

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

TRENDS, RISKS, AND RECOMMENDATIONS 2023



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Executive Summary

A strong public health system serves as a cornerstone of well-being and prosperity for the nation and the world. The foundation of such a system includes a focus on evidence-based interventions, an emphasis on prevention and health equity, and, critically, adequate and predictable funding. Unfortunately, for over two decades, the country's public health system has not received the level of funding needed to ensure it meets the nation's public health needs.

Investing in prevention saves lives. The U.S. public health system has produced many innovations and best practices. Vaccinations stand at the forefront, representing some of the most significant breakthroughs in public health history. The development and implementation of vaccines against deadly infectious diseases, such as smallpox, polio, and measles, have saved countless lives and dramatically reduced the burden of disease. Most recently, it is estimated that the COVID-19 vaccine prevented more than 2.2 million deaths in the United States.¹

Additional public health victories include the Clean Air Act of 1963 and the Safe Drinking Water Act of 1974, which have led to significant reductions in air and water pollution respectively.^{2,3} In addition, an ongoing campaign against tobacco use has resulted in large declines in smoking rates and reduced the prevalence of lung cancer, heart disease, and other tobacco-related illnesses.⁴

Nutrition and healthy lifestyles have been the focus of numerous public health initiatives. Programs such as the Supplemental Nutrition Assistance Program and the Special Supplemental Nutrition Program for Women, Infants, and Children help ensure economically disadvantaged families have access to nutritious food, fostering nutrition security. Furthermore, public health campaigns promoting physical activity have raised awareness about the importance of physical activity in helping to prevent chronic diseases like obesity, diabetes, and heart disease.

None of these life-saving advances would have been possible without sustained investment in science and public health.

But decades of underfunding the public health system have made it challenging to protect the public's health, a fact starkly illuminated by the COVID-19 pandemic. The COVID-19 crisis highlighted the need for robust investment in public health infrastructure, research, surveillance, and rapid-response capabilities to better prepare for and mitigate the impact of future public health emergencies.

Additionally, the United States faces a growing burden of chronic diseases, such as obesity, diabetes, and heart disease, which are closely tied to social determinants of health and the impact of health inequities.⁵ While public health initiatives have made some strides in promoting access to healthy lifestyles, the lack of consistent and sufficient funding hinders the system's ability to develop and sustain comprehensive programs that address the complex interplay of factors contributing to chronic diseases.

Behavioral health is another area in which funding does not match need, with issues like depression, suicide, and substance use disorders affecting millions of Americans.

Finally, health disparities, particularly among marginalized and underserved communities, remain a significant challenge. Public health efforts to promote health equity have been hampered by a lack of resources, as the underfunding of public health disproportionately impacts low-income communities, rural communities, and communities of color.

Investing in public health saves lives and dollars

Investing in public health has consistently proven to yield high returns, further underscoring the importance of robust funding. For every dollar spent on preventive measures and public health programs, the potential savings in healthcare costs and economic productivity can be substantial.⁶ This high return stems from the fact that public health initiatives often target the root causes of health issues, preventing the development of costly chronic conditions and reducing the demand for more expensive medical treatments. Moreover, these investments contribute to a healthier workforce, which in turn leads to increased productivity and a more robust economy. By recognizing the high return of public health investments and allocating resources accordingly, policymakers can promote the long-term health and prosperity of the nation, ultimately creating a more resilient and equitable society.

Many health departments face a funding cliff as pandemic response funding ends

Over the past three years, health agencies have faced a dichotomy in their funding. Although there have been significant increases in short-term funding, these generally took the form of one-time COVID-19-specific appropriations. Such one-time and specific funding has resulted in two current realities: (1) a boom-and-bust cycle, i.e., large funding infusions in response to the pandemic, funding for programs that will now have to shutter as their funding ends; and (2) a situation in which many long-standing deficiencies remain unaddressed as state and local health departments

could not use pandemic response funding to address other public health programming and infrastructure needs. The pattern of only investing in public health during emergencies was in part the cause of the inadequate response to COVID-19, and if repeated, will lead to inadequate responses to future public health emergencies.

Another critical lesson of the COVID-19 pandemic is that emergency appropriations arrive too late to bolster preparedness and prevention efforts. To tackle threats akin to COVID-19, the nation must maintain higher funding levels on a year-to-year basis and invest in planning, workforce, and infrastructure long before a crisis arises. Neglecting to do so is tantamount to recruiting firefighters and procuring hoses and protective equipment while a wildfire is burning.

Federal funding

As the country's leading public health agency and the primary source of funding for state, local, tribal, and territorial health departments, the U.S. Centers for Disease Control and Prevention (CDC) is at the forefront of this preventive work. However, over the past decade, the agency's historically underfunded budget has not kept pace with the nation's growing public health needs and emerging threats.

CDC's fiscal year (FY) 2023 budget, which does not account for one-time infusions of money from pandemic-relief laws, is \$9.2 billion, reflecting a \$760 million year-over-year increase.⁷

However, CDC's budget rose by just 6 percent over the past decade (FY 2014–2023), after adjusting for inflation, and this increase was not evenly distributed across the agency and its programs. A serious mismatch remains between documented public health needs and

funding levels, as many successful prevention programs lack funding to reach all states and territories. For example, funding to prevent and reduce obesity has remained virtually flat for years, even as obesity rates continue to increase, leaving only enough money to support 16 states as they address one of the leading drivers of disease and healthcare spending.^{8,9}

While the country spends \$4.3 trillion on annual health expenditures¹⁰—just 4.4 percent of which goes to public health and prevention—CDC is on track to spend only \$1.4 billion on chronic disease prevention and health promotion in FY 2023, roughly the same level as in recent years and below the FY 2014 level, after adjusting for inflation.

CDC’s annual funding for public health preparedness and response, which is primarily directed to Public Health Emergency Preparedness (PHEP) programs in states, territories, and local areas, including a few big cities, increased slightly between FY 2022 and FY 2023, from \$715 million to \$735 million.¹¹ However, Congress has cut PHEP funding by just over one-fifth since FY 2003, or about half, after adjusting for inflation.

Similarly, funding to prepare the healthcare system for disasters has been cut significantly.¹² The Healthcare Readiness and Recovery Program, which includes the Hospital Preparedness Program—administered by the U.S. Department of Health and Human Services’ Administration for Strategic Preparedness and Response—is the primary source of federal funding to help healthcare systems prepare for emergencies, such as natural disasters and the COVID-19 pandemic. Its budget was \$515 million in FY 2003 and just \$305 million in

FY 2023—a nearly two-thirds cut, after adjusting for inflation.

Another important source of funding for CDC and states is the Prevention and Public Health Fund. Originally designed to expand and sustain the nation’s investment in public health and prevention, the fund remains at about half the funding level Congress should have provided in FY 2023, due to the redirection of monies to other programs and legislation.¹³

The Administration for Strategic Preparedness and Response (ASPR), a part of HHS, received a funding increase of \$517 million over its FY 2022 budget.

Two other federal agencies with public health responsibilities, the Substance Abuse and Mental Health Services Administration and the Health Resources and Services Administration received significant funding increases for FY 2023. The Food and Drug Administration saw marginal operating gains for FY 2023.

State and local funding

At the state level, most states (at least 34 states and the District of Columbia) maintained or increased their funding for public health during FY 2022, while at least 13 reduced that funding.¹⁴

These data were collected by TFAH for its annual *Ready or Not: Protecting the Public’s Health from Diseases, Disasters and Bioterrorism* report. Three states did not report their funding data.¹⁵ State health agencies play a key role in promoting public health and supporting local health departments. They directly engage in population-based primary, secondary, and tertiary prevention, developing preparedness plans, coordinating emergency responses, and conducting lab testing, disease surveillance, and data collection.

WHAT ARE THE CORE CAPABILITIES OF A ROBUST PUBLIC HEALTH SYSTEM?

The United States spends trillions of dollars annually on healthcare, but U.S. residents are not getting healthier and tend to experience worse health outcomes than residents of other high-income countries that spend comparably less money on healthcare.¹⁶

Keeping everyone safe from diseases, disasters, the health impacts of climate change, and bioterrorism requires a public health system focused on prevention, equity, preparedness, and surveillance. Investment to ensure foundational public health capabilities is key. Foundational public health capabilities include assessment and surveillance, emergency preparedness and response, community partnership development, communications, policy development and support, organizational accountability and performance management, and a focus on equity.¹⁷ Interagency and jurisdictional planning and cooperation are also critical, as are efforts to address the needs of population groups or communities at greatest risk.

All of these activities require dedicated and sustained funding and a well-resourced public health infrastructure and workforce, one that has the resources to deal with its everyday work and that is well-positioned to quickly pivot and scale up during emergencies. A robust public health system is one that provides the following essential public health services:¹⁸

- “Assess and monitor population health status, factors that influence health, and community needs and assets.
- Investigate, diagnose, and address health problems and hazards affecting the population.

- Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it.
- Strengthen, support, and mobilize communities and partnerships to improve health.
- Create, champion, and implement policies, plans, and laws that impact health, including programs to promote childhood vaccination and tobacco cessation, for example.
- Utilize legal and regulatory actions designed to improve and protect the public’s health.
- Assure an effective system that enables equitable access to the individual services and care needed to be healthy.
- Build and support a diverse and skilled public health workforce.
- Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement.
- Build and maintain a strong organizational infrastructure for public health.”

To advance equity, successful public health systems promote structural conditions that support optimal health for all and work to remove systemic barriers that have resulted in health disparities.

In addition, a strong public health system comprises federal, state, tribal, territorial, and local health agencies working within a network that includes healthcare providers, public safety agencies, human service and charity organizations, education and youth development organizations, recreation and arts-related organizations, economic and philanthropic organizations, and environmental agencies and organizations.

PUBLIC HEALTH DATA MODERNIZATION AND WORKFORCE NEEDS—WHAT’S THE NEEDED LEVEL OF INVESTMENT?

Experts agree that increased and sustained funding to strengthen the country’s public health system is urgently needed, particularly in the areas of data infrastructure and workforce. **The Data: Elemental to Health campaign, the de Beaumont Foundation, and the Public Health National Center for Innovations have estimated needed levels of investment in both areas.**

Data Modernization

There is strong consensus that the country’s response to the COVID-19 pandemic was weakened by fractured and outdated public health data infrastructure. Ensuring that the COVID-19 pandemic experience is not repeated requires increased and sustained investment in data systems that can deliver comprehensive, real-time data during the country’s next public health emergency. Improved data systems are also a critical element of any efforts to address America’s multiple epidemics of chronic disease and substance misuse and suicide, as well as racial and ethnic health disparities.

The Data: Elemental to Health campaign has called on Congress to invest at least \$7.84 billion over five years¹⁹ to modernize the public health data infrastructure, including by investing in five key pillars of data management:

1. Electronic Case Reporting
2. Laboratory Information Management Systems
3. Syndromic Surveillance
4. Electronic Vital Records
5. National Notifiable Disease Surveillance System

Additionally, investments need to be made in local public health workforce and systems compatibility as well as state-level data systems, leadership, management, workforce, and integration.²⁰

The Public Health Workforce Needs to be Larger and More Diverse

State, local, tribal, and territorial public health departments are essential to maintaining the security, safety, and prosperity of local communities, yet they are consistently underfunded, making residents more vulnerable to emerging infectious disease outbreaks, chronic diseases, and other health threats. An October 2021 analysis conducted by the de Beaumont Foundation and the Public Health National Center for Innovations found that state and local public health departments need an 80

percent increase in workforce size to ensure a minimum set of comprehensive public health services for all U.S. residents.²¹

The 2021 de Beaumont Foundation/Public Health National Center for Innovations issue brief *Staffing Up: Workforce Levels Needed to Provide Basic Public Health Services for All Americans* found that state and local public health departments collectively lost 15 percent of their workforce over the past decade and need to hire 80,000 additional full-time equivalent positions to establish an adequate foundational workforce and to deliver a minimum set of public health services to the nation. Specifically, due to existing staffing shortages, local health departments need to add approximately 54,000 full-time employees and state departments need to add 26,000 full-time employees across differing levels of categories and areas of expertise.²² In addition, an analysis published in March 2023 found that nearly half of all employees in state and local public health agencies left that employment between 2017 and 2021.²³ The stated reasons for the departures included harassment of public health workers as well as planned retirements and departures.²⁴

FIGURE 1: New FTEs Needed by Population Served

Population size	Current FTEs for basic foundational public health services	Total FTEs needed for full implementation	Additional FTEs needed for full implementation	Percentage change needed
<25,000	4,000	13,000	+9,000	230%
25,000 – 49,999	5,500	13,000	+7,500	140%
50,000 – 99,999	7,000	15,000	+8,000	110%
100,000 – 199,999	8,500	14,500	+6,000	70%
200,000 – 499,999	14,000	20,000	+6,000	40%
500,000 +	33,500	51,000	+17,500	50%
Local Health Departments	72,500	126,500	+54,000	70%
State Health Departments	31,000	57,000	+26,000	80%
Total	103,500	183,500	+80,000	80%

NOTE: Estimates are rounded to nearest 500 FTEs and the nearest 10% change.

Source: de Beaumont Foundation and Public Health National Center for Innovations²⁵

Summary of Policy Recommendations

This report includes recommendations for policy actions by Congress and the Administration within five categories:

- **Modernize and strengthen public health in every community**, including data systems and public health laboratory capacity. Grow and add greater diversity to the public health workforce.
- **Invest in the nation's health security** by investing in programs that build defenses against a range of threats, from infectious diseases to weather-related events.
- **Address health inequities and the root causes of disease** by addressing the social determinants of health.
- **Promote health and prevent chronic disease across the lifespan.**
- **Invest in primary prevention of behavioral health concerns and deaths of despair**, including comprehensive suicide and substance use disorder prevention programs.

1

Public Health Funding Trends

Federal Public Health Funding

The federal government allocates investments in public health programs across numerous agencies and initiatives. These programs, which form the backbone of the nation's public health system, aim to enhance health, prevent diseases and injuries, and prepare for potential disasters and major health emergencies. The majority of these funds are awarded to states, tribes, and territories through the Centers for Disease Control and Prevention (CDC), while additional resources are distributed among other agencies within the U.S. Department of Health and Human Services (HHS), the U.S. Department of Agriculture (USDA), the U.S. Department of Housing and Urban Development, the U.S. Department of Transportation, and the U.S. Environmental Protection Agency, among others.



Fiscal year 2023 funding includes some increases but falls short of public health's recommended spending levels in many areas.

In late December 2022, Congress passed and the president signed a \$1.7 trillion omnibus spending package, the Consolidated Appropriations Act of 2023, including some but not all funding recommendations proposed by TFAH and others in the public health community.

Included in the omnibus package were numerous provisions updating authorities and responsibilities intended to improve the nation's pandemic preparedness. The law requires CDC to update its disease outbreaks response planning every few years, gives HHS authority to contract with public and private groups to surge testing capacity during an outbreak, and codifies the Food and Drug Administration's ability

to expedite drug and vaccine approval during a public health emergency. The law includes authorization of public health loan repayment. Loan repayment programs, which have been a long-standing priority for TFAH and the public health community, bolster the public health workforce through repayment programs and initiatives designed to expand the community health workforce. This includes professionals with the linguistic and cultural competencies necessary to serve diverse communities.

Also in the package were changes in the Medicare and Medicaid programs, including a reduction of cuts to physicians' Medicare payments and an extension of

programs that support population health and rural hospitals.

The law did not include new authority for CDC to collect disease data from all states, a provision many groups in the public health community supported. In general, the package included a welcome focus on emergency preparedness and infectious disease prevention, particularly in the areas of infrastructure, data systems, and the public health workforce, but it did less in the areas of chronic disease and environmental threats. And, despite increases in many critical funding areas, the increases did not match the funding level recommended by the public health community.

Highlights of FY 2023 funding by selected agencies and programs:

Centers for Disease Control and Prevention (CDC)

Overall fiscal year (FY) 2023 funding was \$9.2 billion, an increase of \$760 million over FY 2022. More than half of the increase was for public health capabilities like infrastructure, workforce, and data. TFAH has joined the CDC Coalition and other partners in recommending \$11.581 billion in funding for CDC for FY 2023.

National Center for Immunization and Respiratory Diseases:

\$919 million, a \$51 million increase over FY 2022.

Section 317 Immunization Program: \$682 million, an increase of \$31 million above the FY 2022 enacted level. TFAH and other infectious disease advocates recommended an increase of \$1.1 billion over FY 2022.

Influenza Planning and Response: \$231 million, an increase of \$20 million above the FY 2022 enacted level. TFAH and other infectious disease advocates recommended an increase of \$251 million.

National Center for Emerging and Zoonotic Infectious Disease:

\$750.8 million, a \$57.5 million increase over FY 2022.

Antimicrobial Resistance Initiative: \$197 million, an increase of \$15 million above the FY 2022 enacted level. TFAH and other advocates recommended \$397 million.

Advanced Molecular Detection: \$40 million, a \$5 million increase above FY 2022 funding. TFAH and other partners recommended \$175 million.

National Center for Environmental Health: \$247 million, a \$18.5 million increase over FY 2022. TFAH joined environmental health advocates and recommended \$402 million in funding for the center.

Environmental Health Tracking: \$34 million, level with FY 2022. TFAH recommended a \$54 million increase.

Climate & Health: \$10 million, level with FY 2022. Climate and health advocates recommended a funding level of \$110 million.

National Center for Chronic Disease Prevention and Health Promotion:

\$1.43 billion, a \$92 million increase over FY 2022.

Division of Nutrition, Physical Activity, and Obesity: \$58.42 million, level with FY 2022. TFAH recommended a funding level of \$125 million.

Racial and Ethnic Approaches to

Community Health: \$68.95 million, a \$3 million increase over FY 2022. Within that total, Healthy Tribes is funded at \$24 million, an increase of \$1.5 million. TFAH's recommended funding level was \$125 million.

Social Determinants of Health: \$8 million, no increase from FY 2022. TFAH supported President Biden's request of \$153 million.

National Center for HIV, Viral Hepatitis, STD, and TB Prevention:

\$1.39 billion, a \$46 million increase over FY 2022.

Division of Adolescent and School Health:

\$38 million, a \$2 million increase over FY 2022. TFAH's recommended funding level was \$100 million.

National Center for Injury Prevention and Control:

\$761 million, a \$46.5 million increase over FY 2022.

Adverse Childhood Experiences: \$9 million, a \$2 million increase over FY 2022. TFAH recommended a funding level of \$15 million.

Suicide Prevention: \$30 million, a \$10 million increase. TFAH recommended a funding level of \$40 million.

Firearm Injury and Mortality Prevention

Research: \$12.5 million, level with FY 2022. The Gun Violence Prevention Research Roundtable's recommended funding level was \$35 million.

Opioid Overdose Prevention and

Surveillance: \$506 million, a \$15 million increase over FY 2022.

Public Health Preparedness and Response:

\$883M, a \$21 million increase over FY 2022.

Public Health Emergency Preparedness

Cooperative Agreement: \$735 million, an increase of \$20 million above the FY 2022 enacted level. TFAH's recommended spending level was \$824 million.

Funding for Public Health Infrastructure, Data Modernization, and Forecasting:

Public Health Infrastructure and Capacity:

\$350 million, an increase of \$150 million over FY 2022 funding. The report language clarifies that no less than 70 percent of this funding must be awarded to state and local health departments.

Data Modernization Initiative:

\$175 million, an increase of \$75 million over FY 2022 funding. TFAH and the public health community's recommended funding level was \$250 million.

Center for Forecasting Epidemics and Outbreak Analytics:

\$50 million, level with the funding level TFAH supported. This funding line was new in FY 2023.

Administration for Strategic Preparedness and Response:

\$3.6 billion, an increase of \$517 million over FY 2022.

Biomedical Advanced Research and

Development Authority: \$950 million, an increase of \$205 million over FY 2022.

Strategic National Stockpile: \$965 million, a \$120 million increase over FY 2022.

Healthcare Readiness and Recovery including the Hospital Preparedness

Program: \$305 million, an increase of \$9.5 million above the FY 2022 enacted level. TFAH's recommended funding level was \$474 million.

HHS Coordination Operations and

Response Element: This newly funded program received \$75 million.

Substance Abuse and Mental Health Services Administration:

\$7.37 billion, \$970 million increase over FY 2022.

988 Crisis Line and Behavioral Health

Crisis Services: \$502 million, an increase of \$390 million above the FY 2022 enacted level. Public health's recommended funding level was \$747 million.

Project AWARE: \$140 million, an increase of \$20 million above FY 2022 funding.

National Child Traumatic Stress

Initiative: \$94 million, \$12 million above FY 2022 funding.

Restoring Hope for Mental Health and Well

Being Act: The provisions expand more than 30 programs, including behavioral health integration, assistance to states to enforce parity, and other provisions. The bill also includes the Light for Maternal Health and Substance Use Disorders Act, which among other things would screen for mental health/substance use and authorize a dedicated maternal mental health hotline.

The omnibus created a Medicare benefit for behavioral health services provided through mobile crisis units.

The legislation also expanded provider prescribing of buprenorphine for treatment of opioid use disorder.

Sources: U.S. Senate Appropriations Committee;²⁶ Centers for Disease Control and Prevention;²⁷ U.S. Department of Health and Human Services²⁸

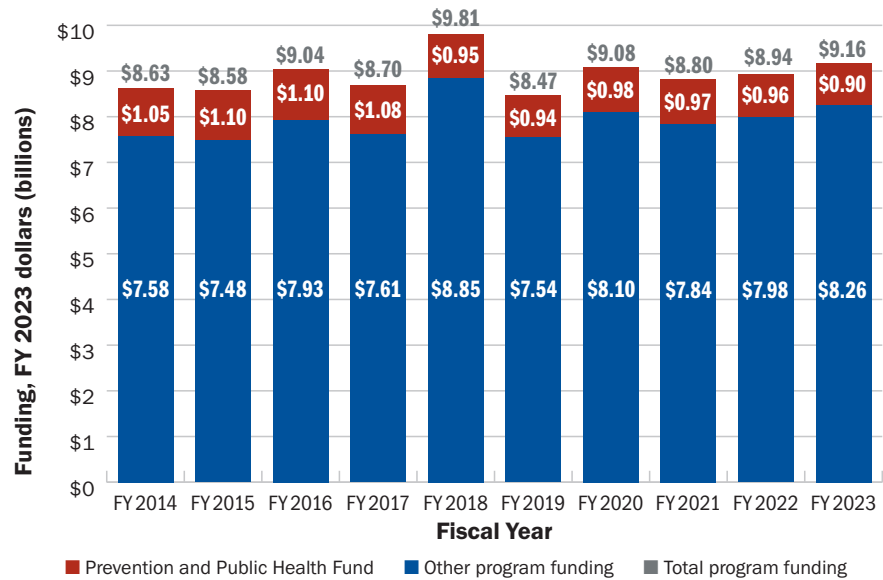
CDC funding trends

CDC stands as the nation’s foremost public health agency. Its mission encompasses safeguarding U.S. residents from disease outbreaks, disasters, and contaminated food and water, as well as mitigating the prevalence of leading causes of death. To facilitate the achievement of its objectives, CDC collaborates with states, localities, tribes, and territories in addressing threats and enhancing health within communities. In fact, CDC distributes a significant portion of its program funding to these jurisdictions.

