

CONFRONTING A LEGACY OF SCARCITY:

A PLAN FOR AMERICA'S RE-INVESTMENT IN PUBLIC HEALTH



**A Report by the Yale Global Health Justice Partnership
of the Yale Law School and
Yale School of Public Health**

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I. Acknowledgments



The Global Health Justice Partnership (GHJP) is an interdisciplinary research, teaching, and advocacy program that aims to tackle contemporary problems at the interface of global health, human rights, and social justice. The GHJP offers a practicum course each year that engages students in real-world projects with scholars, activists, lawyers, and other practitioners on issues of health justice. The GHJP is a collaboration between the Yale Law School and Yale School of Public Health.

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II. Executive Summary

The COVID-19 pandemic has highlighted startling inadequacies in the American public health system. At all levels of government, health departments and public health agencies lack the necessary funding to address the nation's most pressing health concerns. Since fiscal year 2010, funding for state and local health departments has fallen by approximately 17%,¹ and the Centers for Disease Control and Prevention's program level budget has remained roughly the same despite many programs receiving inadequate funds.² A 2019 study in the American Journal of Public Health suggested that there is an annual gap of \$4.5 billion, or \$13 per person, in the funding needed to adequately carry out essential public health activities across the United States (US).³ Meanwhile, there has been only one major attempt to secure a mandatory, sustainable funding stream for public health in the last two decades: the Prevention and Public Health Fund (PPHF). In 2010, the PPHF was established as part of the Affordable Care Act (ACA), but was quickly raided as other priorities took precedence. If the fund had remained intact an additional \$12 billion would have eventually flowed to local and state health departments since 2010.⁴

So how do we get out of the deep hole we have dug for ourselves? This report presents a bold proposal for reinvesting in public health, along with a suite of recommendations to streamline the delivery of funds and promote efficient coordination among public health authorities. To develop

our proposals, we interviewed over two dozen of the nation's leading public health experts, including leaders in local, city, and state health departments, academics and research scientists, clinicians and health commissioners, former CDC directors, congressional staffers, and activists.

Our conclusion is that the centerpiece of sustainable public health funding in America should be a new mandatory funding stream, made available to states and localities, and insulated from attempts to shift funding away from public health. Mandatory funding should be used to provide a core set of essential public health services on an ongoing basis. While securing this type of funding may have previously been thought to be an unattainable feat, Americans' collective experience with the COVID-19 pandemic has enabled the country to gain a new understanding of the importance of public health. To accomplish this goal and maintain support for these vital efforts, all actors - from government agencies to non-governmental organizations working in public health - must communicate with the public regarding the benefits of public health investment. This is not just about public relations, but also means bringing communities into discussions about how to shape a healthier future for us all.

The present moment is also an opportunity to recognize and address the social determinants of health (SDOH), or the "environmental conditions influenced by where people are born, live, learn, work, play, worship, and age that affect a wide range of

health, functioning, and quality-of-life outcomes and risks.”²⁵ This includes education, housing, food security, and more, and generally falls into the domain of agencies that are not traditionally considered health-specific, such as Housing and Urban Development and the Department of Education. While we do not recommend shifting responsibility away from these players, we believe there is significant work to be done building coalitions and fostering coordination with public health authorities in order to improve the social and economic conditions that undergird our collective health.

Although the hallmark of our proposal is new mandatory funding, discretionary funding must play a role as well, particularly to remedy decades of chronic underfunding. The American Rescue Plan has allocated \$93 billion for this purpose. While much of that money is dedicated to fighting COVID-19, the plan does provide substantial funds to support other activities, such as updating physical infrastructure of health department buildings, recruiting and retaining skilled employees, modernizing data management systems, and accrediting local health departments. This funding is a valuable example of what new large, short-term outlays can look like, and demonstrates that securing this type of funding is possible. However, the American Rescue Plan alone will likely not be enough and should be viewed as a starting point rather than as mission accomplished.

The main problem with discretionary funding is that it has generally been limited to use within a single fiscal year. Renewal is always uncertain – subject to the vicissitudes of annual appropriations, where today’s priorities can easily be forgotten tomorrow. One solution is to designate funds as no-year, making them available until expended - an approach used in the American Rescue Plan - or to make funds accessible for an extended period, such as three to five years. In addition, new appropriations should give states and localities maximum flexibility but be based on a core set of public health responsibilities tied to the latest scientific evidence and best practices.

The bottom line is that we cannot afford to continue with business as usual. The steady erosion of funding, only rarely offset by isolated bouts of federal generosity, has left us vulnerable. Public health workers across the country are leaving their jobs en masse due to the hardships faced this past year – hardships made worse by underfunding. This exodus only exacerbates the loss of 55,000 public health workers since the Great Recession in 2008. As a result, the American public health system is in crisis. Rising to this challenge will require political commitment at federal, state, and local levels to make public health a priority in America, so when the next national health threat arrives, we will be able to mount a response that protects the lives and wellbeing of everyone.

III. Foreword

After graduating from medical school in 2001, I set up a private practice in the rural, southern Indiana town of Austin. Nothing could have prepared me for the level of deprivation I witnessed in the lives of my patients. Their suffering taught me that circumstances exist beyond the control of far too many people, contributing to an increased burden of disease and death in the United States.

People's health, prosperity, and wellbeing depend on the resources and opportunities available to them. Yet, people do not choose where they are born or how they are raised, and can only make choices from the options available to them.⁶ Unfortunately, discrimination and deindustrialization have left pockets of concentrated poverty, toxic stress, and inequity throughout the world's wealthiest nation. This has contributed to a four-decade decline in the health and wellness of the American people.⁷ Since the 1980s, the life expectancy in the US has fallen compared to the rest of the developed world, with the average American dying younger than the average person in any of the member nations of the Organisation for Economic Co-operation and Development (OECD) since 1988.⁸ This alarming trend reflects the existence of unique factors which create health disadvantages to people living in the US. Although we lead the world in medical advances and average disposable income, we perennially rank near the bottom of the OECD for equality, sense of community, and childhood poverty. Our public health system has not risen to the challenge.

In the town where I practice, this inevitably culminated in 2015 when Austin became the epicenter of the worst drug fueled HIV outbreak in US history. The resulting devastation, which will have lasting health, social, and economic consequences to this entire region, did not have to happen. Research has shown the southern Indiana HIV outbreak could have been avoided if evidence-based public health measures had been in place.⁹ The purpose of public health is to prevent events such as this from occurring. Healthcare disasters don't just happen; they develop right before our eyes, unseen or ignored until it is too late.¹⁰ Locations with inequitable distribution of resources, like Austin, strikingly correlate with clusters of disease, disability, and early death. These communities, which are already suffering before diseases and disasters strike, also end up suffering the most during them. We saw this play out on a larger scale during the 2020 COVID-19 pandemic most recently.

Physicians take a pledge to "do no harm" but that feels passive when we know that most of what harms people happens outside of clinic walls. A modern Hippocratic Oath to "protect *from* harm" is needed. This would require us to proactively respond to the needs of communities before tragedy strikes, and to work within a person-centered model instead of one that focuses on diseases.

To accomplish this and reverse the downward trend of health in the US, we must innovatively revise how we invest in public health. This report is a unique collaboration between Yale's Schools of Public Health and Law, and outlines how we can do just that. Through countless hours of research and interviews with public health experts across the country, the authors succeed in bringing attention to the importance of consistent, community-level public health investment to address the vital factors that determine the health and prosperity of our communities.

Although not everyone needs an effective public health system, everyone benefits when it works. Decades of evidence directly link economic prosperity to the health and wellness of people. Investing in economic security without similar investments in the public's health is short-sighted and ultimately futile. For our communities to experience sustainable economic growth, they must first become physically healthier.

This report emphasizes that the existence of basic human needs and social conditions are essential for health, wealth, and wellness to also exist within our communities. Collectively referred to as the social determinants of health (SDOH), these vital community conditions have historically been overshadowed by our American ideals of personal responsibility and rugged individualism.¹¹ Despite this, America is also a nation of people who are willing to compassionately lend a helping hand to our neighbors and defend their equal right to life.

I trust that as you continue reading, you will agree that it is time to restructure public health funding so it can be used to support individuals to thrive within diverse communities. Addressing the unique strengths and weaknesses of each neighborhood can only be accomplished by shifting decisions about how federal funds are used to locally invested stakeholders. Mandatory public health funding should aim to define a baseline for each vital community condition necessary for individuals to achieve health, prosperity, and wellness. For example, one definable measure could be reliable public transportation accessible to every household in a community. If this can be accomplished for each vital community condition, we will be able to establish an equitable foundation for health for everyone living in the US.

