

A Funding Crisis for Public Health and Safety:

STATE-BY-STATE PUBLIC
HEALTH FUNDING AND
KEY HEALTH FACTS

2018



Acknowledgements

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

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REPORT AUTHORS

Albert Lang

*Senior Communications Manager
Trust for America's Health*

Molly Warren, SM

*Health Policy Research Manager
Trust for America's Health*

Linda Kulman

Consultant

Introduction

A healthy United States is a strong United States. A prepared nation is a safe nation. But persistent underfunding of the country's public health system has left the nation vulnerable.

We are currently experiencing the worst flu season in a decade and overall flu-related hospitalization is the highest CDC has ever seen. Flu deaths among children and adults are growing, particularly among those who have not been vaccinated.

There are persistent gaps in the nation's readiness for major infectious disease outbreaks such as influenza as well as infectious diseases that are new to the United States such as we've experienced with Zika and Ebola.

In 2017, the United States suffered multiple natural disasters, as record hurricanes struck communities in Florida, Texas and the Caribbean, and drought, floods and wildfires besieged the West. Indications are likely we will continue to experience such catastrophic weather-related emergencies.

We are still in the midst of a devastating opioid epidemic with mounting deaths and overdoses in virtually all parts of the nation. Deaths from drug overdoses increased 21 percent between 2015 and 2016, and are up 75 percent in the last decade (2007-2016).

And more than half of Americans live with at least one chronic disease such as hypertension or diabetes. Many of these diseases are caused or made worse by the high percentage of children and adults who are overweight or obese.

Ongoing federal fiscal austerity, including sequestration, has eroded the nation's ability to adequately prevent disease, respond to extreme weather events, and reduce disparities across communities at the time when the need is growing. At the same time, the nation's life expectancy rates are moving in the wrong direction.

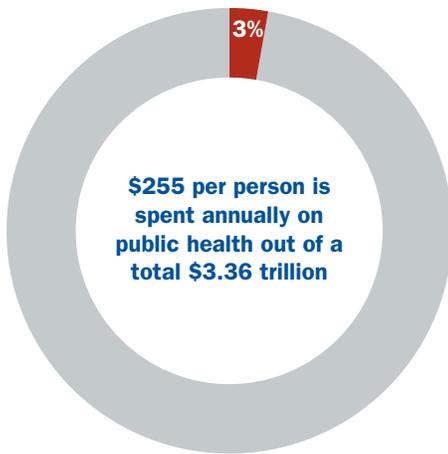
In reality, insufficient funding has hampered the ability of the Centers for Disease Control and Prevention (CDC) and state and local health departments to keep pace with the new and continuing threats to the health of the American people and to fully fund prevention initiatives — which have been shown to save money and prevent illness and injury. For example, increasing local public health spending 10 percent per capita was found to result in a 0.8 percent reduction in adjusted Medicare expenditures per person after 1 year and a 1.1 percent reduction after 5 years.¹

Budget cuts have occurred at all levels of the public health system from the smallest town to the most populous city as well as at the federal level.

The country needs a long-term commitment to rebuild the nation's public health capabilities — not just to plug some of the more dangerous gaps but to make sure each community will be prepared, responsive and resilient when the unexpected occurs.

A Funding Crisis for Public Health and Safety: *Public Health Report* SERIES

Percent of total annual healthcare spending going to public health



And the American public agrees. A survey of registered voters released in January 2017—conducted by the Trust for America’s Health (TFAH)—found that nearly three-quarters (73 percent) of Americans support increasing investments to improve the health of communities.² Yet, of the \$3.36 trillion spent annually on healthcare in the United States each year,³ only 3 percent — \$255 per person — goes to public health.⁴

Each year, Trust for America’s Health releases *A Funding Crisis for Public Health and Safety: State-by-State and Federal Public Health Funding Facts and Recommendations* to examine level of federal and state public health funding that each state receives. This review also provides policymakers and communities with an independent analysis of how their communities protect their health; encourages transparency and accountability; and recommends strategies to modernize the nation’s public health system.



The report includes eight key recommendations (covered in more detail in section III):

1. Increase Funding for Public Health — at the Federal, State and Local Levels
2. Preserve the Prevention and Public Health Fund
3. Prepare for Public Health Emergencies and Pandemics
4. Establish a Standing Public Health Emergency Response Fund
5. Build a National Resilience Strategy to Combat Deaths of Despair
6. Prevent and Reduce Chronic Disease
7. Support Better Health and Top Local Priorities in Every Community

8. Expand the Use of Evidence-Based, High-Impact Strategies to Improve Health in Every Community

The report includes:

I. Overview of current CDC, state and local public health funding:

- A. Federal analyses
- B. State level analyses
- C. Local level analyses

II. Rising Epidemics and Persistent Public Health Challenges

III. Recommendations for Modernizing Public Health and Promoting a Vision for a Healthier America

Overview of Current CDC, State and Local Public Health Funding



Overview of Current CDC, State and Local Public Health Funding

Flat-lined funding for the CDC. The CDC is the world’s leading authority on public health and the nation’s first defense against epidemics. It tracks and fights chronic and infectious diseases and protects against potential man-made bioterrorism threats.⁵

Federal dollars support a wide range of essential public health programs that aim to improve health, prevent diseases and injuries and prepare for potential disasters and major health emergencies.

And, approximately 75 percent of CDC’s budget is distributed to states, localities and other public and private partners to support services and programs. So when CDC’s budget is reduced, the impact is experienced directly at the state and local levels as

well. Such federal funding for states is based on a mixture of population-based formula grant programs (often determined by disease rates or other incidence formulas) and a series of competitive grants, where states apply and some states receive funding and others do not, due to insufficient funds. Because of federal funding limitations, many states submit competitive grant applications that are ultimately “approved but unfunded.”

THE 22X22 CAMPAIGN

This year, some members of the public health community—led by the Association of State and Territorial Health Officers—will launch the 22x22 Campaign to shine a light on the importance of CDC funding.

According to the campaign, an initial increase of \$715 million in discretionary funding from FY18-19 will return CDC’s total funding

22 by **20**
% **22**

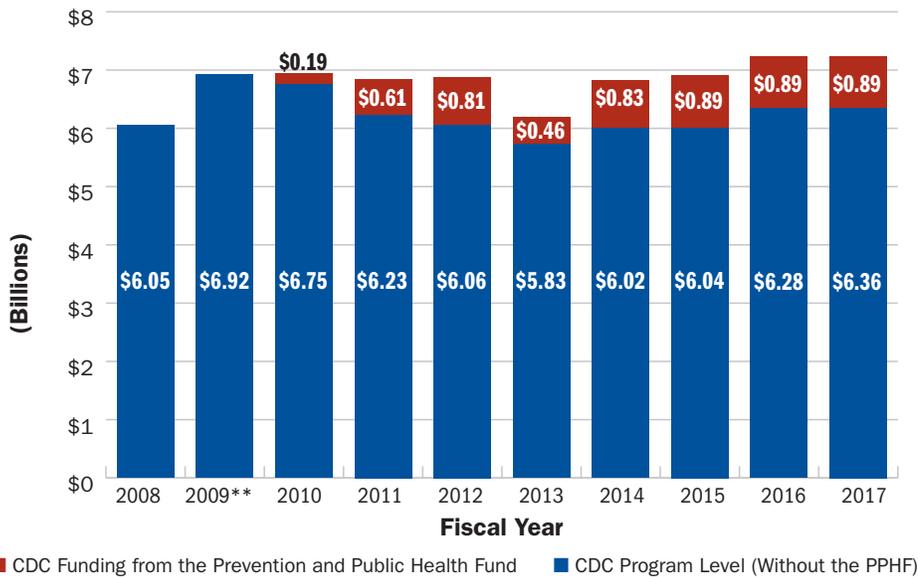
back to 2003 levels. A subsequent \$261 million in annual increases will amount to increased funding of 22 percent by FY22.

Federal Public Health Funding Snap Shot

In Fiscal Year (FY) 2017, CDC's budget was \$7.15 billion (\$21.95 per person).⁶ Adjusting for inflation, CDC's core budget—not including the Prevention Fund—has been essentially flat for the last decade.

Of the roughly 75 percent of CDC funds that go to state and local communities, support ranges from a low of \$5.74 per person in Missouri to a high of \$114.38 per person in Alaska.

CDC Program Levels — Fiscal Year 2008 to Fiscal Year 2017*



*This chart does not account for inflation, numbers are rounded

**FY 2009 includes the 2009 Recovery Act

Twelve percent of CDC's budget (\$890 million) consists of the **Prevention and Public Health Fund** (Prevention Fund), with about \$625 million a year of that directed to state and local efforts. Among activities supported directly by

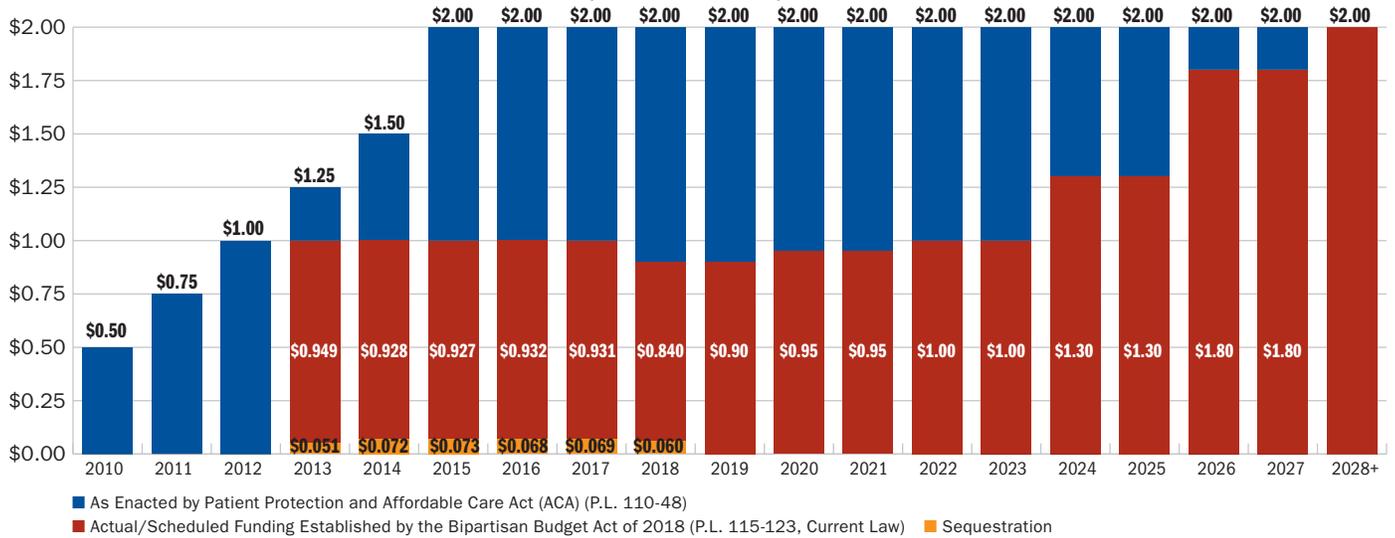
the Prevention Fund are grants to states for infectious disease control, resources through the Preventive Health and Health Services Block Grant, and other core public health programs.

