

The Impact of Chronic Underfunding on America's Public Health System:

Trends, Risks, and Recommendations, 2019

Acknowledgements

Trust for America's Health (TFAH) is a nonprofit, nonpartisan public health policy, research, and advocacy organization that promotes optimal health for every person and community and makes the prevention of illness and injury a national priority.

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REPORT AUTHORS

Matt McKillop, MPP

Senior Health Policy Researcher and Analyst

Vinu Ilakkuvan, DrPH

Consultant

CONTRIBUTORS

Dara Alpert Lieberman, MPP

Director of Government Relations

Daphne Delgado, MPH

Senior Government Relations Manager

Zarah Ghiasuddin

TFAH Intern

PEER REVIEWER

This report benefited from the insights and expertise of the following external reviewer. Although the reviewer has reviewed the report, neither the reviewer nor the reviewer's organization necessarily endorse its findings or conclusions.

Donald Hoppert

*Director of Government Relations
American Public Health Association*

Introduction

The United States has made enormous strides in improving population health and longevity,¹ but significant challenges remain. More than a third of adults, and nearly one in five children, have obesity,² costing the nation hundreds of millions in related health care expenses.³ Tobacco use is still the leading cause of preventable death.⁴ Risks from infectious disease, drug-resistant superbugs, and foodborne illness continue to pose a challenge. A rapid rise in deaths from drugs, alcohol, and suicide represent an urgent crisis.⁵ Weather-related emergencies are becoming more frequent and intense, as the world begins to feel the effects of climate change.⁶ And across most health outcomes, socioeconomic, racial, and ethnic disparities persist.⁷

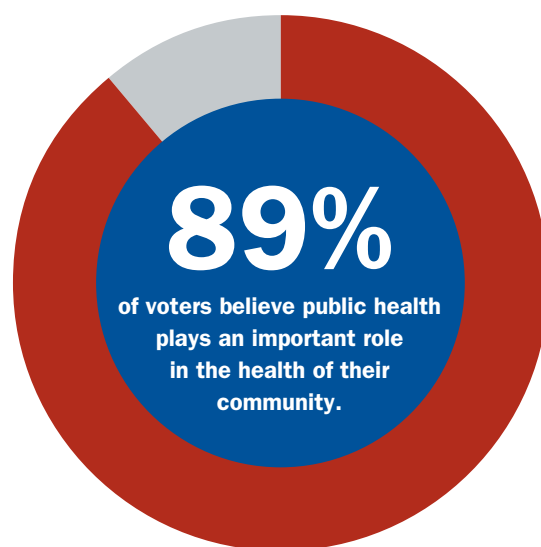
Tackling these issues requires a strong, well-resourced public health system focused on prevention, preparedness, wellness, and community recovery for all Americans. But chronic underfunding has presented a consistent obstacle. In 2017, public health represented just 2.5 percent—\$274 per person—of all health spending in the country.⁸

Such underfunding flouts overwhelming evidence of the life-saving cost-effectiveness of programs that prevent diseases and injuries and prepare for disasters and health emergencies. Public health interventions, such as childhood vaccinations,⁹ school-based violence prevention programs, and indoor smoking bans, improve health outcomes and prevent illness and death.¹⁰ Moreover, many such interventions save money; a 2017 systematic review of the return on investment of public health interventions in high-income countries found a median return of 14 to 1.¹¹

In an age of widening political polarization, public health programs enjoy broad support. A September 2018 poll of U.S. voters found that 89 percent of respondents believed that public health plays an important role in the health of their community. A majority of voters (57 percent) were willing to pay higher taxes to ensure that everyone has access to basic public health protections.¹² (See Figure 1.)

This annual report examines federal, state, and local public health funding, and it recommends investments and policy actions needed to prioritize prevention, effectively address 21st century threats, and ultimately achieve optimal health for all Americans. With chronic underfunding putting lives at risk, the stakes are rising.

Figure 1: Voters Broadly Support Public Health Protections and Investments



Source: The De Beaumont Foundation

Federal Public Health Funding

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. Much of this money flows through the Centers for Disease Control and Prevention (CDC), with additional funds going to other agencies within the U.S. Department of Health and Human Services (HHS), as well as the United States Department of Agriculture (USDA).

CDC funding trends

The CDC is the nation's leading public health agency. Its mission is to protect Americans from disease outbreaks, disasters, and unsafe food and water, and to reduce the incidence of leading causes of Americans' deaths. To help accomplish its objectives, the CDC supports states, localities, tribes, territories, and community organizations in addressing leading health threats in their communities. Indeed, more than half of its program funding is redistributed to these partners.¹³

The agency's budget has not kept pace with the nation's growing public health needs and emerging threats, particularly the rise in substance misuse and weather-related emergencies. The agency has expanded its substance misuse efforts in the past few years, but more resources are needed to address underlying causes, such as the impact of trauma or the lack of supportive school and community environments.¹⁴ Its funding for effective obesity and community prevention programs is inadequate to sufficiently support every state.¹⁵ Despite rapid growth in the elderly population,¹⁶ funding to support healthy aging at the CDC is minimal. Recent increases to funding for public health emergency preparedness, including for weather-related

emergencies, have not made up for resources lost in earlier years, let alone emerging threats.¹⁷ Finally, the CDC also lacks sufficient dedicated funding to adequately support the cross-cutting, foundational capabilities that form the backbone of comprehensive public health systems at the federal, state, and local levels.¹⁸

Fiscal Year (FY) 2019 program funding for the CDC, as enacted in September 2018, is \$7.3 billion.¹⁹ (See Figure 2.) After accounting for interagency transfers and one-time funding,* this reflects a \$143 million (2 percent) increase over FY 2018—or flat funding in inflation-adjusted dollars.

The CDC's FY 2018 budget saw its biggest year-over-year uptick (\$1.079 billion, including \$480 million in one-time funding for laboratory facilities)²⁰ over the past decade.²¹ A third of these additional dollars—about \$350 million—were meant to support the response to the devastating opioid epidemic.²² Of the CDC's funds that go to states, support ranged in FY 2018 from \$17.09 per person in New Jersey to a high of \$63.28 per person in Alaska. (See Table 1.)

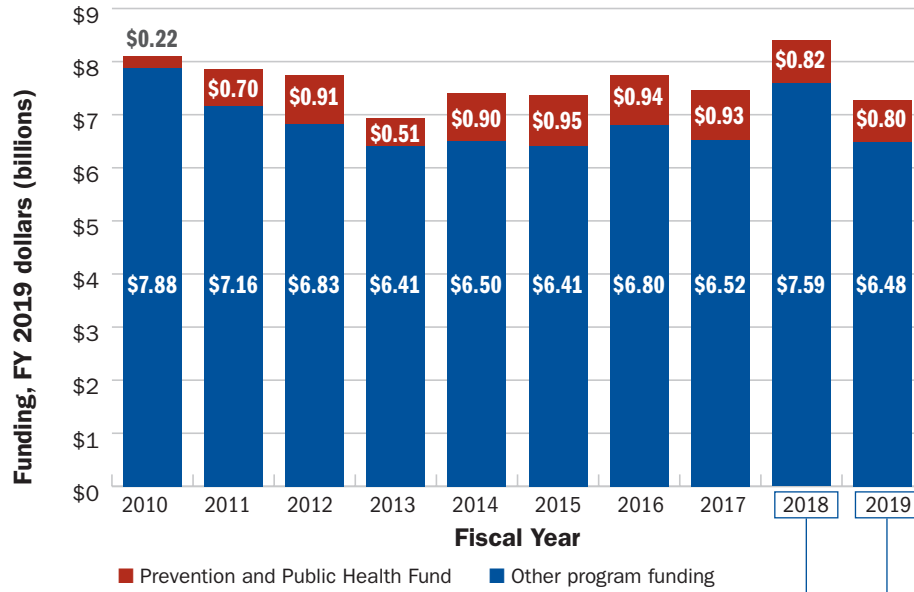
Looking further back, the CDC's budget fell by 10 percent over the past decade (FY 2010-19), after adjusting for inflation.²³ (See Figure 2.)

* The FY 2018 CDC budget was \$8.229 billion. However, appropriately comparing this to the FY 2019 budget requires accounting for the FY 2019 transfer of funding for the Strategic National Stockpile (\$603.9 million) from the CDC to the Assistant Secretary for Preparedness and Response, and excluding FY 2018 one-time lab funding (\$480 million). After making these deductions, the adjusted FY 2018 budget was \$7.145 billion. The FY 2019 budget of \$7.288 billion represents a \$143 million increase over FY 2018.



Figure 2: CDC Program Funding Fell Over Decade

CDC program funding, adjusted for inflation, FY 2010-19



Note: Appropriately comparing funding levels in **FY 2018** and **FY 2019** requires accounting for the transfer of funding for the Strategic National Stockpile from the CDC to the Assistant Secretary for Preparedness and Response in FY 2019, and excluding one-time lab funding in FY 2018.

Data were adjusted for inflation using the Bureau of Economic Analysis's implicit price deflators for gross domestic product