The agency’s budget has not kept pace with the nation’s growing public health needs and emerging threats, including the rise in chronic diseases, weather-related emergencies, substance misuse disorders and suicide. Years of eroding resources for public health emergency preparedness contributed to the country’s flat-footed response to the COVID-19 pandemic.²⁹ Funding for effective community prevention programs, such as obesity prevention, is inadequate to sufficiently support every state.³⁰ Despite rapid growth in the older adult population,³¹ funding to support the overall health and well-being of older adults is scarce. Finally, CDC, and by extension its state, local, tribal, and territorial partners, lack the flexible funding needed to respond to the underlying drivers of poor health and to adequately grow and support the cross-cutting, foundational capabilities that bolster comprehensive public health systems at the federal, state, local, tribal, and territorial levels.³²

The FY 2023 budget for CDC is \$9.2 billion. This budget reflects a \$760 million (9 percent) increase from FY 2022 funding—or a 3 percent increase in inflation-adjusted dollars. Looking further back, CDC’s budget increased by just 6 percent over the past decade

FIGURE 2: CDC Program Funding, Adjusted for Inflation, FY 2014–2023



Note: Appropriately comparing funding levels from FY 2014–2018 to levels in FY 2019 and thereafter requires accounting for the transfer of funding for the Strategic National Stockpile from CDC to the Administration for Strategic Preparedness and Response in FY 2019.

Funding levels are in FY 2023 dollars. TFAH adjusted the data for inflation using the Bureau of Economic Analysis’s price index for gross domestic product.

Source: CDC Annual Operating Plans³³

(FY 2014–2023), after adjusting for inflation. (See Figure 2.)

The largest increases in CDC’s FY 2023 budget went to Public Health Infrastructure and Capacity (+\$150 million), the Public Health Data Modernization Initiative (+\$75 million), the Center for Forecasting Epidemics and Outbreak Analytics (+\$50 million), the Global Public Health Protection program (+\$40 million), and the Immunization Program (+\$31 million).

The \$150 million increase toward building up the nation’s public health system infrastructure and capacity (on top of \$200 million in FY 2022) represents an important milestone. The past two years have been the first time that Congress has provided such a cross-cutting, annual investment, which will begin the process of building

up a woefully under resourced system and workforce. The traditional nature of public health funding—siloed, disease-specific, inconsistent, and often reactive to crises—has restricted health departments’ agility, weakened their capabilities, and left little funding (about \$1 out of every \$10 in CDC’s budget)³⁴ for foundational elements necessary to successfully provide essential public health services.³⁵ Condition-specific program funding is critical, but the public health system cannot adequately modernize without investments in cross-cutting capabilities.

The recent infrastructure money will boost health departments’ ability to hire and retain a skilled workforce; innovate and establish better practices for data collection, health equity, and cross-sector collaborations; support physical and technological improvements in public

health laboratories; and conduct performance improvement.³⁶ In part funded by the American Rescue Plan Act, CDC awarded \$3.2 billion in November 2022 to more than 100 public health departments across the country, including in territories/freely associated states, as well as to three national partners—Association of State and Territorial Health Officials (ASTHO), National Network of Public Health Institutes (NNPHI), and Public Health Accreditation Board (PHAB)—that will support the work of recipient jurisdictions.³⁷ Should future congressional appropriations allow, CDC expects to award about \$1 billion more over the five-year grant period.

The funding is a first-of-its kind, noncategorical, cross-cutting investment to help health departments increase the size and skill level of their workforces; improve organizational systems and processes; modernize and streamline data ecosystems; increase data availability, use, and interoperability; and expand the number and quality of public health service facilities. These grants, although funded by emergency response money, will allow departments to invest in multiyear programs, including growing their workforces, something emergency funding does not typically do.

Also notable was the \$75 million tied to the Public Health Data Modernization Initiative (on top of a \$50 million increase in FY 2022). Public health partners have long sounded the alarm that data, disease surveillance, and epidemiology were moving slower

than the diseases they were intended to detect.³⁸ Under-resourced health departments are forced to operate a patchwork of siloed public health data systems many of which do not connect to each other nor to the healthcare system.³⁹ This new money, in addition to more than a billion dollars in related investments from various pandemic-relief laws, is accelerating data modernization in accordance with CDC's strategic roadmap,⁴⁰ enabling major progress in electronic laboratory reporting and in electronic case reporting among healthcare facilities. CDC Director Dr. Rochelle P. Walensky has said that the initiative is about "making sure our data highways connect and the traffic is free flowing."⁴¹

CDC has also recently established the National Center for Forecasting and Outbreak Analytics, which brings together next-generation public health data, disease modelers, and communications experts to step up the accuracy and widespread use of federal disease modeling and forecasting capabilities—akin to real-time weather forecasts—and to expand data-sharing and integration. This represents the first time that the United States has created an organization to provide such decision-support resources. Already, the center has provided decision-makers with risk assessments and technical reports related to COVID-19, mpox, acute pediatric hepatitis, polio, and Ebola outbreaks, outlining what is known and unknown and helping users understand critical decision points and plan for various scenarios.⁴²

Prevention and Public Health Fund

Of CDC’s FY 2023 budget, 10 percent (\$903 million) consists of funding for the Prevention and Public Health Fund, or the “Prevention Fund,”⁴³ a critical source for prevention and public health funding within the federal budget. 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.”⁴⁴ Its purpose is to support “expanded and sustained national investment in prevention and public health programs.”⁴⁵

The Prevention Fund was established in 2010 as part of the Affordable Care Act. It was designed to provide a sustained source of funding for prevention and public health initiatives, with the overarching goal of improving the health of the U.S. population and reducing healthcare costs associated with chronic diseases.

The Prevention Fund has supported a range of programs and initiatives, encompassing disease prevention,

early detection, management of health conditions, and promotion of healthy lifestyles. The fund has also been used to bolster the nation’s public health infrastructure, including workforce development, community transformation, and public health research.

The impact of the Prevention Fund has been notable in various areas of public health. It has provided resources for vital programs, such as CDC’s National Tobacco Control Program, the Diabetes Prevention Program, and the Immunization Program.

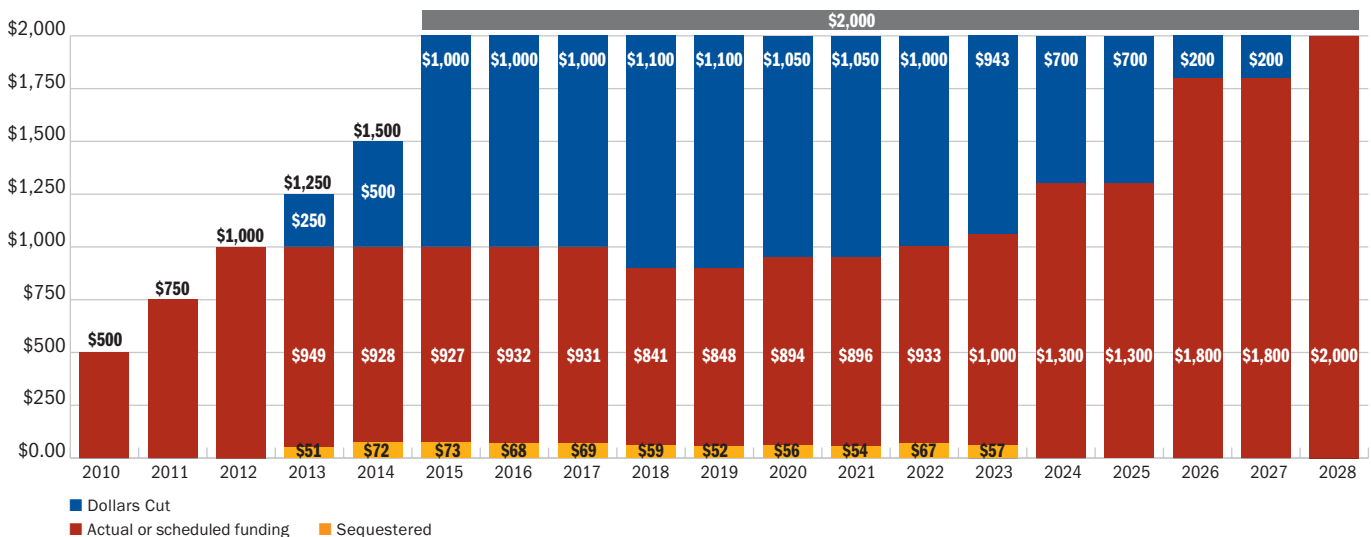
Prevention Fund programs have demonstrated the importance of expanding evidence-based approaches to preventing disease and strengthening the public health infrastructure. It has invested more than \$11 billion to enable communities in every state and territory to invest in effective, proven public health and prevention efforts.^{46,47} The fund supports proven prevention efforts targeted at reducing tobacco use,

expanding access to immunizations, increasing physical activity, improving nutrition, and expanding mental health and injury-prevention programs. It provides financial support directly to states and localities to address their most pressing health challenges with the programs and services most appropriate for their community needs.⁴⁸ Programs under the Prevention Fund have demonstrated significant cost savings, such as the Tips from Former Smokers Campaign, which has resulted in nearly 700,000 lifetime quits saving an estimated \$7.3 billion in smoking-related healthcare costs from 2012 to 2018.⁴⁹

To the detriment of the nation’s health, starting in FY 2013, the Prevention Fund has been repeatedly used for other priorities. There is a growing gap between the funds that were originally enacted and actual or scheduled funding. (See Figure 3.) In all, the fund is on pace to lose \$11.85 billion—about a third—of its originally allocated \$33 billion from FY 2013–2027.

FIGURE 3: String of Cuts to Prevention Fund Since Creation

Prevention Fund, FY 2010–2028



Note: The Patient Protection and Affordable Care Act (P.L. 110-48) established the original allocations (blue bars + red bars + gold bars), while most recently, the Bipartisan Budget Act of 2018 (P.L. 115-123, current law) triggered cuts (blue bars). CDC receives most but not all distributions from the Prevention Fund; the rest is allocated to the Substance Abuse and Mental Health Services Administration and the Administration for Community Living.

Source: CDC Annual Operating Plans⁵⁰

Funding for key initiatives

CDC supports both cross-cutting aspects of public health, such as public health laboratories, as well as issue-specific efforts, such as emergency preparedness, chronic and infectious disease prevention, and substance use disorder and suicide prevention. These programs place an emphasis on addressing the health disparities that exist in communities across the country.

Owing in part to flat funding levels over the past decade, CDC’s budgets for many of these initiatives remain insufficient to support all states, territories, tribes, and localities. This section describes funding trends for several key program areas.

Public health emergency preparedness and response

In 2019, the Pandemic and All-Hazards Preparedness and Advancing Innovation Act was passed,

reauthorizing CDC’s Public Health Emergency Preparedness (PHEP) Cooperative Agreement, the Hospital Preparedness Program, and other critical health security programs through FY 2023.⁵¹ Despite being the primary source of federal support for state, local, tribal, and territorial public health emergency preparedness and response, Congress cut this funding by hundreds of millions of dollars over the past two decades. (See Figure 4.) Following a \$22.6 million increase in FY 2022, PHEP received an additional \$21 million in FY 2023; however, TFAH and other public health groups recommended \$824 million for PHEP in FY 2023 to build readiness for health emergencies nationwide.

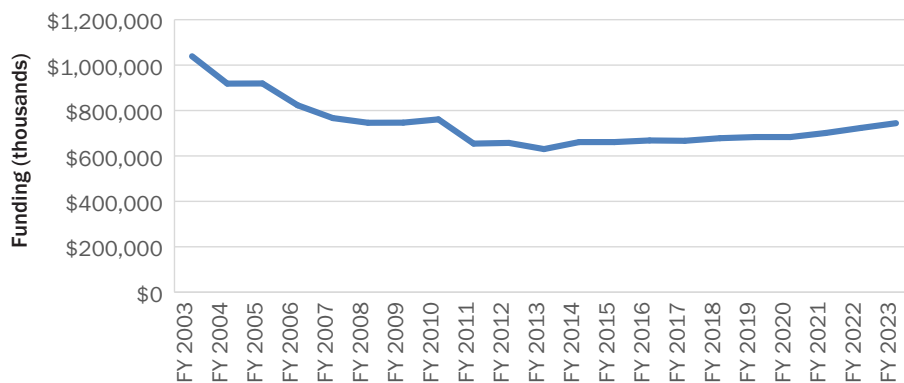
Editor’s note: The Pandemic and All-Hazards Preparedness and Advancing Innovation Act is due for reauthorization this year. TFAH recommends reauthorizing

expiring programs, such as PHEP and HPP, with robust funding levels. TFAH also urges Congress to include provisions to ensure nimble responses to emergencies, such as enabling better public health data collection (to detect threats earlier and more accurately), more efficient hiring and contracting, and enabling temporary reassignment of workers in health agencies during emergencies.

The erosion of funding over time increased the vulnerability of the United States ahead of the COVID-19 pandemic, which revealed the tragic consequences of the nation’s long-term neglect of public health capabilities at the federal, state, local, tribal, and territorial levels. Understaffed health departments were in some cases using 20th-century tools, such as telephones and fax machines,^{52,53} to respond to a 21st-century pandemic. They were needlessly working from a deficit when the pandemic emerged.

FIGURE 4: PHEP Funding Is Slowly Regaining Lost Ground, But Additional Investment Is Needed

CDC funding for state and local preparedness and response, FY 2003–2023



Note: Data for FY 2003–2015 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 2016–2023 reflect the sum of funding for the Public Health Emergency Preparedness Cooperative Agreement and Academic Centers for Public Health Preparedness. A change in CDC’s reporting practice in its annual operating plans accounts for this difference.

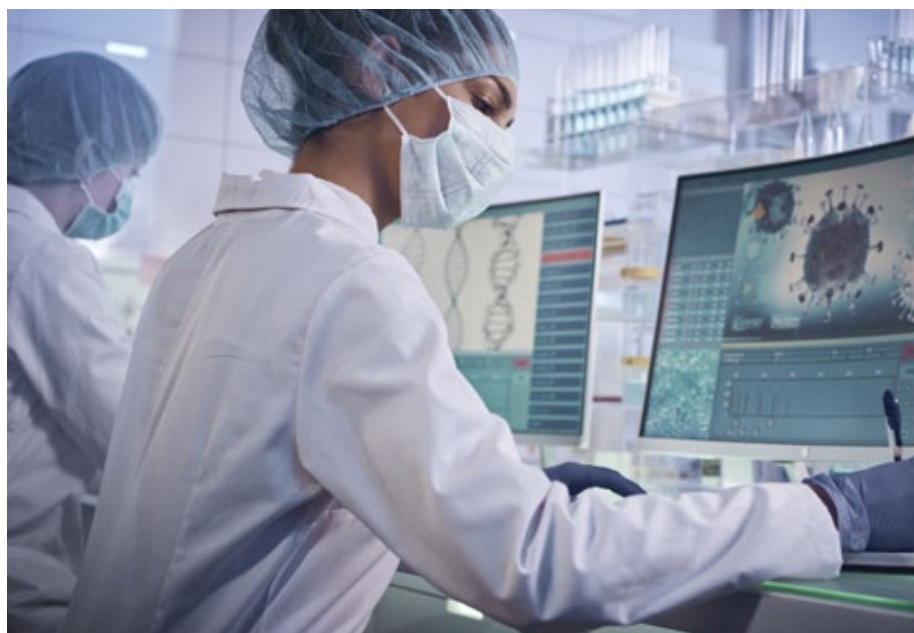
Source: CDC Annual Operating Plans⁵⁴

CDC's PHEP Cooperative Agreement program was established in 2002, in the aftermath of the September 11 terrorist attacks and the subsequent anthrax attacks. Recognizing the need for a robust public health system capable of responding effectively to emergencies, the program was created to enhance the preparedness and response capacity of state, local, tribal, and territorial public health departments.

The PHEP Cooperative Agreement program provides funding and technical assistance to support the development and maintenance of emergency preparedness and response infrastructure. Through this program, CDC collaborates with public health departments to develop and implement plans, train staff, and establish partnerships with other stakeholders, such as healthcare organizations, emergency management agencies, and community-based organizations.

Some of the key achievements of the program include enhanced surveillance and monitoring, strengthened response capabilities, improved communication and coordination, and increased community resilience.

The PHEP Cooperative Agreement provides funding directly to 50 states, four metro areas (Chicago, Los Angeles County, New York City, and the District of Columbia), and eight U.S. territories (as well as freely associated states) to improve readiness.⁵⁵ The program is intended to address “all hazards,” including infectious diseases, such as COVID-19, measles, and seasonal flu; weather-related emergencies; human-made disasters, such as terrorism; environmental disasters; and water contamination. Money from PHEP enables states to fund epidemiologists, laboratory staff, health educators, health



professionals, and field staff to investigate and address public health threats.⁵⁶

Also, in response to the 9/11 terrorist attacks, Congress created the Hospital Preparedness Program (HPP) to mobilize healthcare organizations and hospitals with federal support in the event of a regional or national emergency.⁵⁷

Hospitals must prepare for a range of emergencies, such as outbreaks, violence inside the hospital, extreme weather events, and cyber threats.⁵⁸

The HPP provides funding, technical assistance, and guidance to healthcare organizations, including hospitals, healthcare coalitions, and public health departments, with the goal of enhancing their preparedness and response capabilities. The program encourages collaboration and coordination among healthcare facilities, emergency management agencies, and other community partners to ensure a unified and effective response to various public health emergencies.

Since 2002, the HPP has supported public health emergency responses, including for Hurricane Katrina

(which exposed longstanding critical underfunding and unpreparedness in emergency response, presaging what the country experienced during the COVID-19 pandemic); the H1N1 pandemic; the Boston Marathon bombings; Hurricanes Harvey, Maria, and Irma; and the COVID-19 pandemic.^{59,60}

Administered and run through the Administration for Strategic Preparedness and Response at HHS, the Health Care Readiness Programs Portfolio, including HPP, is the primary federal source of funding to help the healthcare delivery system prepare for and respond to disasters. This funding line has been cut from \$515 million in FY 2003 to \$305 million in FY 2023—a nearly two-thirds cut, after adjusting for inflation.⁶¹

During the first year of the COVID-19 pandemic, the then Office of the Assistant Secretary for Preparedness and Response provided \$350 million in emergency supplemental funding to support hospitals, health systems, and healthcare providers to prepare for and respond to COVID-19. Of this, Congress awarded \$100 million as



Simone Hogan

part of the Coronavirus Preparedness and Response Supplemental Appropriations Act and \$250 million as part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The funding supported the National Special Pathogen System, a nationwide network that coordinates the National Emerging Special Pathogens Training and Education Center; hospital associations in all 50 states, the District of Columbia, New York City, and Puerto Rico; regional Ebola and other special pathogen treatment centers; and HPP recipients.⁶²

Owing in part to long-term underfunding, the pandemic exacerbated major gaps in healthcare preparedness, including coordinating surge capacity across the system,^{63,64} managing and deploying supplies, such as personal protective equipment; building and maintaining preparedness for high-consequence infectious diseases;⁶⁵ preparedness of facilities that serve people at higher risk of poor health outcomes, such as long-term care facilities; and lack of training and preparedness for events in healthcare.⁶⁶ Experts have also identified additional gaps, such as pediatric surge capacity,⁶⁷ burn

capacity, other specialty care needed for emerging threats, and ongoing stress on the healthcare system's ability to provide emergency care.

When extraordinary public health threats occur, the needed response may exceed existing capacity and countermeasures, therefore requiring supplemental funding. There are different mechanisms for facilitating such funding. The most frequent approach is for the administration to request and for Congress to pass a supplemental appropriation, as it did during the initial stages of the COVID-19 pandemic. However, emergency supplemental funding can create additional challenges. For example, Congress often mandates that emergency funding can only be used for specific purposes and responses. Therefore, supplemental funding provided to health departments for COVID-19 response could not be used for mpox vaccination clinics, even when the two outbreaks overlapped.⁶⁸ Often, supplemental funds are also not allowed to be used to shore up underlying preparedness capacity, so gaps that states faced going into the pandemic may remain after the pandemic. Emergency funding

is also short-term, so it is difficult for recipients to hire and retain a workforce, knowing the funds will end in a few years. Finally, the surge of funds may lead policymakers at federal, state, and local levels to believe that public health does not need additional money, even for nonemergency programs, often leading to budget cuts. This leads to a pattern of boom-and-bust funding for public health, which contributes to an unstable workforce and infrastructure. The emergency supplemental request and approval process may result in significant delays, as was the case during the Zika outbreak in FY 2016.⁶⁹

Other mechanisms, including the following, can potentially accelerate the availability of resources:

Infectious Disease Rapid Response Reserve Fund, established by the FY 2019 Labor-HHS-Education appropriations bill, can be tapped to prevent, prepare for, or respond to a declared infectious disease emergency.⁷⁰ Congress also added to the fund an additional \$85 million in FY 2020, \$10 million in FY 2021, \$20 million in FY 2022, and \$35 million in FY 2023.⁷¹ Under the direction of the HHS secretary, funds may be transferred to other Public Health Service Act programs as necessary. This mechanism can move targeted money quickly. However, the demands of addressing many major outbreaks far exceed the balance of the fund, especially if medical countermeasures are required. For example, HHS tapped \$105 million from the fund to begin to respond to the COVID-19 pandemic within days of the federal public health emergency declaration.⁷² Congress replenished the fund with \$600 million in COVID-19-related supplemental legislation.⁷³

Public Health Emergency Rapid Response Fund is designed to be accessed during a declared public health emergency. However, this fund has long been nearly empty. The Pandemic and All-Hazards Preparedness and Advancing Innovation Act requires the Government Accountability Office to audit the fund and to make recommendations for how to improve it.⁷⁴ Unlike the Infectious Diseases Rapid Response Reserve Fund, the Public Health Emergency Rapid Response Fund can be used for noninfectious disease emergencies.

Limited authority under the secretary of HHS to transfer funds among HHS programs accounts. During the COVID-19 response, for example, then-HHS Secretary Alex Azar transferred up to \$136 million among HHS programs as a stop-gap measure.⁷⁵ Transfers can have major harms on public health programs, as was evident during the Zika response, when the HHS secretary redirected \$44 million from PHEP grants while CDC waited for supplemental funding.⁷⁶ Even when Congress back-fills these transfers, the harm has often already been done, as grantees cannot easily hire back a lost workforce.

These mechanisms are intended to serve as a bridge between existing annual funding and emergency supplemental funds but are not intended to supplant or substitute for either. In the early days of the COVID-19 pandemic, transfers from the Infectious Diseases Rapid Response Reserve Fund and other HHS programs helped to jumpstart the response, but delays in the administration's request for emergency supplemental funding, as well as its request to repurpose existing funds, hindered the nation's overall response.⁷⁷

Of course, consistently providing adequate annual funding for public health agencies at the state, local, territorial, and tribal levels would reduce the country's reliance on such emergency tools.

The Biden administration has developed a Pandemic Preparedness Plan as part of a larger effort to transform U.S. capabilities to prepare for and respond rapidly and effectively to future pandemics and other high-consequence biological threats. The president's FY 2024 budget requested \$6.1 billion in mandatory funds for CDC to "modernize and build laboratory capacity, strengthen public health data systems; enhance domestic and global disease surveillance, biosafety, and biosecurity efforts; and support capabilities for monitoring and evaluating vaccine and medical countermeasures safety and effectiveness."⁷⁸ If appropriated, this funding would signify a considerable commitment to bolstering the nation's public health infrastructure and enhancing its capacity to respond to existing and emerging health threats. By allocating resources to upgrade and expand laboratory capabilities, fortify public health data infrastructure, and augment disease-monitoring efforts both nationally and internationally, the budget request acknowledges the critical importance of a robust and agile public health system in protecting the well-being of Americans. Additionally, the proposed funding to aid in assessing and scrutinizing the safety and efficacy of vaccines and medical countermeasures demonstrates a continued emphasis on ensuring the highest standards in public health interventions.