CDC's Prevention and Public Health Fund

State	State PPHF All Grants Awarded by CDC, FY 2016
Alabama	\$8,973,423
Alaska	\$4,462,597
Arizona	\$9,368,015
Arkansas	\$5,919,989
California	\$61,553,706
Colorado	\$8,934,369
Connecticut	\$7,345,772
Delaware	\$2,492,564
D.C.	\$10,306,616
Florida	\$20,372,850
Georgia	\$20,084,351
Hawaii	\$8,005,176
Idaho	\$4,485,717
Illinois	\$18,616,970
Indiana	\$8,276,290
Iowa	\$7,126,042
Kansas	\$9,065,813
Kentucky	\$8,137,514
Louisiana	\$9,022,206
Maine	\$5,517,600
Maryland	\$16,975,209
Massachusetts	\$17,622,501
Michigan	\$22,147,815
Minnesota	\$16,151,974
Mississippi	\$6,255,371
Missouri	\$10,770,773
Montana	\$4,966,229
Nebraska	\$9,591,525
Nevada	\$3,834,916
New Hampshire	\$4,993,404
New Jersey	\$12,111,673
New Mexico	\$8,651,427
New York	\$41,517,446
North Carolina	\$17,183,464
North Dakota	\$2,995,110
Ohio	\$22,990,225
Oklahoma	\$9,317,151
Oregon	\$9,292,480
Pennsylvania	\$22,398,271
Rhode Island	\$8,047,792
South Carolina	\$11,315,305
South Dakota	\$3,746,565
Tennessee	\$13,507,582
Texas	\$29,442,970
Utah	\$9,879,302
Vermont	\$2,927,513
Virginia	\$15,420,904
Washington	\$14,012,178
West Virginia	\$4,533,864
Wisconsin	\$12,824,029
Wyoming	\$2,204,994

Source: CDC. For a detailed list of references, see *Investing in America's Health* at www.healthyamericans.org

Prevention and Public Health Funding Over Time (dollars in billions)



\$11.85 Billion Cut from Prevention and Public Health Fund Since Inception

Year	As Enacted	Actual/Scheduled (as of 2/15/18)	Funding Lost
FY 2010	\$500,000,000	\$500,000,000	\$0
FY 2011	\$750,000,000	\$750,000,000	\$0
FY 2012	\$1,000,000,000	\$1,000,000,000	\$0
FY 2013	\$1,250,000,000	\$1,000,000,000	\$250,000,000
FY 2014	\$1,500,000,000	\$1,000,000,000	\$500,000,000
FY 2015	\$2,000,000,000	\$1,000,000,000	\$1,000,000,000
FY 2016	\$2,000,000,000	\$1,000,000,000	\$1,000,000,000
FY 2017	\$2,000,000,000	\$1,000,000,000	\$1,000,000,000
FY 2018	\$2,000,000,000	\$900,000,000	\$1,100,000,000
FY 2019	\$2,000,000,000	\$900,000,000	\$1,100,000,000
FY 2020	\$2,000,000,000	\$950,000,000	\$1,050,000,000
FY 2021	\$2,000,000,000	\$950,000,000	\$1,050,000,000
FY 2022	\$2,000,000,000	\$1,000,000,000	\$1,000,000,000
FY 2023	\$2,000,000,000	\$1,000,000,000	\$1,000,000,000
FY 2024	\$2,000,000,000	\$1,300,000,000	\$700,000,000
FY 2025	\$2,000,000,000	\$1,300,000,000	\$700,000,000
FY 2026	\$2,000,000,000	\$1,800,000,000	\$200,000,000
FY 2027	\$2,000,000,000	\$1,800,000,000	\$200,000,000
FY 2028	\$2,000,000,000	\$2,000,000,000	\$0
TOTAL	\$33,000,000,000	\$21,150,000,000	\$11,850,000,000

The Public Health Emergency

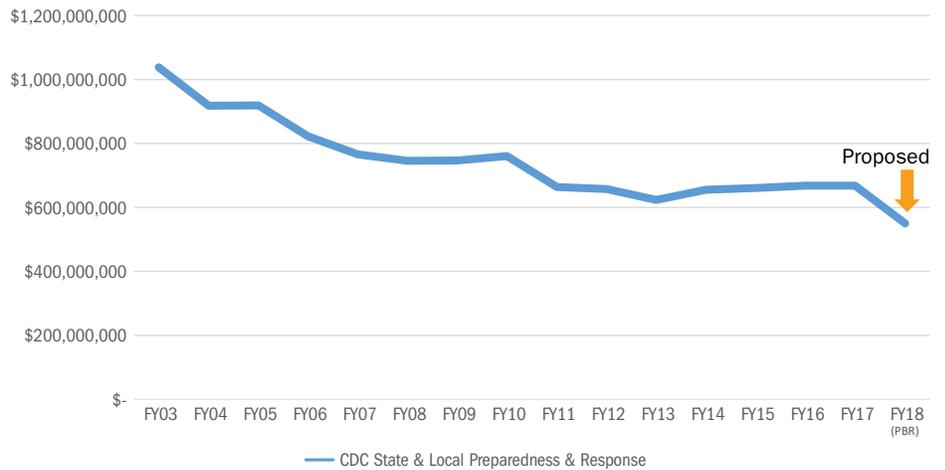
Preparedness (PHEP) Cooperative Agreement Program is the only federal program that supports the work of state and local health departments to prepare for and respond to all types of emergencies, including bioterror attacks, natural disasters, mass casualty events and outbreaks of infectious diseases. Except for one-time, short-term funding to contain the Ebola and Zika viruses, core emergency preparedness funding has been cut by more than one-third (from \$940 million in FY 2002 to \$667 million in FY 2017) per year since the program was established.

CDC spends \$1.1 billion (only \$4 per person) each year to prevent chronic diseases. Nearly half of all Americans have at least one chronic disease — most of which are preventable. More than 80 percent of annual healthcare expenditures (about \$8,000 per person) is associated with chronic disease treatment.^{7,8} CDC’s funding to prevent such illnesses with evidence-based programs have been cut by \$66 million since 2015.

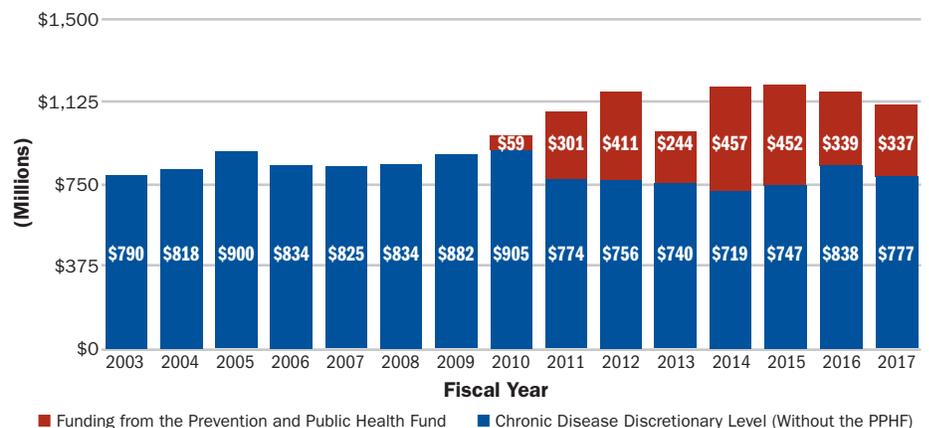
Bipartisan Budget Act of 2018

In February 2018, the Bipartisan Budget Act was signed into law. The Act extended continuing resolution funding for fiscal year 2018 until late March. It restored a \$100 million cut to the Prevention Fund in FY 2019, which was enacted by Congress in December 2017. While the Act included increases to the Prevention Fund in the short-term (FY 2019-21), there are significant reductions to the annual growth of the Prevention Fund beginning in FY 2022. The result is a net cut of \$1.35 billion over the ten year budget window.

PHEP Funding Over Time



Chronic Disease Funding — Fiscal Year 2003 to Fiscal Year 2017*



*FY 2010-2017 values are supplemented by the Prevention and Public Health Fund

Prevention and Public Health Fund Loses \$1.35 billion over 10 Years Under Under the Bipartisan Budget Act of 2018

Year	As Enacted	Previous CR	PL 115-113
FY 2018	\$2 billion	\$900 million	\$900 million
FY 2019	\$2 billion	\$800 million	\$900 million
FY 2020	\$2 billion	\$800 million	\$950 million
FY 2021	\$2 billion	\$800 million	\$950 million
FY 2022	\$2 billion	\$1.25 billion	\$1 billion
FY 2023	\$2 billion	\$1 billion	\$1 billion
FY 2024	\$2 billion	\$1.7 billion	\$1.3 billion
FY 2025	\$2 billion	\$2 billion	\$1.3 billion
FY 2026	\$2 billion	\$2 billion	\$1.8 billion
FY 2027	\$2 billion	\$2 billion	\$1.8 billion
FY 2028	\$2 billion	\$2 billion	\$2 billion

Continuing Resolutions and Public Health Funding and Planning

State and local public health agencies and community-based organizations rely heavily on federal funding to support their public health activities, including chronic and infectious disease prevention, immunization services and other activities. For instance, according to ASTHO, about half of state public health spending comes directly from federal funds.⁹

When the government is operating under a continuing resolution (CR), only a portion of the federal funds will be available to the state and local entities. For example, if a CR funds the government for 25 percent of the year, the public health grantee may receive, at most, 25 percent of their grant, and sometimes less.

Short-term funding has long-term consequences. This limited funding (with

no guarantee of continuation beyond the short-term CR) can cripple state and local public health programs that serve the public. If there are staff vacancies—such as epidemiologists, lab technicians, program coordinators or community health nurses—they are unlikely to be filled since new employees can only be guaranteed a few months of employment.