Source: CDC annual operating plans

Table 1: CDC Program Funding Transfers to States, FY 2018

State	Agency for Toxic Substances and Disease Registry (ATSDR)	Birth Defects, Developmental Disabilities, Disability and Health	CDC-Wide Activities and Program Support	Childhood Obesity Demonstration Project	Chronic Disease Prevention and Health Promotion	Emerging and Zoonotic Infectious Diseases	Environmental Health	Health Reform- Toxic Substances & Environmental Public Health	HIV/AIDS, Viral Hepatitis, STI and TB Prevention
Alabama		\$2,949,147	\$2,753,495		\$13,155,772	\$1,018,363	\$500,000		\$9,882,651
Alaska	\$404,467	\$800,000	\$667,171		\$15,798,700	\$1,092,905	\$355,958		\$2,294,856
Arizona	\$900,000	\$900,000	\$2,344,563		\$15,775,146	\$1,607,612	\$1,330,269		\$10,036,550
Arkansas	\$419,585	\$2,034,943	\$1,584,350		\$11,609,849	\$200,990			\$4,018,043
California	\$856,060	\$1,157,405	\$12,258,366	\$215,319	\$40,573,997	\$10,050,215	\$4,167,901		\$99,531,702
Colorado	\$833,451	\$2,647,439	\$6,892,624		\$13,182,251	\$5,285,240	\$3,267,561		\$10,170,700
Connecticut	\$528,752	\$399,954	\$2,525,322		\$9,282,485	\$5,554,587	\$1,961,269		\$5,851,662
Delaware		\$145,870	\$393,450		\$7,984,481	\$835,470	\$423,550		\$2,450,808
D.C.	\$325,000	\$9,418,212	\$8,062,187		\$19,344,216	\$6,682,133	\$3,017,346		\$26,240,239
Florida	\$443,878	\$759,993	\$16,911,400		\$19,060,996	\$2,353,591	\$2,473,601		\$56,220,566
Georgia	\$239,040	\$6,402,200	\$11,921,868		\$49,813,153	\$7,287,961	\$1,756,156		\$35,165,251
Hawaii		\$266,509	\$1,405,406		\$5,102,222	\$2,551,862	\$1,070,000		\$3,522,682
Idaho	\$212,073	\$150,000	\$703,943		\$6,412,585	\$673,866			\$1,688,404
Illinois	\$925,000	\$2,039,782	\$4,289,414		\$29,086,341	\$6,073,806	\$2,307,941		\$26,949,380
Indiana		\$215,682	\$2,688,357		\$7,817,923	\$1,989,112	\$1,522,435		\$7,266,177
Iowa		\$2,059,998	\$1,929,457		\$8,382,072	\$3,418,798	\$1,499,670		\$2,900,479
Kansas		\$817,967	\$1,580,512		\$9,437,599	\$1,441,595	\$1,387,047		\$2,376,162
Kentucky		\$507,191	\$2,253,617		\$12,548,836	\$865,568	\$1,247,125		\$5,120,172
Louisiana	\$299,810	\$681,538	\$16,056,291		\$13,092,516	\$1,099,723	\$1,409,789		\$13,282,814
Maine		\$150,000	\$1,514,652		\$5,550,049	\$779,257	\$2,134,958		\$1,689,674
Maryland		\$3,714,637	\$20,071,955	\$750,000	\$22,982,613	\$15,808,617	\$3,895,681		\$21,403,036
Massachusetts	\$420,000	\$2,082,026	\$4,725,629		\$15,440,524	\$8,144,382	\$3,490,195		\$16,798,772
Michigan	\$505,853	\$1,682,060	\$7,187,593		\$22,398,464	\$4,227,747	\$6,321,497		\$14,726,728
Minnesota	\$469,654	\$1,267,090	\$6,873,596		\$18,558,826	\$11,964,055	\$2,788,527		\$6,736,066
Mississippi		\$150,000	\$3,004,802		\$12,801,159	\$431,905	\$1,100,750		\$6,526,529
Missouri	\$380,338	\$1,572,536	\$4,354,769		\$11,034,449	\$1,523,594	\$2,271,670		\$9,519,075
Montana	\$236,725	\$415,000	\$1,301,957		\$9,496,621	\$1,896,917	\$475,000	\$2,499,999	\$1,528,520
Nebraska		\$166,250	\$3,051,304		\$10,846,185	\$2,503,688	\$586,163		\$2,278,354
Nevada		\$398,966	\$797,739		\$10,652,681	\$535,425	\$799,637		\$5,034,562
New Hampshire		\$590,000	\$2,650,646		\$7,628,707	\$572,997	\$3,303,425		\$1,438,845
New Jersey	\$640,498	\$1,010,000	\$5,076,047		\$8,446,241	\$2,795,279	\$2,435,387		\$24,825,279
New Mexico			\$2,575,402		\$11,270,901	\$2,636,397	\$2,039,149		\$3,043,503
New York	\$573,050	\$5,471,935	\$12,221,907		\$31,278,443	\$16,323,107	\$6,533,502		\$83,000,696
North Carolina	\$319,084	\$3,441,073	\$4,845,970		\$18,068,109	\$4,060,097	\$1,080,365		\$19,303,659
North Dakota		\$150,000	\$621,797		\$6,240,246	\$1,272,926			\$1,538,841
Ohio	\$499,456	\$549,992	\$7,811,989		\$12,790,042	\$5,764,691	\$1,445,750		\$15,078,026
Oklahoma		\$360,000	\$1,763,783		\$11,544,856	\$1,541,665	\$560,358		\$4,975,898
Oregon	\$484,352	\$887,629	\$1,278,933		\$18,390,926	\$4,909,284	\$2,303,806		\$6,524,737
Pennsylvania	\$480,284	\$316,985	\$8,028,754		\$20,655,684	\$2,930,894	\$2,122,224		\$24,853,140
Rhode Island		\$310,000	\$800,086		\$9,606,414	\$2,242,960	\$2,151,272		\$2,524,688
South Carolina		\$3,449,588	\$2,068,312		\$15,327,705	\$1,750,847	\$600,750		\$9,772,457
South Dakota			\$390,559		\$9,518,372	\$1,158,980			\$1,520,075
Tennessee	\$305,258	\$537,718	\$2,739,057		\$11,023,166	\$7,539,384	\$1,208,352		\$12,483,758
Texas	\$392,173	\$731,660	\$29,589,802		\$19,555,564	\$2,595,527	\$2,161,991		\$53,017,422
Utah	\$235,314	\$1,612,628	\$1,628,933		\$13,212,940	\$4,836,120	\$2,878,698		\$2,401,202
Vermont		\$300,000	\$460,261		\$5,423,028	\$1,664,540	\$2,250,466		\$1,398,426
Virginia	\$646,218	\$196,691	\$19,470,631		\$20,179,330	\$4,499,649	\$2,035,231		\$17,764,819
Washington		\$336,959	\$1,675,032		\$20,974,741	\$6,840,690	\$2,260,545		\$13,364,591
West Virginia			\$1,514,664		\$9,352,208	\$1,096,817	\$627,108		\$2,291,783
Wisconsin	\$458,843	\$1,637,437	\$3,291,841		\$13,726,213	\$6,050,274	\$2,484,236		\$4,861,417
Wyoming		\$148,225	\$434,706		\$4,375,007	\$1,386,410			\$1,512,712
United States	\$13,434,216	\$67,990,915	\$261,044,901	\$965,319	\$745,811,554	\$192,368,519	\$94,044,311	\$2,499,999	\$718,706,588

Table 1: CDC Program Funding Transfers to States, FY 2018

State	Immunization and Respiratory Diseases	Injury Prevention and Control	Occupational Safety and Health	Public Health Preparedness and Response	Public Health Scientific Services (PHSS)	Vaccines for Children	World Trade Center Health Programs (WTC)	Total State Funding	Total State Funding, Per Capita	Total State Funding, Per Capita Ranking
Alabama	\$4,064,728	\$4,311,404	\$1,699,133	\$8,948,119	\$523,843	\$62,273,912		\$112,080,567	\$22.93	26
Alaska	\$1,683,924	\$6,798,822	\$100,966	\$5,012,651	\$716,731	\$10,937,892		\$46,665,043	\$63.28	1
Arizona	\$5,716,056	\$8,289,743	\$1,226,809	\$11,460,662	\$787,539	\$95,545,190		\$155,920,139	\$21.74	36
Arkansas	\$2,832,069	\$3,689,004		\$6,548,590	\$138,000	\$40,791,695		\$73,867,118	\$24.51	22
California	\$30,898,240	\$15,280,703	\$8,129,844	\$62,814,983	\$2,691,048	\$469,126,431		\$757,752,214	\$19.16	43
Colorado	\$5,723,026	\$8,312,770	\$6,286,941	\$10,034,522	\$718,769	\$50,172,576		\$123,527,870	\$21.69	37
Connecticut	\$5,093,096	\$7,333,654	\$1,776,464	\$7,791,742	\$554,972	\$32,241,644		\$80,895,603	\$22.64	29
Delaware	\$1,242,936	\$4,922,875		\$5,025,646	\$344,026	\$10,943,601		\$34,712,713	\$35.89	6
D.C.	\$6,853,763	\$13,587,452	\$255,402	\$8,908,807	\$6,600,195	\$11,190,486		\$120,485,438	\$171.52	
Florida	\$12,293,321	\$7,109,820	\$3,681,557	\$30,109,408	\$1,017,194	\$266,451,800		\$418,887,125	\$19.67	41
Georgia	\$18,704,018	\$21,887,850	\$890,953	\$16,917,159	\$4,169,521	\$134,321,492		\$309,476,622	\$29.42	13
Hawaii	\$1,997,620	\$1,046,106		\$5,120,020	\$1,252,723	\$15,862,463		\$39,197,613	\$27.59	17
Idaho	\$1,652,209	\$3,650,253		\$5,214,492	\$294,641	\$21,930,025		\$42,582,491	\$24.27	23
Illinois	\$11,204,625	\$10,982,914	\$2,692,529	\$26,094,419	\$1,232,573	\$126,281,728		\$250,160,452	\$19.63	42
Indiana	\$4,410,325	\$7,493,461	\$150,000	\$11,467,267	\$442,645	\$72,202,210		\$117,665,594	\$17.58	49
Iowa	\$3,045,563	\$4,563,548	\$4,506,925	\$6,711,641	\$828,287	\$34,322,593		\$74,169,031	\$23.50	25
Kansas	\$3,002,228	\$14,661,129		\$6,974,852	\$1,009,180	\$26,607,209		\$69,295,480	\$23.80	24
Kentucky	\$3,772,993	\$11,332,528	\$2,886,892	\$8,492,609	\$272,359	\$60,805,321		\$110,105,211	\$24.64	21
Louisiana	\$2,586,399	\$8,218,660	\$252,000	\$9,066,745	\$1,397,618	\$75,302,818		\$142,746,721	\$30.63	11
Maine	\$2,217,540	\$6,124,959		\$5,125,564	\$226,592	\$14,101,213		\$39,614,458	\$29.60	12
Maryland	\$10,572,444	\$13,843,478	\$7,581,040	\$11,935,472	\$11,055,379	\$68,782,002		\$212,396,354	\$35.15	8
Massachusetts	\$4,867,908	\$11,670,392	\$7,507,067	\$13,985,993	\$1,460,875	\$54,051,111		\$144,644,874	\$20.96	39
Michigan	\$10,392,490	\$11,598,353	\$3,018,528	\$17,546,890	\$968,607	\$89,970,579		\$190,545,389	\$19.06	44
Minnesota	\$7,142,200	\$6,270,627	\$3,700,062	\$11,390,381	\$428,948	\$47,204,219		\$124,794,251	\$22.24	33
Mississippi	\$2,888,545	\$2,336,007	\$130,000	\$6,497,623	\$81,831	\$42,437,047		\$78,386,198	\$26.25	18
Missouri	\$4,942,335	\$4,771,328	\$834,179	\$10,835,144	\$80,580	\$64,320,042		\$116,440,039	\$19.01	45
Montana	\$1,317,239	\$3,627,577	\$329,306	\$5,047,625	\$254,035	\$10,391,486		\$38,818,007	\$36.54	4
Nebraska	\$2,112,215	\$4,459,529	\$2,066,118	\$5,434,869	\$80,580	\$20,554,320		\$54,139,575	\$28.06	15
Nevada	\$2,477,147	\$4,919,549		\$7,020,595	\$80,580	\$35,050,565		\$67,767,446	\$22.33	31
New Hampshire	\$1,699,032	\$5,881,996	\$294,904	\$5,198,236	\$80,580	\$10,549,918		\$39,889,286	\$29.41	14
New Jersey	\$6,313,733	\$6,928,070	\$1,037,491	\$15,175,449	\$280,580	\$77,263,717		\$152,227,771	\$17.09	50
New Mexico	\$3,760,751	\$8,390,097	\$627,356	\$7,160,392	\$102,580	\$30,681,497		\$72,288,025	\$34.50	10
New York	\$18,649,575	\$13,520,378	\$5,623,815	\$38,184,315	\$2,106,642	\$241,962,766	\$23,293,527	\$498,743,658	\$25.52	19
North Carolina	\$7,087,649	\$14,650,796	\$2,218,404	\$18,582,687	\$103,831	\$121,774,859		\$211,536,583	\$20.37	40
North Dakota	\$1,648,604	\$2,451,661		\$5,130,972	\$81,831	\$7,467,522		\$26,604,400	\$35.00	9
Ohio	\$8,747,744	\$11,794,341	\$2,135,754	\$17,779,802	\$80,580	\$122,138,493		\$206,616,660	\$17.68	47
Oklahoma	\$3,416,636	\$7,920,192	\$69,269	\$7,739,019	\$169,831	\$58,275,508		\$98,337,015	\$24.94	20
Oregon	\$5,356,476	\$7,466,135	\$1,462,922	\$8,246,712	\$61,873	\$35,446,146		\$92,819,931	\$22.15	34
Pennsylvania	\$12,421,654	\$12,963,623	\$2,168,920	\$18,813,229		\$120,605,132		\$226,360,523	\$17.67	48
Rhode Island	\$1,333,212	\$8,000,290	\$498,296	\$5,044,108		\$11,680,470		\$44,191,796	\$41.80	3
South Carolina	\$3,676,029	\$5,429,439		\$9,809,414		\$63,393,894		\$115,278,435	\$22.67	28
South Dakota	\$1,416,305	\$2,781,991		\$5,025,646		\$10,132,569		\$31,944,497	\$36.21	5
Tennessee	\$8,569,928	\$10,167,618	\$492,968	\$11,067,847	\$92,503	\$84,345,212		\$150,572,769	\$22.24	32
Texas	\$22,601,977	\$6,376,022	\$4,488,005	\$38,124,522	\$102,157	\$448,578,843		\$628,315,665	\$21.89	35
Utah	\$2,868,145	\$8,532,898	\$1,686,041	\$6,903,980		\$25,559,748		\$72,356,647	\$22.89	27
Vermont	\$1,287,517	\$5,047,097	\$58,143	\$5,023,301	\$190,984	\$6,902,817		\$30,006,580	\$47.91	2
Virginia	\$8,731,032	\$18,319,443	\$101,320	\$16,712,227	\$3,990,341	\$66,565,530		\$179,212,462	\$21.04	38
Washington	\$6,472,239	\$10,747,059	\$5,469,259	\$12,364,803	\$66,000	\$88,430,155		\$169,002,073	\$22.43	30
West Virginia	\$1,177,192	\$7,768,062	\$391,795	\$5,227,058		\$21,084,481		\$50,531,168	\$27.98	16
Wisconsin	\$8,743,427	\$9,712,184	\$1,906,682	\$12,389,562	\$88,000	\$42,576,269		\$107,926,385	\$18.56	46
Wyoming	\$1,147,853	\$1,475,665		\$4,873,433		\$5,359,478		\$20,713,489	\$35.85	7
United States	\$312,833,912	\$419,419,552	\$90,434,059	\$618,111,204	\$47,308,184	\$3,764,948,692	\$23,293,527	\$7,373,215,452	\$22.54	N/A

Note: The District of Columbia was excluded from per capita state rankings. The U.S. total reflects grants and cooperative agreements to all 50 states and the District of Columbia, but does not include territories, for the purpose of comparability.