By digging down into what it means to be a healthy person, we can develop these baselines; what defines humane housing, reliable transportation, a safe and thriving natural environment, fair wages, meaningful work, life-long learning, a sense of community belonging, and civic responsibility. Once we do this, we will be able to unleash the potential of locally invested faith groups, civic organizations, government agencies, schools, healthcare agencies, community coalitions, employers, and others to help ensure these baselines are available to everyone. The current system has clearly failed, leaving people vulnerable to disease, disability, and early death. Decades of underfunding public health has also left the workforce, health departments, underserved medical facilities, and public health infrastructure threadbare. Promoting public health through more predictable, ongoing funding will allow for greater local investment and sustainability. Then, when diseases and disasters—like COVID-19—threaten our nation, we will be better prepared.

The cumulative effect of every person's health and wellness on our nation matters. The equitable achievement of health and wellness through local investments in public health infrastructure, which is advocated for in this report, will foster greater national security and economic prosperity for all Americans.

I am sure you will be as impressed with this report as I am. Use it to help promote a bold, new way to re-establish public health as a foundational priority for our great nation.

-- William E. Cooke, MD, FAAFP, FASAM, AAHIVS

*Physician, Author of *Canary in the Coal Mine: A Forgotten Rural Community, a Hidden Epidemic, and a Lone Doctor Battle for the Life, Health, and Soul of the People.**

IV. Background

The COVID-19 pandemic has catapulted public health to the forefront of Americans' collective consciousness. As the coronavirus tore across the country, panicked citizens stocked up on essentials as they prepared to isolate, worried that the slightest interaction threatened severe illness or even death. People researched materials for making homemade masks and hand sanitizer as supplies dwindled and they were left to fend for themselves. Conversations usually confined to health departments, hospitals, and research centers - ones about transmission of airborne diseases, contact tracing, and the efficacy of mRNA technology - became the bread and butter of daily news. The average American sacrificed greatly to protect themselves, their loved ones and their neighbors, often maintaining strict and painful separation in order to do so. The pandemic has occupied the minds of Americans not because of the successes of public health, but because of the ways it failed us in our time of need.

“The pandemic occupied the minds of Americans not because of the successes of public health, but because of the ways it has failed us in our time of need.”

Unfortunately, the country's failure to meet the challenge of the global pandemic was predictable. At all levels of government, health departments and public health agencies lack sufficient funding to address the nation's most pressing public health concerns. In a report published by the Institute of Medicine in 2012, the committee found evidence that public health funding has bounced around from decade to decade, subjected to fluctuations dependent on the major health threats of the moment, political priorities, and the state of the economy.¹² The report also found that Congress and state policymakers have failed to make a long-term commitment to sustain funding throughout time.¹³ We cannot say we were not warned.

The numbers are stark. Since fiscal year 2010, total real discretionary funding - the area of the federal budget that funds education, research, public health, and other crucial services - has fallen by 17%.¹⁴ Funding for the Public Health Emergency Preparedness program, the primary source of funding to build capacity for and respond to public health emergencies at all levels of government, has been cut by more than 30% since 2007,¹⁵ decreasing from nearly \$900 million to about \$630 million in 2019.¹⁶ In addition, the United States spends an estimated \$3.6 trillion annually on health, but less than 3 percent of that is directed towards public health and prevention.¹⁷ Overall, it has been estimated that there is about a \$4.5 billion gap in the amount of annual funding needed to adequately implement the most effective and impactful public health activities.¹⁸

There has been one major attempt to secure mandatory sustainable funding for public health in the last twenty years. In 2010, the Prevention and Public Health Fund was established as part of the ACA as the nation's first mandatory source of federal funding for public health. The fund was initially authorized at \$18.75 billion between FY2010 and FY2022, and then \$2 billion

annually.¹⁹ However, it quickly became a piggy bank for members of both political parties, a source to “supplant rather than supplement a variety of programs administered by the Centers for Disease Control and Prevention (CDC) and other agencies of the Department of Health and Human Services (DHHS).”²⁰ If the fund had been maintained as intended, the US would likely be in a very different place today. While it was not dedicated to pandemic preparedness, having a more robust public health infrastructure and workforce as a whole would have enabled a much better response to the events to come.

With its focus on prevention rather than treatment and cure, public health is different from, but complementary to, clinical medicine. Invisible when it is working best, public health is easily undervalued by both policymakers and the public. Yet the COVID-19 pandemic exposed

“A robust, responsive, and resilient public health infrastructure is essential to protect us from the calamities of epidemics, natural disasters, and climate change in the 21st century.”

the dire collateral consequences of neglecting public health, causing a cascade of crises in unemployment, home evictions and foreclosures, food insecurity, and disruptions in education. Those from vulnerable communities have unsurprisingly been hit hardest. The experience dramatically illustrates that a robust, responsive, and resilient public health infrastructure is essential to protect us from the calamities of epidemics, natural disasters, and climate change in the 21st century. It would also uplift the health of all

Americans by mitigating health disparities that have long plagued us as a nation.

This report outlines a proposal for a bold reinvestment in American public health, including both mandatory and discretionary funding. We also offer recommendations for the innovative delivery of public health funding to equitably and efficiently streamline reinvestment. To craft our proposal, we consulted with over two dozen of the nation’s preeminent public health authorities who are experts in leading state and local health departments, building and leveraging coalitions to affect political and social change, managing grants and other funding, and applying public health theory and models to deliver public health activities most effectively (see Appendix for Methods). Without exception, everyone interviewed indicated that a failure to invest in core public health infrastructure and programs, at this crucial point in time, will leave us ill-equipped to address the challenges that lie ahead.

The primary objectives for this report are to prevent business as usual, foster critical dialogue, and reach those who can make a difference. Our political leaders have yet to offer a bold plan to address long-term needs beyond the COVID-19 pandemic. This report offers a blueprint, a set of options for decision-makers to consider. One thing is certain: there is no time to lose.

V. Mandatory Funding

OVERVIEW

The centerpiece of sustainable public health funding should be new mandatory funding, made available to states and localities, that is insulated from bureaucratic attempts to shift funding away from public health. Among our interviewees, there was broad consensus that mandatory funding was the gold standard for supporting programs critical to the health, safety, and well-being of Americans. One expert in federal budgeting described the tradeoff in stark terms, arguing that one dollar of mandatory spending was as valuable as ten dollars in the discretionary budget. The stability and reliability that mandatory funding offers is critical for progress and growth in the field of public health.

Although not everything can, or should, be addressed through mandatory spending, there are concrete benefits to funding ongoing and foreseeable needs through mandatory mechanisms. First, mandatory funding does not need to be reappropriated each year during the ordinary appropriations process, which helps to remove one avenue in which public health funding has been cut repeatedly in the past. Second, both immunity to annual cuts and the symbolic effect of locating funding in the mandatory budget can create a powerful signal of predictability and stability to public health authorities at the state and local levels, helping them feel comfortable making multi-year investments in workforce and capacity building. Finally, stable funding may give both public health authorities and individual practitioners the freedom to engage in experimentation and innovation without feeling that every marginal dollar is at risk. This freedom may help refocus programs away from those with short-term, immediate returns on investment (ROI) toward those likely to provide essential medium- and long-term benefits.