Similarly, with only a portion of the full year funding, public health organizations are unable to purchase a full year of medical or other supplies. For example, it might be advantageous to purchase the majority of flu vaccines at the beginning of the year, but with only a partial percentage of full year funding, a public health department would be unable to purchase all the vaccines needed.

PRESIDENT'S PROPOSED FY 2019 BUDGET

The President's proposed FY 2019 budget was released February 12, 2018.¹⁰ While the budget is just a proposal and not usually enacted into law, it does signal Administration priorities and included significant cuts to public health programs. Some notable proposals:

The budget proposal would cut CDC program level funding by 19.4 percent relative to the FY 2018 annualized Continuing Resolution, and 21.2 percent relative to FY 2017. It also cut several CDC Centers, including: Immunization and Respiratory Diseases; Emergency and Zoonotic Emerging Diseases; Chronic Disease Prevention and Health Promotion and the consolidation and cutting of several of these programs via a proposed America's Health Block Grant; Birth Defects and Developmental Disabilities; Environmental Health; Global Health; and Injury Prevention and Control.

In addition, the budget assumed passage of the Graham-Cassidy version of "repeal and replace" of the Affordable Care Act, so the FY 2019 budget does not include Prevention and Public Health Fund mandatory resources in addition to zeroing out the Preventive Health and Health Services Block Grant.

The Substance Abuse and Mental Health Services Administration (SAMHSA) also appeared to receive a proposed cut, including elimination of the Screening, Brief Intervention, and Referral to Treatment (SBIRT) program—which helps identify, reduce and prevent drug and alcohol misuse.

The Budget request also announced intent to transfer the Strategic National Stockpile budget and management from CDC to the HHS Assistant Secretary for Preparedness and Response, a move that can be implemented without Congressional approval.

CDC FUNDING BY STATE 2017

State	Agency for Toxic Substances and Disease Registry (ATSDR)	Birth Defects, Developmental Disabilities, Disability and Health	CDC-Wide Activities and Program Support (*see note in source)	Chronic Disease Prevention and Health Promotion	Ebola Response and Preparedness	Emerging and Zoonotic Infectious Diseases	Environmental Health	Health Reform – Obesity	Health Reform – Toxic Substances & Environmental Public Health	HIV/AIDS, Viral Hepatitis, STI and TB Prevention
Alabama		\$2,036,647	\$2,593,109	\$12,738,735	\$1,301,869				\$8,829,400	\$9,324,405
Alaska	\$404,467	\$644,200	\$634,010	\$13,765,845	\$1,613,284	\$248,220			\$2,154,995	\$2,108,783
Arizona		\$935,500	\$1,953,592	\$13,450,387	\$2,331,306	\$1,227,513	\$2,099,652		\$8,996,059	\$8,565,715
Arkansas	\$419,585	\$2,049,943	\$1,484,478	\$8,842,305	\$1,987,569				\$3,795,069	\$3,644,599
California	\$856,060	\$1,638,605	\$13,558,425	\$49,900,693	\$11,895,003	\$4,114,518			\$103,236,813	\$102,518,293
Colorado	\$385,472	\$2,826,945	\$2,022,419	\$10,830,451	\$7,292,064	\$1,568,284			\$10,229,506	\$11,365,234
Connecticut	\$528,752	\$20,676	\$2,555,403	\$6,689,271	\$5,265,720	\$1,801,397			\$7,101,712	\$7,330,682
Delaware		\$145,870	\$381,653	\$4,997,003	\$1,023,364	\$102,113			\$2,400,573	\$2,463,102
D.C.	\$150,000	\$6,829,647	\$4,450,797	\$21,245,376	\$4,610,215	\$2,853,954			\$24,849,917	\$23,182,486
Florida	\$443,878	\$759,987	\$5,261,498	\$20,307,394	\$3,256,269	\$2,795,915			\$55,337,622	\$55,081,623
Georgia	\$239,052	\$6,320,007	\$8,053,181	\$41,992,707	\$9,160,585	\$1,628,558	\$70,000		\$29,858,370	\$28,554,091
Hawaii		\$266,509	\$1,771,550	\$8,195,619	\$2,162,610	\$789,213			\$2,483,240	\$2,544,971
Idaho	\$212,073	\$150,000	\$671,733	\$6,483,474	\$848,506				\$1,409,535	\$1,452,173
Illinois	\$2,000,000	\$2,177,186	\$4,049,953	\$22,823,979	\$5,233,386	\$1,849,912	\$60,000		\$31,724,970	\$30,610,823
Indiana		\$215,536	\$2,575,761	\$7,974,481	\$2,237,765	\$1,131,322			\$6,051,088	\$6,166,322
Iowa		\$2,174,997	\$1,879,435	\$8,441,641	\$2,956,235	\$1,246,744			\$2,083,948	\$2,174,052
Kansas		\$449,995	\$1,556,367	\$12,258,055	\$1,581,657	\$696,914			\$2,158,746	\$2,296,536
Kentucky		\$505,821	\$2,180,286	\$10,404,102	\$2,149,122	\$1,032,521			\$4,086,211	\$3,661,413
Louisiana	\$299,865	\$1,091,465	\$5,918,660	\$10,379,820	\$1,476,389	\$1,102,375			\$13,645,547	\$14,924,304
Maine		\$149,999	\$1,492,949	\$5,536,926	\$1,379,370	\$1,948,445			\$1,406,683	\$1,347,445
Maryland		\$5,348,949	\$11,261,063	\$21,685,729	\$13,904,810	\$2,848,276	\$705,633		\$24,706,058	\$26,389,522
Massachusetts	\$420,000	\$2,009,588	\$4,577,600	\$16,723,626	\$7,092,965	\$3,013,287	\$1,800,000		\$17,428,138	\$16,495,311
Michigan	\$505,853	\$1,159,961	\$6,980,707	\$24,398,211	\$4,820,196	\$5,384,164			\$14,807,844	\$14,691,321
Minnesota	\$469,654	\$1,337,090	\$4,248,173	\$18,341,376	\$12,153,728	\$2,349,069			\$7,546,379	\$6,587,278
Mississippi		\$150,000	\$2,566,618	\$11,129,980	\$814,206	\$636,230			\$6,350,948	\$7,127,534
Missouri	\$380,338	\$1,877,159	\$3,984,288	\$9,071,497	\$1,652,058	\$2,029,978			\$9,476,843	\$9,667,670
Montana	\$236,725	\$300,000	\$1,130,880	\$8,440,130	\$2,152,368	\$475,407		\$2,499,999	\$1,345,041	\$1,368,070
Nebraska		\$150,000	\$2,757,604	\$10,989,659	\$2,257,188	\$400,460			\$1,989,035	\$1,810,005
Nevada		\$656,633	\$704,276	\$7,097,385	\$1,552,605	\$511,250			\$4,118,893	\$4,071,214
New Hampshire		\$575,000	\$2,336,868	\$6,666,518	\$1,819,818	\$2,857,894			\$1,262,105	\$1,231,029
New Jersey	\$640,498	\$1,218,837	\$4,788,642	\$8,002,117	\$1,511,946	\$2,245,118			\$25,708,311	\$25,213,699
New Mexico	\$1,000,000		\$2,446,379	\$8,434,893	\$3,516,612	\$1,976,037			\$2,992,422	\$2,947,168
New York	\$573,050	\$5,620,562	\$12,750,717	\$34,010,537	\$13,937,340	\$5,809,375			\$92,036,583	\$93,927,608
North Carolina	\$320,938	\$3,561,809	\$4,377,565	\$19,367,370	\$3,425,156	\$941,318			\$17,236,739	\$15,719,083
North Dakota		\$150,000	\$490,563	\$4,746,834	\$1,023,490				\$1,296,224	\$1,291,563
Ohio	\$499,456	\$549,998	\$7,146,719	\$14,983,258	\$5,796,212	\$841,783			\$13,056,060	\$12,747,992
Oklahoma		\$360,000	\$1,554,620	\$10,901,997	\$1,427,586	\$259,921			\$4,300,023	\$3,972,076
Oregon	\$484,352	\$872,629	\$1,315,556	\$14,792,895	\$4,772,119	\$2,108,266			\$5,699,454	\$5,226,128
Pennsylvania	\$480,284	\$310,523	\$7,681,851	\$17,901,908	\$4,415,753	\$1,791,884			\$24,366,765	\$25,537,938
Rhode Island		\$310,000	\$838,013	\$11,253,456	\$2,075,705	\$1,917,613			\$2,170,448	\$2,158,672
South Carolina		\$1,414,192	\$2,014,156	\$17,036,435	\$2,276,757	\$294,848			\$9,703,744	\$9,226,761
South Dakota			\$582,894	\$8,572,936	\$1,004,066				\$1,329,496	\$1,340,993
Tennessee	\$305,258	\$605,218	\$2,583,974	\$10,303,855	\$9,746,290	\$564,182			\$12,453,492	\$13,155,820
Texas	\$392,173	\$1,415,727	\$6,328,333	\$14,251,375	\$5,149,611	\$1,282,028			\$52,630,661	\$53,191,687
Utah	\$235,314	\$1,497,290	\$1,542,711	\$14,347,747	\$3,742,705	\$2,426,316			\$2,288,410	\$2,135,972
Vermont		\$300,000	\$548,764	\$4,815,966	\$1,151,201	\$2,000,249			\$1,699,810	\$1,618,741
Virginia	\$276,218	\$122,290	\$3,178,312	\$18,560,180	\$3,564,475	\$883,432			\$14,504,813	\$15,364,137
Washington		\$336,959	\$1,564,011	\$21,694,010	\$6,950,115	\$1,412,050			\$14,266,371	\$13,682,922
West Virginia			\$1,483,606	\$7,956,445	\$1,533,539	\$277,790			\$1,698,135	\$1,741,891
Wisconsin	\$458,843	\$1,940,799	\$3,054,572	\$11,037,687	\$5,208,353	\$2,274,098			\$4,353,611	\$4,394,530
Wyoming		\$148,225	\$386,667	\$3,511,819	\$1,127,482				\$1,319,835	\$1,357,531
Grand Total	\$13,618,158	\$65,688,973	\$172,251,961	\$708,286,095	\$201,338,743	\$75,950,241	\$4,735,285	\$2,499,999	\$715,982,695	\$714,708,918

* In previous years, TFAH has excluded large cities (e.g. New York City) vaccine purchases but includes them in this year's analysis.