Source: CDC Grant Funding Profiles

Prevention and Public Health Fund

Eleven percent of the CDC’s FY 2019 budget (\$804.5 million) consists of funding for the Prevention and Public Health Fund (i.e., the Prevention Fund or PPHF),²⁴ the first dedicated and mandatory funding source for prevention and public health within the federal budget.²⁵ The Prevention Fund is intended, by statute, to “improve health and help restrain the rate of growth in private and public sector health care costs.”²⁶

Most of the CDC’s appropriation of the Prevention Fund—some of the fund is sequestered or appropriated to other agencies—is directed to state and local prevention efforts. In FY 2018,

about \$586.5 million of the annual \$800.9 million was transferred to state and local partners, including grants for infectious disease control, the Preventive Health and Health Services Block Grant, immunizations, tobacco cessation, and other core public health programs.²⁷ (See Table 2.)

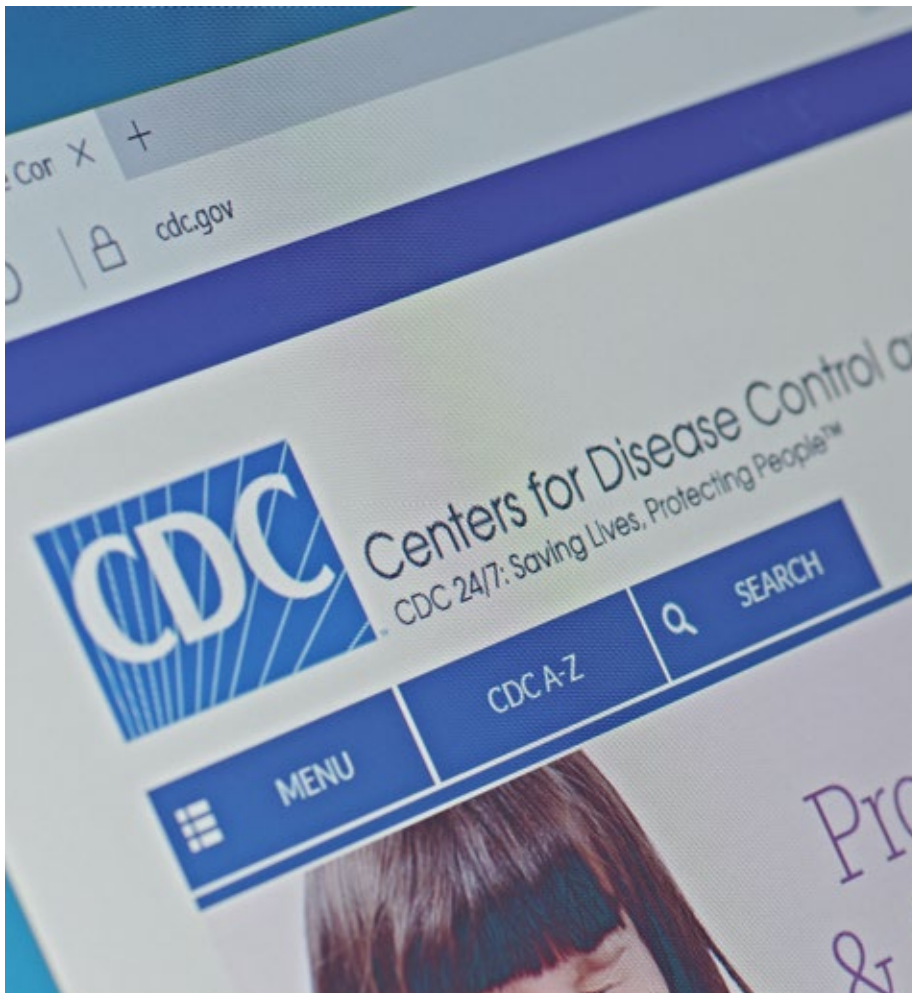
Despite the Prevention Fund’s purpose of improving health and restraining health care costs, it has been repeatedly cut and used to pay for other legislation. There is a growing gap between the funds that were originally enacted and actual/scheduled funding. (See Figure 3.) For instance, the fund will lose \$1.35 billion over 10 years under the Bipartisan Budget Act of 2018.²⁸

Table 2: The CDC Directs Most of Its PPHF Funding to States and Localities

Prevention Fund grants awarded, by state, FY 2018

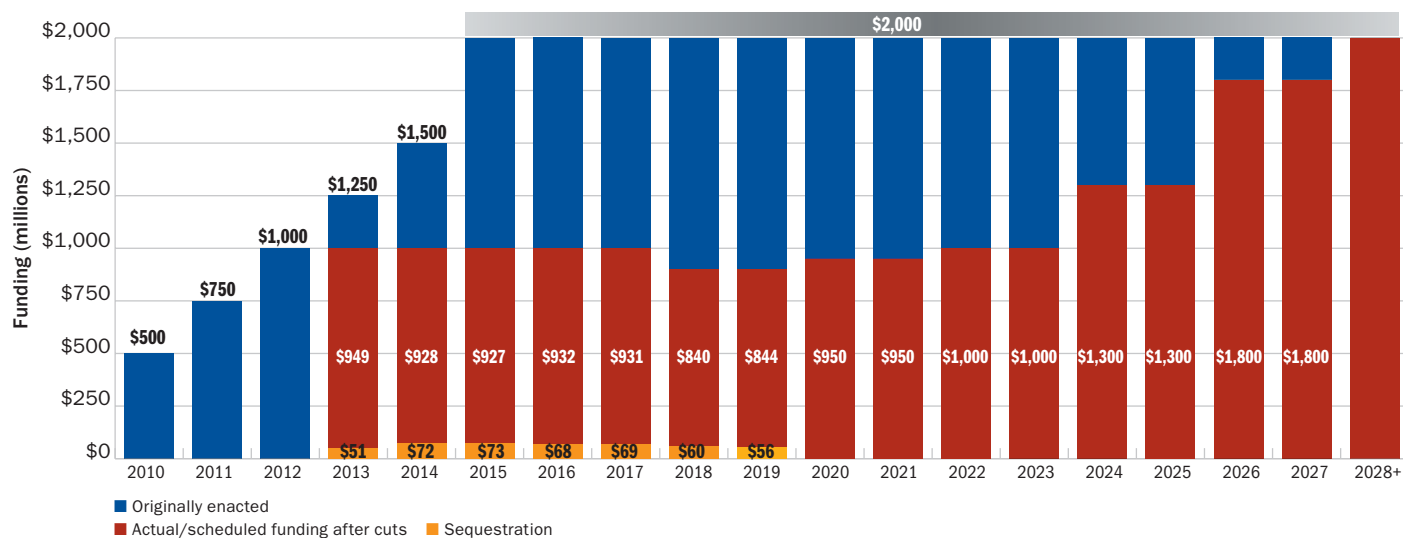
State	Grants awarded
Alabama	\$8,578,608
Alaska	\$4,207,878
Arizona	\$13,295,761
Arkansas	\$4,414,571
California	\$48,080,797
Colorado	\$10,071,340
Connecticut	\$11,259,100
Delaware	\$5,107,449
D.C.	\$10,459,568
Florida	\$17,522,646
Georgia	\$22,159,836
Hawaii	\$4,633,785
Idaho	\$5,198,148
Illinois	\$18,198,025
Indiana	\$7,655,796
Iowa	\$8,531,718
Kansas	\$7,370,967
Kentucky	\$9,109,004
Louisiana	\$10,902,156
Maine	\$6,313,978
Maryland	\$14,837,657
Massachusetts	\$13,716,952
Michigan	\$17,936,400
Minnesota	\$14,255,101
Mississippi	\$5,816,887
Missouri	\$12,012,267
Montana	\$6,942,962
Nebraska	\$8,535,268
Nevada	\$4,052,390
New Hampshire	\$4,895,379
New Jersey	\$14,630,142
New Mexico	\$9,976,828
New York	\$34,989,731
North Carolina	\$12,919,531
North Dakota	\$4,899,289
Ohio	\$16,623,716
Oklahoma	\$8,873,239
Oregon	\$10,846,938
Pennsylvania	\$18,113,233
Rhode Island	\$6,176,555
South Carolina	\$8,686,192
South Dakota	\$5,704,024
Tennessee	\$13,719,125
Texas	\$26,675,142
Utah	\$7,323,524
Vermont	\$3,504,894
Virginia	\$15,808,128
Washington	\$11,016,724
West Virginia	\$4,940,213
Wisconsin	\$13,061,442
Wyoming	\$1,936,209

Source: CDC Grant Funding Profiles



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Figure 3: String of Cuts to Prevention Fund Since Creation
Prevention Fund funding, FY 2010-28



Notes: The original allocations (blue bars) were established by the Patient Protection and Affordable Care Act (ACA) (PL. 110-48), while cuts (red bars) were established by the Bipartisan Budget Act of 2018 (PL. 115-123, Current Law).

Source: TFAH analysis of congressional committee reports

Funding for key CDC initiatives

The CDC supports both cross-cutting aspects of public health, such as public health infrastructure and workforce, as well as issue-specific efforts, such as emergency preparedness, chronic disease and obesity prevention, and substance misuse and suicide prevention.

Despite overall increases in program funding from FY 2017-19, the CDC’s budgets for many of these initiatives remain insufficient to support all states and localities²⁹ and they have remained flat or seen only slight increases over the past decade. This section describes funding trends for several key programs.

Community prevention

Community conditions have a major impact on health and well-being. Often referred to as “social

determinants of health,” the local economy, education level, public safety, and access to quality education, economic opportunity, transportation, and housing all contribute to wellness and life expectancy.^{30,31} Social determinants account for 80 percent of health outcomes, yet funding to address them lags.³²

Governments, nongovernmental organizations, and community members must work together to improve social determinants and better the health of the population, rather than one individual at a time.³³ For example, community partnerships have developed and advocated for healthy food retailers in low-income neighborhoods; engaged in “Complete Streets” planning that addresses the needs of pedestrians, bicyclists, and

transit riders; reduced exclusionary disciplinary practices to create more supportive school environments; and launched multimedia campaigns to reduce tobacco use.

Such proven community prevention strategies improve a wide range of health outcomes, from chronic disease to substance misuse to injury and violence.^{34,35} These strategies can also produce a substantial return on investment—for example, school-based violence prevention efforts can achieve a return ranging from \$22 to \$66 for every \$1 spent and tobacco control mass media campaigns have demonstrated returns ranging from \$7 to \$74 per \$1 spent.³⁶

However, current funding for the CDC's community prevention programs is inadequate and often means the agency is unable to provide funding across the country. For example, the CDC's State Physical Activity and Nutrition (SPAN) Program, which focuses on improving nutrition and encouraging physical activity through early care and education, breastfeeding, food service guidelines, street design, and other local efforts, has only enough funding in FY 2019 to support programs in 16 states.³⁷

Another example is the Racial and Ethnic Approaches to Community Health (REACH) program, which is advancing evidence-based, community-level strategies and tailoring them to eliminate racial and ethnic health disparities in chronic disease and related risk factors. Since FY 2017, REACH grantees experienced a \$53 million diversion in funds to the Good Health and Wellness in Indian Country program, which supports effective

community-chosen and culturally-adapted strategies to reduce the leading causes of chronic conditions, increase health literacy, and strengthen community-clinical links. While total funding for these programs increased by \$5 million in FY 2019, all increases in funding since FY 2017 have been directed to the latter program.

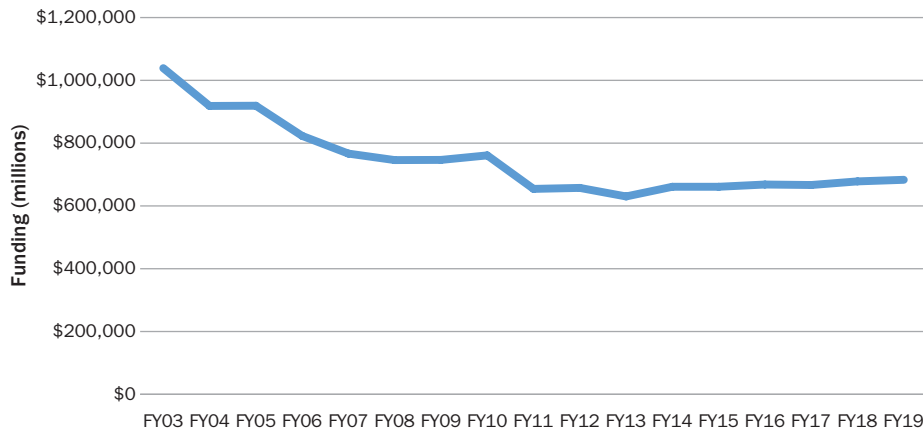
Public health emergency preparedness and response

The CDC's Public Health Emergency Preparedness (PHEP) cooperative agreement is the main source of federal support for state and local public health emergency preparedness and response.³⁸ From FY 2003-19, the CDC's funding for state and local preparedness was cut by a third. Recently, there have been small increases, including \$10 million in FY 2018 and \$5 million in FY 2019. But these welcome moves were not nearly enough to restore lost resources, nor to prepare for public health emergencies that are becoming more frequent and severe. (See Figure 4.)