Promoting health at the community level

The conditions in which people are born, live, work, play, and age affect their health and well-being.^{79,80,81} Social determinants of health (SDOH)—such as economic opportunity, accessible transportation, robust physical infrastructure, educational access, affordable and nutritious food, stable housing, and public safety—all contribute to wellness and life expectancy.^{82,83} Despite these factors' significant impact on a community's health outcomes—by far the most influential⁸⁴—many places still struggle to make healthy options easily accessible for people. And CDC has minimal funding targeted to addressing SDOH and altering these conditions.

Governmental and nongovernmental organizations, along with community members, must work together to improve SDOH and the overall health of whole populations, rather than one individual at a time.⁸⁵ Public health leaders can serve a critical role, leading and/or informing policy interventions, convening multisector stakeholders, and supplying actionable data, among other activities.

For example, community partnerships have developed and advocated for increasing the number of healthy food retailers in low-income neighborhoods; engaged in Complete Streets planning to address the safety needs of pedestrians, bicyclists, and transit riders; worked to reduce exclusionary disciplinary practices to create more supportive school environments; and launched multimedia education campaigns to reduce tobacco use. Public health officials are often in the lead, convening and providing data to support these partnerships.

Another model is the National Diabetes Prevention Program, which includes

the Appalachian Diabetes Control and Translation Project⁸⁶ and the Native Diabetes Wellness Program.⁸⁷ Millions of people in Appalachia suffer from poor health outcomes, including elevated rates of type 2 diabetes, tied to a complex interplay of socioeconomic, geographical, and cultural factors.⁸⁸ High poverty rates, limited access to healthcare, and challenging geography hinder proper diabetes management and prevention strategies. Moreover, Appalachia's distinct cultural identity, marked by isolation, self-reliance, and strong community ties, influences health-seeking behaviors, dietary habits, and attitudes toward preventive care.

Native Americans exhibit the highest prevalence of type 2 diabetes among all racial groups in the United States.⁸⁹ This phenomenon is embedded within a broader context originating from centuries of colonization, forced relocation, and forced cultural assimilation, leading to a legacy of historical trauma. This historical trauma and disruption of traditional lifestyles have resulted in adverse intergenerational health outcomes, attributable to a confluence of factors disproportionately affecting Native Americans. Key risk factors encompass the transition from nutrient-dense traditional diets to calorie-rich processed foods, restricted access to healthcare, and pervasive socioeconomic disparities.

Both projects utilize regional coalitions and community resources to deliver the National Diabetes Prevention Program's education and lifestyle interventions to communities disproportionately impacted by the disease. But insufficient funding limits the number of communities where these programs occur.

Health disparities account for an estimated \$320 billion in annual healthcare spending, which could grow to \$1 trillion by 2040 if not addressed.⁹⁰ Two effective CDC programs that specifically focus on racial and ethnic populations at elevated risk of preventable illness, injury, and death—Racial and Ethnic Approaches to Community Health (REACH) and Healthy Tribes, an overarching title that encompasses programs including Good Health and Wellness in Indian Country—are underfunded and compete for limited resources. Both have a solid track record of advancing culturally appropriate, evidence-informed, and effective interventions for populations that experience disproportionate burdens of chronic disease; Congress should appropriately fund both programs to match the scale of the problem.

These and other community prevention efforts can effectively address a wide variety of negative health outcomes, such as chronic disease, substance misuse, injury, and violence.^{91,92} By extension, this investment can also help reduce preventable healthcare spending, producing a substantial return on investment. For example, school-based substance misuse screenings, brief interventions, and referrals to treatment programs have produced returns on investment as high as \$20 for every \$1 spent.^{93,94} School-based violence-prevention efforts can achieve a return ranging from \$15 to \$81 for every \$1 spent. Tobacco-control mass-

media campaigns have demonstrated returns ranging from \$7 to \$74 per \$1 spent,^{95,96,97,98} and CDC’s Tips from Former Smokers (Tips) campaign, the first federally paid national tobacco-education campaign, resulted in nearly 700,000 lifetime quits which helped prevent an estimated 129,000 early deaths and an estimated \$7.3 billion in smoking-related healthcare costs from 2012 to 2018.⁹⁹ Prevention Fund monies funded the Tips campaign.

While CDC’s existing programs have proved effective in addressing several nonmedical factors of health, FY 2021 was the first year that CDC specifically received funds (\$3 million) to focus on SDOH strategies. The \$8 million that CDC received in FY 2022 and FY 2023 for SDOH have continued to build momentum for innovative work, but that amount needs to grow to fully address the scope of the issue and allow CDC to fund implementation of the plans to address SDOH issues in communities. To build the evidence base for future SDOH work, CDC evaluated existing multisector coalitions that are working to advance health equity through SDOH-centered solutions. In a first-year evaluation, CDC found that of 42 SDOH community partnerships evaluated, 90 percent of them contributed to community changes that promote healthy living. Of the 29 partnerships that reported health outcomes data, their programs are projected to save \$644 million in medical and productivity costs over 20 years.¹⁰⁰

Chronic disease prevention

According to CDC, roughly 60 percent of U.S. adults¹⁰¹ live with one or more chronic diseases, such as heart disease, diabetes, cancer, obesity, and/or asthma.¹⁰² Together, chronic diseases are responsible for seven in 10 deaths each year in the United States¹⁰³ and, along with mental health conditions, are responsible for 90 percent of the country's \$4.3 trillion in annual healthcare expenditures.^{104,105} Nevertheless, CDC is on track to spend only \$1.4 billion on chronic disease prevention and health promotion in FY 2023, roughly the same level as in recent years and below the FY 2014 level, after adjusting for inflation. (See Figure 5.)

Successful programs, such as CDC's State Physical Activity and Nutrition (SPAN) program, do not have enough funding to operate in all 50 states. SPAN provides evidence-based strategies to improve nutrition and encourage physical activity by helping to establish and promote health education in early care and education settings, breastfeeding, adoption of food-service guidelines, street designs that increase connections and provide multiple route options, and other local efforts. Unfortunately, in FY 2023, as in recent years, SPAN only has enough funding to support programs in 16 states.¹⁰⁶ Additional states could receive this support for an estimated \$1.2 million each. Compared with the estimated \$170 billion in obesity-related healthcare costs that the United States spends annually,¹⁰⁷ increasing SPAN funding would be a small investment that could substantially reduce overall healthcare costs.

While genetic risk factors may play a role in the development and progression of chronic disease, behaviors such as smoking, alcohol consumption, diets with high-calorie and low-nutrition content, and a lack of physical activity are major factors that influence the rate and severity of chronic disease.¹⁰⁸ For instance, just one behavioral risk factor—sedentary lifestyle—contributes to an estimated 10 percent of premature deaths¹⁰⁹ and is a major risk factor for severe COVID-19.¹¹⁰ Yet at least 15 percent of adults in every state and territory in the country are physically inactive.¹¹¹ CDC estimates that physical inactivity alone costs the healthcare system \$117 billion annually.¹¹² These risk factors have ties to social, economic, and environmental conditions. Prevention efforts should involve improving the conditions in people's lives that promote healthful behaviors such as access to and affordability of healthy foods, and community-built environments that encourage physical activity.

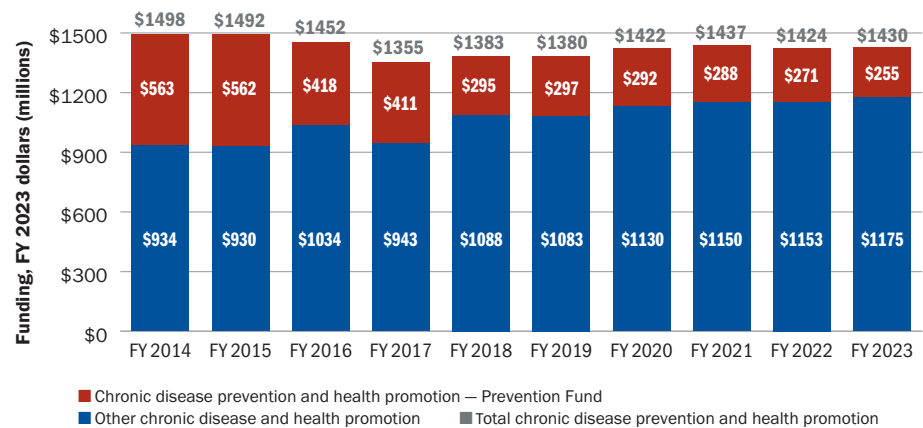
While the majority of adults in the United States live with chronic disease, the burdens are not distributed equally and usually concentrate in neighborhoods and communities that have been historically marginalized and under-resourced. Racial and ethnic disparities are longstanding and severe. For example, according to the National Association of Chronic Disease Directors, while white men are more likely to develop colorectal cancer than Black men and white women are more likely to develop breast cancer than Black women, both Black men and women are more likely to die from those diagnoses.¹¹³

Essential to reducing healthcare expenditures related to treating chronic disease is increased investment in effective and proven prevention programs. CDC’s chronic disease prevention and health promotion activities focus on four key areas:¹¹⁴

1. Measuring prevalence of chronic diseases and risk factors among U.S. residents.
2. Making environmental improvements that facilitate healthy choices.
3. Strengthening prevention services within healthcare systems to keep people well and diagnose diseases early.
4. Creating connections between clinical services and community programs that are designed to help people prevent and manage their chronic diseases and conditions.

CDC has several evidence-based prevention and control programs across the chronic disease spectrum that are ready for communities to implement and that are cost-effective. For example, CDC’s National Diabetes Prevention Program may save more than \$1,000 annually per participant in healthcare costs.¹¹⁵ In the first five-year cycle (2012–2016) of its Million Hearts initiative, a national effort to prevent one million heart attacks and strokes, the program prevented an estimated 135,000 heart attacks, strokes, and related acute cardiovascular events, and it saved \$5.6 billion in direct medical costs, a substantial portion of which was saved by public insurance programs such as Medicare and Medicaid.¹¹⁶

FIGURE 5: CDC’s Current Chronic Disease Funding Lags Behind FY 2014 Level
Chronic disease funding, adjusted for inflation, FY 2014–2023



Note: Funding levels are in FY 2023 dollars. TFAH adjusted data for inflation using the Bureau of Economic Analysis’s price index for gross domestic product.

Source: CDC Annual Operating Plans¹¹⁷

Substance misuse and suicide prevention

The nation's escalating and ever-changing drug overdose and mental health crises continue to cost the lives of tens of thousands of Americans. Provisional data CDC released in February 2023, for example, predicted over 106,000 overdose deaths in the 12-month period ending in September 2022.¹¹⁸ The Office of National Drug Control Policy has explained that overdoses due to illicit synthetic drugs like fentanyl and methamphetamine account for most of these deaths.¹¹⁹ In fact, the rate of drug overdose deaths involving synthetic opioids other than methadone increased 22 percent between 2020 and 2021.¹²⁰

People of color, including American Indian/Alaska Native (AI/AN) and Black people, have been hit hardest by the spike in overdoses in recent years. According to CDC, overdose rates for 2021 were highest for the non-Hispanic AI/AN population, at 56.6 overdoses per 100,000 residents, and the non-Hispanic Black population, at 44.2 overdoses per 100,000 residents.¹²¹

Compounding the overdose crisis, CDC has reported that the number of suicides—over 48,000 deaths—increased in 2021 to nearly historic peak levels after slight declines in 2019 and 2020, and suicide rates increased significantly, overall, for non-Hispanic Black, AI/AN, and Hispanic persons in 2021.¹²² CDC findings released in February 2023 also show worsening trends in suicidal thoughts and behaviors among teen girls through 2021.¹²³ Another analysis of data between 2018 and 2020 shows that emergency department visits for mental-health-related concerns occurred among non-Hispanic Black

988 SUICIDE & CRISIS LIFELINE

In July 2022, a new number—988, akin to 911 for other emergencies—was established for Lifeline, the nation's suicide hotline. The hotline was first launched in 2005, but it had a 10-digit number that limited its accessibility. The new 988 Suicide and Crisis Lifeline represents a major step toward a crisis-response system in which individuals receive treatment through calls, messages, and texts, from mobile crisis teams of mental health professionals

or through stays in crisis stabilization units, if local jurisdictions have funded such programs. In March 2023, calls answered by the crisis line increased 47 percent as compared to March 2022, chats answered increased by 136 percent and texts answered increased by 1,299 percent.¹²⁹ In March 2023, the 988 administrator announced the expansion of specialized support for LGBTQ+ persons via 24/7 chat and text services.¹³⁰

adults at an average annual rate of around 97 visits per 1,000 individuals—roughly double the rate for non-Hispanic white adults.¹²⁴

Overall, \$30 million is dedicated to CDC's suicide prevention work in FY 2023, up from \$20 million in FY 2022.¹²⁵ To help reverse increases in suicide and overdoses and promote other positive outcomes, CDC has identified prevention of adverse childhood experiences (ACEs) as a key priority. CDC estimates that 61 percent of adults report having experienced at least one ACE in their lifetime¹²⁶, and the prevention of ACEs could reduce cases of depression in adults by 44 percent while also averting 1.9 million cases of heart disease, among other benefits.¹²⁷ Additional benefits can come from supportive school environments, programs that promote positive youth development, and policies and practices that support LGBTQ+ students.¹²⁸

Substance misuse, overdose, and suicide share common risk and protective factors. However, few federally funded programs target their

underlying causes and the adversity that often precedes these health concerns. Addressing ACEs and suicide, in particular, requires socially focused efforts, including strengthening economic support for families, intervening early to reduce harm when children are mistreated, and aiding safe and supportive schools. Studies also show that the social and economic crises precipitated by the pandemic, coupled with barriers to behavioral health treatment and racial disparities in access to treatment options, put people in need of mental health or other services at particular risk.¹³¹

Through a prevention approach focused on translating research to action, CDC can support efforts to address these issues by redoubling the focus of public health departments on SDOH, shared risk and protective factors, and community services. These efforts are complementary to individual and treatment-focused services supported by the Substance Abuse and Mental Health Services Administration (SAMHSA) and other agencies. Some CDC programs funded to address the above issues include:

Essentials for Childhood: Preventing Adversity through Data to Action.

In 2020, CDC launched funding for the Preventing ACEs: Data to Action cooperative agreement, which aims to build state-level capacity to collect and learn from ACEs data and to implement strategies to prevent ACEs. CDC has also released several technical packages—collections of proven strategies to reduce specific risks or outcomes—to address ACEs, as described in Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence.¹³² CDC currently supports six state-level offices, institutes, or departments that are implementing two or more strategies from Preventing ACEs. The Connecticut Office of Early Childhood, for example, has trained early childhood home-visitation providers on ACE risk and protective factors and has added questions on ACEs among high school students to its survey efforts.¹³³

Injury Control Research Centers.

To better understand opportunities to prevent suicide and other injury, in 2019, CDC funded nine Injury Control Research Centers at approximately \$833,000 per center each year for five years.¹³⁴ Research topics among the centers include prevention of ACEs, opioid overdose, suicide, and intimate partner and sexual violence, among other issues.

Core State Violence and Injury Prevention Program. To support the implementation, evaluation, and dissemination of strategies to address child abuse and neglect, intimate partner/sexual violence, and other injuries, CDC's Core State Violence and Injury Prevention Program (Core SVIPP) currently funds and

provides technical assistance to 23 state health departments.¹³⁵ States efforts through the Core SVIPP are diverse, but Wisconsin, for example, has utilized its award to address problems with parenting and child behavior and to promote healthy dating relationships, among other initiatives.¹³⁶ Certain Core SVIPP recipients also use funding to improve injury data quality and methodology.¹³⁷ TFAH recommends that core SVIPP should be funded to expand to all 50 states, the District of Columbia and U.S. territories.

Suicide Prevention. The CDC Comprehensive Suicide Prevention program funds states, communities, and tribes to implement comprehensive suicide prevention plans. It currently funds 17 recipients to implement and evaluate a comprehensive public health approach to suicide prevention, with attention to populations at higher risk. The program consists of forming multisector partnerships, using data to identify populations that are disproportionately impacted and risk and protective factors, implementing rigorous evaluation efforts, and filling gaps through complementary strategies and effective communications. The program seeks to reduce suicide and suicide attempts by 10 percent and build toward a national goal of reducing suicide by 20 percent by 2025.¹³⁸ The president's FY 2024 budget requests \$80 million to expand suicide prevention programs.¹³⁹

Overdose Data to Action. CDC funding for opioid overdose prevention and surveillance increased by \$380 million between FY 2017 and FY 2023, from \$125 million

to almost \$506 million.¹⁴⁰ The agency leverages this funding to provide grants to states and a handful of large local health agencies to strengthen prescription drug monitoring programs, implement evidence-based overdose prevention strategies, expand the surveillance of opioid overdoses, and promote appropriate prescribing. To facilitate multifaceted prevention efforts, CDC's Injury Center created the Overdose Data to Action (OD2A) grants program, which began awarding grants in September 2019. The program has awarded grants to 66 jurisdictions (state, territorial, county, and city health departments).¹⁴¹ CDC, for example, has funded work by the state of Washington to share data with local health jurisdictions, which resulted in increased evidence-based approaches by public safety and public health authorities and improved utilization of prevention strategies.¹⁴² The new OD2A funding included separate application processes for state and local health departments with the intention of funding up to 40 local communities with high rates of overdose.

CDC program funding to states, FY 2022

Much of the funding that CDC receives annually is directed to states, localities, tribes, and territories to support their communities' related health programming. Major priorities include funding for childhood vaccination programs (e.g., Hepatitis B, MMR, DTaP); prevention of serious infectious diseases, such as HIV/AIDS, tuberculosis, and various sexually transmitted infections; and chronic disease prevention.

TABLE 1: CDC PROGRAM FUNDING TO STATES, FY 2022

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		\$6,557,429	\$5,528,735		\$13,366,169	\$2,248,081	\$404,616		\$13,988,137
Alaska	\$423,449	\$440,000	\$2,094,922		\$19,964,086	\$1,237,243	\$299,963		\$2,510,769
Arizona		\$1,647,264	\$11,917,609		\$22,912,550	\$2,220,565	\$1,835,927		\$13,121,510
Arkansas		\$1,593,657	\$4,667,009		\$11,725,989	\$1,534,085			\$6,589,529
California	\$1,837,205	\$2,867,346	\$104,624,247	\$575,000	\$38,054,243	\$15,947,365	\$4,509,046		\$116,516,203
Colorado	\$1,887,306	\$1,780,002	\$9,514,645		\$15,830,575	\$6,519,243	\$2,092,745		\$10,835,519
Connecticut	\$511,133		\$6,408,636		\$10,974,251	\$5,395,397	\$2,023,799		\$6,593,266
Delaware			\$3,678,971		\$8,083,934	\$1,582,762	\$973,167		\$2,639,813
D.C.	\$275,000	\$18,328,015	\$97,688,337	\$150,000	\$28,424,398	\$5,923,330	\$2,065,986		\$35,893,152
Florida	\$468,638	\$855,000	\$6,462,764		\$17,621,326	\$6,051,221	\$2,165,950		\$72,658,390
Georgia	\$252,622	\$8,037,895	\$129,878,325	\$375,000	\$70,170,548	\$8,868,683	\$1,701,656		\$49,255,879
Hawaii		\$160,000	\$5,989,836		\$7,246,778	\$1,930,446	\$477,273		\$3,232,072
Idaho	\$222,010	\$160,000	\$1,119,821		\$6,801,661	\$862,570	\$340,000		\$1,961,767
Illinois	\$4,183,184	\$3,790,000	\$29,428,672	\$325,000	\$35,209,167	\$4,278,832	\$2,959,635		\$28,885,148
Indiana		\$410,000	\$7,839,872		\$8,884,231	\$2,310,346	\$1,677,572		\$12,838,548
Iowa		\$1,946,709	\$2,785,046		\$9,718,938	\$3,675,796	\$1,874,412		\$2,883,627
Kansas		\$375,000	\$4,418,631		\$10,508,288	\$1,229,474	\$1,089,363		\$2,639,631
Kentucky		\$679,990	\$6,137,303		\$12,349,795	\$1,771,328	\$1,616,597		\$7,466,297
Louisiana	\$335,104	\$159,998	\$5,141,116		\$14,072,146	\$1,518,238	\$1,116,793		\$18,028,542
Maine		\$200,000	\$4,917,611		\$7,404,573	\$1,568,431	\$1,859,000		\$2,205,917
Maryland	\$102,000	\$5,325,618	\$61,582,186	\$1,030,000	\$25,926,190	\$16,326,096	\$2,830,864		\$29,034,914
Massachusetts	\$1,948,048	\$2,479,370	\$32,510,680	\$500,000	\$18,589,189	\$7,584,629	\$3,557,227		\$15,729,308
Michigan	\$1,700,000	\$1,976,123	\$10,875,153		\$24,233,661	\$4,602,740	\$7,900,052		\$18,047,625
Minnesota	\$606,688	\$2,104,172	\$14,831,180		\$20,265,676	\$10,401,022	\$3,132,089		\$17,591,385
Mississippi			\$3,827,769		\$12,445,663	\$1,030,196	\$317,340		\$11,558,686
Missouri	\$380,338	\$1,474,990	\$11,321,746	\$500,000	\$13,967,267	\$1,732,981	\$2,038,628		\$13,106,450
Montana	\$340,124	\$852,500	\$2,731,226		\$10,291,753	\$1,199,682	\$848,325	\$2,999,994	\$1,846,209
Nebraska		\$160,000	\$4,139,472	\$499,999	\$6,567,484	\$2,111,932	\$973,306		\$2,545,353
Nevada		\$440,000	\$2,239,677		\$11,276,191	\$1,436,641	\$1,111,524		\$8,264,796
New Hampshire	\$389,452	\$732,500	\$3,383,875		\$7,160,579	\$1,402,169	\$2,441,484		\$1,873,586
New Jersey	\$1,733,660	\$1,542,446	\$11,793,606		\$10,274,043	\$2,403,308	\$2,169,315		\$27,659,939
New Mexico	\$339,937	\$160,000	\$6,595,036		\$11,332,618	\$3,617,626	\$1,718,581		\$3,250,267
New York	\$1,703,324	\$9,732,923	\$42,840,651		\$33,246,498	\$15,060,585	\$4,649,633		\$98,556,390
North Carolina	\$1,589,654	\$3,477,472	\$16,341,142		\$20,411,285	\$4,407,053	\$1,971,961		\$22,181,267
North Dakota		\$160,000	\$853,768		\$8,047,559	\$965,735			\$1,841,961
Ohio	\$450,000	\$652,500	\$19,318,016		\$13,628,670	\$6,468,261	\$1,620,646		\$18,109,943
Oklahoma		\$200,000	\$5,936,670		\$11,613,970	\$1,946,292	\$350,000		\$7,587,835
Oregon	\$449,937	\$825,000	\$7,401,589		\$16,809,256	\$4,181,804	\$1,570,912		\$6,926,833
Pennsylvania	\$476,018	\$635,547	\$19,228,365		\$17,466,412	\$5,073,230	\$2,323,495		\$27,040,009
Rhode Island	\$444,790	\$160,000	\$87,749,858	\$500,000	\$11,039,797	\$1,719,842	\$1,911,243		\$2,308,101
South Carolina		\$1,435,000	\$2,091,725		\$17,337,759	\$2,337,629	\$1,179,529		\$12,602,450
South Dakota			\$734,370		\$8,899,963	\$1,176,429	\$635,818		\$1,594,299
Tennessee	\$450,000	\$1,970,186	\$9,455,081		\$12,509,775	\$9,279,357	\$1,182,285		\$15,462,873
Texas	\$440,233	\$925,682	\$36,390,328		\$24,350,132	\$4,823,366	\$3,138,507		\$69,029,151
Utah	\$251,816	\$2,673,129	\$3,234,207		\$14,923,330	\$6,173,210	\$2,276,678		\$2,754,552
Vermont		\$160,000	\$748,841		\$6,636,624	\$1,354,838	\$1,775,218		\$1,795,319
Virginia		\$1,653,250	\$21,087,431		\$28,388,293	\$4,757,249	\$4,065,647		\$16,396,279
Washington	\$415,663	\$493,500	\$34,532,465		\$20,040,681	\$8,668,295	\$1,918,057		\$17,249,850
West Virginia			\$2,483,249		\$9,387,457	\$642,110	\$492,558		\$2,181,506
Wisconsin	\$475,651	\$1,111,389	\$11,085,850		\$14,943,189	\$6,981,937	\$2,735,315		\$4,999,161
Wyoming		\$160,000	\$670,825		\$4,170,042	\$710,966	\$300,000		\$1,804,111
United States	\$25,082,984	\$93,661,602	\$938,258,145	\$4,454,999	\$835,504,652	\$217,250,646	\$94,219,737	\$2,999,994	\$881,674,124