** The District of Columbia was not included in the per capita rankings.

*** The U.S. total reflects grants and cooperative agreements to all 50 states and the District of Columbia, and does not include territories, for comparability.

CDC FUNDING BY STATE 2017

State	Immunization & Respiratory Diseases	Injury Prevention & Control	National Institute for Occupational Safety & Health	Public Health Preparedness & Response	Public Health Scientific Services (PHSS)	Vaccines for Children*	World Trade Center Health Programs (WTC)	Zika Preparedness & Response	CDC Total State Funding	CDC Total State Funding, Per Capita	CDC Total State Funding, Per Capita Ranking**
Alabama	\$4,616,657	\$1,314,099	\$1,641,771	\$8,848,902	\$460,574	\$60,607,074		\$2,949,126	\$107,937,963	\$22.14	29
Alaska	\$2,197,778	\$2,599,626	\$100,966	\$4,388,501	\$352,875	\$10,249,173		\$231,703	\$39,585,643	\$53.51	1
Arizona	\$6,719,108	\$3,397,079	\$486,000	\$11,546,221	\$459,783	\$93,675,627		\$6,692,082	\$153,969,909	\$21.94	31
Arkansas	\$3,303,303	\$746,241		\$6,808,590	\$125,000	\$41,214,777		\$1,929,984	\$72,706,844	\$24.20	20
California	\$35,691,722	\$11,149,992	\$8,346,849	\$62,648,635	\$1,393,722	\$486,354,621		\$30,995,478	\$821,781,136	\$20.79	38
Colorado	\$6,118,083	\$5,380,802	\$5,414,931	\$10,256,388	\$515,931	\$52,046,428		\$936,408	\$115,824,112	\$20.66	39
Connecticut	\$5,307,151	\$3,037,332	\$1,737,965	\$8,060,059	\$433,893	\$33,676,918		\$1,044,709	\$77,260,958	\$21.53	34
Delaware	\$1,559,777	\$3,354,201		\$4,324,673	\$164,809	\$11,099,614		\$591,806	\$30,145,456	\$31.34	8
D.C.	\$7,458,898	\$7,168,677	\$162,819	\$11,973,848	\$9,836,432	\$11,643,026		\$4,397,771	\$117,631,377	\$169.50	-
Florida	\$14,798,972	\$3,188,441	\$3,723,174	\$29,576,508	\$334,528	\$261,620,751		\$56,476,208	\$457,881,145	\$21.82	33
Georgia	\$16,893,825	\$4,958,194	\$1,429,451	\$16,661,084	\$4,263,446	\$129,777,878		\$3,200,882	\$274,507,220	\$26.32	17
Hawaii	\$2,502,618	\$955,146		\$4,984,239	\$1,086,211	\$16,288,637		\$2,115,911	\$43,601,503	\$30.54	9
Idaho	\$2,026,895	\$1,792,869	\$274,594	\$5,347,908	\$221,709	\$21,702,763		\$211,568	\$41,353,627	\$24.09	21
Illinois	\$13,885,987	\$5,757,788	\$2,619,847	\$26,492,071	\$535,449	\$124,898,949		\$4,518,704	\$248,628,181	\$19.42	43
Indiana	\$5,728,209	\$4,239,675	\$150,000	\$248,211	\$494,697	\$69,808,904		\$1,228,845	\$102,084,494	\$15.31	50
Iowa	\$3,680,426	\$1,375,101	\$4,501,462	\$6,713,986	\$555,897	\$35,993,599		\$866,133	\$72,469,604	\$23.04	24
Kansas	\$3,544,433	\$2,275,179		\$7,168,800	\$536,231	\$26,655,800		\$474,569	\$59,356,746	\$20.38	40
Kentucky	\$4,740,577	\$6,193,796	\$3,484,649	\$8,102,748	\$284,776	\$50,866,006		\$1,610,818	\$95,641,433	\$21.47	36
Louisiana	\$3,294,301	\$3,218,459	\$252,000	\$9,335,061	\$1,441,000	\$73,621,714		\$5,909,619	\$130,986,275	\$27.96	11
Maine	\$2,699,900	\$1,656,756		\$5,089,231	\$83,046	\$13,163,450		\$596,458	\$35,203,213	\$26.35	15
Maryland	\$12,811,113	\$5,635,935	\$8,026,234	\$12,097,786	\$10,217,341	\$70,480,644		\$2,656,074	\$202,385,645	\$33.44	6
Massachusetts	\$6,009,677	\$5,318,301	\$7,942,044	\$13,671,945	\$579,173	\$69,939,174		\$2,058,303	\$158,583,821	\$23.12	23
Michigan	\$11,256,512	\$7,220,800	\$3,196,890	\$16,457,659	\$405,483	\$91,162,608		\$1,806,681	\$189,563,569	\$19.03	44
Minnesota	\$7,597,566	\$3,614,160	\$4,154,824	\$11,012,573	\$740,170	\$48,485,178		\$1,283,353	\$123,333,293	\$22.12	30
Mississippi	\$3,378,102	\$379,230	\$130,000	\$6,733,399	\$11,000	\$41,950,520		\$2,693,375	\$76,923,608	\$25.78	19
Missouri	\$6,059,586	\$1,373,135	\$479,996	\$11,259,250	\$128,694	\$63,066,406		\$1,343,021	\$112,182,249	\$18.35	45
Montana	\$1,579,903	\$766,434	\$209,231	\$4,591,111	\$266,363	\$10,330,644		\$156,512	\$34,480,748	\$32.82	7
Nebraska	\$2,505,801	\$2,082,884	\$2,088,315	\$5,731,718	\$323,952	\$19,429,390		\$800,704	\$51,506,710	\$26.83	13
Nevada	\$3,079,026	\$2,132,421		\$7,028,911	\$283,224	\$35,065,713		\$913,277	\$63,143,614	\$21.06	37
New Hampshire	\$1,946,210	\$1,780,774	\$145,000	\$5,187,296	\$113,025	\$10,658,049		\$426,375	\$35,774,932	\$26.64	14
New Jersey	\$7,830,047	\$3,173,502	\$1,039,870	\$15,675,702	\$187,813	\$78,887,702	\$347,320	\$4,439,101	\$155,696,526	\$17.29	48
New Mexico	\$3,932,758	\$3,411,628	\$627,164	\$6,981,581	\$335,028	\$33,875,848		\$2,249,212	\$71,779,562	\$34.38	5
New York	\$21,628,714	\$7,920,357	\$5,422,824	\$37,164,621	\$2,478,274	\$243,305,305	\$19,836,614	\$20,374,445	\$522,869,318	\$26.34	16
North Carolina	\$8,435,529	\$7,999,731	\$1,427,578	\$14,526,298	\$314,993	\$119,720,025		\$1,732,824	\$203,387,873	\$19.80	41
North Dakota	\$1,743,693	\$201,959		\$4,296,207	\$165,517	\$6,651,800		\$241,484	\$21,007,771	\$27.81	12
Ohio	\$10,748,371	\$6,392,381	\$2,096,271	\$17,773,476	\$585,553	\$123,411,527		\$2,337,109	\$206,218,174	\$17.69	47
Oklahoma	\$4,014,156	\$2,936,133	\$69,269	\$7,739,019	\$527,501	\$56,340,510		\$625,741	\$91,056,476	\$23.16	22
Oregon	\$6,056,505	\$4,180,798	\$1,744,507	\$8,250,229	\$425,601	\$39,189,013		\$816,726	\$90,708,650	\$21.90	32
Pennsylvania	\$13,728,214	\$6,527,382	\$2,217,793	\$18,929,172	\$685,568	\$126,152,137		\$3,633,522	\$228,822,756	\$17.87	46
Rhode Island	\$1,723,341	\$4,594,744	\$509,609	\$4,456,670	\$284,989	\$11,267,376		\$608,959	\$42,010,923	\$39.65	4
South Carolina	\$4,319,509	\$2,529,798		\$9,855,896	\$151,000	\$60,962,688		\$1,265,725	\$111,824,748	\$22.26	27
South Dakota	\$1,501,510	\$601,571	\$4,658	\$15,682,917	\$290,659	\$10,213,133		\$287,840	\$40,071,680	\$46.08	2
Tennessee	\$7,968,557	\$3,665,554	\$491,553	\$11,144,717	\$283,046	\$82,229,455		\$2,145,697	\$144,490,848	\$21.51	35
Texas	\$25,180,781	\$2,897,640	\$3,635,570	\$38,128,191	\$393,234	\$436,121,533		\$40,409,333	\$628,216,190	\$22.19	28
Utah	\$3,300,044	\$4,549,871	\$1,797,486	\$6,900,173	\$558,233	\$26,702,600		\$732,061	\$70,620,961	\$22.77	25
Vermont	\$1,640,908	\$2,225,024		\$4,580,219	\$234,171	\$7,726,669		\$210,497	\$27,133,478	\$43.51	3
Virginia	\$7,330,414	\$4,629,083	\$308,922	\$14,967,352	\$1,593,121	\$65,077,963		\$2,088,139	\$137,084,714	\$16.18	49
Washington	\$6,798,766	\$4,813,365	\$5,144,103	\$12,617,589	\$568,936	\$89,108,931		\$1,543,361	\$166,818,567	\$22.53	26
West Virginia	\$2,016,919	\$4,033,527	\$890,957	\$5,413,993	\$129,603	\$20,801,276		\$710,663	\$46,946,453	\$25.85	18
Wisconsin	\$8,772,930	\$4,467,761	\$2,177,405	\$11,265,536	\$596,816	\$47,219,498		\$11,423,406	\$114,251,315	\$19.71	42
Wyoming	\$1,245,644	\$192,665	\$67,445	\$4,014,237	\$128,877	\$5,271,707		\$194,836	\$17,609,439	\$30.40	10
U.S. TOTAL	\$352,909,426	\$186,008,001	\$90,371,996	\$612,711,107	\$47,566,967	\$3,775,770,731	\$20,183,934	\$239,187,138	\$7,285,061,450	\$22.37	N/A**

Source: CDC. For a detailed list of references, see *Investing in America's Health* at www.healthymamericans.org

FY 2017 HRSA Grants to States by Key Program Area (Selected Programs)