The CDC's ongoing investments in preparedness and response help to ready health departments for many types of emergencies. However, extraordinary or novel outbreaks or disasters occasionally require additional—typically one-time—supplemental funding, as was the case during the threats associated with Ebola and Zika. In the past, there have been delays in passing such supplemental funding, postponing emergency response efforts. There are two preliminary efforts to help prevent such delays:

- The FY 2019 Labor-HHS-Education appropriations bill established a

Figure 4: Public Health Emergency Preparedness Funding Has Lost Ground
CDC funding for state and local preparedness and response, FY 2003-19



Note: Data for FY 2003 to 2015 reflect “State and Local Preparedness and Response Capability,” with additions in FY 2003 (smallpox supplement) and FY 2004 (Cities Readiness Initiative and U.S. Postal Service Costs). Data for FY 2016 to 2019 reflects the sum of funding for “Public Health Emergency Preparedness Cooperative Agreement” and “Academic Centers for Public Health Preparedness.” This difference was owed to a change in the CDC’s reporting practice in its annual operating plans.

Source: CDC annual operating plans

new \$50 million Infectious Diseases Rapid Response Reserve Fund (IDRRRF) that could be tapped to prevent, prepare for, or respond to an infectious disease emergency.³⁹ Although housed at the CDC, funds could be transferred to other Public Health Service Act programs, as necessary.

With such a mechanism, money would be targeted for responses to outbreaks, which are often underfunded. It would also help ensure a timely response by health departments. However, many public health emergencies are not infectious in nature and the demands of addressing most major outbreaks far exceed \$50 million, especially if medical countermeasures are required.

- The Secretary of the Department of Health and Human Services (HHS) is authorized under the Public Health Service Act to access money from the Public Health Emergency Fund (PHEF) during a declared public health emergency. However, as of the writing of this report, the PHEF had no balance, according to federal officials.⁴⁰ The Pandemic and All-Hazards Preparedness and Advancing Innovation Act, which passed the U.S. House of Representatives in 2018 and in January 2019, strengthens the PHEF (renaming it to Public Health Emergency Rapid Response Fund), including by clarifying triggers and potential uses.⁴¹ However, Congress would still need to appropriate money into the Fund.

Chronic disease prevention

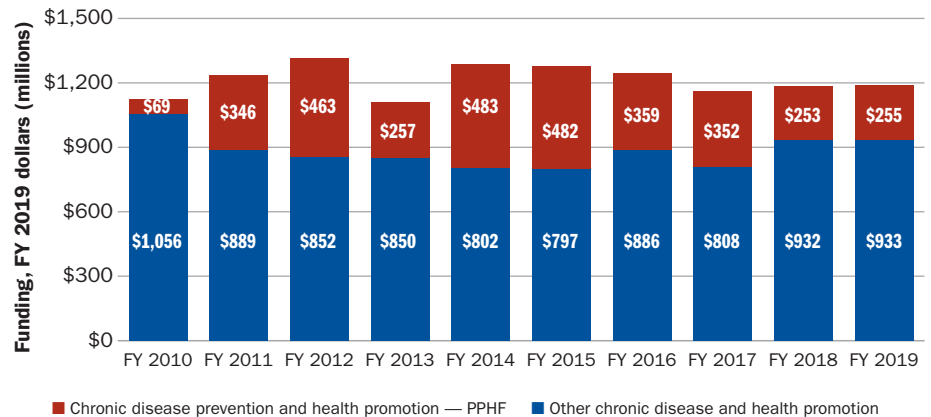
A majority of U.S. adults, especially elderly adults, have a chronic disease, and 40 percent have two or more.⁴² As a result, chronic diseases are the leading cause of death and disability in the country, and 90 percent of annual health care expenditures are for people with chronic and mental health conditions.⁴³

Because most chronic diseases are preventable,⁴⁴ sufficient investments in related public health programming is key to improving health outcomes and reducing health care costs. The CDC spends nearly \$1.2 billion annually to prevent chronic diseases. Adjusted for inflation, the CDC's chronic disease funding in FY 2019 was below its FY 2012 level.⁴⁵ (See Figure 5.)

Substance misuse and suicide prevention

In response to the need for public health approaches to prevent substance misuse and overdose, the CDC has rapidly expanded its substance misuse efforts in recent years. Its annual funding for opioid overdose prevention and surveillance in FY 2018 and FY 2019 rose to \$475 million, an increase of \$350 million from FY 2017.⁴⁶ The agency's activities have included grants to states and large local health agencies to implement and strengthen prescription drug monitoring programs; expand the surveillance of substance-related overdoses; and promote appropriate

Figure 5: CDC Current Chronic Disease Funding Lags FY 2012 Level
Chronic disease funding, adjusted for inflation, FY 2010-19



Note: Data were adjusted for inflation using the Bureau of Economic Analysis's implicit price deflators for gross domestic product.

Source: CDC annual operating plans

prescribing. But, given the [continued escalation in substance use disorder deaths, these funds are still inadequate to address the crisis.](#)

To facilitate multi-faceted prevention efforts, the CDC is in the process of merging separate programs into a single grant program called Overdose Data to Action—or OD2A—grants.⁴⁷ Grants will begin to be awarded in fall 2019. In addition to supporting core activities described above, this grant will also allow states to support innovative community-based prevention efforts, though it is unclear how much funding will go to that purpose.

In addition to substance misuse, the CDC's National Center for Injury Prevention and Control has identified suicide and adverse childhood experiences as key priorities, given the intersection and shared risk and protective factors across these health issues. Nevertheless, few federally funded programs exist that target underlying causes of substance misuse and suicide, such as the impact of trauma or lack of conditions and environments that build resiliency and coping skills (e.g., supportive school environments and availability of mental health services), and the programs that do exist are limited in their geographic coverage.

Federal Funding for Combatting the Opioid Epidemic

The Substance Abuse and Mental Health Services Administration (SAMHSA), the Office of National Drug Control Policy (ONDCP), and other federal agencies do much to develop and advance policies and programs to reduce opioid overdoses and deaths.

SAMHSA has recently expanded existing programs and established new grant programs and technical assistance initiatives. In FY 2019, SAMHSA was appropriated \$1.5 billion for State Opioid Response Grants, which can be used to provide prevention, treatment, and recovery services.⁴⁸

In contrast, the Substance Abuse Prevention and Treatment (SAPT) Block Grant, which focuses broadly on substance misuse, has not received a significant increase in more than a decade.⁴⁹ This grant distributed to states and territories constitutes a substantial amount of states' substance misuse budgets and funds services for 1.5 million Americans.⁵⁰ The grant requires at least 20 percent of its funds to be used toward primary prevention. It makes up 100 percent of substance use prevention efforts in six states and a majority of prevention funding for 35 states.⁵¹

The ONDCP administers the Drug-Free Communities (DFC) grant

program. The DFC grant provides community coalitions with resources to create and sustain programs for reducing youth substance abuse by building infrastructure among local partners. This program has supported community coalitions that have been linked to declines in the use of alcohol, tobacco, and marijuana. Nevertheless, the program received only a \$5 million increase in funding from FY 2016-19.

The SUPPORT for Patients and Communities Act, enacted in October 2018, includes Medicaid- and Medicare-related provisions that increase access to evidence-based treatment and follow-up care, particularly for pregnant women, children, residents of rural areas, older Americans, and people in recovery from substance use disorder.⁵² The law also authorizes a small grant program for state agencies to carry out evidence-based or promising practices for prevention, recovery, and treatment support for children, adolescents, and young adults. While investments in treatment and recovery are critical—and still underfunded—they alone cannot alter the trajectory of the opioid epidemic. Increased funding needs to be allocated to prevent substance misuse and addiction in the first place.⁵³



Healthy aging

The number of Americans age 65 or older is projected to more than double over the next 40 years, rising from 15 percent to nearly 24 percent of the U.S. population.⁵⁴ But resources to promote the health of this population are inadequate. There is not a Healthy Aging unit at the CDC, where support is limited to its Healthy Brain Initiative and a small program to help seniors prevent falls.

Federal programs that address older adult health continue to be siloed and under-resourced, undermining progress toward a systems approach to improve the health and well-being of older adults. The Office of the Assistant Secretary for Health at the U.S. Department of Health and Human Services is promoting the value of expanding age-friendly public health in partnership with the Administration for Community Living (ACL). The ACL administers programs that serve older adults through the Older Americans Act, funding local Area Agencies on Aging (AAAs) to support

nutrition, family caregiver support, transportation, protection from abuse, and other local services. Historically, there has been little collaboration between public health and AAAs. Age-friendly public health systems could align with and complement such aging sector programs and services to help foster the conditions in which older adults can live healthy, independent, and productive lives.

At the state level, recent pilot efforts in Florida to create age-friendly public health activities have demonstrated the value of prioritizing such work. With limited private funding, the state and local public health departments have developed county-specific data reports, reviewed and strengthened core programs, such as emergency preparedness plans, and joined with partners in other sectors to improve the social determinants of health for older adults.

The broader federal funding landscape

In addition to the CDC, other offices and agencies within the Department of Health and Human Services are engaged in public health work and require adequate resources to improve the health and well-being of America's residents. Such agencies include the Food and Drug Administration (FDA) (e.g., protects the safety of foods, drugs, medical devices, cosmetics, and tobacco products), the Health Resources and Services Administration (HRSA) (bolsters health care services for people who are geographically isolated or economically or medically vulnerable), and the Substance Abuse and Mental Health Services Administration (SAMHSA) (leads federal public health efforts surrounding behavioral health). These agencies saw some changes to their budgets in FY 2019, with increases for FDA (\$5.37 billion to \$5.5 billion),⁵⁵ SAMHSA (\$5.65 to \$5.74 billion),⁵⁶ and HRSA (\$6.73 billion to \$6.85 billion).⁵⁷

Safety-net programs within the Department of Agriculture help Americans maintain or improve their health. For example, access to sufficient nutrition and healthful food choices has a positive impact on people's health and reduces health care spending.⁵⁸

Despite food insecurity affecting one in eight Americans, federal nutrition assistance resources remain underfunded. For instance, FY 2019 funding for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), which helped nearly seven million low-income and nutritionally at-risk pregnant women, new mothers, and children under age five in FY 2018,⁵⁹ was cut by \$175 million.⁶⁰ WIC participation can reduce infant mortality and rates of low birthweight, improve the growth

of nutritionally at-risk infants and children, and decrease iron deficiency anemia in children.⁶¹

The 2018 Farm Bill held steady benefits and requirements for the Supplemental Nutrition Assistance Program (SNAP), which assists about 40 million low-income Americans. A February 2019 proposed rule would establish stricter work requirements for SNAP beneficiaries who are able-bodied adults without dependents.⁶² According to the Department of Agriculture's own estimates, this proposed rule would cause more than 755,000 people to lose SNAP benefits. Access to SNAP at early ages can lower rates of diabetes, heart disease, and obesity, among other conditions, and improve non-health outcomes, such as high school graduation, employment status, and earnings.^{63,64}

Funding for a range of activities in other sectors, including education, environment, housing, transportation, and agriculture, also have important implications for health outcomes and costs.

- Education contributes to health and quality of life,⁶⁵ and school policies, programs, resources, and climate affect physical and mental health outcomes.⁶⁶ Congress increased the Department of Education's funding by \$581 million in FY 2019, including increases to Title I, which funds services for disadvantaged students; Special Education; Student Support; Academic Achievement State Grants, which contribute to school safety and supportive school environments; and Education for Homeless Children and Youth. Funding for Head Start, which is part of the Department of Health and Human Services' budget, was increased by \$200 million.⁶⁷

- Housing quality directly affects health, while affordability and stability, and the stresses they bring, have more indirect effects.⁶⁸ The Department of Housing and Urban Development (HUD) received a \$3.9 billion increase in FY 2018, strengthening a number of affordable housing and community development programs.⁶⁹ Despite deep cuts to HUD in the President's proposed FY 2019 budget, Congress increased funding for HUD by \$1.5 billion (3.5 percent), including slight increases for affordable housing programs.⁷⁰

- Walkable, bikeable, transit-oriented communities have been shown to improve health by enabling more physical activity and reducing air pollution and traffic injuries.⁷¹ The 2018 Department of Transportation budget included funding for the Transportation Alternatives Program and new transit projects, and it tripled funding for TIGER (Transportation Investment Generating Economic Recovery) grants, which support trail projects and Complete Streets projects that provide safe access for all users.⁷² The Department of Transportation's FY 2019 budget reflects a 3 percent decrease from FY 2018 (from \$27.3 billion to \$26.5 billion).⁷³

Given the importance of the social determinants of health, the value of much of the work of these varied agencies is noteworthy. Their efforts to build a broad, unified cross-sector vision of the home and community conditions necessary for optimal health, if sufficiently funded, will pay health and economic dividends in the coming years.