TABLE 1: CDC PROGRAM FUNDING TO STATES, FY 2022

State	Immunization and Respiratory Diseases	Injury Prevention and Control	Occupational Safety and Health	Public Health Preparedness and Response	Public Health Scientific Services (PHSS)	Public Health Social Services Emergency Fund (PHSEF)	Vaccines for Children	World Trade Center Health Programs (WTC)	Total State Funding
Alabama	\$4,500,225	\$7,174,096	\$1,949,377	\$9,437,092	\$727,445	\$11,888,106	\$72,853,799		\$150,623,307
Alaska	\$1,908,270	\$6,277,759	\$99,352	\$5,760,000	\$1,505,775	\$5,322,162	\$9,270,388		\$57,114,138
Arizona	\$8,304,812	\$11,940,978	\$655,771	\$12,895,655	\$611,396	\$17,574,992	\$103,452,555		\$209,091,584
Arkansas	\$3,296,661	\$3,825,110	\$75,964	\$6,657,845	\$628,374	\$8,610,719	\$46,296,519		\$95,501,461
California	\$34,102,184	\$22,912,121	\$8,507,198	\$65,173,715	\$3,018,580	\$84,737,898	\$503,075,414		\$1,006,457,765
Colorado	\$6,920,614	\$10,697,960	\$6,303,515	\$11,407,317	\$987,760	\$20,209,805	\$57,404,031		\$162,391,037
Connecticut	\$6,970,192	\$11,548,565	\$1,982,369	\$7,756,083	\$523,655	\$10,424,403	\$38,820,872		\$109,932,621
Delaware	\$2,081,800	\$6,804,722		\$5,401,810	\$808,820	\$7,171,175	\$12,443,694		\$51,670,668
D.C.	\$12,034,985	\$50,311,754	\$1,287,597	\$9,396,569	\$8,065,366	\$42,818,360	\$13,501,949		\$326,164,798
Florida	\$17,013,704	\$21,844,824	\$4,051,235	\$32,171,825	\$597,178	\$38,853,046	\$303,743,112		\$524,558,213
Georgia	\$25,917,416	\$37,505,150	\$847,045	\$18,015,921	\$15,403,072	\$37,704,309	\$159,061,230		\$562,994,751
Hawaii	\$2,223,297	\$3,991,568	\$243,500	\$6,479,045	\$1,565,052	\$8,497,705	\$16,995,195		\$59,031,767
Idaho	\$2,112,487	\$3,523,141		\$5,320,128	\$231,628	\$5,417,460	\$24,214,799		\$52,287,472
Illinois	\$16,517,447	\$17,314,473	\$4,479,171	\$26,802,633	\$325,809	\$42,981,191	\$130,434,645		\$347,915,007
Indiana	\$4,860,977	\$11,455,170	\$680,884	\$11,702,107	\$316,879	\$15,363,369	\$90,359,491		\$168,699,446
Iowa	\$4,540,566	\$5,652,066	\$4,840,450	\$7,158,236	\$186,001	\$16,156,512	\$39,421,843		\$100,840,202
Kansas	\$3,178,612	\$6,536,327		\$6,818,460	\$894,131	\$10,088,405	\$30,600,415		\$78,376,737
Kentucky	\$4,103,804	\$13,021,061	\$3,967,370	\$8,828,495	\$322,538	\$11,467,284	\$57,231,562		\$128,963,424
Louisiana	\$3,882,317	\$13,654,075	\$658,512	\$9,083,163	\$1,514,791	\$27,833,894	\$83,780,092		\$180,778,781
Maine	\$2,984,128	\$8,882,977		\$5,510,000	\$569,045	\$6,229,357	\$15,274,507		\$57,605,546
Maryland	\$21,030,883	\$17,504,852	\$9,307,058	\$13,527,745	\$24,555,289	\$70,689,056	\$85,104,003	\$499,996	\$384,376,750
Massachusetts	\$8,718,224	\$18,289,202	\$4,541,809	\$13,800,043	\$2,041,904	\$23,959,427	\$75,778,337		\$230,027,397
Michigan	\$12,519,626	\$21,771,784	\$2,788,373	\$16,981,692	\$356,966	\$19,172,095	\$96,494,405		\$239,420,295
Minnesota	\$8,744,910	\$10,550,716	\$3,421,952	\$12,284,415	\$566,043	\$17,982,524	\$50,144,915		\$162,627,687
Mississippi	\$2,694,248	\$3,200,555		\$6,596,675	\$95,365	\$11,037,291	\$44,238,081		\$97,041,869
Missouri	\$8,303,495	\$8,484,675	\$1,457,892	\$11,371,063	\$114,797	\$16,656,555	\$69,823,152		\$160,734,029
Montana	\$1,679,796	\$5,181,324	\$286,615	\$5,210,000	\$515,106	\$6,244,465	\$10,569,318		\$50,796,437
Nebraska	\$2,664,445	\$3,744,737	\$2,679,961	\$5,483,678	\$800,009	\$9,755,862	\$24,290,998		\$66,417,236
Nevada	\$3,792,257	\$7,724,902	\$178,764	\$7,289,792		\$9,920,163	\$41,183,988		\$94,858,695
New Hampshire	\$2,016,296	\$4,611,884	\$542,431	\$5,865,902	\$193,310	\$7,278,722	\$11,735,218		\$49,627,408
New Jersey	\$6,614,817	\$13,415,502	\$825,643	\$16,334,607		\$18,999,045	\$93,376,304	\$500,000	\$207,642,235
New Mexico	\$3,748,246	\$6,991,064	\$1,589,954	\$6,949,221	\$22,000	\$9,149,669	\$33,457,980		\$88,922,199
New York	\$20,835,777	\$23,689,226	\$4,794,718	\$39,436,013	\$2,800,000	\$55,017,279	\$275,042,590	\$19,366,358	\$646,771,965
North Carolina	\$9,523,531	\$17,304,335	\$2,925,758	\$15,776,488	\$250,972	\$24,351,638	\$148,028,529		\$288,541,085
North Dakota	\$1,539,059	\$1,759,504		\$5,210,000	\$194,213	\$4,587,016	\$8,677,557		\$33,836,372
Ohio	\$10,838,874	\$26,156,673	\$3,325,999	\$18,217,609		\$25,997,233	\$139,041,470		\$283,825,894
Oklahoma	\$3,736,606	\$9,370,782	\$234,274	\$7,950,479	\$88,000	\$13,238,462	\$67,765,149		\$130,018,519
Oregon	\$6,254,680	\$9,032,273	\$1,218,074	\$8,439,412	\$334,169	\$15,073,530	\$40,303,731		\$118,821,200
Pennsylvania	\$14,723,037	\$27,612,556	\$3,406,580	\$19,581,081		\$34,989,091	\$139,316,793		\$311,872,214
Rhode Island	\$1,870,705	\$9,076,697		\$5,364,683		\$5,759,909	\$14,960,596		\$142,866,221
South Carolina	\$3,426,111	\$6,940,330		\$10,399,303		\$11,866,096	\$72,833,460		\$142,449,392
South Dakota	\$1,628,694	\$3,379,615		\$5,185,928		\$5,136,680	\$10,230,786		\$38,602,582
Tennessee	\$8,474,292	\$12,190,836	\$778,563	\$12,193,260	\$22,000	\$16,721,906	\$101,222,165		\$201,912,579
Texas	\$27,071,033	\$7,441,386	\$3,924,626	\$42,270,242	\$365,256	\$58,691,530	\$581,277,463		\$860,138,935
Utah	\$3,316,233	\$6,413,618	\$2,554,961	\$7,393,766		\$10,981,273	\$28,625,735		\$91,572,508
Vermont	\$1,738,855	\$5,651,161		\$5,197,162		\$5,451,810	\$7,183,632		\$37,693,460
Virginia	\$9,112,535	\$20,190,810	\$1,789,573	\$17,366,084	\$10,257,666	\$33,895,045	\$88,395,981		\$257,355,843
Washington	\$9,297,924	\$12,430,579	\$3,832,132	\$13,663,945	\$66,000	\$21,573,558	\$91,116,078		\$235,298,727
West Virginia	\$1,671,843	\$7,064,105	\$601,214	\$5,189,763	\$123,662	\$7,363,693	\$23,319,323		\$60,520,483
Wisconsin	\$5,465,602	\$12,880,135	\$2,709,097	\$11,871,720	\$358,824	\$15,824,282	\$49,026,914		\$140,469,066
Wyoming	\$1,616,208	\$951,104		\$5,205,186	\$181,599	\$6,254,168	\$5,219,529		\$27,243,738
United States	\$392,123,340	\$615,880,819	\$100,345,331	\$649,383,056	\$83,106,445	\$1,022,969,225	\$4,336,020,290	\$20,366,354	\$10,313,301,743

Note: These figures do not include funding tied directly to the COVID-19 pandemic response. The U.S. total reflects grants and cooperative agreements to all 50 states and the District of Columbia, but it does not include territories, localities, or tribes for the purpose of comparability.

Source: CDC Grant Funding Profiles¹⁴³

CDC COVID-19 State, Tribal, Local, and Territorial Funding

Editor's Note: The Fiscal Responsibility Act of 2023, enacted in June of that year, increased the federal debt limit and rescinded \$27 billion in budget authority from a wide variety of accounts associated with the federal government's response to the COVID-19 pandemic. Consequently, a portion of the funding detailed below will no longer be available for these purposes.

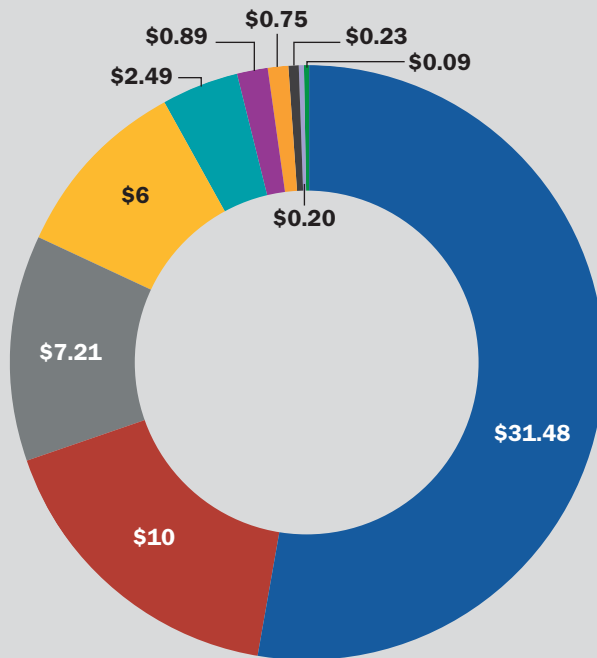
In response to the COVID-19 pandemic, CDC received several pandemic-specific, one-time supplemental appropriations from legislation enacted between March 2020 and March 2021.¹⁴⁴ These one-time monies were in addition to its annual allocation. The supplemental funds were:

- \$2.2 billion from the Coronavirus Preparedness and Response Supplemental Appropriations Act (March 2020);
- \$4.3 billion from the CARES Act (March 2020);
- \$1 billion from the Paycheck Protection Program and Health Care Enhancement Act (April 2020), transferred to CDC from the Public Health and Social Services Emergency Fund (PHSSEF) administered by HHS;
- \$10.3 billion from the PHSSEF went to health departments through CDC's Epidemiology and Laboratory Capacity program for testing and contact tracing.
- \$8.8 billion from the Coronavirus Response and Relief Supplemental Appropriations Act (December 2020);
- \$19.1 billion from the PHSSEF to health departments through CDC's Epidemiology and Laboratory Capacity program for testing and contact tracing; and
- \$11.5 billion from the American Rescue Plan Act (March 2021).¹⁴⁵

These emergency funds, although critical to the pandemic response, have also illuminated why investing in sufficient public health infrastructure before emergencies is so important. Some states have been slowed in their ability to spend emergency funding because, by law, their state legislatures have to approve spending increases, including increases to staffing headcounts, during any given budget year. Moreover, such one-time supplemental funding can create abrupt funding cliffs that make long-term programmatic investments difficult or impossible.

In all, CDC awarded at least \$59.5 billion in COVID-19-related funding to states, localities, tribes, and territories across 10 categories.¹⁴⁶ (See Figure 6.) A majority (53 percent) of the funding went to support Epidemiological and Laboratory Capacity, assisting health departments with detecting, preventing, and responding to COVID-19 and other infectious diseases. The next largest categories were School Testing (17 percent) and Vaccine Preparedness (12 percent), respectively. The funding for schools went toward establishing partnerships with other schools, pharmacies, laboratories, health departments, or departments of education to facilitate testing and other activities, as well as toward the provision of personal protective equipment, air filters, testing kits,

FIGURE 6: Overall CDC COVID-19 State, Tribal, Local, and Territorial Funding
(in billions)



- Epidemiological and Lab Capacity
- School Testing
- Vaccine Preparedness
- Public Health Workforce
- Addressing Health Disparities
- Infection Prevention and Control
- Emergency Response
- Tribal Awards
- Data Modernization
- Other

Notes: **Epidemiological and Laboratory Capacity:** assisting health departments with detecting, preventing, and responding to COVID-19 and other infectious diseases. **School Testing:** establishing partnerships with other schools, pharmacies, laboratories, health departments, or departments of education to facilitate testing and other activities, as well as the provision of personal protective equipment, air filters, testing kits, personnel, and other needs. **Vaccine Preparedness:** creating vaccine capacity, equitable and safe distribution and administration, vaccine confidence and education, community engagement, information systems utilization, and vaccination in tribal communities. **Public Health Workforce:** recruiting, retaining, and training skilled public health staff to support the pandemic response, as well as developing the COVID Response Corps, an initiative that provides surge staffing and resources to health departments. **Addressing Health Disparities:** supporting health departments and reducing COVID-19 health disparities among high-risk and underserved groups, including racial and ethnic minorities and rural communities, and advancing health equity through testing, contact-tracing, and reducing transmission. **Infection Prevention and Control:** implementing surveillance, tracing, testing, vaccines, and guidance and outreach for public and healthcare professionals. **Emergency Response:** initiating COVID-19 prevention, preparedness, response, and recovery initiatives, including school-based health programs. **Tribal Awards:** developing surveillance, mitigation, information management, infection control, and communication to protect against COVID-19 in tribal communities, as well as other injuries and violence such as suicide and intimate partner violence. **Data Modernization:** creating data and surveillance systems to support data-sharing among partners, public health reporting, and enhanced infrastructure improvements.

In addition to amounts appropriated to it directly, CDC also has managed and executed funds appropriated to HHS through PHSSEF. These include transfers to support COVID-19 testing, contact tracing and mitigation, the public health workforce, \$1.29 billion from the Coronavirus Response and Relief Supplemental Appropriations Act, and \$1.9 billion from the American Rescue Plan Act.

Owing to rounding, category funding does not add up precisely to the total.

Source: Centers for Disease Control and Prevention¹⁴⁹

personnel, and other needs. Vaccine preparedness efforts supported vaccine capacity, equitable and safe distribution and administration, vaccine confidence and education, community engagement, information systems utilization, and vaccination in tribal communities. These investments are benefiting communities every day. For example, electronic case reporting has grown from 187 healthcare facilities pre-pandemic to more than 25,000 facilities reporting data electronically as of April 2023, decreasing the burden on reporters and increasing the completeness and speed of reporting.^{147,148}

States also received pandemic-related funding from the NIH, SAMHSA, the Health Resources and Services Administration (HRSA), the Administration for Children and Families, the Administration for Community Living, and other federal agencies.

TABLE 2: OVERALL CDC COVID-19 PANDEMIC RESPONSE FUNDING TO STATES

	CDC Funding to States for COVID-19 Pandemic Response
Alabama	\$835,357,313
Alaska	\$237,945,854
Arizona	\$1,226,490,892
Arkansas	\$554,452,048
California	\$6,394,319,913
Colorado	\$987,228,408
Connecticut	\$701,177,583
Delaware	\$274,948,544
District Of Columbia	\$244,424,907
Florida	\$3,407,301,869
Georgia	\$1,789,533,459
Hawaii	\$308,225,232
Idaho	\$355,454,821
Illinois	\$2,351,400,088
Indiana	\$1,150,755,280
Iowa	\$582,229,066
Kansas	\$536,600,858
Kentucky	\$773,032,589
Louisiana	\$887,738,519
Maine	\$305,711,450
Maryland	\$1,072,443,547
Massachusetts	\$1,350,621,548
Michigan	\$1,708,288,402
Minnesota	\$938,035,261
Mississippi	\$544,373,857
Missouri	\$1,030,590,320
Montana	\$272,582,314
Nebraska	\$400,219,885
Nevada	\$585,725,144
New Hampshire	\$304,505,322
New Jersey	\$1,847,626,863
New Mexico	\$443,483,126
New York	\$4,289,163,172
North Carolina	\$1,655,255,693
North Dakota	\$233,237,230
Ohio	\$1,877,960,697
Oklahoma	\$702,337,549
Oregon	\$711,603,067
Pennsylvania	\$2,074,815,808
Rhode Island	\$384,962,955
South Carolina	\$854,638,188
South Dakota	\$262,579,523
Tennessee	\$1,156,969,089
Texas	\$4,733,514,165
Utah	\$554,881,490
Vermont	\$216,771,573
Virginia	\$1,407,339,869
Washington	\$1,274,366,553
West Virginia	\$359,160,896
Wisconsin	\$984,753,211
Wyoming	\$217,180,687
Total	\$58,354,315,697

Note: The U.S. total reflects grants to all 50 states and the District of Columbia, but it does not include territories, localities, or tribes for the purpose of comparability.

Source: U.S. Centers for Disease Control and Prevention¹⁵⁰

Broader federal funding landscape

While CDC serves as the primary federal public health agency, several federal agencies within and outside HHS complement and support its work. Like CDC, these agencies require adequate resources to support their public health activities and to improve nationwide health and well-being.

Within HHS, several agencies are responsible for activities related to public health protection. **HRSA** provides healthcare services for geographically, economically, and medically vulnerable U.S. residents, including by administering the Ryan White HIV/AIDS Program, which provides primary medical care, essential support services, and medications for low-income people with HIV. **SAMHSA** leads the federal response to behavioral health conditions and supports state efforts to prevent and treat these conditions. The **Food and Drug Administration** (FDA) protects the safety of food, drugs, medical devices, cosmetics, and tobacco products. Throughout the COVID-19 pandemic, FDA has played a leadership role in accelerating medical products to diagnose, treat, and prevent the disease. Together, these agencies help support the physical and mental health of all U.S. residents.

All three agencies saw increases in appropriations in FY 2023 (HRSA: \$8.6 billion to \$9.5 billion;¹⁵¹ SAMHSA: \$6.5 billion to \$7.5 billion;¹⁵² FDA: \$3.37 billion to \$3.6 billion¹⁵³).

In recognition of the positive impact of early childhood education on health and well-being, the **Administration for Children and Families** administers the Head Start Program (for children ages 3 to 5) and the Early Head Start Program (for children under age 3). These programs promote

school readiness among low-income children by providing access to early learning, health, and family well-being initiatives. Research suggests that early childhood education positively impacts cognitive and emotional development, as well as longer-term health outcomes associated with higher incomes, better employment, and higher educational attainment.¹⁵⁴ In FY 2023, Head Start and Early Head Start received \$12 billion,¹⁵⁵ a sizeable increase from FY 2022 (\$11.04 billion). In response to the COVID-19 pandemic, several rounds of supplemental support were provided as part of a nationwide effort to ease the pandemic's harms on young children and their families, including in the CARES Act (\$750 million), the Coronavirus Response and Relief Supplemental Appropriations Act (\$250 million), and the American Rescue Plan Act (\$1 billion).¹⁵⁶

Outside of HHS, many federal departments are assisting in promoting health by addressing SDOH—that is, the broad spectrum of factors in a person's life that influence their health, such as access to safe housing, adequate nutrition, and clean air and water.

The USDA, for instance, also plays a role in public health promotion through anti-hunger programs, such as the Supplemental Nutrition Assistance Program (SNAP) and through nutrition-assistance programs such as the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Increasing nutrition security is core to the mission of the USDA's food nutrition programs serving low-income individuals and families.

