	\$18.97	40
Utah	\$3,987,142	\$5,551,028	\$14,023,411	\$24,106,203	\$52,598,645	\$19.22	38
Vermont	\$1,061,850	\$1,493,512	\$3,313,407	\$14,255,197	\$23,305,106	\$37.51	10
Virginia	\$8,984,266	\$38,648,370	\$16,698,171	\$64,373,084	\$136,570,120	\$17.58	43
Washington	\$16,247,328	\$79,423,101	\$12,896,776	\$94,795,673	\$214,104,710	\$32.69	14
West Virginia	\$3,126,354	\$3,299,806	\$8,996,416	\$54,373,030	\$99,699,209	\$54.95	2
Wisconsin	\$11,660,515	\$12,907,986	\$16,672,150	\$32,975,493	\$91,955,264	\$16.34	47
Wyoming	\$834,545	\$876,233	\$2,104,888	\$7,288,402	\$13,839,969	\$25.98	22
<b>U.S. TOTAL</b>	<b>\$560,138,336</b>	<b>\$2,352,754,866</b>	<b>\$813,721,645</b>	<b>\$3,202,622,913</b>	<b>\$7,585,450,101</b>	<b>NA**</b>	<b>NA**</b>

\*D.C. was not included in the per capita rankings because total funding for D.C. includes funds for a number of national organizations.

\*\*The U.S. total reflects HRSA grants to all 50 states and D.C.



# Endnotes

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