State Public Health Funding

State health agencies play a key role in promoting public health and supporting local health departments. They directly engage in population-based primary prevention, developing preparedness plans and coordinating emergency responses, combatting the opioid epidemic, and conducting lab testing, disease surveillance, and data collection.⁷⁴ Many are expanding and modernizing their work to include a stronger focus on “upstream” or primary prevention policies and programs (for more information, see TFAH’s [“Promoting Health and Cost Control in States”](#) report), a commitment to the promotion of equity as a core value in all of their work, and an expansion of their partnership with health care and with non-health sectors.

The ability of state health departments to fulfill these roles is heavily affected by federal funding, which is a primary source of state public health money. Total state spending on public health increased by 2 percent in FY 2018.

Seventeen states and the District of Columbia cut their public health funding in FY 2018. (See Table 3.) While most cuts were relatively small,

public health funding in Alaska, Maine, and Texas were down more than 10 percent. A majority of states maintained or increased their public health funding for the year. Nevada’s rose by 30 percent, and Hawaii, Kansas, Louisiana, Michigan, North Dakota, and Washington each increased their funding by more than 10 percent.



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Table 3: State Public Health Funding Held Stable or Increased in 33 states
Public health funding, by state, fiscal 2017–2018

	FY 2018 funding	Percentage change
Alabama	\$279,005,845	1.7%
Alaska	\$71,402,600	-13.8%
Arizona	\$68,068,700	-0.1%
Arkansas	\$151,852,956	-2.8%
California	\$2,588,903,000	2.8%
Colorado	\$282,495,722	1.5%
Connecticut	\$110,991,051	6.5%
Delaware	\$39,032,300	-1.8%
D.C.	\$93,891,000	-1.1%
Florida	\$390,814,976	0.8%
Georgia	\$233,484,497	6.4%
Hawaii	\$170,347,276	10.5%
Idaho	\$153,165,500	1.3%
Illinois	\$331,737,880	1.6%
Indiana	\$92,570,257	9.7%
Iowa	\$126,229,296	-0.5%
Kansas	\$41,094,981	16.8%
Kentucky	\$152,460,883	-6.3%
Louisiana	\$112,010,181	16.4%
Maine	\$23,621,513	-17.1%
Maryland	\$255,460,086	5.0%
Massachusetts	\$523,761,131	1.1%
Michigan	\$151,414,400	18.0%
Minnesota	\$244,955,000	-0.1%
Mississippi	\$42,993,213	-9.9%
Missouri	\$43,164,251	3.7%
Montana	\$23,754,145	-5.9%
Nebraska	\$89,234,681	4.1%
Nevada	\$25,223,708	30.2%
New Hampshire	\$30,836,781	2.9%
New Jersey	\$251,431,000	5.2%
New Mexico	\$283,269,500	-1.8%
New York	\$1,645,336,100	-4.5%
North Carolina	\$157,214,360	6.0%
North Dakota	\$40,858,480	12.2%
Ohio	\$153,239,809	5.8%
Oklahoma	\$153,322,000	-5.4%
Oregon	\$116,277,440	2.7%
Pennsylvania	\$185,520,000	7.5%
Rhode Island	\$55,949,621	0.4%
South Carolina	\$131,206,566	9.4%
South Dakota	\$30,613,700	-3.5%
Tennessee	\$332,445,000	-1.2%
Texas	\$479,210,971	-12.1%
Utah	\$103,768,200	3.9%
Vermont	\$29,609,249	-1.3%
Virginia	\$322,331,204	0.5%
Washington	\$341,908,500	13.5%
West Virginia	\$108,316,602	3.4%
Wisconsin	\$100,942,600	1.0%
Wyoming	\$30,894,959	0%
51-state total	\$11,877,166,374	2.0%

Note: Owing to differences in organizational responsibilities and budgeting, funding data are not necessarily comparable state to state. See TFAH's "[Ready or Not: 2019](#)" report, Appendix: Methodology for a description of TFAH's data-collection process, including its definition of public health funding.

Source: TFAH analysis of states' public health funding data.

3

Local Public Health Funding

Local public health departments engage their residents and coordinate partners to address public health issues in their community. These agencies help protect the food and water supply, provide immunizations, conduct surveillance to detect and monitor infectious diseases, prepare for and respond to disasters and emergencies, combat the opioid epidemic, and offer other public health services and education.⁷⁵ Like their state counterparts, they are adjusting the shape of their work. For example, many have reduced their provision of direct services as more Americans gained health insurance, and increased their attention to policies that promote well-being (e.g., [Cityhealth](#), an initiative of the de Beaumont Foundation and Kaiser Permanente).

Spending cuts at the federal and state level have serious consequences for local health departments and the communities they serve, given that such allocations constitute a substantial portion of local health departments' budgets.

One-fifth of local health departments (21 percent) reported decreases in their FY 2017 budgets, according to a spring 2018 survey. A slightly higher percentage (23 percent) also experienced cuts in the previous year.⁷⁶

The percentage of large local health departments—those serving populations of 500,000 or more—reporting budget cuts in FY 2017 almost doubled over the previous year (19 percent, compared to 10 percent in FY 2016).

Eighteen percent of medium-sized local health departments—those serving populations between 50,000 and 499,999—reported budget cuts in FY 2017. Approximately a quarter of all small local health departments—those serving populations below 50,000—experienced budget cuts in both FY 2017 (23 percent) and FY 2016 (24 percent).⁷⁷

Public health funding cuts at the federal, state, and local levels undermine efforts to hire, train, and retain a strong public health workforce, which in turn limits governments' ability to effectively protect and promote the health of their communities. Multiple years of funding cuts contributed to more than 55,000 lost jobs at local health departments from 2008-17.⁷⁸

Public Health Infrastructure

To provide all Americans with an adequate level of public health protection, every health department must possess foundational capabilities, including those pertaining to assessment, all-hazards preparedness, policy development/support, communications, community partnerships, organizational competencies, and accountability/performance management.^{79,80}

The CDC plays a key role in supporting public health capacity across more than 3,000 state, local, territorial, and tribal public health agencies. But uneven funding creates enormous variation⁸¹ in such capabilities across the nation's public health departments, contributing to

negative health outcomes and health disparities. According to recent analyses, there is a \$4.5 billion gap between current funding and what is needed to build a strong public health infrastructure nationwide.⁸²



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5

Recommendations for a Healthier America

Trust for America’s Health recommends the following policy actions and investments to achieve optimal health for all people, in all communities.

Increase federal investments in public health

Adequately protecting and improving the health of Americans requires greater federal investment in public health. Given bipartisan support among American voters for public health protections,⁸³ and the proven cost-effectiveness of public health interventions and policies,⁸⁴ investing in public health is the most efficient, commonsense way to improve health and health equity.

To protect and improve the health and well-being of all Americans, TFAH recommends that Congress and the President take the following actions.

Raise overall budget caps

When the Bipartisan Budget Act of 2018 expires at the end of FY 2019, public health and other federally funded domestic discretionary programs face a scheduled cut of \$55 billion—11 percent if applied across-the-board, adjusted for inflation.⁸⁵ Cuts of this magnitude would be devastating to public health prevention and preparedness programs. To avoid this funding cliff, lawmakers will need to enact a new bipartisan budget deal that raises the overall spending caps and that provides appropriators with the funding needed to invest in effective public health programs.

Substantially increase funding for the CDC

The CDC is America’s first defense against health threats and epidemics and the workforce we count on to improve health and health equity. Yet, funding for the agency has not kept pace with rising public health needs and changing demographics.

As a first step, Congress and the President should increase the CDC’s funding by 22

percent, compared to its FY 2018 level, by FY 2022, as advocated by the Association of State and Territorial Health Officials’ “22 by 22” campaign. While the \$143 million increase that the CDC received in the FY 2019 budget is a positive development, its discretionary funding must increase by an additional \$1.5 billion by FY 2022 to allow it to properly address the nation’s public health priorities.⁸⁶

For FY 2020, TFAH recommends increases to adequately support the agency’s evidence-based public health efforts, including in the following areas.

The Prevention and Public Health Fund

The Prevention and Public Health Fund has made critical investments in evidence-based programs, including expanding vaccine infrastructure, building laboratory and surveillance capacity, and promoting tobacco cessation.

Against its authorized purpose, the PPHF has been used to support programs outside the realm of prevention and public health, including Medicare physician payments in 2012, the 21st Century Cures Act in 2016, and the Children’s Health Insurance Program in 2018.⁸⁷ While these programs are important, this shortsighted approach increases costs and worsens health outcomes in the long run by hampering prevention efforts. Treatment should not be funded at the expense of prevention.

As the largest investment in prevention, the Prevention Fund should be protected, cuts in future years should be restored, and its funds should be used for their authorized purpose.



Community prevention

Community-level work to prevent illness and address social determinants of health, such as by changing street design to improve pedestrian and biker safety or improving housing quality to reduce the risk of lead poisoning, asthma and other health conditions, requires significant resources over the long term. Under current funding, the CDC cannot provide adequate resources to all eligible states or communities, leaving many underfunded or unfunded for certain prevention activities, which harms health and exacerbates health disparities.

TFAH recommends increasing funding for the CDC’s community prevention programs and activities, including:

- an additional \$40.8 million† in FY 2020 for the State Physical Activity and Nutrition (SPAN) program to provide all states with resources to combat the obesity epidemic.

SPAN replaced State Public Health Action grants in 2018. While SPAN now provides funding to implement evidence-based strategies at state and local levels to improve nutrition and physical activity, the current funding level only supports 16 states;

- an additional \$21 million to the Racial and Ethnic Approaches to Community Health (REACH) program to restore prior levels of funding to REACH grantees, while also maintaining the budget for the Good Health and Wellness in Indian Country program.

Public health emergency preparedness

Congress and the President should increase funding to \$824 million in FY 2020—to the levels authorized in 2006—for the CDC’s Public Health Emergency Preparedness (PHEP) cooperative agreement program to ensure states and localities have the core resources needed to respond to

an escalating number of emergencies. Emergency responses are increasing, despite steady funding erosion. There were 18 declared public health emergencies in 2017, compared to 29 combined declared emergencies for the prior 10 years. This funding would help restore capacity at health departments impacted by cuts, especially those that responded to an unprecedented number of emergencies in recent years.

Increased funding is also needed for preparedness programs under the Assistant Secretary for Preparedness and Response, including the Hospital Preparedness Program (HPP), which provides funding and technical assistance to every state and territory to prepare the health system to respond and recover from disasters; as well as programs that support research, development, and stockpiling of medical countermeasures. HPP has been cut nearly in half over the past 16 years, and funding should increase to at least \$474 million. (For more information, see TFAH’s [“Ready or Not: 2019”](#) report.)

Finance a standing response fund for emergencies

To ensure a timely public health response to major crises, TFAH recommends significant no-year funding for one or both of the recently proposed response funds—the Infectious Diseases Rapid Response Reserve Fund (IDRRRF), established by the FY 2019 Labor-HHS-Education appropriations bill and the Public Health Emergency Fund (PHEF). Such funds should be temporary bridges until supplemental emergency resources are approved. Their resources

† This total would extend the program to the remaining 34 states, assuming that states received \$1.2 million, on average.

should not be drawn from existing emergency preparedness activities.

Substance misuse and suicide prevention

Congress and the President should build on recent investments to reduce substance misuse, especially opioid misuse, by increasing funding for relevant programs (including suicide prevention) within the CDC's National Center for Injury Prevention and Control and Division of Adolescent and School Health (DASH), with an emphasis on upstream or primary prevention activities.