Even before the COVID-19 pandemic, millions of U.S. residents¹⁵⁷ and households struggled with hunger,

food insecurity, and the affordability of healthy foods, making funding for SNAP critical to the nation's public health. The economic devastation wrought by the pandemic, particularly for families with children who were already living near the brink of crisis, only worsened the problem.¹⁵⁸

To help provide relief, Congress and the USDA took several steps to bolster the federal nutrition programs. The 2020 Families First Coronavirus Response Act allowed states to give some SNAP-eligible households emergency allotments up to the maximum benefit¹⁵⁹ and established new waiver authorities that allowed WIC and other child nutrition programs to serve participants more effectively during the pandemic. This flexibility for WIC extended through the duration of the public health emergency declaration, and flexibility for the Summer Food Service Program extended through September 30, 2022.^{160,161}

The American Rescue Plan boosted SNAP and WIC benefit levels and expanded eligibility, extending a 15 percent increase to SNAP benefits through September 30, 2021; adding an increase in WIC benefits for fruits and vegetables; providing extra administrative funds to administer SNAP benefits; and adding funding to expand access to SNAP online purchasing. The law also allowed young adults to receive healthy Child and Adult Care Food Program meals at homeless and youth shelters, provided additional funding to support nutrition programs for older adults and Native American communities under the Older Americans Act, and established a practice of extending grocery benefits to low-income children to replace school-provided meals during summer months.^{162,163}

As of March 1, 2023, the temporary increases to SNAP benefits that were initiated in spring 2020 expired, resulting in a benefit cut for households living in 32 states, the District of Columbia, Guam, and the U.S. Virgin Islands, which had still been paying the emergency allotments. The change was included in the Consolidated Appropriations Act of 2023 and was tied to the expiration of the federal Public Health Emergency declaration. (The enhancements had already ended in 18 states, which had previously allowed their COVID-19 emergency declarations to expire; USDA had only been authorized to approve enhanced benefits as long as a federal and state declaration were active.) As a result of the change, every recipient household will receive at least \$95 less per month, threatening to increase food hardship and the likelihood of associated negative health outcomes.¹⁶⁴ The reduction in benefits means that approximately 32 million people are now receiving lower levels of food assistance.¹⁶⁵ The Census Bureau's Household Pulse Survey, taken in early May 2022 after most effected households began to receive lower SNAP benefits, found that 1 in 4 households receiving lower SNAP benefits due to the March 1 policy change reported not having enough to eat "sometimes" or "often," a level nearly equal to estimates in states that opted out of the additional benefits program early.¹⁶⁶

Low-income adults with access to SNAP have better health outcomes than those without it, including lower rates of hypertension and diabetes, and they have approximately 30 percent lower healthcare expenditures than low-income individuals without SNAP.^{167,168} Access to SNAP at early ages can also improve non-health outcomes, such as high school graduation, employment status, and earnings.¹⁶⁹ Updates and increases in WIC benefits also have been associated with a modest decrease in obesity among infants and toddlers who are program participants.¹⁷⁰

Beyond traditional federal food-assistance programs, the expanded Child Tax Credit payments that were

disbursed monthly during the second half of 2021, as part of the American Rescue Plan Act, helped recipient families put food on the table. In the six weeks after issuances started flowing, the number of adults living with children reporting that their household did not always have enough to eat fell by nearly a third, with the greatest improvements felt by Black and Latino parents. By contrast, over the same period, food insecurity levels of adults without children changed little.¹⁷¹ The temporary credit expansion, in conjunction with other economic relief provisions, drove down the supplemental child poverty rate from 9.7 percent in 2020 to a record low of 5.2 percent in 2021.^{172,173}

WHITE HOUSE CONFERENCE ON HUNGER, NUTRITION, AND HEALTH

On September 28, 2022, the White House Conference on Hunger, Nutrition, and Health was convened for the first time in over 50 years. The first White House Conference, held in 1969, led to numerous public health advancements that decreased hunger for families in the United States, such as the creation of the Special Supplemental Nutrition Program for Women, Infants, and Children. The 2022 White House Conference produced the National Strategy on Hunger, Nutrition, and Health which provided data and a roadmap to address nutrition security, inadequate

rates of physical activity, and increasing rates of diet-related diseases.¹⁷⁴ The National Strategy cited data on the increasing rates of obesity from Trust for America's Health's 2022 State of Obesity report. Following the White House Conference, the USDA has issued two proposed rules that would enhance and update the WIC program and increase nutrition standards for school meals.^{175, 176} In addition, President Biden's FY 2024 budget requests \$72 million to expand CDC's SPAN program to all 50 states and the territories, a long-standing priority of TFAH.

State and Local Public Health Funding

State and local health agencies play a key role in promoting public health and supporting local health departments. They directly engage in population-based primary, secondary, and tertiary prevention; developing preparedness plans and coordinating emergency responses; addressing the opioid epidemic; and conducting lab testing, disease surveillance, and data collection.^{177,178} Many are expanding and modernizing their work to include a stronger focus on primary, or upstream, prevention policies and programs (for more information, see TFAH's Promoting Health and Cost Control in States series^{179,180}), a commitment to the promotion of equity as a core value in all of their work, and an expansion of their partnership with healthcare and with non-health sectors. Federal funding, a primary source of state public health budgets, heavily affects the ability of state health departments to fulfill these roles.

Zooming in on funding supported by states' own revenues (i.e., state-generated revenue from taxes, fees, third-party reimbursements, etc.), at least 34 states and the District of Columbia maintained or increased public health funding in FY 2022. (See Table 3.) But at least 13 states reduced the money directed to such programming amid the COVID-19 pandemic, increasing the likelihood that they will be less prepared and less responsive in the moments that matter most.¹⁸¹ (Data were not available for three states.)

Local public health departments engage their residents and coordinate partners to address public health issues in their community. These agencies work to prevent chronic disease and injury prevention, they 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 provide other public health services and education.^{182,183} In recent years, however, some departments have reduced their provision of direct services as more Americans gained health insurance, and they have increased their attention to policies that promote population level well-being.

More than three years into the COVID-19 pandemic, the workforce of many state and local health departments are dealing with burnout. Consider the following indicators: 76 percent of local health departments report that inadequate staffing levels hindered the effectiveness, scale, or quality of their COVID-19 response—the largest reported obstacle by a significant margin.¹⁸⁴ Just a quarter of the public, according to survey results published in 2022, has a high level of trust in recommendations from state and local health officials,¹⁸⁵ a phenomenon that in some cases is leading states or localities to turn down available federal assistance.^{186,187,188} In addition, dozens of states are considering and/or enacting laws that restrict authorities of state and local public health officials, governors, and others in responding to the pandemic and future health threats.^{189,190} In a spring 2021 survey of public health workers, 53 percent of respondents reported having symptoms of at least one mental health condition, such as anxiety and post-traumatic stress disorder, over the past two weeks.¹⁹¹ A more recent survey found similar results: A majority of public health employees reported having symptoms of post-traumatic stress disorder, and one-in-five said their mental health was fair or poor.¹⁹² One possible explanation is the higher rates of bullying, threats, and harassment that public health staff

experienced during the pandemic.¹⁹³ Indeed, 16 percent of local health departments reported that they had received direct threats to an individual's or their family's physical safety, and in 9 percent of departments, a staff person had their personal information publicized.¹⁹⁴ Similarly, almost one in six local health department employees experienced harassment during the first year of the pandemic because of their role as a public health professional, increasing the likelihood that they would leave their agency and perhaps even the field altogether.^{195,196}

In another alarming trend, a survey of the public health workforce taken during the end of 2021 and beginning of 2022, found that nearly one-third of the responding state and local public health staffers say they are considering leaving their jobs within a year either to retire or for some other reason.¹⁹⁷

These are concerning circumstances, to be sure, but there are reasons for hope. First, in recent years, several states, including Colorado, Georgia, Oklahoma, Oregon, and Utah, enacted laws to protect public health workers from harassment or threats of violence, strengthening and adding to the legal protections that exist in at least 35 states and the District of Columbia.¹⁹⁸ Additionally, as the country's economy recovered from pandemic-inflicted damage, it has thus far avoided the type of slow rebound in state, tribal, territorial, and local revenue that was characteristic of the years following the Great Recession.¹⁹⁹ It is too soon to say if the harmful boom and bust pattern of only investing in public health during an emergency will be repeated, but a positive sign was the \$7.4 billion included in the American Rescue Plan Act to hire and train public health workers.^{200,201} Another

was the adoption of the Public Health Workforce Loan Repayment Program as part of the Consolidated Appropriations Act of 2023, which will allow for the establishment of a federal loan repayment program to support recruitment and retention of health department staff.²⁰² Loan repayment incentives must be funded by Congress in order to be implemented.

Perhaps most significantly, CDC is administering the groundbreaking Public Health Infrastructure Grant Program in partnership with three national organizations—the Association of State and Territorial Health Officials, the National Network of Public Health Institutes, and the Public Health Accreditation Board.²⁰³ The five-year grant program is intended to help state, local, and territorial public health agencies build the size and diversity of their workforce, modernize their data systems, and enhance their capabilities across eight interrelated foundational domains: (1) assessment and surveillance, (2) community partnership and development, (3) equity, (4) organizational competencies, (5) policy development and support, (6) accountability and performance management, (7) emergency preparedness and response, and (8) communications.²⁰⁴

Overall, experts estimate that in order to establish a solid infrastructure and to deliver a set of key services (i.e., a baseline that would be elevated during emergency responses), state and local health departments need to increase the size of their workforces by up to 80 percent. This would amount to 26,000 more full-time equivalent (FTE) positions at the state level and 54,000 more FTEs in local departments, with the greatest relative increases needed among local departments who serve fewer than 100,000 residents.²⁰⁵

These additions would reverse long-term trends in which state health departments lost 10,000 (nearly 10 percent) full-time employees from 2012 to 2019²⁰⁶ and local departments lost 26,000 (16 percent) full-time staff from 2008 to 2019.²⁰⁷ A recent analysis of 143 state and local health agencies found that nearly half of agency employees left between 2017 and 2021, a proportion that rose to three-quarters for early career staff. If separation trends continue, by 2025 more than 100,000 public health staff would leave their organizations. The authors noted that “such rates of departure trigger not just major expenses [related to onboarding new workers] ... but also broader societal impact through the loss of critical public health experience and institutional knowledge during a health crisis.”²⁰⁸

Some states, such as Hawaii, Maryland, Oregon, and New Mexico, are considering measures to improve public health workforce recruitment, retention, and well-being,²⁰⁹ but much more attention is needed. For more than three years, state and local public health officials have performed admirably under daunting circumstances and amid needless headwinds—and in doing so have saved lives. But despite their valiant efforts to overcome their limited resources, those limitations came at a cost to the well-being of this personnel, the effectiveness of the country’s COVID-19 response, and the other critical priorities that were set aside because of stop-gap redeployments. These circumstances are unnecessary and counterproductive. Going forward, providing higher levels of sustained, predictable resources to these agencies, in addition to modernizing their data systems and other steps to unlock their capabilities, should be a top priority for policymakers at all levels.^{210,211,212}

TABLE 3: PUBLIC HEALTH FUNDING, STATE BY STATE, FY 2021–2022

State	FY 2022 Funding	Up or down from prior year
Alabama	\$249,889,351	▼
Alaska	\$66,987,900	▲
Arizona	\$120,482,053	▲
Arkansas	\$137,311,022	▲
California	\$5,100,168,000	▼
Colorado	\$309,318,173	▲
Connecticut	\$141,129,022	▲
Delaware	\$50,968,000	▲
District of Columbia	\$282,292,322	▲
Florida	\$431,775,735	▲
Georgia	\$335,453,554	▲
Hawaii	Not reported	Not reported
Idaho	\$97,569,600	▲
Illinois	\$464,423,300	▲
Indiana	\$103,790,532	▲
Iowa	\$118,688,257	▲
Kansas	\$52,869,605	▲
Kentucky	\$133,084,764	▲
Louisiana	\$114,854,372	▼
Maine	\$49,833,172	▼
Maryland	Not reported	Not reported
Massachusetts	\$783,764,090	▲
Michigan	Not reported	Not reported
Minnesota	\$335,306,608	▼
Mississippi	\$48,913,645	▲
Missouri	\$39,891,059	▼
Montana	\$19,369,874	▼
Nebraska	\$86,692,269	▲
Nevada	\$31,609,058	▼
New Hampshire	\$31,592,911	▼
New Jersey	\$352,732,000	▲
New Mexico	\$316,256,376	▼
New York	\$1,831,899,971	▲
North Carolina	\$167,965,278	▲
North Dakota	\$56,283,518	▲
Ohio	\$531,685,631	▲
Oklahoma	\$266,711,582	▼
Oregon	\$221,272,117	▲
Pennsylvania	\$217,116,030	▲
Rhode Island	\$312,153,040	▲
South Carolina	\$146,934,838	▲
South Dakota	\$34,012,815	▲
Tennessee	\$398,840,400	▼
Texas	\$689,584,448	▲
Utah	\$110,191,191	▲
Vermont	\$38,603,607	▲
Virginia	\$380,349,502	▲
Washington	\$536,852,280	▲
West Virginia	\$138,551,789	▲
Wisconsin	\$114,099,800	▲
Wyoming	\$13,431,629	▼

Note: As a result of differences in organizational responsibilities and budgeting, funding data are not necessarily comparable state to state. See the “Appendix: Methodology” section of TFAH’s 2019 Ready or Not report for a description of TFAH’s data-collection process, including its definition of public health funding.²¹³

While states received federal one-time COVID-response funding, those funds are not included in these tallies, as all federal funds are excluded from this measure. However, in some cases, state funding for pandemic response may have been included in the data reported to TFAH. For some states, COVID-response funding may have resulted in an increase in the state’s overall public health funding for the year. Other states may have reallocated money from one line to another with little impact on the overall funding level. Some states experienced sizable fluctuations in the state-supported funding of public health services due to a host of pandemic-related funding actions. In some cases, a temporary infusion of state-supported funds might have been appropriated for a single year. In other cases, state funding might have been temporarily cut and replaced by pandemic-related federal funding.

Three states (Hawaii, Maryland, and Michigan) did not provide TFAH with public health funding data for FY 2022.

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

Recommended Policy Actions

To improve the health and well-being of all U.S. residents, reduce healthcare costs and health disparities, and protect the nation's health and economic security, TFAH recommends that Congress and the president take the following actions for FY 2024 and beyond.

Modernize and Strengthen Public Health in Every Community

Protect and increase overall funding for CDC and public health to save lives nationwide.

Many proven, evidence-based public health and prevention programs have yet to reach all 50 states, including programs to prevent the leading causes of death and drivers of healthcare costs. TFAH supports providing sustainable, predictable annual appropriations for CDC of at least \$11.581 billion in FY 2024. Most of this funding goes to the states to implement evidence-based public health and prevention programs. Similarly, state, local, tribal, and territorial lawmakers should prioritize public health funding to ensure workforce retention and avoid the boom-and-bust cycle of public health.

Provide sustained, disease-agnostic funding to build modern public health systems. Most public health funding is characterized by disease-specific support, rather than a focus on building capabilities that would help all programs. In addition to condition specific programs, TFAH supports sustained funding for cross-cutting public health programs that support foundational public health capabilities like disease tracking, communications, and health equity. A modernized public health infrastructure would enable more effective use of taxpayer funds and improve the response to rising health threats, yet public health experts estimate a shortfall of \$4.5 billion per year necessary to enable health departments to develop foundational capabilities of public health.^{214,215} Sustainable and predictable funding to build these basic capabilities, such as proposed in the Public Health Infrastructure Saves Lives Act, would ensure continuous progress toward effective public health systems. As an interim step, Congress should appropriate robust annual investment in CDC's **Public Health Infrastructure Grant** program.

Invest in sustained public health data modernization to detect and contain outbreaks and emerging threats.

Congress should build on investments in CDC's **Data Modernization Initiative** to bring public health information systems at CDC and state, local, tribal, and territorial health departments into the 21st century. These investments will enable actionable data to improve responses to epidemics and the effectiveness of related programs. Congress must augment and sustain these advancements to help public health systems recover from decades of neglect. The Data: Elemental to Health campaign estimates at least \$7.84 billion is needed over the next five years for CDC's Data Modernization Initiative to strengthen public health data collection and reporting at the state and local levels.²¹⁶ Congress should also support next-generation disease detection through CDC's Advanced Molecular Detection program and the newly established Center for Forecasting and Outbreak Analytics.

Fund CDC to support state and local public health laboratories and epidemiology.

Congress should increase funding to strengthen Epidemiology and Laboratory Capacity across the country. Currently, funding for the Epidemiology and Laboratory Capacity grant meets less than half the need of laboratories and health department epidemiologists nationwide, with little funding for cross-cutting systems and workforce.²¹⁷

Bolster recruitment and retention of the public health workforce. Emergency supplemental funding can help with short-term staffing needs for discrete response needs but cannot be used to recruit and retain a well-trained public health workforce in the long term. Funding cliffs caused by these short-term infusions of funding could result in massive layoffs within the public health



sector, leaving the nation even more vulnerable. Congress and state and local governments should prioritize the development and retention of a diverse and sufficient public health workforce by funding the public health workforce loan repayment program and other incentives and by funding CDC's public health workforce lines, including public health workforce loan repayment.

Restore the Prevention and Public Health Fund. The Prevention and Public Health Fund has made critical investments in every state, such as expanding vaccine access through the 317 Immunization Program, building laboratory capacity,

and promoting tobacco cessation.²¹⁸ Programs under the Prevention Fund have demonstrated significant cost savings. The Tips from Former Smokers Campaign, for example, resulted in nearly 700,000 lifetime quits and saved an estimated \$7.3 billion in smoking-related healthcare costs from 2012 to 2018.²¹⁹ Despite funding critical work, the Prevention Fund has already been cut by \$11.85 billion dollars from FY 2013 through FY 2027. Congress should restore the funding taken from the Prevention Fund and should not use the Prevention Fund as an offset for other legislation.

Invest in the Nation's Health Security

Strengthen public health emergency preparedness, including within the healthcare system. Congress should invest in the foundational programs that build the nation's defense against a range of threats, including:

Public Health Emergency Preparedness (PHEP). Congress should continue to restore funding to CDC's PHEP Cooperative Agreement program to \$1 billion in FY 2024 to ensure states and localities have the core resources necessary to respond to an escalating number of emergencies. The program's funding has been cut by more than 20 percent over the past 20 years—or more than 50 percent, after adjusting for inflation—leading to loss of expert staff and modern response systems. This funding would help restore capacity at health departments impacted by cuts and build sustainable progress in the nation's defense against natural disasters, biological threats, and manmade events.

Health Care Readiness and Recovery Program, Including Hospital Preparedness Program (HPP). In FY 2024, Congress should provide \$500 million to the Health Care Readiness and Recovery Program, administered by the Administration for Strategic Preparedness and Response, the primary federal source of funding to help the healthcare delivery system prepare for and respond to disasters. Appropriations for this line, which includes HHP grants to 50 states as well as territories and cities, have been cut drastically from \$515 million in FY 2003 to \$305 million in FY 2022, or 62 percent when accounting for inflation. HPP supports multiple approaches to develop healthcare-system readiness, but limited funding has prevented some regions from fully developing this capacity.

Support vaccine infrastructure to reduce preventable infectious diseases.

Congress should increase support for immunization infrastructure, outbreak prevention, and outbreak response by appropriating \$1.4 billion in FY 2024 for the National Immunization Program. CDC's immunization program supports state and local immunization programs that increase vaccine rates (including among underserved populations), respond to outbreaks, educate the public and providers, conduct surveillance, improve vaccine confidence, establish partnerships, and improve information systems. Funding has not kept pace with needs, however, and the early sluggishness in vaccination campaigns against COVID-19 were partially due to underfunded state and local systems. The pandemic also demonstrated the need for more extensive communications on the importance, effectiveness, and safety of routine vaccinations and to counter misinformation.

Prevent the threat of antimicrobial-resistant infections. More than 35,000 people die each year from infections that are resistant to drugs like antibiotics.²²⁰ Congress should increase funding for innovative methods of preventing, detecting, and containing outbreaks supported by the Antibiotic Resistance Solutions Initiative (ARSI) at CDC. Through ARSI, CDC is investing in prevention measures in every state to strengthen lab capacity, track infections across healthcare systems, detect new threats, disrupt pathogens, coordinate prevention strategies, and educate healthcare providers on appropriate antibiotic use.

Prepare and mitigate the health impacts of climate change, extreme weather, and other environmental health threats, including by supporting CDC's National Center for Environmental Health. Programs that protect communities from threats such as lead, toxic chemicals, extreme heat, and flooding need support to reach communities at highest risk. These programs include:

Climate and Health Program. The administration and Congress should increase funding to \$110 million in FY 2024 to expand CDC's Climate and Health Program to improve climate readiness in every state, large city, tribe, and territory.²²¹ Only nine states and two localities are grantees of CDC's Climate and Health Program, which gives these communities assistance to implement CDC Building Resilience Against Climate Effects (BRACE) framework. The BRACE framework can help jurisdictions identify likely climate impacts, potential health impacts, and high-risk populations and locations, and it can create and implement adaptation plans.²²²

Environmental Health Tracking. Congress should increase funding to \$65 million to extend CDC's National Environmental Public Health Tracking Program to every state.²²³ The network helps states collect key data around environmental health threats and target interventions to save lives. Through the Tracking Network, states monitor water quality from wells used for drinking water, check levels of mercury in popular fishing areas, measure air quality from wildfires, and track the impact of smoke from wood burning stoves. The program has an estimated return on investment of \$1.44 for every dollar invested in healthcare costs alone.²²⁴



Office of Climate Change and Health Equity. Congress and the administration should provide \$5 million for HHS's Office of Climate Change and Health Equity to support its mission of serving as a government-wide hub for climate and health policy in pursuit of equitable health outcomes.

Create a Health Defense Operations budget designation. The surge of short-term, time-limited funding in COVID-19 supplemental appropriations legislation was important for America's significant response needs but is not a sustainable source of funding to finance this country's pandemic preparedness requirements. Furthermore, thousands of competing priorities in the non-defense discretionary budget category continue to impede annual discretionary appropriations, making it nearly impossible to invest in medium- to long-term pandemic prevention. Congress should create a Health Defense Operations budget designation to exempt specific health defense programs central to pandemic preparedness from the annual discretionary budget allocations and ensure these critical activities receive sustainable resources necessary to secure Americans' health and economic and national security.²²⁵

Address Health Disparities and Root Causes of Disease

Advance health equity by addressing community-wide social determinants of health (SDOH). Nonmedical factors, such as housing, employment, transportation, food security, and education, have a major influence on individual and community health.²²⁶ Indeed, these factors are estimated to contribute as much as 80 to 90 percent to a person's health outcomes, while traditional healthcare only accounts for 10 to 20 percent.²²⁷ For FY 2024, TFAH urges Congress to fund CDC's Social Determinants of Health Program with at least \$100 million to invest in addressing conditions that affect the health and livelihoods of communities and prevent disease at the outset.²²⁸ The funding would support local, state, territorial, and tribal efforts to coordinate multisectoral partnerships to identify and address the most pressing nonmedical factors influencing health in their area and make healthy choices the easy choice.

Focus funding on populations at elevated risk due to the impact of structural racism, poverty, systemic discrimination, and disinvestment.

Communities disadvantaged by systemic discrimination, including those living with health disparities as part of systemic marginalization, must be a priority for funding and investment. Federal health agencies should consider disease burden and social context when determining grant-making eligibility criteria and enable capacity-building funding so the communities with the greatest need can access and benefit from competitive grants. Congress should expand discretionary health funding to address health disparities and to ensure funding is reaching under-resourced, marginalized, and disproportionately impacted communities.

Promote Health and Prevent Chronic Diseases Across the Lifespan

Significantly increase investment in chronic disease prevention. Six in 10 adults in the United States lives with a chronic disease,²²⁹ and just over one in three young adults ages 17 to 24 exceed the weight limits to serve in the U.S. military.²³⁰ Chronic diseases are the leading causes of death and disability and, along with mental health conditions, account for an estimated 90 percent of the nation's \$4.3 trillion annual health costs.²³¹ Many of these conditions could be prevented or managed with cost-effective community interventions and patient support. Congress should counteract years of underfunding of CDC's **National Center for Chronic**

Disease Prevention and Health Promotion. Under current funding, CDC cannot provide adequate resources to all eligible states or communities, including states that already have high rates of disease.

Within the Chronic Disease Center, TFAH recommends increasing funding for:

Division of Nutrition, Physical Activity and Obesity. Congress should allocate at least \$130 million in FY 2024 to CDC's Division of Nutrition, Physical Activity and Obesity to allow CDC to continue building out key programs, including extending the State Physical Activity and Nutrition

program (SPAN) program to all 50 states, U.S. territories, and tribal communities. SPAN enables states to implement evidence-based strategies to improve overall health and prevent increasing levels of the obesity epidemic, but currently only supports 16 out of 50 eligible states.²³² SPAN grantees focus their efforts on increasing breastfeeding support, disseminating food-service guidelines, promoting community physical-activity access strategies, and integrating both nutrition and physical activity standards into statewide early care and education systems. This funding level would also enable CDC's Active People, Healthy Nation to provide technical assistance to small, rural, and underfunded communities access active transportation grant funding from the Bipartisan Infrastructure Law.