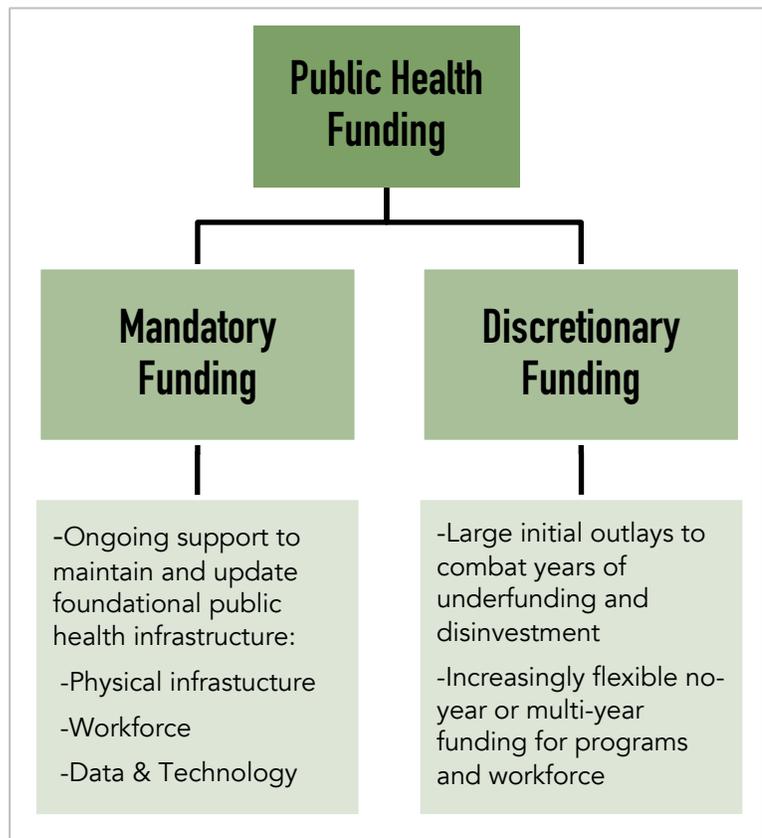


Figure 1: Overview of Public Health Funding Proposal

At the outset, we want to be clear: this will not be easy. Many of our interviewees emphasized that a sufficient level of mandatory funding for public health is the holy grail that they and others have pursued for years. That said, as we discussed in previous sections, this is a unique moment for a number of reasons: the weaknesses exposed by pandemic, the public’s appreciation for the role of government programs, and the increased awareness of the relationships between public health and societal wellbeing are only a few. Accordingly, this report aims high with an awareness that our proposals are bold in both scope and structure, but with the hope that the time is ripe for such bold action.

WHAT SHOULD BE INCLUDED

As the COVID-19 pandemic has dramatically illustrated, decades of underfunding public health have resulted in outdated data systems and collection methods, deteriorating physical infrastructure of health departments, and an inability for health departments to innovate and develop new methods for improving health. Although large, short-term investments are initially required to “catch-up” public health systems and bring them into the 21st century, once these initial outlays are made, ongoing funding is going to be required to ensure our basic public health systems’ capabilities do not slip backwards and are ready for future crises to come. This funding must be predictable and stable. This is particularly important in workforce development, with regard to attracting and retaining talent in state and local health departments. We also propose that new mandatory funding be dedicated to updating and maintaining public health infrastructure around the country, from the physical plant—the health department buildings themselves—to the data systems and other core components necessary for a 21st century organization and workplace.

Additionally, mandatory funding should be used to provide targeted, yet flexible grants to states to ensure a base-level of public health services, such as disease surveillance, data gathering and reporting, sanitation, and immunization capacity on an ongoing basis. Such money should be provided directly to both states and localities. It should be classified as mandatory spending to avoid cuts in the appropriations process, which will become increasingly likely as vivid memories of COVID-19 fade.

Finally, existing mandatory spending in areas other than public health - namely transportation, housing, and food security - should be leveraged to address core aspects of the social determinants of health (SDOH). Although public health authorities should advocate strongly for this kind of holistic approach and will be able to do so more effectively once they are adequately funded themselves, SDOH-focused initiatives should be independent of the primary push for new public health funding. There are two main reasons for this approach. First, core public health efforts are already difficult to effectively advocate for and merging them with the much broader domain of SDOH would expand efforts in a counterproductive way. Second,

shifting and redirecting funding in a way that threatens the authority of existing managers in the federal bureaucracy is likely to generate infighting and institutional resistance, even when the goals of different players are aligned. Accordingly, we recommend that those with existing, subject-area expertise outside of core public health domains remain in control of and responsible for their programs.

OVERCOMING RESISTANCE

Despite the clear benefits of securing a substantial amount of mandatory funding, there are a number of hurdles that such a program will need to overcome. The most obvious is political opposition. New mandatory funding is a big political ask, and there are powerful factions that are likely to resist any expansion of the federal budget; for example, deficit hawks in Congress, governors in conservative states, and influential think tanks. In addition, efforts to insulate new mandatory funding to prevent it from being shifted to other priorities within the overall mandatory budget might generate resistance from groups who want access to the new funding in the future. Despite this, there are also powerful advocates on the other side – Senators Gillibrand and Murray have both advanced proposals for billions of dollars in new funding for public health, and the breadth of the most recent COVID-19 relief legislation illustrates that the current administration appreciates the importance of strengthening public health capacity. While Senators Gillibrand and Murray’s proposals currently call for discretionary funding, they are clear demonstrations of the general political support for increased public health funding at this moment. Although no design will fully avoid political confrontation, there are choices that may increase the chances of success.

1. New funding should be accompanied by a coordinated public relations and lobbying push that emphasizes the efficiency and value of public health investment. Numerous interviewees emphasized the fundamental paradox of public health – when public health institutions do their jobs well, they are invisible. The result is that there are not strong constituencies advocating for broad expansions in public health funding the way there are for direct medical care. Although special interest groups in the area of public health do exist, there is little consensus among them and many focus on disease-specific causes. However, our interviewees also noted that the devastation wrought by COVID-19 offers a unique opportunity to make the case for public health in easily articulated terms. Gaps in core functions like vaccination administration, data gathering and analysis, contact tracing, education, and outreach have all exacerbated the devastation a pandemic can wreak. Ensuring that advocates of any new funding tie their proposals to concrete examples related to COVID-19 will help ground their arguments and maintain momentum into the future. The COVID-19 crisis illustrates the damaging effects of underfunding traditional public health functions like disease monitoring and tracking,

but also presents an opportunity to make a strong, public health case for expanding funding targeted to SDOH. Multiple interviewees stressed that advocates should advance a “health in all policies” framework that describes the way that community health is both influenced by *and itself influences* social and economic conditions. As an example, access to affordable and stable housing not only influences health outcomes, but that failure to address health needs also makes it more difficult and costly to implement effective housing programs. It is important to note that we are not advocating that new public health funding be used to fund housing, food, or other social services – doing so would explode the bottom line of any new program and would likely trigger bureaucratic disputes with institutions whose mandates currently include aspects of SDOH. What we are proposing is that advocates form strategic partnerships with institutions addressing SDOH outside the formal, public health model, including collaborations between agencies such as CDC, NIH, HRSA, DOT, HUD and USDA. This would help make a broader case for public health funding, including increased funding of partner institutions.

Another aspect of the COVID-19 pandemic that can be leveraged in support of these proposals is that large numbers of players in the public health ecosystem have, for the first time, received sizable amounts of federal funding. As one of our interviewees noted, institutions, like people, are loss averse – it is far easier to mobilize a coalition to fight the withdrawal of funding than it is to get people up in arms about the prospect of new funding. An important task for advocates is to track down the recipients of COVID-19 relief funding and enlist them in the broader coalition described above.

2. The mantra that spending on prevention now saves multiples on treatment later is one that can both ground advocacy efforts and be baked into funding mechanisms. For example, some interviewees proposed incorporating formal cost-benefit analyses or ROI requirements into mandatory funding legislation. To receive funding, specific proposals would have to demonstrate that they would produce net spending returns (or at least have a net neutral spending profile). For example, various forms of spending on prevention likely reduce the government’s net outlays on treatment. This kind of formal mechanism can help guide downstream practitioners to cost-effective strategies and reassure deficit hawks that proposals would not expand into limitless budgetary sinkholes. Such an approach might be especially useful for new mandatory funding that is housed within Medicare and Medicaid. Framing such additions as net neutral in terms of bottom lines would be a highly effective way to pitch them to skeptics. Several interviewees also noted that this kind of ROI requirement could offer support for addressing SDOH more holistically. While programs related to SDOH such as housing or food security would not have to be funded directly with public health dollars, proving that taking an inter-agency approach to addressing needs would ultimately save money on clinical care down the road would be a powerful tool for advocates across multiple sectors.