State	Primary Health Care Funding	Health Professions Funding	Maternal & Child Health Funding	HIV/AIDS Funding	Total HRSA Funding for State (All Programs)	Total HRSA Funding for State, Per Capita (All Programs)	Total HRSA Funding for State, Per Capita Ranking
Alabama	\$81,507,866	\$24,856,096	\$22,273,834	\$30,032,746	\$161,619,351	\$33.15	16
Alaska	\$73,706,208	\$2,720,536	\$4,257,705	\$2,021,209	\$84,912,653	\$114.78	1
Arizona	\$80,974,184	\$10,536,462	\$22,806,066	\$22,311,771	\$143,405,248	\$20.44	44
Arkansas	\$53,818,491	\$11,662,707	\$16,356,000	\$9,427,618	\$95,634,037	\$31.83	17
California	\$635,154,052	\$96,941,909	\$78,670,286	\$313,160,687	\$1,131,148,157	\$28.61	26
Colorado	\$103,574,610	\$16,325,420	\$21,845,074	\$19,779,978	\$165,972,967	\$29.60	25
Connecticut	\$58,478,631	\$11,488,456	\$17,803,536	\$24,489,751	\$112,917,893	\$31.47	18
Delaware	\$14,539,947	\$4,869,667	\$8,795,404	\$6,215,733	\$34,600,622	\$35.97	13
D.C.	\$26,415,769	\$19,318,839	\$22,062,040	\$66,784,041	\$136,290,372	\$196.39	-
Florida	\$230,355,229	\$27,927,489	\$38,875,121	\$184,085,186	\$483,400,157	\$23.04	41
Georgia	\$117,541,118	\$20,362,429	\$31,793,494	\$98,084,322	\$271,338,923	\$26.02	32
Hawaii	\$44,863,705	\$10,253,907	\$8,065,156	\$3,622,724	\$67,819,455	\$47.51	6
Idaho	\$46,341,009	\$2,524,518	\$6,720,404	\$5,154,355	\$62,214,664	\$36.24	11
Illinois	\$196,528,620	\$32,885,561	\$42,161,688	\$79,159,789	\$356,629,623	\$27.86	27
Indiana	\$72,261,175	\$6,002,885	\$28,287,493	\$46,094,931	\$156,520,318	\$23.48	40
Iowa	\$40,099,406	\$6,225,178	\$16,631,377	\$16,907,225	\$84,490,761	\$26.86	30
Kansas	\$42,200,421	\$3,130,522	\$13,455,920	\$4,881,167	\$68,879,044	\$23.64	39
Kentucky	\$75,185,911	\$8,427,675	\$19,208,804	\$13,586,762	\$123,959,705	\$27.83	28
Louisiana	\$96,451,970	\$12,875,507	\$28,802,266	\$27,138,510	\$169,230,966	\$36.13	12
Maine	\$42,750,688	\$2,726,302	\$10,323,630	\$4,339,075	\$65,027,451	\$48.68	4
Maryland	\$61,349,996	\$6,242,137	\$35,404,333	\$54,850,564	\$160,213,818	\$26.47	31
Massachusetts	\$125,870,031	\$39,257,285	\$38,309,907	\$52,838,541	\$258,332,655	\$37.66	10
Michigan	\$123,763,845	\$34,036,605	\$51,767,869	\$31,773,725	\$244,837,637	\$24.58	34
Minnesota	\$41,329,636	\$9,719,336	\$21,247,772	\$16,185,538	\$97,846,413	\$17.55	49
Mississippi	\$74,930,454	\$5,377,265	\$18,701,420	\$26,465,219	\$129,810,475	\$43.50	9
Missouri	\$106,029,031	\$20,599,207	\$20,980,367	\$36,196,535	\$188,967,227	\$30.91	20
Montana	\$42,862,588	\$4,310,974	\$7,326,853	\$3,581,941	\$62,107,866	\$59.12	2
Nebraska	\$21,864,257	\$5,428,524	\$7,957,217	\$7,442,483	\$45,549,648	\$23.72	38
Nevada	\$21,458,501	\$1,421,815	\$5,767,981	\$18,547,042	\$48,761,987	\$16.26	50
New Hampshire	\$26,461,976	\$3,515,657	\$6,691,583	\$1,521,801	\$40,021,470	\$29.80	23
New Jersey	\$80,461,060	\$8,743,858	\$31,362,793	\$61,953,519	\$183,176,272	\$20.34	46
New Mexico	\$73,476,564	\$4,542,842	\$11,966,282	\$5,826,081	\$98,764,442	\$47.30	7
New York	\$259,512,096	\$40,532,484	\$60,727,738	\$332,816,660	\$696,446,250	\$35.09	14
North Carolina	\$133,812,859	\$21,232,892	\$29,207,388	\$57,522,568	\$245,512,014	\$23.90	37
North Dakota	\$10,783,345	\$2,831,415	\$5,324,153	\$36,428	\$22,439,967	\$29.71	24
Ohio	\$141,412,726	\$41,913,334	\$38,626,983	\$26,720,083	\$252,177,017	\$21.63	43
Oklahoma	\$55,862,089	\$5,461,367	\$20,170,870	\$4,977,755	\$88,795,995	\$22.59	42
Oregon	\$92,365,567	\$4,800,599	\$17,736,891	\$12,395,230	\$129,630,613	\$31.29	19
Pennsylvania	\$123,629,880	\$70,040,963	\$47,241,519	\$80,778,210	\$326,166,388	\$25.47	33
Rhode Island	\$27,007,069	\$3,115,703	\$11,238,841	\$7,743,879	\$49,285,363	\$46.51	8
South Carolina	\$85,629,745	\$6,723,475	\$23,450,833	\$31,130,947	\$150,126,640	\$29.88	22
South Dakota	\$18,139,087	\$2,047,595	\$5,055,763	\$1,276,832	\$30,068,331	\$34.57	15
Tennessee	\$85,137,429	\$21,157,700	\$25,665,851	\$48,597,249	\$183,370,674	\$27.30	29
Texas	\$258,137,758	\$49,843,935	\$60,058,825	\$187,017,914	\$559,737,077	\$19.78	47
Utah	\$39,264,746	\$9,208,346	\$15,677,256	\$9,377,093	\$75,301,079	\$24.28	36
Vermont	\$22,631,448	\$906,745	\$4,045,713	\$1,445,345	\$29,897,576	\$47.94	5
Virginia	\$87,621,369	\$14,586,771	\$22,712,654	\$42,651,400	\$172,378,999	\$20.35	45
Washington	\$133,018,277	\$25,919,110	\$26,194,599	\$33,840,174	\$222,201,130	\$30.00	21
West Virginia	\$67,980,566	\$5,087,551	\$13,924,048	\$2,064,921	\$92,610,594	\$51.00	3
Wisconsin	\$44,754,541	\$17,226,731	\$24,885,068	\$14,414,911	\$104,073,630	\$17.96	48
Wyoming	\$8,981,575	\$1,585,563	\$1,653,082	\$964,089	\$14,206,435	\$24.52	35
U.S. TOTAL	\$4,628,289,121	\$819,479,849	\$1,170,277,750	\$2,190,232,257	\$8,978,828,049	\$27.57	N/A

*The District of Columbia 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 the District of Columbia, and does not include territories, for comparability.

Estimated Business Activity and Job Support from FY 2017 CDC and HRSA Funding**

State	CDC & HRSA State Funding, FY 2017	Estimated Business Activity from FY 2017 CDC and HRSA Funding	Estimated Number of Jobs Supported by FY 2017 CDC and HRSA Funding
Alabama	\$269,557,314	\$404,335,971	6,896
Alaska	\$124,498,296	\$186,747,444	2,050
Arizona	\$297,375,157	\$446,062,736	6,693
Arkansas	\$168,340,881	\$252,511,322	4,321
California	\$1,952,929,293	\$2,929,393,940	31,807
Colorado	\$281,797,079	\$422,695,619	4,912
Connecticut	\$190,178,851	\$285,268,277	3,184
Delaware	\$64,746,078	\$97,119,117	1,675
D.C.	\$253,921,749	\$380,882,624	3,572
Florida	\$941,281,302	\$1,411,921,953	27,431
Georgia	\$545,846,143	\$818,769,215	12,117
Hawaii	\$111,420,958	\$167,131,437	2,132
Idaho	\$103,568,291	\$155,352,437	2,243
Illinois	\$605,257,804	\$907,886,706	8,617
Indiana	\$258,604,812	\$387,907,218	5,986
Iowa	\$156,960,365	\$235,440,548	2,789
Kansas	\$128,235,790	\$192,353,685	3,067
Kentucky	\$219,601,138	\$329,401,707	5,049
Louisiana	\$300,217,241	\$450,325,862	6,131
Maine	\$100,230,664	\$150,345,996	2,237
Maryland	\$362,599,463	\$543,899,195	7,522
Massachusetts	\$416,916,476	\$625,374,714	8,010
Michigan	\$434,401,206	\$651,601,809	8,844
Minnesota	\$221,179,706	\$331,769,559	6,172
Mississippi	\$206,734,083	\$310,101,125	5,933
Missouri	\$301,149,476	\$451,724,214	8,477
Montana	\$96,588,614	\$144,882,921	2,305
Nebraska	\$97,056,358	\$145,584,537	2,572
Nevada	\$111,905,601	\$167,858,402	2,471
New Hampshire	\$75,796,402	\$113,694,603	1,568
New Jersey	\$338,872,798	\$508,309,197	5,974
New Mexico	\$170,544,004	\$255,816,006	3,923
New York	\$1,219,315,568	\$1,828,973,352	19,584
North Carolina	\$448,899,887	\$673,349,831	10,890
North Dakota	\$43,447,738	\$65,171,607	1,234
Ohio	\$458,395,191	\$687,592,787	7,897
Oklahoma	\$179,852,471	\$269,778,707	4,524
Oregon	\$220,339,263	\$330,508,895	4,798
Pennsylvania	\$554,989,144	\$832,483,716	11,265
Rhode Island	\$91,296,286	\$136,944,429	1,576
South Carolina	\$261,951,388	\$392,927,082	7,175
South Dakota	\$70,140,011	\$105,210,017	1,485
Tennessee	\$327,861,522	\$491,792,283	7,319
Texas	\$1,187,953,267	\$1,781,929,901	25,442
Utah	\$145,922,040	\$218,883,060	3,546
Vermont	\$57,031,054	\$85,546,581	1,165
Virginia	\$309,463,713	\$464,195,570	7,654
Washington	\$389,019,697	\$583,529,546	9,086
West Virginia	\$139,557,047	\$209,335,571	4,135
Wisconsin	\$218,324,945	\$327,487,418	4,472
Wyoming	\$31,815,874	\$47,723,811	684
U.S. TOTAL	\$16,263,889,499	\$24,395,834,249	340,614

* The U.S. total reflects grants to all 50 states and the District of Columbia, and does not include territories, for comparability.