TFAH recommends:

- increasing Opioid Abuse and Overdose Prevention activities at the CDC Injury Center by \$175 million, for a total of \$650 million. This funding would build upon previous efforts to support federal, state, and local activities like provider education and prescription drug monitoring programs by adding primary prevention capacity at the federal, state, and local levels to identify and reduce primary risk factors and promote protective factors to prevent substance misuse;
- increasing funding for the CDC's Division of Adolescent and School Health (DASH) and Healthy Schools Program under the Division of Population Health. Both programs offer in-school, evidence-based approaches to equip children and adolescents with protective knowledge and skills that enable them to avoid substance misuse and become healthy adults. In addition to the students, such efforts will engage parents, teachers, and the community;
- increasing funding for SAMHSA's Substance Abuse Prevention and Treatment Block Grant to expand prevention efforts in states;
- increasing funding for the ONDCP's Drug Free Communities Program to expand community coalitions that work to prevent and reduce substance misuse;
- increasing funding for early intervention and suicide prevention efforts at SAMHSA, such as the Garrett Lee Smith Suicide Prevention Grant Program; and
- establishing a dedicated funding line for the CDC focused on suicide prevention efforts with public health departments at the federal, state, and local levels.

Numerous interventions and policies proven to reduce or prevent substance misuse and suicide are also highlighted in TFAH's ["Pain in the Nation" report](#).

Surveillance and data

The nation's public health surveillance infrastructure relies on antiquated, unconnected systems and methods. Local, state, and federal data systems have not kept pace with current technologies and result in delayed detection and response to public health threats. Cross-cutting investments are needed to revitalize the CDC's data infrastructure, shore up state and local public health surveillance, and to track environmental threats to health. Public health and health care organizations are leading a campaign to advocate for \$1 billion over 10 years to modernize the public health surveillance enterprise and build secure, interoperable systems and a highly trained workforce.⁸⁸

Greater resources are also needed for the Behavioral Risk Factors Surveillance Survey, which provides invaluable data to public health agencies.



Healthy aging

The CDC should create a new Healthy Aging unit within the Division of Population Health to build state and local public health department capacity to promote the health and well-being of older adults. The unit would take one or more of the following actions:

- assessing the needs of older adults with a focus on those that can be met through public health interventions and result in improved overall health and well-being of older adults, improved health equity, and reduced healthcare costs;
- assessing and adapting existing programs and policies with significant gaps in meeting the health needs of older adults;
- developing partnerships with aging sector stakeholders to ensure non-duplication of efforts and increase efficiency by working collaboratively across sectors;
- implementing evidence-based disease prevention and health promotion programs and policies that improve the health of older adults;

- addressing emergency preparedness planning needs for vulnerable older adult populations; and/or
- promoting policies to improve the quality of life and health, including by connecting with existing efforts, such as Age-Friendly Communities.

The CDC should coordinate efforts with the Administration for Community Living, other federal agencies, and key nonprofit organizations to improve the health of older adults. The CDC would also identify resources available to state and local health departments and create a repository of resources and evidence-based programs and policies that address the health and well-being of older adults.

Every state, the District of Columbia, and the three largest cities should receive funding to ensure that the capacity exists within their public health agency to assess and address the public health needs of adults age 65 or older. The assessment should focus on needs that, if met, would optimize health, reduce disparities, and reduce health care costs. The funding could support a

dedicated staff person who is an expert in healthy aging to oversee the work and to coordinate with aging sector stakeholders to implement policies and programs. The CDC should administer and evaluate the effort.

Social determinants of health

Congress should authorize a CDC program to fund local and state agencies to gather data, identify priorities, establish plans, and take action to address unmet non-medical social needs, such as those related to housing, food, utilities, safety, and transportation. The goal of the program would be to improve health outcomes and reduce health care costs. The program would support the following actions:

- Developing local and state partnerships between public health agencies and health care systems,

such as those supported by the Centers for Medicare & Medicaid Services' Accountable Health Communities grantees, to address identified social needs of patients;

- Convening local and state organizations, agencies, and policymakers from multiple sectors to review and consider community-wide interventions strategies to advance health-promoting social conditions;
- Providing national training and technical assistance to grantees and other interested parties in the optimal approaches to improving health and reducing health care costs by addressing social determinants. Eligible organizations could include local and state health departments and others deemed appropriate by the CDC.

Provide sufficient full-year funding for federal agencies

Many federal agencies have a hand in protecting and improving public health. When government is operating under a short-term continuing resolution—or worse, a shut-down—public health and other programs that promote health can be crippled. Congress should pass full-year appropriations measures that fund federal agencies for the entire fiscal year. This is essential for effective and efficient use of taxpayer dollars and planning and maintaining workforce, supplies, and other capacities necessary to support public health activities.

As the agreement to increase spending caps under the 2011 Budget Control Act expires, Congress should also raise discretionary spending caps to allow for sufficient investment in public health and other domestic priorities that impact health, including housing, education, transportation, and other issues. A congressional budget agreement should also balance new investments between defense and non-defense discretionary programs.

Increase state and local investment in public health, prioritizing social determinants

State and local public health departments play important roles in protecting and promoting the health of their residents. TFAH recommends that states and localities increase their public health funding. State and local health departments need funding for core programs, and for addressing emerging challenges, such as opioid and suicide deaths. More broadly, these public health departments need greater resources in order to

become Chief Health Strategists in their communities, leading efforts to convene partners across sectors to build integrated systems that improve health and health equity.⁸⁹

States and localities should also invest in evidence-based policies and programs that make communities healthier by improving the conditions where people live, work, learn, and play. These include high quality

universal pre-kindergarten and school nutrition programs, Complete Streets policies, housing rehabilitation loan and grant programs, Housing First/rapid re-housing programs, earned income tax credits, earned sick leave, and paid family leave. (For more information on these programs and policies, and the health and economic evidence of their effectiveness, see TFAH’s [“Promoting Health and Cost Control in States” report](#).)

Work across sectors to improve the effectiveness and efficiency of public health investments

Building partnerships across a range of sectors and stakeholders (e.g., health departments, schools, health care providers, transportation departments, local businesses, faith-based and other agencies) is one of the strongest approaches to improving community health.⁹⁰ Scaling and sustaining such partnerships requires action from those at all levels—and in varied sectors—of government, as well as the private sector. In particular, health care payors and providers, government agencies, and the philanthropic community have important roles to play in incentivizing and facilitating cross-sectoral investments.

Health care payors and large health systems

Health care payors—both public and private—and health care systems

can contribute to the promotion of prevention in the delivery of care and in their roles as community institutions. There are, in fact, mounting cost pressures to develop innovative approaches that shift from the traditional fee-for-service clinical models to value-based ones that consider and attempt to address the impact of nonclinical factors.⁹¹

These approaches should be expanded. Insurers should incentivize and health systems should conduct screening of their patients for the social determinants of health. Payors should expand their coverage of non-medical social needs that impact the health and well-being of patients, such as those associated with food insecurity and housing instability. Examples of the

type of coverage should include:

- assistance in securing housing and supportive wrap-around services;⁹²
- provision of medically tailored meals (home-delivered if necessary), nutrition counseling, and care management for chronically ill members, or referrals to prescription food clinics with healthy options at no cost to food-insecure patients;⁹³
- support to parents through proven, intensive services—sometimes homes delivered—such as the Nurse Family Partnership; and
- the 18 proven prevention interventions that are part of the CDC’s 6|18 initiative.⁹⁴

Payors can make it easier for health care systems to invest in social determinants by expanding their list of allowable interventions. Some private payors, such as Kaiser Permanente and Humana, have already begun to do so. And in the public sector, more and more states are exploring how to address these needs through Medicaid waivers. Some state Medicaid programs are beginning to encourage their contracted managed care organizations to address social needs, such as living environments and access to healthful food.⁹⁵ Section 1115 demonstration waivers that give providers financial incentives to provide more efficient and effective care (e.g., Delivery System Reform Incentive Payment programs) and

screen and address beneficiaries' health-related social needs (e.g., Accountable Health Communities) are steps in the right direction. And the Center for Medicare & Medicaid Innovation Center deserves credit for its Accountable Health Communities model, which makes routine the screening for social determinants and the efforts to address them. Such practices should be widely expanded. Given the influential example that the Centers for Medicare & Medicaid Services set for private insurers,⁹⁶ these innovations have the potential to be adopted by other payors, as well.

In addition to expanding patient services, payors and health systems should also expand their support for improving conditions of the

larger communities in which their patients live. In doing so, they should prioritize the improvement of the conditions in neighborhoods with residents who have elevated levels of preventable illnesses, injuries, and deaths. Hospital community benefit and other hospital funds should be directed to community investments in affordable housing and economic growth in such geographic areas.⁹⁷ Health systems can become “anchor institutions” for those neighborhoods, striving to improve the social determinants of health—for example, by purchasing, hiring, and investing locally and by supporting total-population policies such as those identified by TFAH’s Promoting Health and Cost Control in States project and Cityhealth.⁹⁸

Medicaid’s Unique Role

There is an especially strong business case for Medicaid to invest in addressing the social determinants of health, given the growing body of evidence that interventions targeted at those who can most benefit would provide significant health care savings. For example, interventions addressing the housing and other social needs of this population could make significant inroads in reducing Medicaid costs.⁹⁹

In addition, Medicaid, along with Medicare, the major public insurance programs, set an example for private insurers.¹⁰⁰ Thus, innovations in Medicaid have the potential to be adopted by other payors, as well.

Medicaid agencies, managed care plans, and provider organizations can address prevention and social determinants

through various existing authorities, including by providing housing-related services through home- and community-based waiver programs; providing food vouchers or pest control through managed care value-added services; and coordinating referrals to community services as part of patient-centered medical homes or Medicaid Health Homes.

Many states are also addressing prevention and social determinants through waiver authorities. Several state Medicaid agencies have worked with the CDC to implement 6|18 Initiative preventive interventions to improve health outcomes and lower costs, and some states are beginning to use their Accountable Care Organizations to address social determinants such as living environments and access to healthful food.¹⁰¹

Government agencies and philanthropists

Grantmakers should encourage cross-sector collaboration by structuring grants to incentivize and cover the planning and infrastructure costs of initiating and maintaining such work and promote the braiding of funding streams to support multi-sector strategies.

Government agencies and philanthropic organizations should also support creative approaches to facilitate cross-sector investments, such as Prevention and Wellness Trusts and Pay for Success or Social Impact Bond models. A Prevention and Wellness Trust pools public and/or private sources of funding to support prevention and wellness interventions that improve population health outcomes.¹⁰² For example, the Prevention and Wellness Trust Fund of Massachusetts was funded by a one-time assessment of acute hospitals and payors.¹⁰³ This kind of Trust can supplement limited public resources for prevention and enable multi-sector efforts. In the Pay for Success or Social Impact Bond model, private investors provide upfront capital for the delivery of services, which are repaid by a payor—often a government payor—only if and when the services delivered achieve an agreed-upon result.¹⁰⁴ This structure can help overcome the wrong-pocket problem, when one organization or sector is best positioned to make an investment but another benefits.

Ease coordination of funding from multiple streams

Making effective cross-sector investments often requires more flexibility than federal, state, and local governments have traditionally provided. Governments should make it easier for grantees to coordinate or combine funding from diverse sources. Two key mechanisms for doing so are braiding funding (coordinating funding from multiple sources to support a single initiative or portfolio of interventions at the community level) and blending funding (combining separate funding streams into one pool, under a single set of reporting and other requirements, to meet needs that are unexpected or unmet by other sources).

TFAH has compiled a [compendium of resources and examples](#) to help communities as they explore [braiding or blending](#) funds to support health improvement. TFAH has also issued [recommendations](#) for how the federal government can promote the braiding of programs and funding streams,¹⁰⁵ many of which can also be applied to state and local governments. It is important that agencies using these options put safeguards in place to ensure that funds are not reduced or cut (for example, by creating block grants that appear to offer greater flexibility but that actually reduce the ability to address a range of health needs by reducing funding), and that those served are not adversely affected by a reduction in benefits or services. With such safeguards in place, agencies that take these steps can maximize the effectiveness of existing funding streams, putting government dollars to better use and improving the lives of residents in communities across the nation.