3. To the extent possible, new mandatory funding should be based on or incorporated into existing statutory frameworks.

For example, numerous interviewees pointed to the Prevention and Public Health Fund (PPHF) in the Affordable Care Act (ACA) as a strong model for mandatory public health funding. However, the program was plagued by a core design flaw: there was no built-in mechanism to prevent funding from being shifted away from the PPHF to other, seemingly higher-priority uses within the overall mandatory budget. One notable example was that funding was taken from the PPHF to help cover shortfalls in Medicare funding. Accordingly, a new PPHF (or renewed funding of the original PPHF) is a logical starting point for the new mandatory funding we propose. To be successful, however, new legislation will have to include strong protections to prevent the funds from being redirected away from authorized public health uses. This might be accomplished by measures like statutory language segregating new funding from the rest of the federal mandatory budget, requiring that requests to shift funding go through the formal legislative process, and/or requiring evaluation and approval from a fund administrator tasked with ensuring that funding for public health goals is not unduly threatened. It is also worth remembering that the PPHF, though somewhat depleted, still holds a significant amount of funding that is currently being used by the CDC. Although the PPHF was not ideal in its initial construction, we believe it is not yet worth giving up on.

Other existing statutory frameworks that could be leveraged for some forms of public health funding are Medicare and Medicaid. As mentioned above, several interviewees noted that this would be an ideal place to incorporate a formal ROI requirement for public health programs. This would be designed to avoid a scenario in which opponents of Medicare/ Medicaid allege that new funding is excessive and use it as an excuse to impose caps on overall mandatory spending. One major advantage of including new public health spending within Medicare/Medicaid is the ability to make quick, regulatory modifications - even through executive agency rulemaking in some cases - thereby avoiding the full legislative process.

Using Medicare and Medicaid in this way will require not only federal rule modifications, but also support to states and localities to enable them to take advantage of newly available funding. For example, the need to submit State Plan Amendments (and the lack of legal capacity for preparing successful ones) has stymied efforts to take advantage of Medicaid rule changes in the past. As a result, modifications to Medicare and Medicaid will require the federal government to provide funding and legal resources to downstream public health authorities to help them overcome these bureaucratic barriers.

While Medicaid and Medicare can be leveraged for some public health activities, these programs cannot, and should not, be the primary source of secure public health funding. Interviewees noted that an overreliance on Medicare and Medicaid could expand their budgets to the point where it may be more likely they become a greater target for budget cutting across the board. A Medicaid/Medicare-focused approach may also drive some public health efforts to

become unnecessarily medicalized when they have social or economic solutions or could be addressed without recourse to the medical system.

4. Principles taken from defense funding might be redeployed in the public health context. Although we would not advocate funding all public health programs through the defense budget, several of our interviewees noted that, especially in areas related to health security, defense appropriations could be used for emergency preparedness and crisis response programs, bolstering stockpiles of essential medicines and equipment, building out disease surveillance and data gathering infrastructure, hiring contact tracers, and setting up vaccine distribution plans. Such health security-related functions could be exempted from budget caps, and statutory or report language could promote flexibility in uses, with public health experts able to determine needs on an ongoing basis. One proposal that currently seeks to set up something along these lines is Resolve to Save Lives' Health Defense Operations (HDO) budget designation.²¹ Although a program like this would address only a subset of the goals outlined in this report, it could be an important piece of the puzzle.

POTENTIAL PITFALLS

Though we believe the proposals outlined are strong on their merits, there are a number of potential challenges and concerns that must be accounted for.

First, any new funding should include dedicated mechanisms and guidelines for tracking equity outcomes. This is already supported by the Biden Administration. The Administration has reportedly advocated for increasing CDC funding for equity promotion from a meager 3 million to over 150 million and has hired racial equity experts to its COVID-19 task force.²² This action by the Biden Administration underscores the importance of acting quickly to take advantage of the current moment. One problem with current CDC funding that numerous interviewees described is that the agency has no way to track exactly how state and local health departments actually use federal money. Building out a reporting system and a workforce to analyze this data will be crucial for adapting grant programs to promote equity. In addition, having a robust tracking system will also help promote efficiency goals, which should help build coalitions with those concerned with good governance and responsible spending.

Second, steps should be taken to ensure mandatory spending for public health is not internally fungible, meaning it is not possible for Congress and the President to shift around and reallocate funding within overall mandatory funding in order to compensate for shortfalls in other priority programs. This problem was noted above with respect to the PPHF but is much broader and affects all mandatory programs. Any new public health funding should be formally insulated in statutory language to prevent more powerful interest coalitions from draining funding down

the road. With that being said, including such language in legislation is not without risks. In the past, statutory defenses against repeal and modification have been used to insulate unpopular or pro-corporate legislation from repeal. As a result, some of our interviewees highlighted the chance that insulating public health funding would open Pandora's Box and create damaging precedents. Statutory language should be clearly and explicitly limited to the public health context, should only prohibit shifting allocations within the mandatory budget, and should not include restrictions on modifying the legislation itself (e.g., requiring a supermajority for repeal). In addition, the language might also be limited to preventing shifts in funding through executive action, rather than imposing restrictions on Congress.

Third, once funding is secured, mechanisms must be put in place to assist local public health officials that might have difficulty handling large, undirected sums of money. For example, some municipal health departments have one or two employees and no large budget management infrastructure, and therefore may not be capable of managing direct funds from the federal government. As a result, targeted grants might be more helpful and manageable for these localities. There are a number of solutions to this problem that were highlighted by our interviewees. One is to simply reserve a subset of new funding for small localities and ensure that some of the funds are dedicated to administrative support. Another solution could be tasking federal or state employees with helping manage the distribution of money to understaffed or unaccredited local health departments.

Additionally, although some degree of targeting is important, the vast majority of money made available to local health departments should be more flexible than it is today. Imposing strict requirements on how funds can be used and accompanying those requirements with harsh penalties for misuse might discourage states and localities from taking advantage of new funding streams. Some of our interviewees noted that even if local health departments do accept the funding, overly complex federal conditions (which are made more restrictive by states afraid of federal backlash) discourages innovation and experimentation at the local level, leading to worse outcomes and lower efficiency. Many local health departments are capable of handling the technical demands of deploying funds on their own or with assistance from the state and should be increasingly included in decision-making regarding what is most needed by their constituents.

Finally, advocates should be careful to design funding architectures in ways that do not create zero-sum conflicts within the federal bureaucracy. Although some of our interviewees noted that there are sources of funding for clinical care that might be repurposed for public health and prevention, they did not recommend attempting to divert these funding streams. The primary reason is that there would be strong institutional opposition from current recipients. One example of this was a proposal to tap into Graduate Medical Education funding to pay for training and educating public health workers. This would be strongly opposed by doctors and clinicians (along with their lobbies) and would be a high-risk option with an unjustifiably low payoff. Therefore,

separate funding streams must be established which are dedicated to activities such as education and training for the public health workforce.

CONCLUSION

In sum, we recommend pursuing new mandatory funding for public health to support core public health efforts on an ongoing basis. Although some short-term needs - particularly large, one-off infrastructure investments - can be met through discretionary appropriations, funding for basic public health services and the people necessary to execute these efforts needs to be both predictable and stable, which counsel classifying it as mandatory spending. Although there are large political barriers to securing such funding, leveraging the current political climate, previously successful programs, and novel design choices can help us chart a path to success.

VI. Discretionary Funding

OVERVIEW

Although the centerpiece of our proposal is a call for new mandatory funding, discretionary spending should still play an important role. In particular, the nature of the current challenges we face in public health - the result of decades of chronic underfunding - will require large, short-term outlays in addition to new sources of mandatory, ongoing support. This kind of one-off spending is easily accomplished at a lower political cost through discretionary mechanisms and would be particularly useful for projects like updating physical infrastructure, modernizing data management systems, rebuilding stockpiles of essential supplies post-COVID-19, and making investments in accrediting local health departments. The funds allocated to public health by the American Rescue Plan (ARP) will enable the US to make progress with these types of projects. However, the ARP alone is likely not enough to address the decades of neglect that were further undermined by the COVID-19 pandemic. Therefore, future evaluations of the state of public health infrastructure must determine if additional large, discretionary outlays are needed. After these funds bring public health to an acceptable baseline, mandatory funding can be used to sustain and build on this progress.

In general, reliance on discretionary spending should be limited because it requires renewal as part of the formal appropriations process, making it vulnerable to changes in political and economic trends. Accordingly, the appropriations process does not support the kind of long-term commitments that are necessary to support the public health workforce or provide the ongoing maintenance necessary to keep infrastructure up to date in the future.