**The chart reflects a formula developed by health economists to estimate the business activity and jobs generated by federal public health grants. It parallels a process long utilized to estimate the impact of NIH funding.

State Public Health Spending

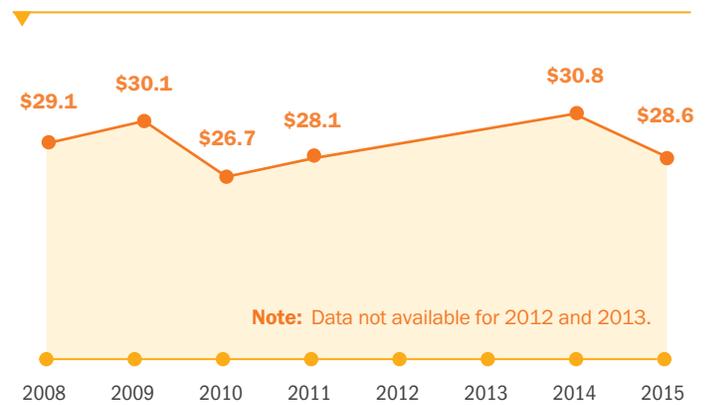
Almost half of state public health spending came from federal funds, while one-quarter was from state funds.¹¹

Overall spending for public health by states has been declining. Based on a TFAH analysis (adjusted for inflation), 31 states made cuts to their public health budgets from FY 2015-2016 to FY 2016-2017. Only 19 states and Washington, D.C. maintained or increased their budgets, making it hard for states to compensate for reduced federal funding.

Public health funding is discretionary spending in most states and, therefore, is at high risk for significant cuts during tight fiscal climates.

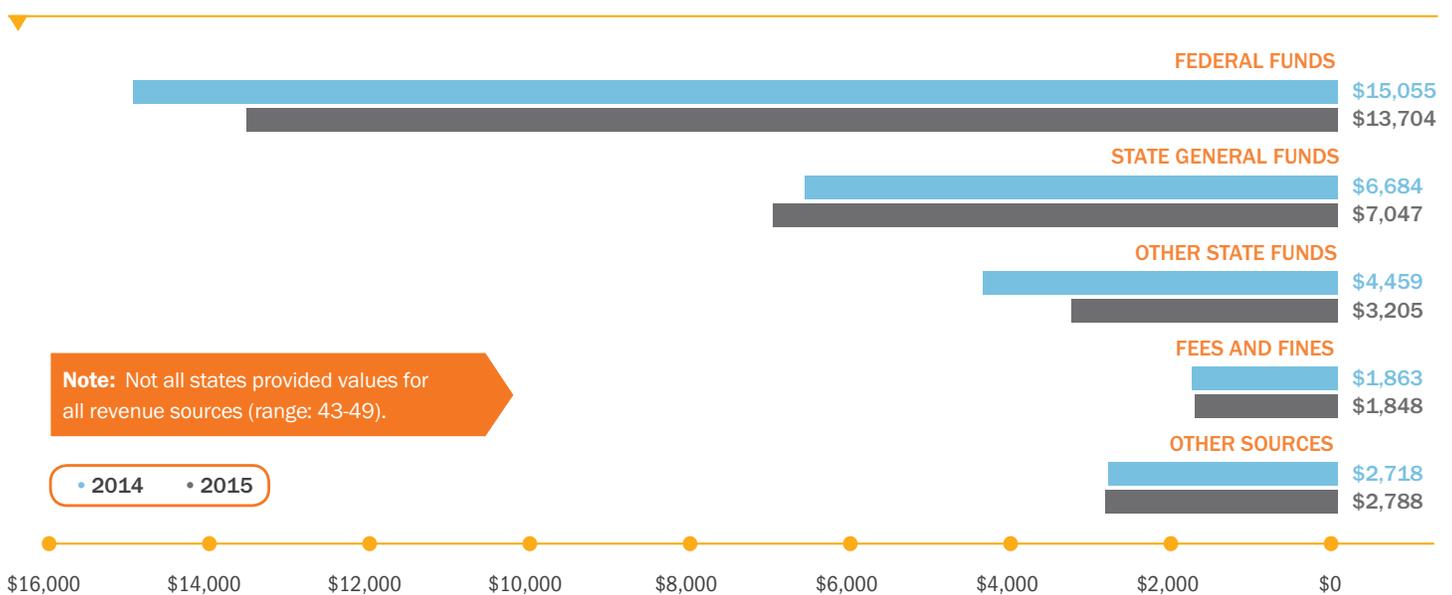
State public health spending is actually lower in 2016-2017 than it was in 2008-2009, as some of the funding cuts that occurred during the Great Recession still have not been fully restored.

TOTAL STATE HEALTH AGENCY REVENUE, IN BILLIONS, 2008-2015 (N=46-49)



Source for both charts: Association of State and Territorial Health Officials: <http://www.astho.org/Profile/Volume-Four/2016-ASTHO-Profile-of-State-and-Territorial-Public-Health/>

TOTAL STATE HEALTH AGENCY REVENUE FOR 2014 AND 2015 BY SOURCE OF FUNDING, IN MILLIONS (N=49)



STATES' PUBLIC HEALTH BUDGETS

	FY 2016-2017 State Public Health Budget
Alabama	\$274,290,949
Alaska	\$84,857,300
Arizona	\$61,023,300
Arkansas	\$156,264,435
California	\$2,424,431,000
Colorado	\$278,276,006
Connecticut	\$104,214,695
Delaware	\$39,745,800
D.C.	\$94,923,000
Florida	\$387,656,410
Georgia	\$219,395,730
Hawaii	\$159,900,025
Idaho	\$151,217,000
Illinois	\$327,241,300
Indiana	\$84,205,745
Iowa	\$219,770,221
Kansas	\$35,179,495
Kentucky	\$185,502,795
Louisiana	\$98,660,306
Maine	\$28,006,490
Maryland	\$243,358,946
Massachusetts	\$364,200,373
Michigan	\$128,282,100
Minnesota	\$358,163,000
Mississippi	\$36,645,538
Missouri	\$34,979,581
Montana	\$25,246,757
Nebraska	\$85,688,198
Nevada	\$19,851,091
New Hampshire	\$29,976,434
New Jersey	\$233,629,000
New Mexico*	\$80,900,400
New York	\$1,722,043,754
North Carolina	\$148,298,428
North Dakota	\$36,404,687
Ohio	\$144,784,069
Oklahoma	\$162,020,000
Oregon	\$113,216,399
Pennsylvania	\$161,554,000
Rhode Island	\$60,906,278
South Carolina	\$119,916,820
South Dakota	\$31,734,355
Tennessee	\$336,532,700
Texas	\$602,084,601
Utah	\$95,347,100
Vermont	\$35,006,938
Virginia	\$320,760,606
Washington	\$301,352,000
West Virginia	\$104,749,777
Wisconsin	\$83,930,400
Wyoming	\$30,894,959
National	\$11,667,221,290

Source: Publicly available state budget information, distributed to state officials for updates and verification; U.S. Census Bureau

* State did not respond to budget verification request



Source: TFAH analysis. For a detailed methodology, see *Ready or Not? Protecting the Public's Health from Diseases, Disasters and Bioterrorism* at <http://healthyamericans.org/reports/readyornot2017/>.

States vary significantly in how they structure public health agencies, programs and services — so it makes direct comparisons across states difficult. For instance, states may have more centralized or decentralized public structures, or some public health agencies may include environmental health, behavioral health or some direct services, depending on the structure of the state agencies. The budgets may include unrealized collection authority and may or may not include revenue from local sources. State budget numbers may include fee collection authority that may not be realized and is not revenue for the state. And, state budget numbers may include grants to support local health agencies but do not reflect revenue from local government (e.g., city or county taxes).

Notes: North Dakota and Virginia report biennium budgets, and for this analysis the funding was divided in two to reflect one-year spending levels.

Local Spending for Public Health.

Overall spending at local public health departments has also been decreasing. Since 2008, local health departments (LHDs) have lost 55,590 staff due to layoffs or attrition. In addition, about 25 percent of LHDs reported a lower FY2016 budget than the previous year, with fewer LHDs reporting an increase in their budget for the current FY as compared to the previous year. While the number of LHDs experiencing budget cuts has decreased in recent years, most departments have not reported an increase in funding.¹²

However it is difficult to generalize about local health departments. There

are about 2,800 local health departments (LHDs) in the United States. Some rural jurisdictions serve fewer than 1,000 residents, while the New York City Department of Health serves a population of about 8.55 million.

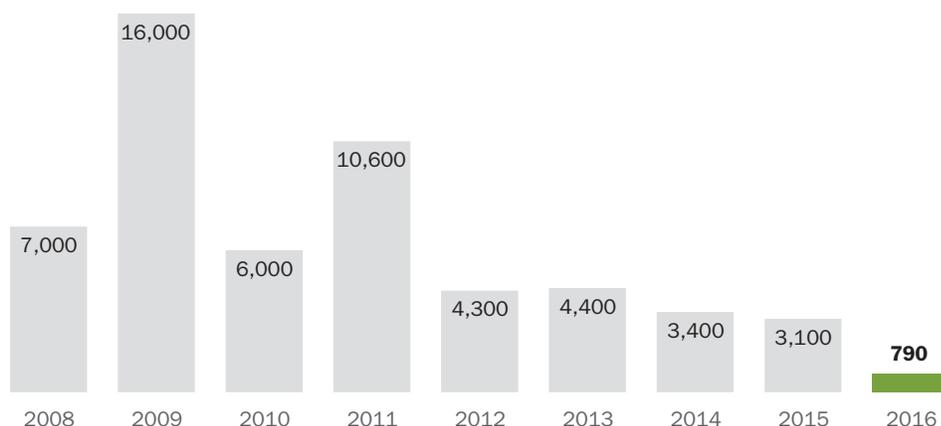
Similarly, state and local funding for public health varies dramatically.^{13,14} Not only do various states structure their public health agencies differently, some are more centralized than others — but certain states and localities also put a higher priority on public health.¹⁵

Since 2008, LHDs have eliminated a cumulative total of 55,590 jobs due to layoffs or attrition because of hiring freezes or budget cuts.

In 2016, LHDs reported an estimated 800 jobs lost. Of those, 600 were due to layoffs, and another 200 were due to attrition.