Racial and Ethnic Approaches to Community Health and Healthy Tribes. Congress should appropriate at least \$102.5 million to CDC's REACH and Healthy Tribes programs in FY 2024. Within this total, TFAH recommends including at least \$75.5 million for the REACH grant program to continue scaling to allow all eligible and approved, but unfunded, communities to benefit. The REACH program is one of the only CDC programs that explicitly focuses on improving chronic disease outcomes and health equity for specific racial and ethnic groups in communities with high incidence rates for such diseases. REACH grantees successfully decreased rates

of smoking, reduced obesity, increased fruit and vegetable consumption, and improved healthy behaviors. In addition, Congress should allocate \$27 million for Healthy Tribes to expand the three programs under this funding line, which includes Good Health and Wellness in Indian Country, Tribal Epidemiology Centers for Public Health Infrastructure, and Tribal Practices for Wellness in Indian Country. Together, these programs work with American Indian tribes, Alaskan Native villages, tribal organizations, and tribal epidemiology centers to promote health, prevent disease, reduce health disparities, and strengthen connections to culture and lifeways that improve health and wellness.

Support Age-Friendly Public Health Systems. Congress should provide at least \$50 million in FY 2024 for CDC to build state, local, tribal, and territorial public health department capacity to promote the health of older adults. Age-Friendly Public Health System interventions can optimize the well-being of adults ages 65 or over, prolong their independence, and reduce their use of expensive healthcare services. Yet there is no standalone program at CDC that supports state, local, tribal, and territorial public health departments to improve overall older adult health and well-being. A dedicated public health role is necessary to foster multisector collaboration and to develop effective solutions to improve the lives of older adults.²³³

Invest in Primary Prevention of Behavioral Health Concerns and Deaths of Despair

Expand comprehensive suicide prevention. Overall, the number of suicides—over 48,000 deaths—increased to near peak historic levels in 2021, and suicide rates increased significantly for young Black persons and AI/AN persons.²³⁴ Findings CDC released in February 2023 also show worsening trends in suicidal thoughts and behaviors among teen girls, in particular, through 2021.²³⁵ Congress should increase funding for CDC’s **Comprehensive Suicide Prevention** program, which funds states, territories, and tribes to implement comprehensive suicide-prevention plans using multisector partnerships and data to inform prevention efforts with the goal of reducing suicide by 20 percent by 2025.²³⁶ A key outcome of the Comprehensive Suicide Prevention program is also a 10 percent reduction in suicide and suicide attempts among populations that are disproportionately affected by suicide, including veterans and rural communities.²³⁷ This type of prevention approach centered on public health departments can leverage their focus on risk and protective factors and community services. Congress should provide at least \$80 million for CDC’s suicide prevention work in FY 2024 to create a national program to reverse suicide rates from near peak historical levels, address the crisis of suicidal thoughts and behaviors among youth, and increase comprehensive prevention approaches in all 50 states, including tribal communities.

Increase resources to prevent and mitigate Adverse Childhood Experiences (ACEs). ACEs can have profound lifetime impacts on behavioral and physical health. CDC estimates that 61 percent of adults report having experienced at least one ACE in their lifetime, and the prevention of ACEs could reduce cases of depression in adults by 44 percent and avoid 1.9 million cases of heart disease. CDC research shows that creating and sustaining safe, stable, nurturing relationships and environments for all children and families can prevent ACEs and help children reach their full health and life potential. Congress should provide at least \$15 million in FY 2024 to expand CDC’s groundbreaking work in this area through the **Essentials for Childhood: Preventing Adversity through Data to Action** program. CDC takes a comprehensive public health approach to preventing ACEs, including by building the evidence base through innovative research and evaluation, supporting data innovation, and identifying strategies and improving capacity and awareness to prevent ACEs across the country. Under this program, state-level entities implement sustainable ACEs strategies from CDC’s Preventing ACEs: Leveraging the Best Available Evidence publication, including economic assistance to families and efforts to connect youth to care.

Expand school-based services to reduce risk among youth. Congress should increase funding for CDC’s **Division of Adolescent and School Health (DASH)** program to \$100 million in FY 2024. DASH funds local education agencies to implement school-based programs and practices designed to promote healthy behaviors and to reduce and prevent HIV, sexually transmitted diseases, and pregnancy among adolescents. DASH’s programs reduce risk behaviors, among other positive outcomes, for less than \$10 per student.²³⁸ In fact, studies released in January and February 2022 found that these programs resulted in significant decreases in sexual risk behaviors, violent experiences, and substance use.^{239,240} An increase in DASH funding to \$100 million would allow the program to expand to all 50 states and 100 of the largest local education agencies, reach 25 percent of all students, and help address the severe negative impacts of the pandemic on youth mental health.

Endnotes

- 1 Schneider, Eric C., Arnav Shah, Pratha Sah, et al. "Impact of U.S. COVID-19 Vaccination Efforts: An Update on Averted Deaths, Hospitalizations, and Health Care Costs Through March 2022." *The Commonwealth Fund*, April 8, 2022. <https://www.commonwealthfund.org/blog/2022/impact-us-covid-19-vaccination-efforts-march-update>. Accessed May 4, 2023.
- 2 Congressional Research Service. "Safe Drinking Water Act (SDWA): A Summary of the Act and Its Major Requirements." July 1, 2021. <https://crsreports.congress.gov/product/pdf/RL/RL31243>. Accessed May 12, 2023.
- 3 U.S. Environmental Protection Agency. "Progress Cleaning the Air and Improving People's Health." Updated May 1, 2023. <https://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health#pollution>. Accessed May 4, 2023.
- 4 Centers for Disease Control and Prevention. "Impact of First Federally Funded Anti-Smoking Ad Campaign Remains Strong After Three Years." Press release, March 24, 2016. <https://www.cdc.gov/media/releases/2016/p0324-anti-smoking.html>. Accessed May 4, 2023.
- 5 Gunja, Munira Z., Evan D. Gumas, and Reginald D. Williams II. "U.S. Health Care from a Global Perspective, 2022: Accelerating Spending, Worsening Outcomes." *Commonwealth Fund*, January 31, 2023. <https://www.commonwealthfund.org/publications/issue-briefs/2023/jan/us-health-care-global-perspective-2022>. Accessed May 4, 2023.
- 6 Masters, Rebecca, Elspeth Anwar, Brandon Collins, et al. "Return on Investment of Public Health Interventions: A Systematic Review." *Journal of Epidemiology and Community Health*, 71(8): 827-834, August 2017. <https://pubmed.ncbi.nlm.nih.gov/28356325/#:~:text=The%20median%20ROI%20for%20public%20health%20interventions%20was,and%20national%20public%20health%20interventions%20are%20highly%20cost-saving..> Accessed May 4, 2023.
- 7 Centers for Disease Control and Prevention. "Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/operating-plans/index.html>. Accessed May 4, 2023.
- 8 Centers for Disease Control and Prevention. "State Physical Activity and Nutrition (SPAN) Program." Division of Nutrition, *Physical Activity, and Obesity*. Updated January 20, 2023. <https://www.cdc.gov/nccdphp/dnpao/state-local-programs/span-1807/index.html>. Accessed May 4, 2023.
- 9 Warren, Molly, Stacy Beck, and Madison West. *The State of Obesity 2022: Better Policies for a Better America*. Washington, DC: Trust for America's Health, September 2022. https://www.tfah.org/wp-content/uploads/2022/09/2022ObesityReport_FINAL3923.pdf. Accessed May 4, 2023.
- 10 Martin, Anne B., Micah Hartman, Joseph Benson, Aaron Catlin, and the National Health Expenditure Accounts Team. "National Health Care Spending In 2021: Decline in Federal Spending Outweighs Greater Use of Health Care." *Health Affairs*, 42(1): 6-17, December 14, 2022. <https://www.healthaffairs.org/doi/10.1377/hlthaff.2022.01397>. Accessed May 4, 2023.
- 11 Centers for Medicare & Medicaid Services. National Health Expenditure Accounts. Updated December 15, 2022. <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nationalhealthaccountshistorical>. In 2021, the country as a whole spent \$4.3 trillion on health, of which \$188 billion—4.4%—was devoted to government public health activities.
- 12 Centers for Disease Control and Prevention. "FY 2023 Operating Plan." <https://www.cdc.gov/budget/documents/fy2023/FY-2023-CDC-Operating-Plan.pdf>. Accessed May 4, 2023.
- 13 Trust for America's Health. "The Prevention and Public Health Fund: Preventing Disease and Reducing Long-Term Health Costs." 2022. https://www.tfah.org/wp-content/uploads/2022/08/PPHF_Backgrounder_August_2022.pdf. Accessed May 4, 2023.
- 14 Trust for America's Health. *Ready or Not: Protecting the Public's Health from Diseases, Disasters, and Bioterrorism 2023*. Washington, DC. <https://www.tfah.org/report-details/ready-or-not-2023/>. Accessed May 4, 2023.
- 15 Three states (Hawaii, Maryland, and Michigan) did not provide TFAH with public health funding data for FY 2022.
- 16 Kurani, Nisha, and Cynthia Cox. "What Drives Health Spending in the U.S. Compared to Other Countries." *Peterson-KFF Health System Tracker*, September 25, 2020. <https://www.healthsystemtracker.org/brief/what-drives-health-spending-in-the-us-compared-to-other-countries>. Accessed May 4, 2023.
- 17 Public Health National Center for Innovations. Revising the Foundational Public Health Services in 2022. January 31, 2022. FPHS | PHNCI Accessed May 13, 2023.
- 18 De Beaumont Foundation and Public Health National Center for Innovation. "10 Essential Public Health Services." September 2020. https://www.unmc.edu/publichealth/ophp/_documents/10-EPHS.pdf. Accessed May 4, 2023.
- 19 Data: Elemental to Health. Modernize Public Health Data: A Call to Congress. https://cdn.ymaws.com/www.cste.org/resource/resmgr/data_health/DMI_Costs_One_Pager_FINAL_08.pdf Accessed May 5, 2023
- 20 The Data: Elemental to Health campaign is a coalition of public health organizations including National Association of City and County Health Officials, Council of State and Territorial Epidemiologists, Big City Health Coalition, and the Association of Public Health Laboratories. CSTE. "The Data: Elemental to Health." Accessed May 4, 2023.
- 21 De Beaumont Foundation and Public Health National Center for Innovation. "Staffing Up: Workforce Levels Needed to Provide Basic Public Health for all Americans." October 7, 2021. <https://debeaumont.org/news/2021/staffing-up-research-brief/>. Accessed May 4, 2023.
- 22 Ibid.
- 23 De Beaumont Foundation. "Public Health Turnover Threatens Community Health and Safety." *Public Health Workforce Interests and Needs Survey*, March 6, 2023. <https://debeaumont.org/news/2023/public-health-turnover-threatens-community-health-and-safety/>. Accessed April 10, 2023.
- 24 Jonathon P. Leider, Brian C. Castrucci, Moriah Robins, et al. "The Exodus of State and Local Public Health Employees: Separations Started Before and Continue Throughout COVID-19." *Health Affairs*. The Exodus Of State And Local Public Health Employees: Separations Started Before And Continued Throughout COVID-19 | Health Affairs Accessed May 15, 2023.
- 25 De Beaumont Foundation and Public Health National Center for Innovation. "Staffing Up: Workforce Levels Needed to Provide Basic Public Health for all Americans." October 7, 2021. <https://debeaumont.org/news/2021/staffing-up-research-brief/>. Accessed May 4, 2023.
- 26 U.S. Senate Appropriations Committee. "Fiscal Year 2023 Omnibus Appropriates Bill Highlights." https://www.appropriations.senate.gov/imo/media/doc/HIGHLIGHTS_DOCUMENT_FY_23.pdf. Accessed May 4, 2023.
- 27 Centers for Disease Control and Prevention. "CDC FY 2023 Operating Plan." <https://www.cdc.gov/budget/documents/fy2023/FY-2023-CDC-Operating-Plan.pdf>. Accessed May 4, 2023.

- 28 Administration for Strategic Preparedness and Response. "FY 2024 Justification of Estimates for Appropriations Committee." U.S. Department of Health and Human Services. <https://aspr.hhs.gov/AboutASPR/BudgetandFunding/Documents/FY2024/ASPR-cj.pdf>. Accessed May 4, 2023.
- 29 Trust for America's Health. "What We Are Learning from COVID-19 About Being Prepared for a Public Health Emergency." May 2020. <https://www.tfah.org/report-details/covid-19-policy-response-brief/>. Accessed May 4, 2023.
- 30 Trust for America's Health. "The State of Obesity 2021: Better Policies for a Healthier America." September 2021. <https://www.tfah.org/report-details/state-of-obesity-2021/>. Accessed May 4, 2023.
- 31 Population Reference Bureau. "Fact Sheet: Aging in the United States." Updated January 2016. <https://www.prb.org/aging-unitedstates-fact-sheet/>. Accessed May 4, 2023.
- 32 Resolve: Public Health Leadership Forum. "Developing a Financing System to Support Public Health Infrastructure." Updated October 2, 2018. http://www.resolve.org/site-healthleadershipforum/files/2018/11/PHLF_developingafinancingsystemtosupportpublichealth.pdf. Accessed May 4, 2023.
- 33 Centers for Disease Control and Prevention. "Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/operating-plans/index.html>. Accessed May 4, 2023.
- 34 Centers for Disease Control and Prevention. "Justification of Estimates for Appropriation Committees: FY 2023." U.S. Department of Health and Human Services. <https://www.cdc.gov/budget/documents/fy2023/FY-2023-CDC-congressional-justification.pdf>. Accessed May 4, 2023.
- 35 Public Health National Center for Innovations. "Foundational Public Health Services." February 2022. <https://phnci.org/uploads/resource-files/FPHS-Factsheet-2022.pdf>. Accessed May 4, 2023.
- 36 Centers for Disease Control and Prevention. "Justification of Estimates for Appropriation Committees: FY 2023." U.S. Department of Health and Human Services. <https://www.cdc.gov/budget/documents/fy2023/FY-2023-CDC-congressional-justification.pdf>. Accessed May 4, 2023.
- 37 Centers for Disease Control and Prevention. "Funded Jurisdictions." In: Public Health Infrastructure Grant Program. Updated January 5, 2023. <https://www.cdc.gov/infrastructure/Funded-Jurisdictions.html>. Accessed May 4, 2023.
- 38 Council of State and Territorial Epidemiologists. "Driving Public Health in the Fast Lane." de Beaumont, September 25, 2019. <https://debeaumont.org/news/2019/white-paper-driving-public-health-in-the-fast-lane/#:-:text=The%20Council%20of%20State%20and%20Territorial%20Epidemiologists%20%28CSTE%29,to%20detect%20and%20respond%20to%20global%20health%20challenges>. Accessed May 4, 2023.
- 39 Data: Elemental to Health. "Modernize Public Health Data: A Call to Congress." https://cdn.ymaws.com/www.cste.org/resource/resmgr/data_health/DML_Costs_One_Pager_FINAL_08.pdf. Accessed May 4, 2023.
- 40 Centers for Disease Control and Prevention. "CDC Data Modernization Initiative – Notable Milestones: 2019-2022." *Public Health Surveillance and Data*. Updated April 12, 2023. https://www.cdc.gov/surveillance/surveillance-data-strategies/milestones_2019-2020.html. Accessed May 4, 2023.
- 41 Rochelle, Walensky. "CDC Director Discusses COVID-19 and the Future of American Public Health | Bloomberg Philanthropies." *You Tube*, uploaded by Bloomberg Philanthropies. December 15, 2022. <https://youtu.be/EKOrHUwM2f4?t=500>. Accessed May 4, 2023.
- 42 Lipstitch, Marc. "New CDC Center Focused on Forecasting the Next Outbreak: 5 Things to Know." *Medscape*, February 28, 2023. https://www.medscape.com/viewarticle/988615#vp_1. Accessed May 4, 2023.
- 43 Centers for Disease Control and Prevention. "Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/operating-plans/index.html>. Accessed May 4, 2023.
- 44 Centers for Disease Control and Prevention. "Prevention and Public Health Fund." Office of Financial Resources. Updated June 22, 2021. <https://www.cdc.gov/funding/pphf/index.html>. Accessed May 4, 2023.
- 45 Prevention and Public Health Fund, 2006. 42 USC §300u-11(a). <https://www.govinfo.gov/app/details/USCODE-2010-title42/USCODE-2010-title42-chap6A-subchapXV-sec300u-11>. Accessed May 4, 2023.
- 46 Trust for America's Health analysis of appropriations bills. https://www.tfah.org/wp-content/uploads/2022/08/PPHF_Backgrounder_August_2022.pdf
- 47 Trust for America's Health. "The Prevention and Public Health Fund: Preventing Disease and Reducing Long-Term Health Costs." https://www.tfah.org/wp-content/uploads/2022/08/PPHF_Backgrounder_August_2022.pdf. Accessed May 12, 2023.
- 48 U.S. Department of Health and Human Services. "Prevention and Public Health Fund." January 9, 2020. <https://www.hhs.gov/open/prevention/index.html>. Accessed May 4, 2023.
- 49 Sundar S. Shrestha, Kevin Davis, Nathan Mann, et al. "Cost Effectiveness of the Tips from Former Smokers Campaign—United States, 2012–2018." *American Journal of Preventive Medicine*, 60(3): 406-410, March 2021. <https://pubmed.ncbi.nlm.nih.gov/33455819/>. Accessed May 4, 2023.
- 50 Centers for Disease Control and Prevention. "Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/operating-plans/index.html>. Accessed May 4, 2023.
- 51 Centers for Disease Control and Prevention. "Public Health Emergency Preparedness (PHEP) Cooperative Agreement." Center for Preparedness and Response. Updated April 4, 2023. <https://www.cdc.gov/cpr/readiness/phep.htm>. Accessed May 4, 2023.
- 52 Kliff, Sarah, and Margot Sanger-Katz. "Bottleneck for U.S. Coronavirus Response: The Fax Machine." *The New York Times*, July 13, 2020. <https://www.nytimes.com/2020/07/13/upshot/coronavirus-response-fax-machines.html>. Accessed May 4, 2023.
- 53 Hamilton, Janet J., Kathryn Turner, and Meredith Lichtenstein Cone. "Responding to the Pandemic: Challenges with Public Health Surveillance Systems and Development of a COVID-19 National Surveillance Case Definition to Support Case-Based Morbidity Surveillance During the Early Response." *Journal of Public Health Management and Practice*, 27(Supplement): S80-S86, January/February 2021. https://journals.lww.com/jphmp/Fulltext/2021/01001/Responding_to_the_Pandemic_Challenges_With_Public.14.aspx. Accessed May 4, 2023.
- 54 Centers for Disease Control and Prevention. "Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/operating-plans/index.html>. Accessed May 4, 2023.
- 55 Centers for Disease Control and Prevention. "Public Health Emergency Preparedness (PHEP) Cooperative Agreement." Center for Preparedness and Response. Updated April 4, 2023. <https://www.cdc.gov/cpr/readiness/phep.htm>. Accessed May 4, 2023.
- 56 Ibid.
- 57 Public Health Emergency. "About the Hospital Preparedness Program." Updated October 20, 2021. <https://aspr.hhs.gov/HealthCareReadiness/HPP/Pages/about-hpp.aspx>. Accessed May 4, 2023.