Luckily, the new administration has advanced a FY 2022 discretionary spending proposal that provides an important, though admittedly modest, baseline investment in essential projects. The proposal includes \$8.7 billion for CDC, an increase of \$1.6 billion over the 2021 enacted level, in addition to substantial funds dedicated to addressing the opioid crisis, HIV/AIDS, mental health, health equity, racial disparities, and gun violence.²³ However, the bulk of the spending is earmarked for use by federal government entities (such as the CDC, FDA, and NIH) rather than state and local health departments. Additionally, since this proposal is for discretionary spending, it must be re-evaluated at the end of FY 2022 and is vulnerable to yearly changes in priorities and politics. This section outlines our findings regarding how discretionary proposals can be implemented to achieve essential goals in tandem with an expanded commitment to public health mandatory spending.

WHOLE OF GOVERNMENT APPROACH

A common theme across our interviews was that budgetary strategies should not be limited to one level of government – well-resourced public health efforts are essential all the way from the federal government down to the community level. Not only should sufficient funding be made available at each level, but funding architecture should also be designed to increase inter-entity coordination in order to improve public health reach, impact, and efficiency. While the scope of expertise and responsibility differs at the federal, state, and local levels, this does not mean that public health entities at each level should not have access to or control over funds. As a general matter, our interviewees stressed the importance of federal and state support in the form of funding, guidance, and infrastructure management, but noted that local entities were often best positioned to manage programs at the point of delivery and to tailor services to the specific needs of their communities.

In practical terms, this means delivering on some of the Biden Administration’s core FY 2022 proposals, but also expanding them in terms of scope and jurisdictions served. Although the Biden Administration’s request is a start, the \$8.7 billion allocated to CDC still falls short of the \$9.5 billion that is estimated to be needed to fully implement the foundational public health activities nationwide.²⁴ In addition, the \$8.7 billion allocated in the FY2022 budget does not take into account the decades of underinvestment compounded by the damage of the COVID-19 pandemic. If the US wants to use the discretionary budget to play catch up, it will require a larger and more ambitious budget than what the Biden Administration is currently envisioning.

The Biden Administration’s plan does include funding earmarked for public health infrastructure, but it is not enough to cover all federal, state, and local needs. Similarly, the current Administration’s plan includes substantial funding for cybersecurity and data management, but is targeted primarily at federal entities.²⁵ In order to achieve broader goals, the amount of funding for these purposes should be expanded. Expanded legislation should also not simply leave distribution up to the CDC but should provide guidance for getting funds directly to entities outside the federal bureaucracy. As noted in the previous section, our interviewees explained that localities have historically gotten the short end of the stick since funds from the CDC must almost always first be directed through federal and state agencies before localities are able to access them. Due to this, localities often receive far too little support to advocate for themselves directly in budgeting processes. This has manifested in dramatic infrastructure shortfalls – our interviewees recounted anecdotes of crumbling health departments buildings all around the country, and of lacking access to laptops or Wi-Fi which prevented them from doing essential fieldwork. Fixing these gaps should happen with the next discretionary budget.

FOCUS ON SUSTAINABILITY AND PREDICTABILITY

The core problem with discretionary funding is that it is generally only available for one year and is subject to uncertain renewal. These features make it a poor funding source for investments that require predictability to be successful – most notably with respect to building out America’s public health workforce and infrastructure. Where discretionary funds are used to accomplish short-term goals, a number of our interviewees emphasized that there are design choices that can enhance sustainability and predictability, enabling downstream recipients of funds to use them as efficiently as possible. One such choice is to designate funds as no-year, meaning that once appropriated, the funds are available until exhausted, rather than having to be used within a given time period. Another alternative would be to designate appropriations as available for a fixed period of time, such as three or five years. Making funds available over longer periods of time would reduce pressure on funding recipients to deploy funds as quickly as possible and allow recipients to maximize the return on their investments. This type of designation could be applied to all forms of infrastructure and programmatic investments but would be absolutely essential for discretionary funds supporting the public health workforce. Our interviewees emphasized that the absolute minimum number of years for which new employment positions must be funded is three, but that five-year funding commitments would be ideal.

ALTERNATIVE STRATEGIES

Several interviewees who are experts in federal budget analysis offered discretionary funding strategies that could strengthen public health capacity at the federal, state, and local levels in a fiscally and economically responsible way. One potential strategy would be to use zero-based budgeting, as opposed to no-year funding, when allocating some discretionary funds (zero-based budgeting differs from no-year funding in that expenses must be re-justified for each new period, whereas no-year funding can be used until exhausted once allocated and requires no future justification). Zero-based budgeting could be especially suited for two- to three-year commitments for hiring new workforce and building institutional expertise.

INCENTIVIZE COLLABORATION AND INNOVATION

As is the case with mandatory funding, grants to states and localities should allow for flexibility while incorporating federal scientific expertise, guidance on best-practices, and metrics for accountability. At a minimum, this means ensuring that funding is not provided with harsh penalties for rule violations, such as requiring localities to pay back large federal grants in full. These kinds of rules discourage innovation, experimentation, and participation in grant programs.

Instead, our interviewees, particularly those with experience in state and local government, noted that federal entities are most helpful when they adopt a collaborative rather than an authoritative role.

Allowing for flexibility, however, does not mean eliminating baseline standards for grant recipients to meet. Funding architecture should be designed to encourage accountability at the state and local level. This is discussed more broadly in the next section on reforms to the delivery of funding, but one method suggested by interviewees was having recipients of federal funds demonstrate some level of independent financial commitment to public health goals, when possible. Interviewees referred to this as a “skin-in-the game” approach. One possible way to accomplish this is to use matching programs, such that states and localities are required to put up their own funds alongside federal support, thereby producing independent incentives for good management, as well as community accountability. Of course, such a requirement should not be inflexible or onerous – non-partisan public health experts, such as those at the CDC, should retain discretion to waive any match requirements for jurisdictions that would be unduly burdened by them.

CONCLUSION

More recent funding proposals, such as Senator Gillibrand’s “Force to Fight COVID-19 Proposal” and Senator Murray’s “Public Health Infrastructure Saves Lives Act” along with feedback from those interviewed for this report, indicate there may be increasing political commitment to fix our eroding public health system. Ideally, most ongoing funding necessary to maintain the nation’s public health infrastructure and workforce should be supported through new mandatory funding. However, simply providing a level of investment necessary for maintenance and occasional updating will not be sufficient given the current shortfalls caused by decades of underinvestment. To enable this kind of catch-up investment, we recommend building on and expanding the approach of the American Rescue Plan but providing significantly more money to meet a wider range of needs, particularly where mandatory funding would be infeasible. As noted in previous sections, the weaknesses in our public health system revealed by the pandemic provide compelling arguments for taking the current political moment to shepherd such a funding program through Congress.

VII. Reforms to the Delivery of Public Health Funding

OVERVIEW:

The previous two sections outlined our proposal for achieving sustainable public health funding in the US through a new mandatory funding stream and specifically designed supplemental discretionary funds. Securing more permanent funding streams for public health is essential for enabling health departments to effectively carry out their core functions. However, if reforms are not made to the delivery system through which funding moves from the federal level to state and local health departments, the US will continue to face tremendous barriers to using funds effectively and in ways that best meet the unique needs of various communities.

The following recommendations outline reforms to be made to the delivery of public health funding. They aim to allow for more flexibility, accountability, innovation, and equity, while avoiding unnecessary bureaucratic hurdles for under-resourced jurisdictions. Ultimately, these recommendations aim to achieve a more equitable distribution of resources among all localities in the US. We therefore recommend, at the minimum, that the following reforms be made in tandem with the provision of new funding.

FLEXIBILITY:

Much of the funding currently allocated from the federal level to states and localities is done so in the form of categorical funding grants.²⁶ Funds allocated in this way are typically only applicable to specific purposes. Often, this restrictive, narrowly tailored funding does not allow much latitude for health departments as they try to meet the needs of their communities. Many interviewees working in local and state health departments brought up challenges related to this inflexible method of funding, such as needing to hire staff using disease specific grant funding and therefore not being able to use those staff members' expertise across a number of areas, not having sufficient funds available for non-programmatic costs such as administrative costs, and not being able to reallocate funds for different purposes should the priorities and needs of the community change within a grant's funding period. One interviewee described encountering this last challenge during the COVID-19 pandemic, discussing how their health department received substantial funding for COVID-19 testing, but once the country began to focus on vaccination, the funding was not able to be reallocated to their vaccine program due to vaccination activities not being included in the initial agreement. This, in turn, resulted in much of the funding dedicated to the testing program going to waste.