This estimate is much lower than any of the reported evidence in previous years, indicating that LHD staffing levels are rebounding.

Number of jobs lost



Source: National Association of County and City Health Officials: <http://nacchoprofilestudy.org/wp-content/uploads/2017/10/2017-Forces-of-Change-Main-Report1.pdf>.

Rising Epidemics

Rising Epidemics and Persistent Public Health Challenges

The nation has persistent serious, ongoing health problems — a majority of which could be prevented or mitigated by prioritizing strong public health programs and strategies. In addition, almost every year the nation faces new health crises. Since emergencies are a matter of when, not if, preparation is the key to responding effectively.

Public Health Preparedness.

As the climate changes, the likelihood of unusual weather patterns and extreme weather events increase. Water may rise to unsafe levels and the insects and animals that spread disease may move into new geographic locations. In 2017, the nation responded to several unprecedented public health emergencies:

- **Weather Disasters.** According to the National Oceanic and Atmospheric Administration (NOAA), in 2017, there were 16 distinct weather and climate disasters across the United States, each with losses exceeding \$1 billion.¹⁶ Three Category 4 and 5 hurricanes made landfall in the United States and its territories in one year—a new record.¹⁷
- **Northern California Floods.** In February 2017, extreme rainfall across northern and central California caused substantial property and infrastructure damage from flooding, landslides and erosion. Severe damage to the Oroville Dam spillway caused a multi-day evacuation of 188,000 residents downstream, and San Jose’s Coyote Creek overflowed its banks, flooding neighborhoods and forcing 14,000 residents to evacuate.¹⁸
- **California Wine Country Wildfires.** The wildfires were the deadliest in the state’s history, killed 43 people, scorched more than 245,000 acres, destroyed approximately 8,900 buildings, and forced 100,000 people to evacuate, some at a moment’s notice. Preliminary damage estimates exceed \$3 billion.^{19,20}
- **Extreme Drought in Montana, North Dakota and South Dakota.** The drought damaged crops, forcing ranchers to sell off livestock due to lack of feed. The drought also set the stage for devastating wildfires later that year.²¹
- **Hurricane Harvey.** Extreme rainfall produced historic flooding in the Houston area that displaced more than 30,000 people, damaged or destroyed more than 200,000 homes and businesses and caused 84 deaths.²²
- **Hurricane Irma.** The hurricane devastated the U.S. Virgin Islands and reached Florida as a Category 5 storm. A quarter of the buildings in the Florida Keys were destroyed. Maintaining maximum sustained wind strength of 185 mph for a record 37 hours, the hurricane caused significant storm surge damage, resulting in 95 deaths.²³

- **Hurricane Maria.** The hurricane made landfall in southeast Puerto Rico after first striking St. Croix in the U.S. Virgin Islands. Up to three feet of rain caused widespread flooding and mudslides across the island and severely damaged the island’s infrastructure.²⁴ Millions of residents of the islands were without clean water and electricity for many weeks, and many lacked access to basic healthcare in the aftermath of the storms. Some parts of the islands have yet to regain electricity.

- **Infectious Disease Outbreaks.**

In 2017, multiple communities responded to outbreaks of Hepatitis A—which disproportionately impacted homeless populations—foodborne outbreaks and emerging threats such as drug-resistant *C. auris*. Outbreaks cause suffering and death, divert resources and personnel from other vital public health activities and have extensive costs.

PANDEMIC AND ALL-HAZARDS PREPAREDNESS ACT (PAHPA)

The Pandemic and All-Hazards Preparedness Act, which first became law in 2006, aims “to improve the Nation’s public health and medical preparedness and response capabilities for emergencies, whether deliberate, accidental, or natural.”

In 2013, Congress reauthorized PAHPA through the Pandemic and All-Hazards Preparedness Reauthorization Act (PAHPRA), which included funding for public health and medical preparedness programs, such as the Hospital Preparedness Program (HPP) and the Public Health Emergency Preparedness (PHEP) Cooperative Agreement. It also amended the Public Health Service Act to grant state health departments flexibility in dedicating staff resources during a disaster; authorized funding through 2018 for buying medical countermeasures under the Project BioShield Act; and increased the

flexibility of BioShield to support advanced research and development of potential medical countermeasures.

PAHPA is up for reauthorization in 2018 and Congress will be considering what needs to be changed to help public health prepare the nation for emerging threats. Priorities for improving public health readiness include:

- Fully funding the continuum of preparedness programs, including PHEP, HPP and medical countermeasures programs;
- Supporting a standing public health emergency response fund to serve as a bridge between underlying preparedness funding and supplemental emergency funds for major disasters; and
- Strengthening planning for the whole community.

Public Health Epidemics.

In addition to facing natural disasters, communities across the country must confront serious, ongoing health problems. These include the rising “deaths of despair”—those from drugs, alcohol and suicide—and continually high obesity rates. Making strong preventive public health programs and strategies a top priority could improve health, well-being and life expectancy—which declined for the past two years.^{25,26}

Deaths of Despair.

According to the most recent data, in 2016, 142,000 Americans, the highest number ever recorded, died from alcohol- and drug-induced fatalities and suicide — an average of one every four minutes.²⁷ These 142,000 ‘despair deaths’ in 2016 add to the more than one million Americans who died from drugs, alcohol or suicide in the previous decade (2006 to 2015).²⁸ For context, deaths from these three causes are nearly identical in number as those who died in 2016 from stroke, the fifth leading cause of death in United States, and are greater than the number of Americans who died in all U.S. wars since 1950 combined.^{29,30}

In February, TFAH and Well Being Trust did a further analysis into trends, finding:

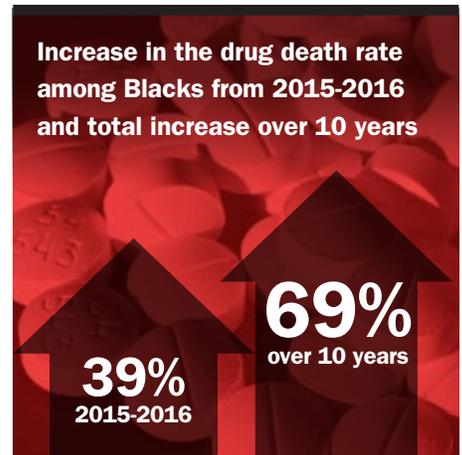
- **Racial Disparities:** While drug overdoses were still highest among Whites in 2016, there were disproportionately large increases in drug deaths among racial/ethnic minority groups, particularly among Black Americans. In the previous decade, Blacks had relatively low drug overdose rates — averaging 35 percent lower than Whites between 2006 and 2015. However, between 2015 and 2016, Blacks experienced an alarming increase — of 39 percent — in drug-related deaths. And, Latinos saw

drug death rates increase 24 percent, while the rate for Whites increased 19 percent from 2015-2016.^{31 32}

- **Synthetic Opioids:** Deaths from synthetic opioids — including fentanyl and carfentanil — doubled from 2015 to 2016 from 9,600 to 19,400 and was the driving force for the extraordinary increase in drug deaths. (Alcohol, other types of drug and suicide deaths also increased but by a much lower amount.) The lethality of these drugs puts users at extremely high risk — compared with heroin, fentanyl is 50 times more potent and carfentanil is 5,000 times more potent than heroin.³³
- **Regional Disparities:** The Northeast and Midwest had the largest increase in alcohol, drug and suicide deaths between 2015 and 2016. Six states and Washington, D.C. saw alcohol, drug and suicide death rates increase by more than 20 percent: Delaware (25 percent); Illinois (21 percent); Maryland (40 percent), New Jersey (22 percent), Ohio (21 percent), Pennsylvania (25 percent) and Washington, D.C. (58 percent).

If deaths continue to grow at similar rates as from 2015 to 2016, deaths could top more than 2 million in the coming decade (2016-2025). This would mean more than 287,700 individuals could die from these three causes in the year 2025, double the current number who died in 2016.³⁵

CDC’s Injury Center for the Prescription Overdose Prevention Program has increased its work in prescription drug overdose prevention over recent years, working with state health departments to accelerate prevention efforts. CDC is also supporting nearly all states with funding to improve prescription drug monitoring programs (PDMPs), expand insurer mechanisms to address the problem and improve clinical practice.



Alcohol. Not only is alcohol killing American adults, it is poisoning future generations. A February 2018 JAMA study states that fetal alcohol spectrum disorders may affect between 1.1 to 5 percent of American children, five times more than previous estimates. Women drinking during pregnancy can cause neurological damage resulting in physical, mental and emotional problems.³⁴

Unfortunately, there are few federally funded programs that target some of the key underlying causes of addiction such as the impact of trauma in childhood or adulthood and the lack of conditions in life that build resiliency and coping skills. CDC and the Substance Abuse and Mental Health Services Administration (SAMHSA) are well positioned to fund community-based agencies and local and state health departments to carry them out. However, CDC has no funding to distribute for such activities and SAMHSA's funding for such work is limited.

Obesity and Overweight.

Nearly 38 percent of American adults are obese and more than one-third of children are overweight or obese, contributing to more than \$200 billion in direct health costs each year.^{36,37,38}

Regional disparities in rates persist: nine of the 11 states with the highest obesity rates are in the South, and 23 of the 25 states with the highest rates of obesity are in the South and Midwest.

In addition, adult obesity rates have striking racial and ethnic inequities: rates are above 40 percent for Blacks in 15 states and rates at or above 35 percent among Latinos in nine states compared with rates above 35 percent among Whites in one state.

The obesity crisis also impacts our nation's military readiness. Being overweight or obese is the leading

cause of medical disqualifications, with nearly one-quarter of service applicants rejected for exceeding the weight or body fat standards. Obese service members and members of their family who are obese cost the military about \$1 billion every year in healthcare costs and lost productivity.³⁹

While adult obesity rates have shown some signs of leveling off, this progress could be eroded if programs are cut and policies are weakened. And, even if the rates level off and remain at their extremely high level of obesity and overweight, we will continue to see more and more cases of diabetes, heart disease and cancer.

Tobacco.

Despite enormous progress in reducing smoking, tobacco use is still a leading cause of preventable death in the United States, killing more than 480,000 people annually. This is more than AIDS, alcohol, car accidents, illegal drugs, murders and suicides combined. Tobacco costs the United States approximately \$170 billion in healthcare expenditures and more than \$150 billion in lost productivity each year.⁴⁰ Tobacco companies are developing and promoting new tobacco and/or nicotine-related products such as flavored cigarettes, lozenges and chewing tobacco as well as expanding their aggressive advertising and distribution of e-cigarettes.