- 58 Millard, Elizabeth. "How Hospital Emergency Preparedness Is Evolving." *Time*, November 25, 2022. <https://time.com/6236510/how-hospitals-plan-for-emergencies/>. Accessed May 4, 2023.
- 59 Public Health Emergency. "Health Care Readiness in Action: Stories from the Field." *Public Health Emergency*. Updated January 5, 2022. <https://www.phe.gov/Preparedness/planning/hpp/events/Pages/default.aspx>. Accessed May 4, 2023.
- 60 Public Health Emergency. "COVID-19 Resources for Health Care System Preparedness and Response." Updated October 7, 2021. <https://www.phe.gov/emergency/events/COVID19/HPP/Pages/default.aspx>. Accessed May 4, 2023.
- 61 Watson, Crystal R., Matthew Watson, and Tara Kirk Sell. "Public Health Preparedness Funding: Key Programs and Trends From 2001 to 2017." *American Journal of Public Health*, 107(S2): S165-S167, 2017. <https://ajph.aphapublications.org/doi/10.2105/AJPH.2017.303963>. Accessed May 4, 2023.
- 62 Public Health Emergency. "COVID-19 Supplemental Funding Overview." Updated April 26, 2021. <https://www.phe.gov/emergency/events/COVID19/HPP/Pages/overview.aspx>. Accessed May 4, 2023.
- 63 Branswell, Helen. "A Severe Flu Season Is Stretching Hospitals Thin. That Is a Very Bad Omen." *STAT*, January 15, 2018. <https://www.statnews.com/2018/01/15/flu-hospital-pandemics/>. Accessed May 4, 2023.
- 64 Shammas, Brittany, Ariana Eunjung Cha, Ben Guarino, and Jacqueline Dupree. "Record Numbers of COVID-19 Patients Push Hospitals and Staffs to the Limit." *The Washington Post*, December 16, 2020. <https://www.washingtonpost.com/health/2020/12/16/hospitals-covid-overwhelmed/>. Accessed May 4, 2023.
- 65 Popescu, Saskia, and Rebecca Leach. "Identifying Gaps in Frontline Healthcare Facility High-Consequence Infectious Disease Preparedness." *Health Security*, 17(2), April 26, 2019. <https://www.liebertpub.com/doi/10.1089/hs.2018.0098>. Accessed May 4, 2023.
- 66 National Academies of Sciences, Engineering, and Medicine. "2. Perspectives on the Nation's Capacity to Respond to Threats to Health, Safety, and Security." In *Engaging the Private-Sector Health Care System in Building Capacity to Respond to Threats to the Public's Health and National Security*. Washington, DC: National Academies Press, March 2018. <https://www.nap.edu/read/25203/chapter/3#12>. Accessed May 4, 2023.
- 67 National Academies of Sciences, Engineering, and Medicine. "3. Leveraging Health Care Coalitions." In *Forum on Medical and Public Health Preparedness for Catastrophic Events, Board on Health Sciences Policy, Institute of Medicine. Preparedness, Response, and Recovery Considerations for Children and Families: Workshop Summary*. Washington, DC: National Academies Press, March 21, 2014. <https://www.ncbi.nlm.nih.gov/books/NBK195866/>. Accessed May 4, 2023.
- 68 Centers for Disease Control and Prevention. "Mpox: Resources and Tools for Existing State, Tribal, Local, and Territorial Grant Recipients." February 15, 2023. <https://www.cdc.gov/grants/documents/resources-tools-existing-stlt-recipients.pdf>. Accessed May 4, 2023.
- 69 Berkrot, Bill. "Zika Funding Delay Hurt Effort to Fight Virus: U.S. Health Officials." *Reuters*, October 3, 2016. <https://www.reuters.com/article/us-health-zika-usa/zika-funding-delay-hurt-effort-to-fight-virus-u-s-health-officials-idUSKCN12327R>. Accessed May 4, 2023.
- 70 Infectious Diseases Rapid Response Reserve Fund, 2020. 42 USC 247d-4a. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title42-section247d-4a&num=0&edition=prelim#sourcecredit>. Accessed May 4, 2023.
- 71 Centers for Disease Control and Prevention. "Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/operating-plans/index.html>. Accessed May 4, 2023.
- 72 Abutaleb, Yasmeen, and Erica Werner. "HHS Notifies Congress that it May Tap Millions of Additional Dollars for Coronavirus Response." *The Washington Post*, February 3, 2020. <https://www.washingtonpost.com/health/2020/02/03/hhs-notifies-congress-it-may-tap-millions-additional-dollars-coronavirus-response/>. Accessed May 4, 2023.
- 73 USA Spending. "Infectious Diseases Rapid Response Reserve Fund." USA Spending. Federal Account Profile. https://www.usaspending.gov/federal_account/075-0945. Accessed May 4, 2023.
- 74 U.S. Department of Health and Human Services. "Pandemic and All-Hazards Preparedness and Advancing Innovation Act." Administration for Strategic Preparedness and Response. <https://aspr.hhs.gov/legal/pahpa/Pages/pahpaia.aspx>. Accessed May 4, 2023.
- 75 U.S. Department of Health and Human Services. "FY 2020 Secretary's Transfer for Coronavirus Response." February 2, 2020. <https://aboutblaw.com/O5I>. Accessed May 4, 2023.
- 76 National Association of County and City Health Officials. "Impact of the Redirection of Public Health Emergency Preparedness (PHEP) Funding from State and Local Health Departments to Support National Zika Response." May 2016. <https://www.naccho.org/uploads/downloadable-resources/Impact-of-the-Redirection-of-PHEP-Funding-to-Support-Zika-Response.pdf>. Accessed May 4, 2023.
- 77 Congressional Research Service. "Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (P.L. 116-123): First Coronavirus Supplemental." March 25, 2020. <https://crsreports.congress.gov/product/pdf/R/R46285>. Accessed May 4, 2023.
- 78 U.S. Department of Health and Human Services. HHS FY 2024 Budget in Brief. <https://www.hhs.gov/sites/default/files/fy-2024-budget-in-brief.pdf>. Accessed May 4, 2023.
- 79 Dorans, Kirsten S., Elissa H. Wilker, Wenyuan Li, et al. "Residential Proximity to Major Roads, Exposure to Fine Particulate Matter, and Coronary Artery Calcium: The Framingham Heart Study." *Arteriosclerosis, Thrombosis, and Vascular Biology*, 36(8): 1679-1685, 2016. <https://www.ahajournals.org/doi/10.1161/ATVBAHA.116.307141>. Accessed May 4, 2023.
- 80 Navathe, Amol S., Feiran Zhong, Victor J. Lei, et al. "Hospital Readmission and Social Risk Factors Identified from Physician Notes." *Health Services Research*, 53(2): 1110-1136, April 2018. <https://www.ncbi.nlm.nih.gov/pubmed/28295260>. Accessed May 4, 2023.
- 81 Singh, Gopal K., Gem P. Daus, Michelle Allender, et al. "Social Determinants of Health in the United States: Addressing Major Health Inequality Trends for the Nation, 1935-2016." *International Journal of MCH and AIDS*, 6(2): 139-164, 2017. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5777389/>. Accessed May 4, 2023.
- 82 MacIntyre, Sally, and Anne Ellaway. "Ecological Approaches: Rediscovering the Role of the Physical and Social Environment." In: Berkman, Lisa, and Kawachi, Ichiro (eds.), *Social Epidemiology*. New York: Oxford University Press, 2000: 332-348.
- 83 Committee on Valuing Community-Based, Non-Clinical Prevention. "2. Community-Based Prevention." In: *An Integrated Framework for Assessing the Value of Community-Based Prevention Programs; Board on Population Health and Public Health Practice; Institute of Medicine*. Washington, DC: National Academies Press, 2012. <https://www.ncbi.nlm.nih.gov/books/NBK206935/>. Accessed May 4, 2023.

- 84 Magnan, Sanne. "Social Determinants of Health 101 for Health Care: Five Plus Five." *National Academy of Medicine*, October 2017. <https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/>. Accessed May 4, 2023.
- 85 Committee on Valuing Community-Based, Non-Clinical Prevention. "2. Community-Based Prevention." In: *An Integrated Framework for Assessing the Value of Community-Based Prevention Programs; Board on Population Health and Public Health Practice; Institute of Medicine*. Washington, DC: National Academies Press, 2012. <https://www.ncbi.nlm.nih.gov/books/NBK206935/>. Accessed May 4, 2023.
- 86 Centers for Disease Control and Prevention. "Appalachian Diabetes Control and Translation Project." Updated March 23, 2022. <https://www.cdc.gov/diabetes/programs/appalachian.html>. Accessed May 4, 2023.
- 87 Centers for Disease Control and Prevention. "Native Diabetes Wellness Program." Updated December 30, 2022. <https://www.cdc.gov/diabetes/ndwp/index.html>. Accessed May 4, 2023.
- 88 Appalachian Regional Commission. "Creating a Culture of Health in Appalachia: Mortality." 2021. https://www.arc.gov/wp-content/uploads/2021/02/Health_Disparities_in_Appalachia_Mortality_Domain.pdf. Accessed May 4, 2023.
- 89 Centers for Disease Control and Prevention. "Native Americans with Diabetes." Updated November 15, 2018. <https://www.cdc.gov/vitalsigns/aian-diabetes/index.html>. Accessed May 4, 2023.
- 90 Davis, Andy, Neal Batra, Asif Dhar, et al. "US Health Care Can't Afford Health Inequities." *Deloitte Insights*, June 2022. <https://www2.deloitte.com/us/en/insights/industry/health-care/economic-cost-of-health-disparities.html>. Accessed May 4, 2023.
- 91 Centers for Disease Control and Prevention. "Hi-5 Health Impact in 5 Years." Updated May 11, 2017. <https://stacks.cdc.gov/view/cdc/48459>. Accessed May 4, 2023.
- 92 The New York Academy of Medicine and Trust for America's Health. *A Compendium of Proven Community-Based Prevention Programs*. Washington: Trust for America's Health, 2013. <https://www.tfah.org/report-details/a-compendium-of-proven-community-based-prevention-programs/>. Accessed May 4, 2023.
- 93 Minnesota Management and Budget. "Substance Use Disorder Findings." <https://mn.gov/mmb/results-first/substance-use-disorder/>. Accessed May 4, 2023.
- 94 Masters, Rebecca, Elspeth Anwar, Brendan Collins, et al. "Return on Investment of Public Health Interventions: A Systemic Review." *Journal of Epidemiology and Community Health*, 71(8): 827-834. <https://jech.bmj.com/content/71/8/827>. Accessed May 4, 2023.
- 95 Washington State Institute for Public Policy. "Good Behavior Game." Benefit-cost estimates updated December 2019. Literature review updated March 2018. <https://www.wsipp.wa.gov/BenefitCost/Program/82>. Accessed May 4, 2023.
- 96 Washington State Institute for Public Policy. "Life Skills Training." Benefit-cost estimates updated December 2019. Literature review updated June 2014. [https://www.wsipp.wa.gov/BenefitCost/Program/37#:~:text=LifeSkills%20Training%20\(LST\)%20is%20a,with%20initiation%20of%20risky%20behaviors](https://www.wsipp.wa.gov/BenefitCost/Program/37#:~:text=LifeSkills%20Training%20(LST)%20is%20a,with%20initiation%20of%20risky%20behaviors). Accessed May 4, 2023.
- 97 Washington State Institute for Public Policy. "Promoting Alternative Thinking Strategies (PATHS)." Benefit-cost estimates updated December 2019. Literature review updated June 2015. <https://www.wsipp.wa.gov/BenefitCost/ProgramPdf/94/Promoting-Alternative-Thinking-Strategies-PATHS#:~:text=Program%20Description%3A%20The%20Promoting%20Alternative,skills%20for%20grades%20K%2D6>. Accessed May 4, 2023.
- 98 Community Preventive Services Task Force. "Reducing Tobacco Use and Secondhand Smoke Exposure: Mass-Reach Health Communication Interventions." U.S. Department of Health and Human Services, 2015. [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.thecommunityguide.org/media/pdf/SET_Tobacco_MassReach.pdf](https://efaidnbmnnnibpcajpcglclefindmkaj/https://www.thecommunityguide.org/media/pdf/SET_Tobacco_MassReach.pdf). Accessed May 4, 2023.
- 99 Sundar S Shrestha, Kevin Davis, Nathan Mann, et al. "Cost Effectiveness of the Tips from Former Smokers Campaign—United States, 2012–2018." *American Journal of Preventive Medicine*, 60(3): 406-410, March 2021. <https://pubmed.ncbi.nlm.nih.gov/33455819/>. Accessed May 4, 2023.
- 100 Centers for Disease Control and Prevention. "Improving Social Determinants of Health—Getting Further Faster." March 2023. <https://www.cdc.gov/chronicdisease/programs-impact/sdoh/pdf/GFF-eval-brief-508.pdf>. Accessed May 4, 2023.
- 101 Centers for Disease Control and Prevention. "About Chronic Diseases." National Center for Chronic Disease Prevention and Health Promotion. Updated July 21, 2022. <https://www.cdc.gov/chronicdisease/about/index.htm>. Accessed May 4, 2023.
- 102 Centers for Disease Control and Prevention. "About Chronic Diseases." National Center for Chronic Disease Prevention and Health Promotion. Updated July 21, 2022. <https://www.cdc.gov/chronicdisease/about/index.htm>. Accessed May 4, 2023.
- 103 Centers for Disease Control and Prevention. "About the Center." National Center for Chronic Disease Prevention and Health Promotion. Updated March 2, 2023. <https://www.cdc.gov/chronicdisease/center/index.htm>. Accessed May 4, 2023.
- 104 Centers for Medicare & Medicaid Services. "National Health Expenditures Accounts." Updated December 15, 2022. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical>. Accessed May 4, 2023.
- 105 Martin, Anne B., Micah Hartman, Joseph Benson, Aaron Catlin, and the National Health Expenditure Accounts Team. "National Health Care Spending In 2021: Decline in Federal Spending Outweighs Greater Use of Health Care." *Health Affairs*, 42(1): 6-17, December 14, 2022. <https://www.healthaffairs.org/doi/10.1377/hlthaff.2022.01397>. Accessed May 4, 2023.
- 106 Centers for Disease Control and Prevention. "State Physical Activity and Nutrition (SPAN) Program." Updated January 20, 2023. <https://www.cdc.gov/nccdphp/dnpao/state-local-programs/span-1807/index.html>. Accessed May 4, 2023.
- 107 Ward, Zachary J., Sara N. Bleich, Michael W. Long, et al. "Association of Body Mass Index with Health Care Expenditures in the United States by Age and Sex." *PLOS ONE*, 16(3): e0247307, March 2021. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0247307>. Accessed May 4, 2023.
- 108 Centers for Disease Control and Prevention. "About Chronic Diseases." National Center for Chronic Disease Prevention and Health Promotion. Updated July 21, 2022. <https://www.cdc.gov/chronicdisease/about/index.htm>. Accessed May 4, 2023.
- 109 Chakradhar, Shraddha. "More Than 15% of US Adults Are Physically Inactive, New CDC Data Show." *STAT*, January 16, 2020. <https://www.statnews.com/2020/01/16/physical-inactivity-us-adults-cdc-data/>. Accessed May 4, 2023.

- 110 Sallis, Robert, Deborah Rohm Young, Sara Y. Tartof, et al. "Physical Inactivity Is Associated with a Higher Risk for Severe COVID-19 Outcomes: A Study In 48,440 Adult Patients." *British Journal of Sports Medicine*, 55: 1099-1105, 2021. <https://pubmed.ncbi.nlm.nih.gov/33849909/>. Accessed May 4, 2023.
- 111 Centers for Disease Control and Prevention. "Adult Physical Inactivity Prevalence Maps by Race/Ethnicity." Updated February 17, 2022. <https://www.cdc.gov/physicalactivity/data/inactivity-prevalence-maps/index.html>. Accessed May 4, 2023.
- 112 Chakradhar, Shraddha. "More Than 15% of US Adults Are Physically Inactive, New CDC Data Show." *STAT*, January 16, 2020. <https://www.statnews.com/2020/01/16/physical-inactivity-us-adults-cdc-data/>. Accessed May 4, 2023.
- 113 National Association of Chronic Disease Directors. "Chronic Disease Prevention & Health Equity: The Key to Improving Life and Healthcare (2020)." 2020. <https://chronicdisease.org/chronic-disease-prevention-health-equity-the-key-to-improving-life-and-healthcare/>. Accessed May 4, 2023.
- 114 Centers for Disease Control and Prevention. "About the Center." National Center for Chronic Disease Prevention and Health Promotion. Updated March 2, 2023. <https://www.cdc.gov/chronicdisease/center/index.htm>. Accessed May 4, 2023.
- 115 Jeffrey A. Tice, Rick Chapman, Karen K. Shore, et al. *Diabetes Prevention Programs: Effectiveness and Value. Final Evidence Report and Meeting Summary*. Boston: Institute for Clinical and Economic Review, July 25, 2016. http://icerorg.wpengine.com/wp-content/uploads/2020/10/CTAF_DPP_Final_Evidence_Report_072516.pdf. Accessed May 4, 2023.
- 116 Ritchey, Matthew D., Hilary K. Wall, Judy Hannan, and Laurence S. Sperling. "Million Hearts®: 2012–2016 Final Report Addendum Significant Impact; Significant Opportunity." U.S. Department of Health and Human Services. June 2020. https://millionhearts.hhs.gov/files/MH_final_report_addendum_2020.pdf. Accessed May 4, 2023.
- 117 Centers for Disease Control and Prevention. "Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/operating-plans/index.html>. Accessed May 4, 2023.
- 118 Centers for Disease Control and Prevention. "Provisional Drug Overdose Death Counts." National Center for Health Statistics. Updated April 12, 2023. <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>. Accessed May 4, 2023.
- 119 White House Office of National Drug Control Policy. "RELEASE: Dr. Rahul Gupta Releases Statement on CDC's New Overdose Death Data." Press release, February 15, 2023. <https://www.whitehouse.gov/ondcp/briefing-room/2023/02/15/release-dr-rahul-gupta-releases-statement-on-cdcs-new-overdose-death-data/>. Accessed May 4, 2023.
- 120 Spencer, Merianne Rose, Arialdi M. Miniño, and Margaret Warner. "Drug Overdose Deaths in the United States, 2001–2021." *NCHS Data Brief*, No. 457, December 2022. <https://www.cdc.gov/nchs/data/databriefs/db457.pdf>. Accessed May 4, 2023.
- 121 Ibid.
- 122 Stone, Deborah M., Karin A. Mack, and Judith Qualters. "Notes from the Field: Recent Changes in Suicide Rates, by Race and Ethnicity and Age Group – United States, 2021." *Morbidity and Mortality Weekly Report*, 72(6): 160-162, February 10, 2023. <https://www.cdc.gov/mmwr/volumes/72/wr/mm7206a4.htm>. Accessed May 4, 2023.
- 123 Centers for Disease Control and Prevention. *Youth Risk Behavior Survey Data Summary & Trends Report: 2011–2021*. Atlanta: Centers for Disease Control and Prevention, Division of Adolescent and School Health, February 13, 2023. https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf. Accessed May 4, 2023.
- 124 Peters, Zachary J., Loredana Santo, Danielle Davis, and Carol J. DeFrances. "Emergency Department Visits Related to Mental Health Disorders Among Adults, by Race and Hispanic Ethnicity: United States, 2018–2020." *National Health Statistics Reports*, No. 181, March 1, 2023. <https://www.cdc.gov/nchs/data/nhsr/nhsr181.pdf>. Accessed May 4, 2023.
- 125 Centers for Disease Control and Prevention. "FY 2023 Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/fy2023/operating-plans.html>. Accessed May 4, 2023.
- 126 Centers for Disease Control and Prevention. Adverse Childhood Experiences. Adverse Childhood Experiences | Injury | CDC Accessed May 5, 2023.
- 127 Trust for America's Health and Well Being Trust. *Pain in the Nation 2022: U.S. Experienced Highest Ever Combined Rates of Deaths Due to Alcohol, Drugs, and Suicide During the First Year of the COVID-19 Pandemic*. Washington: Trust for America's Health, May 2022. <https://www.tfah.org/report-details/pain-in-the-nation-2022/>. Accessed May 4, 2023.
- 128 Centers for Disease Control and Prevention. *Youth Risk Behavior Survey Data Summary & Trends Report: 2011–2021*. Atlanta: Centers for Disease Control and Prevention, Division of Adolescent and School Health, February 13, 2023. https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf. Accessed May 4, 2023.
- 129 Substance Abuse and Mental Health Services Administration. "988 Performance Metrics." Updated April 24, 2023. <https://www.samhsa.gov/find-help/988/performance-metrics>. Accessed May 4, 2023.
- 130 Vibrant Emotional Health. "988 Suicide & Crisis Lifeline LGBTQ+ Pilot Now 24/7 with Text and Chat." Press release, March 8, 2023. <https://www.vibrant.org/988-suicide-crisis-lifeline-lgbtq-pilot-now-24-7-with-text-and-chat/>. Accessed May 4, 2023.
- 131 Trust for America's Health and Well Being Trust. *Pain in the Nation 2022: U.S. Experienced Highest Ever Combined Rates of Deaths Due to Alcohol, Drugs, and Suicide During the First Year of the COVID-19 Pandemic*. Washington: Trust for America's Health, May 2022. <https://www.tfah.org/report-details/pain-in-the-nation-2022/>. Accessed May 4, 2023.
- 132 Centers for Disease Control and Prevention. *Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence*. Atlanta: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2019. <https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf>. Accessed May 4, 2023.
- 133 Centers for Disease Control and Prevention. "Preventing Adverse Childhood Experiences: Data to Action (PACE: D2A)." *National Center for Health Statistics*. Updated September 22, 2022. <https://www.cdc.gov/violenceprevention/aces/preventingaces-data-to-action.html>. Accessed May 4, 2023.
- 134 Centers for Disease Control and Prevention. "Injury Control Research Centers." Updated October 13, 2021. <https://www.cdc.gov/injury/erpo/icrc/centers.html>. Accessed May 4, 2023.
- 135 Centers for Disease Control and Prevention. "About the Core SVIPP Program." Updated March 24, 2023. <https://www.cdc.gov/injury/stateprograms/about.html>. Accessed May 4, 2023.
- 136 Centers for Disease Control and Prevention. "Wisconsin: Core State Violence and Injury Prevention Program." July 2018. https://www.cdc.gov/injury/pdfs/stateprograms/wisconsin_core_svipp-H.pdf. Accessed May 4, 2023.

- 137 Centers for Disease Control and Prevention. "About the Core SVIPP Program." Updated March 24, 2023. <https://www.cdc.gov/injury/stateprograms/about.html>. Accessed May 4, 2023.
- 138 Centers for Disease Control and Prevention. "Comprehensive Suicide Prevention." Updated April 11, 2023. <https://www.cdc.gov/suicide/programs/csp/index.html>. Accessed May 4, 2023.
- 139 The White House. "Fact Sheet: The President's Budget for Fiscal Year 2024." March 9, 2023. <https://www.whitehouse.gov/omb/briefing-room/2023/03/09/fact-sheet-the-presidents-budget-for-fiscal-year-2024/>. Accessed May 4, 2023.
- 140 Centers for Disease Control and Prevention. "FY 2023 Operating Plans." Updated February 10, 2023. <https://www.cdc.gov/budget/fy2023/operating-plans.html>. Accessed May 4, 2023.
- 141 Centers for Disease Control and Prevention. "Overdose Data to Action." Updated March 3, 2023, 2022. <https://www.cdc.gov/drugoverdose/od2a/index.html>. Accessed May 4, 2023.
- 142 Centers for Disease Control and Prevention. "OD2A: Impact of CDC-funded Programs." National Center for Health Statistics. Updated November 5, 2021. <https://www.cdc.gov/drugoverdose/od2a/impact.html>. Accessed May 4, 2023.
- 143 Centers for Disease Control and Prevention. "Grant Funding Profiles." Updated January 12, 2023. <https://www.cdc.gov/fundingprofiles/index.htm>. Accessed May 4, 2023.
- 144 Centers for Disease Control and Prevention. "Novel Coronavirus (COVID-19)." Office of Financial Resources. Updated August 3, 2021. <https://www.cdc.gov/budget/fact-sheets/covid-19/index.html>. Accessed May 4, 2023.
- 145 Ibid.
- 146 Centers for Disease Control and Prevention. "CDC COVID-19 State, Tribal, Local, and Territorial Funding." Updated November 29, 2022. <https://www.cdc.gov/budget/fact-sheets/covid-19/funding/index.html>. Accessed May 4, 2023.
- 147 Centers for Disease Control and Prevention. "eCR Puts the Pedal to the Metal and Expands Nationwide." Updated September 9, 2022. <https://www.cdc.gov/ecr/stories/expanding-nationwide.html>. Accessed May 4, 2023.
- 148 Centers for Disease Control and Prevention. "Healthcare Facilities in Production for eCR." Updated April 11, 2023. <https://www.cdc.gov/ecr/facilities-map.html>. Accessed May 4, 2023.
- 149 Ibid.
- 150 Ibid.
- 151 Health Resources and Services Administration. "Operating Plan for FY 2023." Updated February 10, 2023. <https://www.hrsa.gov/about/budget/operating-plan.html>. Accessed May 4, 2023.
- 152 U.S. Department of Health and Human Services. "Fiscal Year 2024 Budget in Brief." 2023. <https://www.hhs.gov/sites/default/files/fy-2024-budget-in-brief.pdf>. Accessed May 12, 2023.
- 153 Food and Drug Administration. "FY 2023 Operating Plan Narrative." 2023. <https://www.fda.gov/media/165045/download>. Accessed May 4, 2023.
- 154 Centers for Disease Control and Prevention. "Early Care and Education Portal" Updated September 21, 2022. <https://www.cdc.gov/earlycare/index.html>. Accessed May 4, 2023.
- 155 First Five Years Fund. "Head Start & Early Head Start." <https://www.ffyf.org/issues/head-start-early-head-start/>. Accessed May 4, 2023.
- 156 Ibid.
- 157 Move for Hunger. "About Move for Hunger." <https://www.moveforhunger.org/about-us>. Accessed May 4, 2023.
- 158 Center on Budget and Policy Priorities. "Tracking the COVID-19 Recession's Effects on Food, Housing, and Employment Hardships." *COVID Hardship Watch*. Updated February 10, 2022. <https://www.cbpp.org/research/poverty-and-inequality/tracking-the-covid-19-recessions-effects-on-food-housing-and>. Accessed May 4, 2023.
- 159 Dean, Stacy, Lauren Hall, Brynne Keith-Jennings, and Dottie Rosenbaum. "SNAP Benefit Boost Would Get Needed Food Aid to the Poorest Participants, Who Have Been Left Out." *Center on Budget and Policy Priorities*, September 16, 2020. <https://www.cbpp.org/research/food-assistance/snap-benefit-boost-would-get-needed-food-aid-to-the-poorest-participants>. Accessed May 4, 2023.
- 160 U.S. Department of Agriculture. "USDA Extends WIC COVID-19 Flexibilities for Duration of the COVID-19 Public Health Emergency." Press release, September 21, 2020. <https://www.usda.gov/media/press-releases/2020/09/21/usda-extends-wic-covid-19-flexibilities-duration-covid-19-public>. Accessed May 4, 2023.
- 161 Pérez, Allyson, and Crystal Fitzsimons. "Congress Passes Bipartisan, Bicameral Keep Kids Fed Act." *Food Research & Action Center*, June 24, 2022. <https://frac.org/blog/congress-passes-keep-kids-fed-act>. Accessed May 4, 2023.
- 162 Guardia, Luis. "FRAC Hails Senate Passage of American Rescue Plan Act, Further Strengthening SNAP, Pandemic EBT, and Other Relief Provisions." *Food Research & Action Center*, March 2021. <https://frac.org/news/frachailssenatepassageofamericanrescueact>. Accessed May 4, 2023.
- 163 Neuberger, Zoe. "An Opportunity to Make Summer Childhood Hunger History." *Center on Budget and Policy Priorities*, April 28, 2021. <https://www.cbpp.org/blog/an-opportunity-to-make-summer-childhood-hunger-history>. Accessed May 4, 2023.
- 164 Rosenbaum, Dottie, Katie Bergh, and Hall, Lauren. "Temporary Pandemic SNAP Benefits Will End in Remaining 35 States in March 2023." *Center on Budget and Policy Priorities*, February 6, 2023. <https://www.cbpp.org/research/food-assistance/temporary-pandemic-snap-benefits-will-end-in-remaining-35-states-in-march>. Accessed May 4, 2023.
- 165 Adrienne R. Brown, Katherine G. Giefer, and Michael D. King. "Roughly 32 Million People Receiving Less Government Food Assistance". U.S. Census Bureau. April 27, 2023. Impact of the End of Extra SNAP Benefits (census.gov) Accessed May 13, 2023.
- 166 Ibid
- 167 Hoynes, Hilary, Diane Whitmore Schanzenbach, and Douglas Almond. "Long-Run Impacts of Childhood Access to the Safety Net." *American Economic Review*, 106(4): 903–934, 2016. <https://www.aeaweb.org/articles?id=10.1257/aer.20130375>. Accessed May 4, 2023.
- 168 Berkowitz, Seth A., Hilary K. Seligman, Joseph Rigdon, et al. "Supplemental Nutrition Assistance Program (SNAP) Participation and Health Care Expenditures Among Low-Income Adults." *JAMA Internal Medicine*, 177(11): 1642-1649, 2017. <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2653910>. Accessed May 4, 2023.
- 169 Schanzenbach, Diane Whitmore, Lauren Bauer, and Greg Nantz. "Twelve Facts About Food Insecurity and SNAP." *Brookings Institution*, April 21, 2019. <https://www.brookings.edu/research/twelve-facts-about-food-insecurity-and-snap/>. Accessed May 4, 2023.