RECOMMENDATIONS:

Increase local control of funding:

The majority of public health funding should continue to come from the federal government, but this support must allow for more local control of funding guided by stakeholders within communities to increase the balancing of spending power. State and federal governments, which historically control both how much funding localities receive and how the funding must be spent, should reduce the requirements they place on how the funding can be used. Enabling localities to acquire more control over how money is spent allows for broader flexibility and can better enable programs to be adapted to meet the needs of local communities. For example, one interviewee working in a rural community described how the categorical funding they receive rarely permits them to address issues such as lack of transportation. Due to this, many of the programs and interventions deployed in the region often fall short due to community members not being able to access them in the first place.

For the first time in March 2021, CDC released a funding opportunity, titled, “National Initiative to Address COVID-19 Health Disparities Among Populations at High-Risk and Underserved, Including Racial and Ethnic Minority Populations and Rural Communities” in which localities who serve a county population of 2,000,000 or more; or serve a city population of 400,000 or more were eligible to apply directly for support.²⁷ Prior to this funding opportunity, CDC has only provided direct funds to states, territories and five large cities. While using population size as the only criteria for determining which localities can apply for funding may create challenges, as discussed more in the next section on accountability, this funding opportunity is an exciting example of what more flexibility and local control can look like.

Reduce consequences associated with alternative use of funds:

As discussed previously, there are often strict requirements on how funds can be used and harsh penalties for misuse. Reducing requirements on spending will, in turn, also reduce the penalties and consequences states and localities fear for accidentally misusing funds for non-grant specified activities. While it is extremely important to hold states and localities accountable for their use of federal funds, and flagrant misuse should not be tolerated, many interviewees described how states currently tend to interpret federal guidelines in the most restrictive, least-flexible way due to the severe consequences of accidental misinterpretation. Interpreting guidelines in this rigid way makes it difficult for states and localities to use funds in ways that best meet their community’s unique needs, thus further limiting the effectiveness of programs and diminishing their impact. One method of accomplishing this, while still holding health departments accountable for use of funds, could be to create a stream-lined process for states and localities to communicate with funders to clarify requirements and get non-grant specified activities approved.

ACCOUNTABILITY:

The current mechanisms for public health funding primarily hold states accountable for their use of funds by creating rigid guidelines in grant contracts which outline how funds are allowed to be used. States and localities must define the metrics they will use to prove funds are being used for the intended purpose prior to receiving funding. As stated previously, most of these grant contracts pass funds to states in the form of categorical funding, which typically only enable funds to be used for specific purposes within disease or program categories.²⁸ Once allocated by the federal government, awards are only tracked on the state level. Tracking spending across federal, state and local levels is extremely challenging and complex,²⁹ making it difficult to ensure funds are allocated to localities equitably or based on need. However, these difficulties notwithstanding, local accountability is vital and needs to be addressed in funding models in the future.

RECOMMENDATIONS:

Develop a new set of metrics outside of grant agreements to continue holding states and localities accountable:

If public health funding streams are made more flexible, a new set of metrics must be developed to continue holding states and localities accountable for their use of federal funds and must have statutory oversight to ensure they are enforced. Rather than defining metrics within rigidly defined, disease-specific funding agreements, metrics can be defined more broadly, focusing on population health outcomes. One interviewee recommended that rather than setting a ceiling for metrics that must be achieved, states and localities could instead be required to set a floor for core population health outcomes to make sure all communities are achieving a baseline level of health. Population health outcome measures can be based on factors such as maternal mortality, life expectancy, and average distance to emergency medical services.

Specify appropriations to be passed from states to localities using a newly developed formula:

The federal government should begin to specify appropriations to be passed through the state to lower-level jurisdictions. There are already programs run by the federal government, such as HIV/AIDS programs through the Ryan White Care Act, which direct funds to local jurisdictions as part of the authorizing legislation for this effort.³⁰ New formulas for determining funding allocation levels should be developed which move beyond only using indicators such as population size or density. Instead, new tools, such as the social vulnerability index (SVI),³¹ or new formulas which take into account factors such as poverty, homelessness, food insecurity, and transportation access, could be used to supplement traditional health metrics.

Mandatory funding should therefore be available to localities to maintain these baseline levels of health, evaluated through disease incidence, mortality, and SDOH indicators. Monitoring these metrics should be the responsibility of the federal government, which will need new resources and staffing. A permanent version of the Biden Administration's COVID-19 Health Equity Task Force, fixed within the CDC or other federal agency, is one form this could take.

Develop additional methods aside from accreditation to determine which localities have capacity to use funds effectively:

Since 2011, the accreditation process has been used as a way to ensure health departments meet a minimum set of standards and have the capacity to carry out the ten Essential Public Health Services, as well as operate efficiently and maintain strong and effective communications with the governing entity.³² While the process has been helpful in setting standards and enabling many health departments to improve their community's outcomes, the process of becoming accredited is costly and burdensome and may not be feasible for health departments with limited funding and staff. Many experts interviewed brought up that when funding opportunities are contingent upon accreditation, it can serve to further exacerbate disparities between the health departments which have more funding and capacity and those that do not. Due to this, the CDC should develop additional methods, outside of accreditation, to determine which health departments have the ability to carry out public health activities effectively. For example, in Senator Murray's 2020 "Public Health Infrastructure Saves Lives Act" she proposes allowing for accreditation waivers, which would waive the accreditation requirement for entities where it would be "a significant hardship to comply with such a requirement", but who can still carry out the activities outlined in a funding opportunity.³³ Adopting a method such as this would promote accountability of health departments, but without broadening gaps in funding. Another method could be enabling unaccredited localities to partner with larger entities with demonstrated evidence of fiscal accountability. This would allow more local health organizations to receive training, technical assistance, and other resources necessary to reduce health disparities.

INNOVATION:

The underfunding of public health over the past two decades has led to a lack of innovation in the field. This dynamic can be seen in all areas of public health, spanning from outdated data and technology systems to difficulty coordinating across siloed sectors to address SDOH. Many interviewees described feeling like they were always operating from a place of scarcity and rarely had funds to do anything beyond the bare necessities. When health departments have been given funds for the purpose of innovation, many interviewees discussed it being difficult to justify actually using them in that way when basic needs, such as for computers and staff, are unmet.

For innovation and growth to become commonplace in public health, health departments must first feel secure that their baseline needs are, and will continue to be, met.

RECOMMENDATIONS:

Focus on developing an enhanced data gathering, monitoring and analysis infrastructure in tandem with a workforce who maintain the skills to sustain it:

In order to attain a baseline level of health in all communities, infrastructure must be created to elevate current systems of data gathering, monitoring, and analysis along with a workforce to maintain it. Various interviewees, particularly those situated within local and city health departments, indicated comparatively high investment in projects and programs compared with that for infrastructure for data gathering, storage and analysis. Without allocated funding directly set aside for this kind of infrastructure, including personnel and updated data monitoring systems, many health departments do not have the necessary capacity to effectively utilize the funding received for dedicated projects which requires these capabilities. During the past year, basic data on COVID-19, from number of people tested to number of people who died, was often uncertain, hampering efforts to combat the epidemic.³⁴ With the creation of a robust data infrastructure and with streamlined and more efficient data systems, departments will not only have more complete and accurate data, but also more time for other tasks. Strong data structures will also be necessary to maintain effective oversight and accountability of selected programs aimed at preventing and mitigating disease, as has been seen through the COVID-19 pandemic this past year.

Collaborate across sectors to address the social determinants of health:

Despite the interconnectedness of lived experiences and health, departments responsible for things such as housing, transportation, and education have been treated as separate and distinct from public health. The US health disadvantage, a reference to the decades of neglected SDOH that have adversely impacted life expectancy, is a public health crisis that few policies have acknowledged, but has resulted in significant disease burden, disability, and early death.³⁵ As new models for public health funding are developed, the SDOH must be addressed through the coordination of organizations and departments with technical expertise that fall outside the domains of traditionally understood public health capabilities. Framing health issues through the lens of the SDOH can have clear benefits and a Health in All Policies (HiAP) approach offers a way to integrate the broad range of people's needs into programs across agencies.³⁶ For example, acknowledging that people can better manage chronic and infectious diseases when they have secure housing and reliable transportation can enable interventions to more holistically target all of these factors.

One cautionary note, interviewees warned of the danger of framing all issues in the context of health, as it could easily divert attention from core public health activities. This means emphasizing SDOH and traditional public health efforts is clearly a balancing act. We have to do both at the same time, but not pit them against each other.