Obesity Rates in the United States



More than one-third of adults are obese



More than one-third of children are overweight or obese

Recommendations

An additional investment of just \$10 per person in evidence-based community health improvement programs to increase physical activity, improve nutrition and reduce tobacco use could save the country more than \$16 billion each year — a \$5.60:\$1 return.⁴¹

Public health departments have the crucial responsibility of protecting citizens from health threats and improving health in neighborhoods, schools and workplaces across America. They identify the most pressing health challenges and the most effective strategies to counter them. They work with public and private partners across sectors — such as the education, transportation and housing sectors — to bring the necessary resources and expertise together to make change happen.

But without a strong consistent investment in prevention, the country will never advance in the fight to stop diseases and curb epidemics. Achieving a healthier nation is a goal all Americans share. The nation needs a long-term commitment to improve the nation's public health capabilities. TFAH recommends:

Increase Funding for Public Health — at the Federal, State and Local Levels

Five of the strongest school-based substance misuse prevention strategies have returns on investment (ROI) ranging from \$3.80:\$1 to \$34:\$1 — and have demonstrated results in reducing misuse of a range of drugs, alcohol and tobacco along with other risky behaviors, while improving school achievement and future career attainment.^{42, 43, 44, 45}

And, a review of 53 school-based violence prevention program studies found reduced violence rates (including suicides) of 29.2 percent among high school students, 7.3 percent among

The return for every \$1 invested in health improvement programs is \$5.60



middle school students, 18.0 percent among elementary school students and 32.4 percent among pre-kindergarten and kindergarten students — all of which led to decreased substance misuse and increased academic performance.^{46,47} ROIs ranged from \$15 to \$81 for every \$1 spent.^{48, 49, 50}

To turn the tide of health epidemics and prevent disease, stable, sufficient funding is required to support basic public health capabilities around the country and to ensure all Americans are protected no matter where they live. Increased funds are needed to fill gaps in critical infrastructure and to support innovation to keep pace with modern technology. Funding should be strategic and accountable so resources are used efficiently to maximize effectiveness. In the past several years much progress has been made in identifying the characteristics of a modern, effective and efficient health department, sometimes referred to as the Chief Health Strategist for the community. This knowledge allows for more targeted investments which should result in positive, measurable improvements in health and reduced health care costs.

EXAMPLES OF RETURN ON INVESTMENTS FOR PREVENTION EFFORTS

(Analyses/formulas indicate healthcare and/or societal dollars saved for every \$1 invested.)

Five Strongest School-based Substance Misuse Prevention Programs	3.80:1.00 to 34.0:1.00	Community-based Nutrition, Activity and Tobacco Prevention Programs	5.60:1.00	Lead Abatement Programs	17.00:1.00 to 221.00:1.00
Supportive Housing Programs for High-Need Patients	2.00:1.00 to 6.00:1.00	Diabetes Prevention Program	2.00:1.00	Early Childhood Education Programs	4.00:1.00 to 12.00:1.00
		Child Asthma Prevention Programs	1.46:1.00 to 7.00:1.00	Nurse Home Visiting for High Risk Infants	5.70:1.00

Preserve the Prevention and Public Health Fund

The Prevention and Public Health Fund is the nation's only dedicated funding source for prevention and public health, by statute, intended "to provide for expanded and sustained national investment in prevention and public health programs to improve health and help restrain the rate of growth in private and public sector health care costs."⁵¹ According to a recent study, the Prevention Fund was vital in supporting public health services during the Great Recession and some Prevention Fund programs demonstrated that the ability of the federal government to bring

people and constituencies together can be an important lever for promoting progress, especially when supported with adequate funding.⁵²

To date, the Fund has invested more than \$7 billion to enable communities in every state to invest in effective, proven public health and prevention efforts that have (among other things):

- Transformed and revitalized communities,
- Built epidemiology and laboratory capacity,
- Trained the nation's public health workforce,

- Prevented some increases of diabetes through the Diabetes Prevention Program,
- Expanded access to vaccines,
- Reduced tobacco use, and
- Tracked childhood lead poisoning.

In the future, the Fund should be restored and used for the purposes it was created to supplement, not supplant public health funding, and focus on prevention. As noted, the Bipartisan Budget Act will cut \$1.35 billion in future funding from the Prevention and Public Health Fund.

Prepare for Public Health Emergencies and Pandemics

Recent emergencies — from hurricanes to wildfires to the flu and other infectious disease outbreaks — proved that the nation must be ready to face any and all public health emergencies, manmade or natural. Over the past few years, state and local health departments and health systems have responded to crises such as the Flint water contamination; extreme weather; wildfires; outbreaks of HIV, hepatitis, measles, Legionnaire’s, and other infectious diseases; and mass casualty events.

In addition, CDC’s Division of Global Health Protection contributes to global health security by building public health capacity to detect and respond to outbreaks where they occur—and hopefully prevent them from reaching America. Yet much of CDC’s global health security work is set to end in 2018 as funding for the program expires.⁵³

More than any other source, federal dollars fund state and local agencies to ensure they have the vital capacity and infrastructure to prepare for and respond to public health emergencies.

Cuts to these programs cannot be backfilled with short-term funding after an event. An efficient and effective state and local response relies heavily on reliable, ongoing support for a network of local expertise, training and exercises. It can be rapidly degraded but it cannot be rapidly created through sporadic, ad hoc investments when a crisis strikes.

To date, inadequate resources have hampered innovation, including development and wide-scale use of state-of-the-art biosurveillance, disease diagnostics, and medical countermeasures. Investment in innovation is essential to retain the U.S. public health system’s premier global capabilities.

TFAH recommends increased funding for the grants and agreements that address gaps in state and local public health and healthcare preparedness and extending funding for global health security.

Additionally, during PAHPA reauthorization, the following could be considered:

- Fully funding the continuum of preparedness programs, including PHEP, HPP and medical countermeasures programs;

- Supporting a standing public health emergency response fund to serve as a bridge between underlying preparedness funding and supplemental emergency funds for major disasters; and
- Strengthening planning for the whole of community.

Establish a Standing Public Health Emergency Response Fund

The nation must also fund a complementary Public Health Emergency Fund that can be used to provide immediate surge funding during major unexpected events.

A Public Health Emergency Fund would immediately make resources available to fight new pandemics, disease outbreaks or bioterror threats without diverting funding from ongoing readiness.

The current process of insufficient funding means there are long-standing gaps in the baseline system. All too often, emergency supplemental budgets take time, cause delayed responses, and cannot be used to backfill ongoing vulnerabilities in the response system.





Build a National Resilience Strategy to Combat Deaths of Despair

Solving the deaths of despair requires investments in prevention and treatment. The nation needs sufficient funding to support all government agencies—including CDC’s Injury Center—fighting these overlapping epidemics.

A National Resilience Strategy should take a comprehensive approach by focusing on prevention, early identification of issues and effective treatment, including by:

- **Improving Pain Management and Treatment** by helping people heal physically, mentally and emotionally;
- **Stemming the Opioid Crisis** with a full-scale approach — including promoting responsible opioid prescribing practices; public education about misuse and safe disposal of unused drugs; “hotspot” intervention strategies; anti-trafficking to stop the

flow of heroin, fentanyl and other illicit drugs; and expanding the use and availability of rescue drugs, sterile syringes and diversion program;

- **Addressing the Impact of the Opioid Epidemic on Children — and the Need for a Multi-Generational Response** that includes substance use disorder treatment for parents and wrap-around services for children and families, including grandparents and other relatives who help care for children;
- **Lowering Excessive Alcohol Use** through evidence-based policies, such as by increasing pricing, limiting hours and density of alcohol sales, enforcing underage drinking laws and holding sellers and hosts liable for serving minors;
- **Preventing Suicides** by expanding crisis intervention services; anti-bullying and social-emotional learning in schools; and support systems for Veterans;
- **Expanding and Modernizing Mental Health and Substance Use Disorder Treatment Services — Toward a Goal of Focusing on the “Whole Health” of Individuals;**
- **Prioritizing Prevention, Reducing Risk Factors and Promoting Resilience in Children, Families and Communities** by limiting trauma and adverse experiences; and
- **Rebooting Substance Misuse Prevention and Mental Health in Schools** by scaling up evidence-based life- and coping-skills programs and inclusive school environments and increasing the availability of mental health and other services.

Prevent and Reduce Chronic Disease

The nation must address the underlying environmental, social and/or economic causes of chronic diseases that are responsible for 80 percent of the healthcare costs in the United States. A clinical healthcare approach is a late-stage Band-Aid and could never prevent chronic, expensive diseases, such as diabetes.

CDC's National Center for Chronic Disease Prevention and Health Promotion coordinates with public and private partners to work toward health outcome goals through reducing rates of death and disability due to tobacco use, the prevalence of obesity, and rates of death and disability due to diabetes, heart disease and stroke.

TFAH recommends increased funding for prevention across government, including at CDC's National Center for Chronic Disease Prevention and Health Promotion. Increased funding would increase support for state health departments and enable them to deploy interventions focused specifically on improving nutrition and promoting physical activity. It also would help support a possible expansion of coordinated activities in Indian Country and the work being done in high-obesity counties, many of which are rural.

Support Better Health and Top Local Priorities in Every Community

There should be improved mechanisms and funding that provide the flexibility for local communities to prioritize

and address their top public health goals — from prescription drug misuse to obesity to suicide prevention. This should include bringing together the key partners, assets and resources of a community to achieve a more efficient and effective collective impact, including strategies reflecting their unique challenges and expertise.

Partners should include the health sector, social services, local businesses, philanthropies, schools, and faith and community groups. This approach draws on partner expertise and creates diverse public and private funding streams. Additionally, state and local health departments play a critical role as their partnerships' Chief Health Strategist.

Expand the Use of Evidence-Based, High-Impact Strategies to Improve Health in Every Community

Experts have identified a set of the strongest health improvement strategies. Improving data availability and access would increase public health's ability to scale strategies. For instance, in 2016, CDC released a set of top community-wide Health Impact in 5 Years strategies and community-clinical approaches via the 6118 Initiative: Accelerating Evidence into Action.^{54, 55}

In addition, a network of expert institutes should be supported in every state. These will provide support to local communities, helping them identify their top needs, to measure impact, and to provide technical assistance.

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1730 M Street, NW, Suite 900
Washington, DC 20036
(t) 202-223-9870
(f) 202-223-9871