Endnotes

- 1 Penn Wharton Budget Model. "Mortality in the United States: Past, Present, and Future." <http://budgetmodel.wharton.upenn.edu/issues/2016/1/25/mortality-in-the-united-states-past-present-and-future> (accessed March 13, 2019).
- 2 Hales CM., Carroll MD., Fryar CD., et al. "Prevalence of Obesity Among Adults and Youth: United States, 2015-2016." National Center for Health Statistics, October 2017. <https://www.cdc.gov/nchs/data/databriefs/db288.pdf>.
- 3 Trust for America's Health. "The State of Obesity: Better Policies for a Healthier America." September 2018. <https://www.tfah.org/report-details/the-state-of-obesity-2018/>.
- 4 U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.
- 5 Trust for America's Health. *Pain in the Nation*. Washington, D.C. Trust for America's Health, 2018. <https://www.tfah.org/report-details/pain-in-the-nation/> (accessed March 13, 2019).
- 6 Lancet Countdown, 2018: 2018 Lancet Countdown on Health and Climate Change Brief for the United State of America. Salas RN, Knappenberger P, Hess JJ. *Lancet Countdown U.S. Brief*, London, United Kingdom, 32 pp.
- 7 National Center for Health Statistics. Health, United States, 2015: With Special Feature on Racial and Ethnic Health Disparities. Hyattsville, MD. 2016; 2015 National Healthcare Quality and Disparities Report and 5th Anniversary Update on the National Quality Strategy. Rockville, MD: Agency for Healthcare Research and Quality; Apr. 2016. 2016. AHRQ Pub. No. 16-0015; National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Committee on Community-Based Solutions to Promote Health Equity in the United States; Baciu A, Negussie Y, Geller A, et al., editors. Washington (DC): National Academies Press (US); 2017 Jan 11.
- 8 Centers for Medicare and Medicaid Services. "National Health Expenditure Accounts." December 2018. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/National-HealthExpendData/NationalHealthAccountsHistorical.html>.
- 9 Orenstein WA and Ahmed R. "Simply put: Vaccination saves lives." Proceedings of the National Academy of Sciences of the United States of America, 114(16): 4031-4033, April 2017.
- 10 Trust for America's Health and The New York Academy of Medicine. "A Compendium of Proven Community-Based Prevention Programs" 2013. https://www.tfah.org/wp-content/uploads/archive/assets/files/Compendium_Report_1016_1131.pdf.
- 11 Masters R, Anwar E, Collins B, Cookson R, Capewell S. Return on investment of public health interventions: a systematic review. *J Epidemiol Community Health* 71(8):827-34, 2017. <http://jech.bmj.com/content/jech/early/2017/03/07/jech-2016-208141.full.pdf> (accessed January 2019).
- 12 De Beaumont Foundation. National Survey Reveals Strong Bipartisan Support for Public Health, 2018. <https://www.debeaumont.org/national-survey-reveals-strong-bipartisan-support-for-public-health> (accessed March 29, 2019).
- 13 Centers for Disease Control and Prevention. "FY 2018 Assistance Snapshot." <https://www.cdc.gov/funding/documents/fy2018/fy-2018-ofr-assistance-snapshot-508.pdf> (accessed April 1, 2019); Centers for Disease Control and Prevention. FY 2019 Operating Plan. <https://www.cdc.gov/budget/documents/fy2019/fy-2019-cdc-operating-plan.pdf> (accessed January 2019).
- 14 Trust for America's Health. *Pain in the Nation*. Washington, D.C. Trust for America's Health, 2018. <https://www.tfah.org/report-details/pain-in-the-nation/> (accessed March 13, 2019).
- 15 Trust for America's Health. *The State of Obesity*. Washington, D.C. Trust for America's Health, 2018. <https://www.tfah.org/report-details/the-state-of-obesity-2018/> (accessed March 13, 2019).
- 16 Population Reference Bureau. "Fact Sheet: Aging in the United States." January 2016. <https://www.prb.org/aging-unitedstates-fact-sheet/>.
- 17 Trust for America's Health. *Ready or Not? Protecting the Public's Health from Diseases, Disasters and Bioterrorism*. Washington, D.C. Trust for America's Health, 2019. <https://www.tfah.org/site-report-details/ready-or-not-protecting-the-publics-health-from-diseases-disasters-and-bioterrorism-2019/> (March 13, 2019).
- 18 Public Health Leadership Forum. "Developing a Financing System to Support Public Health Infrastructure." 2018. http://www.resolv.org/site-healthleadershipforum/files/2018/11/PHLF_developingafinancingsystemtosupportpublichealth.pdf.
- 19 Centers for Disease Control and Prevention. FY 2019 Operating Plan. <https://www.cdc.gov/budget/documents/fy2019/fy-2019-cdc-operating-plan.pdf> (accessed March 29, 2019).
- 20 Centers for Disease Control and Prevention. FY 2018 Operating Plan. <https://www.cdc.gov/budget/documents/fy2018/fy-2018-cdc-operating-plan.pdf> (accessed January 2019); Centers for Disease Control and Prevention. "FY 2019 Operating Plan." <https://www.cdc.gov/budget/documents/fy2019/fy-2019-cdc-operating-plan.pdf> (accessed March 13, 2019).
- 21 Centers for Disease Control and Prevention. "Operating Plans." <https://www.cdc.gov/budget/operating-plans.html> (accessed March 29, 2019).
- 22 Centers for Disease Control and Prevention. FY 2018 Operating Plan. <https://www.cdc.gov/budget/documents/fy2018/fy-2018-cdc-operating-plan.pdf> (accessed January 2019).
- 23 Centers for Disease Control and Prevention. "Operating Plans." <https://www.cdc.gov/budget/operating-plans.html> (accessed March 29, 2019).
- 24 Centers for Disease Control and Prevention. "FY 2019 Operating Plan." <https://www.cdc.gov/budget/documents/fy2019/fy-2019-cdc-operating-plan.pdf> (accessed March 13, 2019).
- 25 Centers for Disease Control and Prevention. Funding: PPHF. <https://www.cdc.gov/funding/pphf/index.html> (accessed January 2019).
- 26 Ibid.
- 27 Centers for Disease Control and Prevention. "FY 2019 Operating Plan." <https://www.cdc.gov/budget/documents/fy2019/fy-2019-cdc-operating-plan.pdf> (accessed March 13, 2019).
- 28 Mitchell A and Heisler E. Bipartisan Budget Act of 2018 (P.L. 115-123): CHIP, Public Health, Home Visiting, and Medicaid Provisions in Division E. Congressional Research Service, March 2018. <https://fas.org/sgp/crs/misc/R45136.pdf> (accessed January 2019).
- 29 Centers for Disease Control and Prevention. "REACH 2018 Recipients." https://www.cdc.gov/nccdphp/dnpao/state-local-programs/reach/current_programs/recipients.html (accessed March 13, 2019).
- 30 McIntyre S and Ellaway A. Ecological approaches: Rediscovering the role of the physical and social environment. In: Berkman L, Kawachi I, editors. *Social epidemiology*. New York: Oxford University Press; 2000. pp. 332-348.
- 31 *An Integrated Framework for Assessing the Value of Community-Based Prevention*. Committee on Valuing Community-Based, Non-Clinical Prevention Programs; Board on Population Health and Public Health Practice; Institute of Medicine. Washington (DC): National Academies Press (US); 2012 Oct 29. <https://www.ncbi.nlm.nih.gov/books/NBK206935/> (accessed January 2019).

- 32 County Health Rankings & Roadmaps. "What is Health?" 2018. <http://www.countyhealthrankings.org/what-is-health> (accessed March 13, 2019).
- 33 *An Integrated Framework for Assessing the Value of Community-Based Prevention. Committee on Valuing Community-Based, Non-Clinical Prevention Programs; Board on Population Health and Public Health Practice; Institute of Medicine.* Washington (DC): National Academies Press (US); 2012 Oct 29. <https://www.ncbi.nlm.nih.gov/books/NBK206935/> (accessed January 2019).
- 34 Centers for Disease Control and Prevention. *Hi-5 Health Impact in 5 Years.* <https://www.cdc.gov/policy/hst/hi5/aboutsummaries/index.html> (accessed January 2019).
- 35 The New York Academy of Medicine and Trust for America's Health. *A Compendium of Proven Community-Based Prevention Programs, 2013.* https://www.tfah.org/wp-content/uploads/archive/assets/files/Compendium_Report_1016_1131.pdf (accessed January 2019).
- 36 Washington State Institute for Public Policy. Good Behavior Game. Benefit-Cost Estimates Updated December 2018. Literature Review Updated March 2018. Olympia, WA: Washington State Institute for Public Policy, 2018. <http://www.wsipp.wa.gov/BenefitCost/ProgramPdf/82/Good-Behavior-Game> (accessed March 29, 2019); Washington State Institute for Public Policy. Life Skills Training. Benefit-Cost Estimates Updated December 2018. Literature Review Updated June 2014. Olympia, WA: Washington State Institute for Public Policy, 2018. <http://www.wsipp.wa.gov/BenefitCost/ProgramPdf/37/Life-Skills-Training> (accessed March 29, 2019); Washington State Institute for Public Policy. Promoting Alternative Thinking Strategies (PATHS). Benefit-Cost Estimates Updated December 2018. Literature Review Updated June 2015. Olympia, WA: Washington State Institute for Public Policy, 2018. <http://www.wsipp.wa.gov/BenefitCost/ProgramPdf/94/Promoting-Alternative-Thinking-Strategies-PATHS> (accessed September 2016); Community Preventive Services Task Force. Reducing Tobacco Use and Secondhand Smoke Exposure: Mass-Reach Health Communication Interventions. Washington, DC: U.S. Department of Health and Human Services, 2015. <http://www.thecommunityguide.org/tobacco/massreach.html> (accessed September 2016).
- 37 Centers for Disease Control and Prevention. State Physical Activity and Nutrition Program Recipients. <https://www.cdc.gov/nccdphp/dnpao/state-local-programs/span-1807/span-1807-recipients.html> (accessed January 2019).
- 38 Centers for Disease Control and Prevention. Public Health Emergency Preparedness (PHEP) Cooperative Agreement. <https://www.cdc.gov/cpr/readiness/phep.htm> (accessed January 2019).
- 39 for Disease Control and Prevention. FY 2019 Operating Plan. <https://www.cdc.gov/budget/documents/fy2019/fy-2019-cdc-operating-plan.pdf> (accessed January 2019).
- 40 Department of Health and Human Services. Public Health and Social Services Emergency Fund: Justification of Estimates for Appropriations Committees. <https://www.hhs.gov/sites/default/files/budget/fy2016/fy2016-public-health-social-services-emergency-budget-justification.pdf> (accessed March 22, 2019).
- 41 Pandemic and All-Hazards Preparedness and Advancing Innovation Act of 2019, H.R. 269, 116th Cong. (2019).
- 42 Centers for Disease Control and Prevention. Chronic Diseases in America. <https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm> (accessed January 2019).
- 43 Centers for Disease Control and Prevention. *Health and Economic Costs of Chronic Diseases.* <https://www.cdc.gov/chronicdisease/about/costs/index.htm> (accessed January 2019).
- 44 American Public Health Association. "Public Health and Chronic Disease: Cost Savings and Return on Investment." https://www.apha.org/~media/files/pdf/factsheets/chronicdiseasefact_final.ashx (accessed March 13, 2019).
- 45 Centers for Disease Control and Prevention. FY 2019 Operating Plan. <https://www.cdc.gov/budget/documents/fy2019/fy-2019-cdc-operating-plan.pdf> (accessed January 2019). Inflation adjustments were made using the Bureau of Economic Analysis's implicit price deflator for gross domestic product.
- 46 Ibid.
- 47 Centers for Disease Control and Prevention. "Overdose Data to Action Notice of Funding Opportunity." March 8, 2019. <https://www.cdc.gov/drugoverdose/od2a/index.html>.
- 48 Substance Abuse and Mental Health Services Administration. "Operating plan for FY 2019." https://www.samhsa.gov/sites/default/files/samhsa_fy2019_operating_plan_508.pdf (accessed April 1, 2019).
- 49 Substance Abuse and Mental Health Services Administration. "Fiscal Year 2011: Justification of Estimates for Appropriations Committees." https://www.samhsa.gov/sites/default/files/samhsa_fy11cj.pdf (accessed April 1, 2019); Substance Abuse and Mental Health Services Administration. "Operating plan for FY 2019." https://www.samhsa.gov/sites/default/files/samhsa_fy2019_operating_plan_508.pdf (accessed April 1, 2019).
- 50 National Association of State Alcohol and Drug Abuse Directors. "Substance Abuse Prevention and Treatment (SAPT) Block Grant." March 2019. <http://nasadad.org/2018/06/sapt-block-grant-overview/>.
- 51 National Association of State Alcohol and Drug Abuse Directors. "Substance Abuse Prevention and Treatment (SAPT) Block Grant." <http://nasadad.org/2019/03/sapt-block-grant-overview/> (accessed March 22, 2019).
- 52 H.R.6 – SUPPORT for Patients and Communities Act. 115th Congress (2017-2018). <https://www.congress.gov/bill/115th-congress/house-bill/6> (accessed January 2019).
- 53 Trust for America's Health. *Pain in the Nation.* November 2017. <https://www.tfah.org/report-details/pain-in-the-nation/>.
- 54 Population Reference Bureau. "Fact Sheet: Aging in the United States." January 2016. <https://www.prb.org/aging-united-states-fact-sheet/>.
- 55 Food and Drug Administration. "Fiscal Year 2020: Justification of Estimates for Appropriations Committees." <https://www.fda.gov/downloads/AboutFDA/Reports-ManualsForms/Reports/BudgetReports/UCM633738.pdf> (accessed April 1, 2019).
- 56 Substance Abuse and Mental Health Services Administration. "Operating plan for FY 2019." https://www.samhsa.gov/sites/default/files/samhsa_fy2019_operating_plan_508.pdf (accessed April 1, 2019).
- 57 Health Resources & Services Administration. "FY 2019 Operating Plan." February 2019. <https://www.hrsa.gov/about/budget/operating-plan.html>.
- 58 Trust for America's Health. *The State of Obesity 2018: Better Policies for a Healthier America.* September 2018. <https://www.tfah.org/report-details/the-state-of-obesity-2018/>.
- 59 United States Department of Agriculture. "WIC Program Participation and Costs." Mar. 8, 2019. <https://fns-prod.azureedge.net/sites/default/files/pd/wisummary.pdf>.
- 60 National WIC Association. "Weekly WIC Policy Update." May 14, 2018. <https://www.nwica.org/blog/weekly-wic-policy-update-113#.XKjzLShKJIU>.
- 61 Foster, E. M., Jiang, M., & Gibson-Davis, C. M. (2010). The effect of the WIC program on the health of newborns. *Health services research*, 45(4), 1083–1104. doi:10.1111/j.1475-6773.2010.01115.x; Food and Nutrition Service, USDA. "Women, Infants and Children (WIC)." Nov. 18, 2013. <https://www.fns.usda.gov/wic/about-wic-how-wic-helps>.
- 62 Food and Nutrition Service, USDA. "Supplemental Nutrition Assistance Program: Requirements for Able-Bodied Adults without Dependents." *The Daily Journal of the United States Government*, February 2019.
- 63 Schanzenbach DW., Bauer L., Nantz G. "Twelve facts about food insecurity and SNAP." Brookings, April 21, 2016. <https://www.brookings.edu/research/twelve-facts-about-food-insecurity-and-snap/>.
- 64 Hoynes H., Schanzenbach DW., Almond D. "Long-Run Impacts of Childhood Access to the Safety Net." *American Economic Review*, 106(4): 903-934, 2016.