One example of the role public health authorities could play in addressing SDOH could be with the monitoring and identification of severe housing instability in communities. After identifying problems, public health authorities could work with partners in local state or federal housing agencies to craft a response to these challenges. In this example, the public health authorities would be responsible for framing needs and establishing metrics, but the housing authorities would remain accountable for funding and implementing a program to address the issue. An approach like this would enable public health departments to play an integral role in addressing SDOH while not overinflating spending dedicated to the health sector.

EQUITY

As COVID-19 highlighted, underfunding public health has disproportionately impacted under-resourced and marginalized communities. Low-income people, residents of rural areas, and black, indigenous, and people of color (BIPOC) have worse outcomes across a range of health and mental health conditions compared to their white counterparts.³⁷ Racism and social injustice impact not only health, but all aspects of individuals' lives, including “where one lives, learns, works, worships and plays” by “creating inequities in access to a range of social and economic benefits—such as housing, education, wealth, and employment.”³⁸ Though the pandemic has highlighted these issues, they are not new. For example, the Indian Health Service (IHS), which was established to directly fund and deliver care to American Indians and Alaska Natives, has been underfunded for decades despite the government's statutory obligation to provide funding to these groups. The IHS received only \$5.9 billion in fiscal year 2020,³⁹ far less than the \$48 billion that a coalition of American Indian and Alaska Native organizations requested in a recent proposal to Congress. As seen through this example, the IHS and other entities may have been established with the intent of providing increased support to BIPOC and other under-resourced communities. Without proper funding, however, they are nothing more than symbolic and will fail to meet the needs of the communities they serve.

The recommendations made in this section thus far, for increased flexibility, alternative forms of accountability, and innovation, all share the goal of promoting equity. The Biden Administration has also taken steps toward this goal by creating the COVID-19 Health Equity Task Force and the “Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.” However, while rhetorical commitments to equity are a step in the right direction, actually allocating and ensuring effective delivery of the funding will be what is necessary to ultimately fulfil these goals.

VIII. CONCLUSION

The deadliness of the COVID-19 pandemic has been worsened by the United States' crumbling public health infrastructure. A report by the National Center for Disaster Preparedness at the Earth Institute and Columbia University estimates that hundreds of thousands of deaths in 2020 were due to policy failures, delayed and insufficient responses, and the inability to efficiently track cases to manage the virus' spread.⁴⁰ Years of underfunding and de-prioritization of public health resulted in a system that was unable to respond to the increased demands of this national emergency. Separate from the pandemic, thousands of deaths each year result from our failing public health systems. The US ranks last in the Healthcare Access and Quality (HAQ) Index, a measure of preventable deaths, relative to peer countries including Australia, Germany, and the UK,⁴¹ and life expectancy in the US is two years lower than the OECD average.⁴² These results suggest that infectious disease, maternal and neonatal disorders, and noncommunicable diseases such as diabetes are a needlessly high burden in the US.⁴³

“...hundreds of thousands of deaths in 2020 were due to policy failures, delayed and insufficient responses, and the inability to efficiently track cases to manage the virus' spread.”

For over two decades, report after report and study after study have described the chronic underfunding of American public health. It is undisputed that increasing funding is absolutely critical for improving public health infrastructure and bringing American public health “up to code.” Local and state health departments across the country are not receiving adequate funds to replenish their shrinking workforces or to develop and maintain systems to track and respond to illness and disease in a modern world. We cannot lose the opportunity presented by the COVID-19 pandemic - a tragedy that has thrust usually invisible matters into the limelight - to improve our public health infrastructure at every level of government in the US.

This report charts a path to these new investments. Though interviewees had a variety of opinions about the specific details of any plan, there was universal agreement that mandatory funding would be the best way to ensure sustainable support. Discretionary funding too should play a role, particularly in the short-term to address long-standing gaps. Our interviewees were also clear that the way funding allocated is critical. In particular, we must balance flexibility with accountability, and promote opportunities for innovation in the communities where we live and work. Funding is the lifeblood of public health and keeping it flowing is, as we have seen this past year, a matter of life and death.

“Funding is the lifeblood of public health and keeping it flowing is, as we have seen this past year, a matter of life and death.”

IX. Appendix.

METHODS

In order to gain insight into the possibilities for securing a long-term, sustainable funding stream for public health, a literature review was first completed to establish a foundational framework for the current public health funding mechanisms in the United States. A semi-structured interview guide was then developed, allowing for flexibility in questions asked of individuals in a wide range of public health-related positions. Twenty-five interviews were conducted with public health experts, ranging from policymakers, academics, on-the-ground practitioners, and public health officials in local, state and federal governmental health agencies. Interviewees were initially recruited through team members' interpersonal and organizational networks and were subsequently recruited through a snowball sampling method. All interviews were conducted via video conferencing platforms.

LIMITATIONS

Interviewees were primarily recruited through team members' and interviewee's interpersonal and organizational networks. Due to this, the sample of interviewees tended to be in managerial, research-oriented or policy-making positions and may therefore not be representative of the experiences and opinions of all public health workers throughout the United States. They also likely do not represent all of the vast geographic differences in public health funding, governance, and needs. In addition, while efforts were made to incorporate the perspective of tribal authorities, individuals working in tribal health are underrepresented in the sample of interviewees. This report was researched and written under strict time constraints and therefore did not give us the ability to research all areas of public health funding and implementation as in depth as could have been done with more time. However, while the aforementioned factors are limitations of the study, we do not believe that they significantly alter the ability of this report to provide broad initial ideas for securing sustainable public health funding.

LIST OF INTERVIEWEES

- Adriane Casalotti
- Allison Arwady
- Caitlin Peruccio
- Catherine Coleman Flowers
- Clay Goddard
- Delight Satter
- Jacob Hacker
- Jamila Michener
- Jeffrey Duchin
- Jeffrey Levi
- Jennifer Kates
- John Auerbach
- José Montero
- Justin Mendoza
- Karen DeSalvo
- Marcelle Layton
- Mark Mioduski
- Mary Bassett
- Nancy Krieger
- Ruth Katz
- Steven Reynolds
- Timothy Westmoreland
- Tom Frieden
- William Cooke
- Zack Wortman

*As a note, this list does not suggest that interviewees endorse the contents of this report. Interviews were conducted for informational purposes and the contents of the report reflect the opinions of the authors.

REFERENCES

- ¹ Weber, L., Ungar, L., & Smith, M. R. Hollowed-Out Public Health System Faces More Cuts Amid Virus. *Kaiser Health News*. 2020. Accessed May 27, 2021. <https://khn.org/news/us-public-health-system-underfunded-under-threat-faces-more-cuts-amid-covid-pandemic/>
- ² Farberman, R. K., McKillop, M., Lieberman, D. A., Delgado, D., Thomas, C., Cunningham, J., & McIntyre, K. The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations. *Trust for America's Health*, 2020. <https://www.tfah.org/wp-content/uploads/2020/04/TFAH2020PublicHealthFunding.pdf>
- ³ Farberman, R. K., McKillop, M., Lieberman, D. A., Delgado, D., Thomas, C., Cunningham, J., & McIntyre, K. The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations. *Trust for America's Health*, 2020. <https://www.tfah.org/wp-content/uploads/2020/04/TFAH2020PublicHealthFunding.pdf>
- ⁴ APHA Advocacy Fact Sheet on the Prevention and Public Health Fund. *American Public Health Association*. https://www.apha.org/-/media/Files/PDF/factsheets/200129_PPHF_factsheet.ashx
- ⁵ Healthy People 2030: Social Determinants of Health. *U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion*. Accessed May 17, 2021. <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>
- ⁶ Community Health and Economic Prosperity: Engaging Businesses as Stewards and Stakeholders—A Report of the Surgeon General, (Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention, and Prevention Office of the Associate Director for Policy and Strategy, January 2021), 11, <https://www.hhs.gov/sites/default/files/chep-sgr-full-report.pdf>
- ⁷ “What Is the US Health Disadvantage?,” Community Health and Economic Property: Engaging Businesses as Stewards and Stakeholders—A Report of the Surgeon General, January 2021, <https://www.hhs.gov/sites/default/files/chep-sgr-what-health-disadvantage-fs2.pdf>.
- ⁸ Community Health and Economic Prosperity, 6–7.
- ⁹ Gonsalves GS, Crawford FW. Dynamics of the HIV outbreak and response in Scott County, IN, USA, 2011-15: a modelling study. *Lancet HIV*. 2018;5(10):e569-e577. doi:10.1016/S2352-3018(18)30176-0
- ¹⁰ Cooke, W. 2021. Canary in the Coal Mine: A Forgotten Rural Community, a Hidden Epidemic, and a Lone Doctor Battle for the Life, Health, and Soul of the People. *Tyndale House Publishers*.
- ¹¹ Milstein, B, Roulier, M, Kelleher, C., Hartig, E., & Wegley S. Thriving Together: A Springboard for Equitable Recovery and Resilience in Communities Across America. *CDC Foundation and Well Being Trust*. July 4, 2020. childrenandnature.org/wp-content/uploads/070720-Thriving-Together-FINAL_compressed11.pdf
- ¹² Institute of Medicine. For the Public's Health: Investing in a Healthier Future. Washington, DC: *The National Academies Press*. 2012. <https://doi.org/10.17226/13268>.
- ¹³ Institute of Medicine. For the Public's Health: Investing in a Healthier Future. <https://doi.org/10.17226/13268>.