170. Centers for Disease Control and Prevention. "Obesity Among Young Children Enrolled in WIC." Updated November 8, 2022. <https://www.cdc.gov/obesity/data/obesity-among-WIC-enrolled-young-children.html>. Accessed May 4, 2023.
- 171 Zippel, Claire. "After Child Tax Credit Payments Begin, Many More Families Have Enough to Eat." *Center on Budget and Policy Priorities*. August 30, 2021. <https://www.cbpp.org/blog/after-child-tax-credit-payments-begin-many-more-families-have-enough-to-eat>. Accessed May 12, 2023.
- 172 Marr, Chuck, Kris Cox, Sarah Calame, et al. "Year-End Tax Policy Priority: Expand the Child Tax Credit for the 19 Million Children Who Receive Less Than the Full Credit." *Center of Budget and Policy Priorities*, December 7, 2022. <https://www.cbpp.org/research/federal-tax/year-end-tax-policy-priority-expand-the-child-tax-credit-for-the-19-million>. Accessed May 4, 2023.
- 173 Burns, Kalee, Liana Fox, and Wilson Danielle. "Expansions to Child Tax Credit Contributed to 46% Decline in Child Poverty Since 2020." *United States Census Bureau*, September 13, 2022. <https://www.census.gov/library/stories/2022/09/record-drop-in-child-poverty.html>. Accessed May 4, 2023.
- 174 The White House. Biden-Harris Administration Launches the White House Challenge to End Hunger and Build Healthy Communities, Announces New Public & Private Sector Actions to Continue Momentum from Historic Hunger, Nutrition, and Health Conference. March 24, 2023. FACT SHEET: Biden-Harris Administration Launches the White House Challenge to End Hunger and Build Healthy Communities, Announces New Public & Private Sector Actions to Continue Momentum from Historic Hunger, Nutrition, and Health Conference | The White House. Accessed April 6, 2023.
- 175 Federal Register. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC): Revisions in the WIC Food Packages. November 11, 2022. Federal Register: Special Supplemental Nutrition Program for Women, Infants, and Children (WIC): Revisions in the WIC Food Packages Accessed May 13, 2022.
- 176 Federal Register. Child Nutrition Programs: Revision to Meal Patterns Consistent With the 2020 Dietary Guidelines for Americans. February 7, 2023. Federal Register: Child Nutrition Programs: Revisions to Meal Patterns Consistent With the 2020 Dietary Guidelines for Americans Accessed May 13, 2023.
- 177 Salinsky, Eileen. "Governmental Public Health: An Overview of State and Local Public Health Agencies." *National Health Policy Forum*, Background Paper No. 77, August 18, 2010. https://hsr.himmelfarb.gwu.edu/sphhs_centers_nhpf/244/. Accessed May 4, 2023.
- 178 The Association of State and Territorial Health Officials. "ASTHO Profile of State and Territorial Public Health Volume 4." 2017. <https://www.astho.org/Profile/Volume-Four/2016-ASTHO-Profile-of-State-and-Territorial-Public-Health/>. Accessed May 4, 2023.
- 179 Trust for America's Health. "Promoting Health and Cost Control in States." February 21, 2019. <https://www.tfah.org/report-details/promoting-health-and-cost-control-in-states/>. Accessed May 4, 2023.
- 180 Trust for America's Health. "Leveraging Evidence-Based Policies to Improve Health, Control Costs, and Create Health Equity." July 29, 2021. <https://www.tfah.org/report-details/leveraging-evidence-based-policies/>. Accessed May 4, 2023.
- 181 Trust for America's Health. *Ready or Not 2022: Protecting the Public's Health from Diseases, Disasters and Bioterrorism*. Washington: Trust for America's Health, March 10, 2022. <https://www.tfah.org/report-details/ready-or-not-2022/>. Accessed May 4, 2023.
- 182 North Carolina Institute for Public Health. "What Do Local Health Departments Do for Your Community?" 2015. <https://sph.unc.edu/files/2015/03/nciph-comm-lhd-exp.pdf>. Accessed May 4, 2023.
- 183 Bryant, Blaire. "Protect Funding for Core Local Public Health Services and Prevention Programs." *National Association of Counties Policy Brief*, March 8, 2021. <https://www.naco.org/resources/protect-funding-core-local-public-health-services-and-prevention-programs>. Accessed May 4, 2023.
- 184 National Association of County and City Health Officials. "2020 Forces of Change: The COVID-19 Edition." April 28, 2022. <https://www.naccho.org/uploads/downloadable-resources/2020-Forces-of-Change-The-COVID-19-Edition.pdf>. Accessed May 4, 2023.
- 185 SteelFisher, Gillian K., Mary G. Findling, Hannah L. Caporello, et al. "Trust in US Federal, State, and Local Public Health Agencies During COVID-19: Responses and Policy Implications." *Health Affairs*, 42(3): 328-337, March 2023. <https://www.healthaffairs.org/doi/10.1377/hlthaff.2022.01204>. Accessed May 4, 2023.
- 186 Rodriguez, Jazmin Orozco. "Mistrust and Polarization Steer Rural Governments to Reject Federal Public Health Funding." *Kaiser Health News*, November 18, 2022. <https://khn.org/news/article/mistrust-and-polarization-steer-rural-governments-to-reject-federal-public-health-funding/>. Accessed May 4, 2023.
- 187 Weber, Lauren. "How One State's Public Health Defunding Led to Vaccination Chaos." *Kaiser Health News*, March 26, 2021. <https://khn.org/news/article/missouri-public-health-defunding-vaccination-chaos/>. Accessed May 4, 2023.
- 188 Szabo, Liz, and Weber, Lauren. "Fighting Monkeypox, Sexual Health Clinics Are Underfunded and Ill-Equipped." *Kaiser Health News*, July 19, 2022. <https://khn.org/news/article/monkeypox-sexual-health-clinics-underfunded-ill-equipped/>. Accessed May 4, 2023.
- 189 The Network for Public Health Law. "Summary of Enacted Laws and Pending Bills Limiting Public Health Authority: The Second Wave." Updated April 22, 2022. https://www.networkforphl.org/wp-content/uploads/2022/04/50_State-Survey_Summary-of-Enacted-Laws-and-Pending-Bills-Limiting-Public-Health-Authority-1.pdf. Accessed May 4, 2023.
- 190 Weber, Lauren, and Joel Achenback. "Covid Backlash Hobbles Public Health and Future Pandemic Response." *The Washington Post*, March 8, 2023. <https://www.washingtonpost.com/health/2023/03/08/covid-public-health-backlash/>. Accessed May 4, 2023.
- 191 Bryant-Genevier, Jonathan, Carol Y. Rao, Barbara Lopes-Cardozo, et al. "Symptoms of Depression, Anxiety, Post-Traumatic Stress Disorder, and Suicidal Ideation Among State, Tribal, Local, and Territorial Public Health Workers During the COVID-19 Pandemic – United States, March–April 2021." *Morbidity and Mortality Weekly Report*, 70: 947-952, July 2, 2021. https://www.cdc.gov/mmwr/volumes/70/wr/mm7026e1.htm?s_cid=mm7026e1_w. Accessed May 4, 2023.
- 192 De Beaumont Foundation and the Association of State and Territorial Health Officials. "Rising Stress and Burnout in Public Health: Results of a National Survey of the Public Health Workforce." March 2022. https://debeaumont.org/wp-content/uploads/dlm_uploads/2022/03/Stress-and-Burnout-Brief_final.pdf. Accessed May 4, 2023.
- 193 Ibid.

- 194 National Association of County and City Health Officials. "2020 Forces of Change: The COVID-19 Edition." April 28, 2022. <https://www.naccho.org/uploads/downloadable-resources/2020-Forces-of-Change-The-COVID-19-Edition.pdf>. Accessed May 4, 2023.
- 195 National Association of County and City Health Officials. "NACCHO Research: Harassment Targeting Local Public Health Associated With Dire Outcomes on an Already Stretched Workforce." *NacchoVoice*, November 22, 2022. <https://www.naccho.org/blog/articles/naccho-research-harassment-targeting-local-public-health-associated-with-dire-outcomes-on-an-already-stretched-workforce>. Accessed May 4, 2023.
- 196 McCall, Timothy C., Alford, Aaron A., Cunningham, Margaret C. et al. "The Role of Harassment in the Mental Well-Being of Local Public Health Professionals and Its Relationship with an Intent to Leave Their Organization During the COVID-19 Pandemic." *Journal of Public Health Management and Practice*, 29(Supplement 1): S45-S47, January/February 2023. <https://pubmed.ncbi.nlm.nih.gov/36223508/>. Accessed May 4, 2023.
- 197 De Beaumont Foundation. "2021 Public Health Workforce Interests and Needs Survey." 2022. <https://debeaumont.org/phwins/2021-findings/>. Accessed May 4, 2023.
- 198 Association of State and Territorial Health Officials. "COVID-19 Pandemic Further Strains Public Health Workforce." 2022. <https://www.astho.org/globalassets/pdf/legislative-prospectus-series/2022-public-health-workforce.pdf>. Accessed May 4, 2023.
- 199 The Pew Charitable Trusts. "'Lost Decade' Casts a Post-Recession Shadow on State Finances." June 4, 2019. <https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/06/lost-decade-casts-a-post-recession-shadow-on-state-finances>. Accessed May 4, 2023.
- 200 Association of State and Territorial Health Officials. "ASTHO Applauds President Biden's Historic Public Health Workforce Expansion." Press release, May 13, 2021. <https://www.astho.org/communications/newsroom/2021/astho-applauds-president-bidens-historic-public-health-workforce-expansion/>. Accessed May 4, 2023.
- 201 National Association of County and City Health Officials. "NACCHO Applauds Biden Administration Plan to Bolster Public Health Workforce." Press release, May 13, 2021. <https://www.naccho.org/blog/articles/naccho-applauds-biden-administration-plan-to-bolster-public-health-workforce>. Accessed May 4, 2023.
- 202 National Association of County and City Health Officials. "NACCHO Lauds Passage of Public Health Workforce Loan Repayment Program Included in End-of-Year Legislation." Press release, December 23, 2022. <https://www.naccho.org/blog/articles/naccho-lauds-passage-of-public-health-workforce-loan-repayment-program-included-in-end-of-year-legislation>. Accessed May 4, 2023.
- 203 Centers for Disease Control and Prevention. "Public Health Infrastructure Grant Program." Center for Surveillance, Epidemiology, and Laboratory Services, Division of Scientific Education and Professional Development, Updated May 2, 2023. <https://www.cdc.gov/infrastructure/index.html>. Accessed May 4, 2023.
- 204 Public Health Initiatives. "Transforming Public Health through the FPHS." <https://phnci.org/transformation/fphs>. Accessed May 4, 2023.
- 205 De Beaumont Foundation and Public Health National Center for Innovation. "Staffing Up: Workforce Levels Needed to Provide Basic Public Health for all Americans." October 7, 2021. <https://debeaumont.org/news/2021/staffing-up-research-brief/>. Accessed May 4, 2023.
- 206 Association of State and Territorial Health Officials. "New Data on State Health Agencies Shows Shrinking Workforce and Decreased Funding Leading Up to the COVID-19 Pandemic." Press release, September 24, 2020. <https://www.astho.org/communications/newsroom/older-releases/new-sha-data-shows-shrinking-workforce-decreased-funding-leading-to-covid-19-pandemic/>. Accessed May 4, 2023.
- 207 National Association of County & City Health Officials. "NACCHO's 2019 Profile Study: Changes in Local Health Department Workforce and Finance Capacity Since 2008." May 2020. <https://www.naccho.org/uploads/downloadable-resources/2019-Profile-Workforce-and-Finance-Capacity.pdf>. Accessed May 4, 2023.
- 208 Leider, Jonathon P., Brian C. Castrucci, Moriah Robins, et al. "The Exodus of State and Local Public Health Employees: Separations Started Before and Continued Throughout COVID-19." *Health Affairs*, 42(3): 338-348, March 2023. <https://www.healthaffairs.org/doi/10.1377/hlthaff.2022.01251>. Accessed May 4, 2023.
- 209 Davis, Maggie. "State and Territorial Policies to Strengthen the Public Health and Healthcare Workforce." Association of State and Territorial Health Officials, March 24, 2023. <https://www.astho.org/communications/blog/state-territorial-policies-strengthen-public-health-healthcare-workforce/>. Accessed May 4, 2023.
- 210 Ekoma, Jeffrey. "The Need for Modernizing Public Health Data in Responding to COVID-19." Association of State and Territorial Health Officials, October 8, 2020. <https://www.astho.org/communications/blog/need-for-modernizing-public-health-data-responding-to-covid-19/>. Accessed May 4, 2023.
- 211 Lane, JT, Karen Smith, Meredith Allen, Priyanka Surio, and Elizabeth Ruebush. "COVID-19 Highlights Critical Need for Public Health Data Modernization to Remain a Priority." *Journal of Public Health Management and Practice*, 26(6): 634-636, November/December 2020. <https://pubmed.ncbi.nlm.nih.gov/32969954/>. Accessed May 4, 2023.
- 212 Association of State and Territorial Health Officials. "Public Health for the 21st Century: Data Modernization and Privacy Protections." 2022. https://www.astho.org/globalassets/pdf/legislative-prospectus_data-modernization.pdf. Accessed May 4, 2023.
- 213 Trust for America's Health. *Ready or Not: Protecting the Public's Health from Diseases, Disasters and Bioterrorism, 2019.* Washington: Trust for America's Health, February 12, 2019. <https://www.tfah.org/report-details/ready-or-not-protecting-the-publics-health-from-diseases-disasters-and-bioterrorism-2019/>. Accessed May 4, 2023.
- 214 Public Health Leadership Forum. "Developing a Financing System to Support Public Health Infrastructure." October 2, 2018. http://www.resolve.org/site-healthleadershipforum/files/2018/11/PHLF_developingafinancingsystemtosupportpublichealth.pdf. Accessed May 4, 2023.
- 215 Cezar Brian C. Mamaril, Glen P. Mays, Douglas Keith Branham. "Estimating the Cost of Providing Foundational Public Health Services." *Health Services Research*, 53(S1): 2803-2820, 2018. <https://doi.org/10.1111/1475-6773.12816>. Accessed May 4, 2023.
- 216 Data: Elemental to Health. "Modernize Public Health Data: A Call to Congress." https://cdn.ymaws.com/www.cste.org/resource/resmgr/data_health/DMI_Costs_One_Pager_FINAL_08.pdf. Accessed May 4, 2023.
- 217 Association of State and Territorial Health Officials. "FY24 Governmental Public Health Appropriations Book." April 2023. <https://www.astho.org/globalassets/pdf/astho-appropriations-book.pdf>. Accessed May 4, 2023.

- 218 For more information, see: Trust for America's Health. "Prevention and Public Health Fund Detailed Information." <https://www.tfah.org/report-details/prevention-and-public-health-fund-detailed-information/>. Accessed May 4, 2023.
- 219 Sundar S. Shrestha, Kevin Davis, Nathan Mann, et al. "Cost Effectiveness of the Tips From Former Smokers Campaign—United States, 2012–2018." *American Journal of Preventive Medicine*, 60(3): 406-410, March 2021. <https://pubmed.ncbi.nlm.nih.gov/33455819/>. Accessed May 4, 2023.
- 220 Centers for Disease Control and Prevention. "About Antimicrobial Resistance." Updated October 5, 2022. [https://www.cdc.gov/drugresistance/about.html#:~:text=In%20the%20U.S.%2C%20more%20than,Resistance%20\(AR\)%20Threats%20Report](https://www.cdc.gov/drugresistance/about.html#:~:text=In%20the%20U.S.%2C%20more%20than,Resistance%20(AR)%20Threats%20Report). Accessed May 4, 2023.
- 221 Office of Management and Budget. "Summary of the President's Discretionary Funding Request." April 9, 2021. <https://www.whitehouse.gov/wp-content/uploads/2021/04/FY2022-Discretionary-Request.pdf>. Accessed May 4, 2023.
- 222 Centers for Disease Control and Prevention. "CDC's Climate-Ready States & Cities Initiative." Updated November 4, 2021. https://www.cdc.gov/climateandhealth/climate_ready.htm. Accessed May 4, 2023.
- 223 Centers for Disease Control and Prevention. "State & Local Tracking Programs." Updated July 29, 2022. <https://www.cdc.gov/nceh/tracking/grants.htm>. Accessed May 4, 2023.
- 224 Centers for Disease Control and Prevention. "Fiscal Year 2013 Centers for Disease Control and Prevention Justification of Estimates for Appropriations Committees." U.S. Department of Health and Human Services. <https://www.cdc.gov/budget/documents/fy2013/fy-2013-cdc-congressional-justification.pdf>. Accessed May 4, 2023.
- 225 Resolve to Save Lives. "Making the World Safer from Epidemics with Advocacy and Action." *Health Defense Operations*. <https://resolvetosavelives.org/prevent-epidemics>. Accessed May 4, 2023.
- 226 Taylor, Lauren A., Caitlin E. Coyle, Chima Ndumele, et al. *Leveraging the Social Determinants of Health: What Works?* Boston: Yale Global Health Leadership Institute and the Blue Cross and Blue Shield Foundation of Massachusetts, June 29, 2015. <https://www.bluecrossmafoundation.org/publication/leveraging-social-determinants-health-what-works>. Accessed May 4, 2023.
- 227 Magnan, Sanne. "Social Determinants of Health 101 for Health Care: Five Plus Five." *National Academy of Medicine*, October 9, 2017. <https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/>. Accessed May 4, 2023.
- 228 Office of Management and Budget. "Summary of the President's Discretionary Funding Request." April 9, 2021. <https://www.whitehouse.gov/wp-content/uploads/2021/04/FY2022-Discretionary-Request.pdf>. Accessed May 4, 2023.
- 229 Centers for Disease Control and Prevention. "Chronic Diseases in America." Updated December 13, 2022. <https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>. Accessed May 4, 2023.
- 230 Centers for Disease Control and Prevention. *Unfit to Service Obesity and Physical Inactivity Are Impacting National Security*. UNFIT TO SERVE: Obesity is Impacting National Security (cdc.gov) July 2022. Accessed May 5, 2023.
- 231 Centers for Disease Control and Prevention. "Health and Economic Costs of Chronic Diseases." Updated March 23, 2023. <https://www.cdc.gov/chronicdisease/about/costs/index.htm>. Accessed May 4, 2023.
- 232 Centers for Disease Control and Prevention. "State Physical Activity and Nutrition (SPAN) Program." Updated January 20, 2023. <https://www.cdc.gov/nccdphp/dnpao/state-local-programs/span-1807/index.html>. Accessed May 4, 2023.
- 233 Trust for America's Health. "Age-Friendly Public Health Systems." 2020. <https://www.tfah.org/wp-content/uploads/2023/03/FY24-Age-Friendly-Public-Health-1.pdf>. Accessed May 4, 2023.
- 234 Stone, Deborah M., Karin A. Mack, and Judith Qualters. "Notes from the Field: Recent Changes in Suicide Rates, by Race and Ethnicity and Age Group – United States, 2021." *Morbidity and Mortality Weekly Report*, 72(6): 160-162, February 10, 2023. <https://www.cdc.gov/mmwr/volumes/72/wr/mm7206a4.htm>. Accessed May 4, 2023.
- 235 Centers for Disease Control and Prevention. *Youth Risk Behavior Survey Data Summary & Trends Report: 2011–2021*. Atlanta: Centers for Disease Control and Prevention, Division of Adolescent and School Health, February 13, 2023. https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf. Accessed May 4, 2023.
- 236 Centers for Disease Control and Prevention. "Comprehensive Suicide Prevention." Updated April 11, 2023. <https://www.cdc.gov/suicide/programs/csp/index.html>. Accessed May 4, 2023.
- 237 Ibid
- 238 Centers for Disease Control and Prevention. "Success Stories: What's Working in Schools." Updated August 8, 2022. <https://www.cdc.gov/healthyyouth/stories/index.htm>. Accessed May 4, 2023.
- 239 Robin, Leah, Zachary Timpe, Nicolas A. Suarez, et al. "Local Education Agency Impact on School Environments to Reduce Health Risk Behaviors and Experiences Among High School Students." *Journal of Adolescent Health*, 70(2): 313-321, February 2022. <https://www.sciencedirect.com/science/article/abs/pii/S1054139X21004006>. Accessed May 4, 2023.
- 240 Kaczkowski, Wojciech, Jingjing Li, Adina C. Cooper, and Leah Robin. "Examining the Relationship Between LGBTQ-Supportive School Health Policies and Practices and Psychosocial Health Outcomes of Lesbian, Gay, Bisexual, and Heterosexual Students." *LGBT Health*, 9(1), January 2022. <https://www.liebertpub.com/doi/10.1089/lgbt.2021.0133>. Accessed May 4, 2023.



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