- 65 Low BJ. and Low MD. "Education and Education Policy as Social Determinants of Health." *Virtual Mentor*. 2006;8(11):756-761., November 2006. <https://journalofethics.ama-assn.org/article/education-and-education-policy-social-determinants-health/2006-11>.
- 66 Huang K-Y, Cheng S., Theise R. "School contexts as social determinants of child health: current practices and implications for future public health practice." *Public Health Rep*, 128(3): 21-28, 2013. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3945445/>.
- 67 Ujifusa, Andrew (September 13, 2018). Lawmakers Strike Deal on Education Spending, Omit Ban on Money for Guns. *Education Week*. <http://blogs.edweek.org/edweek/campaign-k-12/2018/09/education-spending-deal-lawmakers-omit-guns-ban-money.html> (accessed January 2019).
- 68 Hernandez, Diana; Suglia, Shakira. "Leveraging the Social Determinants to Build a Culture of Health." <https://healthequity.globalpolicysolutions.org/wp-content/uploads/2016/12/Housing2.pdf> (accessed March 27, 2019).
- 69 Kerchof C. *Congress Provides Significant Increases for Housing in FY 2018 Omnibus. Enterprise*, March 2018. <https://www.enterprisecommunity.org/blog/2018/03/fy-2018-omnibus-provides-significant-funding-increases-housing> (accessed January 2019).
- 70 Congressional Research Service. "Transportation, Housing and Urban Development, and Related Agencies (THUD) Appropriations for FY2019: In Brief." March 2019. <https://fas.org/sgp/crs/misc/R45487.pdf>.
- 71 Robert Wood Johnson Foundation. "How Does Transportation Impact Health?" October 2012. <https://www.rwjf.org/en/library/research/2012/10/how-does-transportation-impact-health-.html>.
- 72 Congress resists big budget cuts. Safe Routes to School National Partnership, March 2018. <https://www.saferoutespartnership.org/blog/congress-rejects-big-budget-cuts> (accessed January 2019).
- 73 Ibid.
- 74 National Health Policy Forum. "Governmental Public Health: An Overview of State and Local Public Health Agencies." August 2010. https://www.nhpf.org/library/background-papers/BP77_GovPublicHealth_08-18-2010.pdf; The Association of State and Territorial Health Officials. ASTHO Profile of State and Territorial Public Health. 2016. <http://www.astho.org/Profile/Volume-Four/2016-ASTHO-Profile-of-State-and-Territorial-Public-Health>.
- 75 North Carolina Institute for Public Health. "What do local health departments do for your community?" <https://sph.unc.edu/files/2015/03/nciph-comm-lhd-exp.pdf> (accessed January 2019); Bryant, Blaire. "Protect Funding for Core Local Public Health Services and Prevention Programs." National Association of Counties. February 2019. <https://www.naco.org/resources/protect-funding-core-local-public-health-services-and-prevention-programs>.
- 76 National Association of County & City Health Officials. "The Forces of Change in America's Local Public Health System: 2018. 2018. <http://nacchoprofilestudy.org/wp-content/uploads/2018/12/2018-Forces-of-Change-Main-Report.pdf>.
- 77 Ibid.
- 78 Ibid.
- 79 The Public Health National Center for Innovations. *Foundational Public Health Services*. <https://phnci.org/fphs> (accessed January 2019).
- 80 Public Health Leadership Forum. *Developing a Financing System to Support Public Health Infrastructure*. http://www.resolve.org/site-healthleadershipforum/files/2018/11/PHLF_developingafinancingsystemtosupportpublichealth.pdf (accessed January 2019).
- 81 Systems for Action. "National Longitudinal Survey of Public Health Systems." <http://systemsforaction.org/national-longitudinal-survey-public-health-systems> (accessed April 1, 2019).
- 82 Public Health Leadership Forum. *Developing a Financing System to Support Public Health Infrastructure*. http://www.resolve.org/site-healthleadershipforum/files/2018/11/PHLF_developingafinancingsystemtosupportpublichealth.pdf (accessed January 2019).
- 83 De Beaumont Foundation. *National Survey Reveals Strong Bipartisan Support for Public Health*, 2018. <https://www.debeaumont.org/news/national-survey-2018/> (accessed January 2019).
- 84 Masters R, Anwar E, Collins B, Cookson R, Capewell S. Return on investment of public health interventions: a systematic review. *J Epidemiol Community Health* 71(8):827-34, 2017. <http://jech.bmj.com/content/jech/early/2017/03/07/jech-2016-208141.full.pdf> (accessed January 2019).
- 85 Center on Budget and Policy Priorities. "New Budget Deal Needed to Avert Cuts, Invest in National Priorities." March 1, 2019. <https://www.cbpp.org/research/federal-budget/new-budget-deal-needed-to-avert-cuts-invest-in-national-priorities>.
- 86 The Association of State and Territorial Health Officials. Congress Must Act to Increase Funding for CDC 22% by 2022. n.d. <http://www.astho.org/Advocacy-Materials/22-by-22/> (accessed March 13, 2019).
- 87 Yeager A. Cuts to Prevention and Public Health Fund Puts CDC Programs at Risk. *The Scientist*, February 2018. <https://www.the-scientist.com/daily-news/cuts-to-prevention-and-public-health-fund-puts-cdc-programs-at-risk-30298> (accessed January 2019).
- 88 Council of State and Territorial Epidemiologists. "Data: Elemental to Health." https://cdn.ymaws.com/www.cste.org/resource/resmgr/pdfs/pdfs2/DSI_OnePager_FINAL.pdf (accessed April 1, 2019).
- 89 National Association of County & City Health Officials. "Statement of Policy: The Local Health Department as Community Chief Health Strategist." <https://www.naccho.org/uploads/downloadable-resources/15-11-LHD-as-Community-Chief-Health-Strategist.pdf> (accessed March 14, 2019).
- 90 Mays GP, Mamaril CB, Timsina LR. Preventable death rates fell where communities expanded population health activities through multisector networks. *Health Affairs*; November 2016, 35(11):2005-13. <http://cachi.org/uploads/resources/Health-Aff-Mays-Multisector-pop-health-init.pdf> (accessed January 2019).
- 91 Kohli J. and De Biasi A. "Supporting healthy communities." The Deloitte Center for Government Insights, 2017. https://www2.deloitte.com/content/dam/insights/us/articles/3608_supporting-healthy-communities/DUP_supporting-healthy-communities.pdf.
- 92 Lipson DJ. *Medicaid's Role in Improving the Social Determinants of Health: Opportunities for States*. National Academy of Social Insurance, June 2017. <https://www.nasi.org/research/2017/medicaid-s-role-improving-social-determinants-health> (accessed March 13, 2019).
- 93 Irving MT. Health Partners Plans Publishes Results of Groundbreaking Food is Medicine Program in Call to Action. Health Partners Plans, February 28, 2018. <https://www.healthpartnersplans.com/about-us/newsroom/news-releases/2018/health-partners-plans-publishes-results-of-groundbreaking-food-as-medicine-program-in-call-to-action>; Anthes L. Hungry for Policy: Searching for Solutions to Food Insecurity in Ohio Medicaid. The Center for Community Solutions, April 23, 2018. <https://www.communitysolutions.com/research/hungry-policy-searching-solutions-food-insecurity-ohio-medicaid/>.

- 94 Centers for Disease Control and Prevention. *CDC's 618 Initiative: Accelerating Evidence into Action*. October 4, 2018. <https://www.cdc.gov/sixteen/index.html>.
- 95 Center for Health Care Strategies, Inc. "Addressing Social Determinants of Health through Medicaid Accountable Care Organizations: Early State Efforts." February 14, 2018. <https://www.chcs.org/resource/addressing-social-determinants-health-medic-aid-accountable-care-organizations-early-state-efforts/>.
- 96 How Medicare, Medicaid, and CHIP Guide the Health Payer Industry. *HealthPayer Intelligence*. <https://healthpayerintelligence.com/features/how-medicare-medic-aid-and-chip-guide-the-health-payer-industry>.
- 97 National League of Cities. Partnership for Quality Affordable Housing and Supportive Health Services. May 11, 2018. <https://www.nlc.org/resource/partnership-for-quality-affordable-housing-and-supportive-health-services>.
- 98 Ted Howard and Tyler Norris, "Can hospitals heal America's communities?," Democracy Collaborative, December 2015, <http://democracycollaborative.org/content/can-hospitals-heal-americas-communities>.
- 99 National Academy of Social Insurance. "Medicaid's Role in Improving the Social Determinants of Health: Opportunities for States" June 2017. <https://www.nasi.org/research/2017/medicaid%E2%80%99s-role-improving-social-determinants-health>.
- 100 How Medicare, Medicaid, and CHIP Guide the Health Payer Industry. *HealthPayer Intelligence*. <https://healthpayerintelligence.com/features/how-medicare-medic-aid-and-chip-guide-the-health-payer-industry>.
- 101 Center for Health Care Strategies, Inc. "Addressing Social Determinants of Health through Medicaid Accountable Care Organizations: Early State Efforts." February 14, 2018. <https://www.chcs.org/resource/addressing-social-determinants-health-medic-aid-accountable-care-organizations-early-state-efforts/>.
- 102 Build Healthy Places. *Jargon Buster*. <https://www.buildhealthyplaces.org/jargon-buster/#wellness-trust> (accessed March 13, 2019).
- 103 Solomon L. "Fast Fact: Wellness Trusts are An Innovative Way to Fund Prevention and Health Equity Efforts." Build Healthy Places Network, July 28, 2016. <https://buildhealthyplaces.org/whats-new/wellness-trusts-innovative-way-fund-prevention-health-equity-efforts/>.
- 104 Roman JK. *Solving the Wrong Pockets Problem: How Pay for Success Promotes Investment in Evidence-Based Best Practices*. Urban Institute, September 2015. <http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000427-Solving-the-Wrong-Pockets-Problem.pdf> (accessed January 2019).
- 105 De Biasi A, Ilakkuvan V and Seiler N. "Promoting Effectiveness and Sustainability of Initiatives to Improve Health and Social Outcomes: Methods that Federal Agencies Can Use to Facilitate Coordination and Integration of Funding Streams." Trust for America's Health, 2018. <https://www.tfah.org/wp-content/uploads/2018/01/TFAH-Braiding-Report-FINAL.pdf> (accessed January 2019).



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