-
- ¹⁴ Gullo, T. Discretionary Appropriations Under the Budget Control Act. *Congressional Budget Office*, 2019. <https://www.cbo.gov/system/files?file=2019-02/54988-DiscretionaryAppropriations.pdf>
- ¹⁵ Impact of Public Health Emergency Preparedness Funding on Local Public Health Capabilities, Capacity, and Response. *National Association of County & City Health Officials*. 2015. Accessed May 17, 2021. http://njaccho.org/wp-content/uploads/2014/06/report_phepimpact_july2015-Final.pdf
- ¹⁶ Public Health Preparedness and Response. *Centers for Disease Control and Prevention*. 2019. https://www.cdc.gov/cpr/whatwedo/00_docs/2019-CDC-Preparedness-and-Response-Fact-Sheet.pdf
- ¹⁷ National Health Expenditure Data. *Centers for Medicare & Medicaid Services*. 2020. Accessed May 17, 2021. <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nationalhealthaccountshistorical>
- ¹⁸ DeSalvo, K., Parekh, A., Hoagland, W., Dilley, A., Kaiman, S., Hines, M., & Levi, J. Developing a financing system to support public health infrastructure. *American Journal of Public Health*, 109, 1358-1361. 2019. <https://doi.org/10.2105/AJPH.2019.305214>
- ¹⁹ Fraser, M. A Brief History of the Prevention and Public Health Fund: Implications for Public Health Advocates. *American Journal of Public Health*, 109, 572-577. 2019. <https://doi.org/10.2105/AJPH.2018.304926>
- ²⁰ Fraser, M. A Brief History of the Prevention and Public Health Fund. <https://doi.org/10.2105/AJPH.2018.304926>
- ²¹ Health Defense Operations Funding. *Resolve to Save Lives*. 2020. <https://preventepidemics.org/wp-content/uploads/2020/05/HDO-1-pager.pdf>
- ²² FY 2022 Discretionary Request. Washington, DC: *Executive Office of the President: Office of Management and Budget*. <https://www.whitehouse.gov/wp-content/uploads/2021/04/FY2022-Discretionary-Request.pdf>
- ²³ FY 2022 Discretionary Request. <https://www.whitehouse.gov/wp-content/uploads/2021/04/FY2022-Discretionary-Request.pdf>
- ²⁴ DeSalvo, K., Parekh, A., Hoagland, W., Dilley, A., Kaiman, S., Hines, M., & Levi, J. Developing a financing system to support public health infrastructure. <https://doi.org/10.2105/AJPH.2019.305214>
- ²⁵ FY 2022 Discretionary Request. <https://www.whitehouse.gov/wp-content/uploads/2021/04/FY2022-Discretionary-Request.pdf>
- ²⁶ Institute of Medicine. For the Public's Health: Investing in a Healthier Future. <https://doi.org/10.17226/13268>.
- ²⁷ National Initiative to Address COVID-19 Health Disparities Among Populations at High-Risk and Underserved, Including Racial and Ethnic Minority Populations and Rural Communities. *Centers for Disease Control and Prevention*. 2021. Accessed May 17, 2021. <https://www.cdc.gov/publichealthgateway/partnerships/COVID-19-Health-Disparities-OT21-2103.html>
- ²⁸ Institute of Medicine. For the Public's Health: Investing in a Healthier Future. <https://doi.org/10.17226/13268>.

-
- ²⁹ Leider, J., Resnick, B., Bishai, D., & Scutchfield, F.D. How Much Do We Spend? Creating Historical Estimates of Public Health Expenditures in the United States at the Federal, State, and Local Levels. *Annual Review of Public Health*, 39, 471-487. 2018. <https://doi.org/10.1146/annurev-publhealth-040617-013455>
- ³⁰ About the Ryan White HIV/AIDS Program. *Health Resources and Services Administration*. 2020. Accessed May 27, 2021. <https://hab.hrsa.gov/about-ryan-white-hiv-aids-program/about-ryan-white-hiv-aids-program>
- ³¹ CDC/ATSDR Social Vulnerability Index. *Agency for Toxic Substances and Disease Registry*. 2021. Accessed May 17, 2021. <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>
- ³² What is Public Health Department Accreditation? *Public Health Accreditation Board*. 2021. Accessed May 17, 2021. <https://phaboard.org/what-is-public-health-department-accreditation/>
- ³³ Public Health Infrastructure Saves Lives Act. Senate Bill, 116th Congress, TAM20F7. 2021. <https://www.help.senate.gov/imo/media/doc/Public%20Health%20Infrastructure%20Saves%20Lives%20Act%20-%20Introduced.pdf>
- ³⁴ Krieger, N., Gonsalves, G., Bassett, M, Hanage, W., & Krumholz, M. The Fierce Urgency Of Now: Closing Glaring Gaps In US Surveillance Data On COVID-19. *Health Affairs*, April 2020. DOI:10.1377/hblog20200414.238084
- ³⁵ National Research Council & Institute of Medicine, U.S. Health in International Perspective: Shorter Lives, Poorer Health, Washington DC: *National Academies Press*. 2013. <https://www.ncbi.nlm.nih.gov/books/NBK154480/>
- ³⁶ Health in All Policies. *Centers for Disease Control and Prevention*. 2016. Accessed May 17, 2021. <https://www.cdc.gov/policy/hiap/index.html>
- ³⁷ Racism and Health. *Centers for Disease Control and Prevention*. 2021. Accessed May 17, 2021. <https://www.cdc.gov/healthequity/racism-disparities/index.html>
- ³⁸ Racism and Health. *Centers for Disease Control and Prevention*. 2021. Accessed May 17, 2021. <https://www.cdc.gov/healthequity/racism-disparities/index.html>
- ³⁹ Putting America's Health First: FY 2020 President's Budget for HHS. *Department of Health and Human Services*. 2021. <https://www.hhs.gov/sites/default/files/fy-2021-budget-in-brief.pdf>
- ⁴⁰ Redlener, I, Sachs, J. D., Hansen, S., & Hupert, N, New York, NY: 130,000-210,000 Avoidable COVID-19 Deaths- and Counting- in the U.S. *Earth Institute, National Center for Disaster Preparedness, & Columbia University*. 2020. <https://ncdp.columbia.edu/custom-content/uploads/2020/10/Avoidable-COVID-19-Deaths-US-NCDP.pdf>
- ⁴¹ Kurani, N., McDermott, D., & Shanosky, N. How does the quality of the U.S. healthcare system compare to other countries? *Peterson Center on Healthcare & Kaiser Family Foundation*. 2020. <https://www.healthsystemtracker.org/chart-collection/quality-u-s-healthcare-system-compare-countries/#item-healthcare-quality-and-access-haq-index-rating-2016>
- ⁴² Health at a Glance 2019. *OECD: Better Policies for Better Lives*. 2019. Accessed May 17, 2021. <https://www.oecd.org/unitedstates/health-at-a-glance-united-states-EN.pdf>

⁴³ Barber, R.M., Fullman, N., Sorensen, R. J, Bollyky, T., McKee, M, et. al. Healthcare Access and Quality Index based on mortality from causes amenable to personal health care in 195 countries and territories, 1990–2015: a novel analysis from the Global Burden of Disease Study 2015. *The Lancet*, 390, 231-266. 2017.
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