
“Ready or Not? Public Health Infrastructure”
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Testimony of

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Let me start by expressing my gratitude to Chairwoman Rosa DeLauro, Ranking Member Tom Cole, and distinguished members of the Subcommittee, for the opportunity to appear before the House Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies to discuss an issue of vital importance to the lives of the American people – strengthening public health infrastructure.

My name is Dr. Umair A. Shah, and I am the new Secretary of Health for the Great State of Washington. I have been in my current position at the Washington Department of Health since late December 2020. Prior to that, I served as the Executive Director and Local Health Authority for Harris County Public Health serving the nation’s 3rd largest county. Throughout my public health career, I have responded to countless emergencies of all kinds both domestically and abroad.

Additionally, I have had the true honor of providing clinical care for our nation’s veterans as an emergency department physician at Houston’s Michael E. DeBakey Veteran’s Affairs Medical Center for over 20 years. I am also a Past President of the National Association of County and City Health Officials (NACCHO) as well as its Texas affiliate, and am now a proud member of the Association of State and Territorial Health Officials (ASTHO) which serves as the voice of state public health agencies across the nation.

Given these experiences, I am keenly aware of the critical role that state, territorial, tribal, and local public health agencies play on the front lines implementing vital public health programs and responding to a wide array of public health emergencies. Today, I
am here to represent the important voice of this “invisible” public health system that works 24/7 to protect communities across this great nation of ours.

As we all know, the U.S. public health system has worked around the clock to respond to the COVID-19 pandemic since the first identified U.S. case was confirmed in our state of Washington in January 2020. Since that time, public health has implemented a wide range of community mitigation and response strategies including community outreach, nonpharmaceutical interventions, epidemiological surveillance, contact tracing, quarantine and isolation, and COVID-19 testing to name a few. The latest – and perhaps most critical lift in the fight against COVID-19 – is the standing up of COVID-19 vaccination efforts with the hope of once and for all ending this horrific pandemic in the United States and beyond.

As you may be aware, I have testified previously in Congress and have stated multiple times that the public health system is often invisible to most Americans as it goes about its behind-the-scenes work. It is when an emergency or an outbreak strike that the fragility and chronic underfunding of the public health system is laid bare. Everyone, everywhere, in all communities, should be able to rely on a strong public health system that is able to support them when emergencies strike.

Public health activities and services must be delivered efficiently and effectively, making the best use of innovation, technology, science, expertise, and the reliance on a qualified and dedicated public health workforce. While there were many uncertainties with the COVID-19 pandemic, one thing that was for certain: this pandemic would have played out very differently if the capacity of the public health system across this nation was better able to support the needs of communities.

Current COVID-19 Response Efforts in Washington State

The state of Washington has mounted one of the most effective responses to COVID-19 in the nation to date. This is a testament to the leadership of Governor Jay Inslee, the work of previous Secretary of Health John Wiesman, as well as the dedication of the incredibly resilient staff of the Washington Department of Health (DOH) and so many partners across the state. Thanks to this work, Washington has consistently ranked in the top 5 for least cases across the nation. Our state also has one of the lowest death rates per 100,000 population over the course of the pandemic despite being hit first and hard with the first reported case and nursing home outbreak in the U.S.1,2,3

While this success has not been without its challenges, it has come as a result of recognizing the importance of being quick and responsive to the ever-evolving nature of this pandemic while also putting science and evidence of what works first. Recently, Washington has seen a steady decrease in case rates such that all regions have now

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3 https://covid.cdc.gov/covid-data-tracker/#cases_deathsper100k (Accessed February 21, 2021)
been able to move into the second phase of the Washington *Roadmap to Recovery* Plan.⁴

Right now, the focus of Washington and states across the country is not only fighting the pandemic as it has for months on end but in getting the precious COVID-19 vaccine into arms of people quickly and equitably. In Washington, this is being done by looking at all the places people can eventually get vaccine – local health departments, hospitals, clinics, pharmacies, mass vaccination sites and more – and finding creative and innovative ways to ensure access.

One recent example is the Washington State Vaccine Action Command and Coordination System (VACCS) Center to support the vaccine distribution efforts. The VACCS has brought together partners in a unique manner through a public-private partnership including entities such as Microsoft, Starbucks, Costco, and Kaiser Permanente to name a few. This state’s success has been equally due to the strong work of not just public health but also healthcare and partners on the ground in local communities across Washington. In my short tenure in Washington, I have been impressed seeing first-hand how amazingly all partners have come together to protect communities across our state.

**Gratitude for Federal Funding Passed by Congress**

The Washington DOH would like to thank all of you in Congress for passage of the COVID Relief and Response Act (Division M of Public Law 116-260, enacted December 27, 2020) that provided an additional $8.75 billion to the federal Centers for Disease Control and Prevention (CDC) for COVID-19 response, including $4.5 billion dedicated to states, localities, territories, tribes and tribal organizations, largely to support vaccination efforts. Also, the bill included $22.4 billion for COVID-19 contact tracing, containment, mitigation, testing, and surveillance, which will greatly increase the capacity of our state and local public health departments to slow and ultimately prevent the spread of COVID-19.

Washington has used this funding to focus on providing needed resources in testing and contact tracing at the community level in an effort to respond to outbreaks swiftly and appropriately, as well as collecting data required to make informed decisions. In moving to vaccine administration, it provided necessary support for DOH to aid efforts on the ground to do everything possible to reach the right people, at the right time, in the right place. Most recently, Washington received an approved expedited FEMA Public Assistance project of $550 million specifically for mass vaccinations efforts in Washington.

This new funding will allow Washington to continue these efforts as it moves towards vaccinating as many Washingtonians as possible. While more federal support will continue to be key in the ongoing battle against COVID-19, these available funding streams are both appreciated and being utilized across the state of Washington.

Chronic Underfunding

While an injection of funding from all sources is absolutely necessary in the midst of such an overwhelming public health crisis, we cannot help as a nation to reflect on how important it is to build the necessary capacity in advance of a crisis. Having seen public health respond to so many large-scale emergencies in nearly two decades of work in this field, it is clear that while emergency response gets the headlines, it is the challenge of doing more with less as a result of chronic underfunding in public health infrastructure that is the biggest struggle.5

Over the past 40 years, the United States has spent ever-increasing amounts of money on personal healthcare – so called individualized medicine – while at the same time governmental public health activities were simply neglected. This chronic under-investment was often unnoticed because of the lack of visibility of public health as a field. In fact, between 1980 and 2019 per capita expenditures on personal health grew by almost $9,000 while governmental public health activities only increased by $270.6

In 2016, America was spending almost twice as much on health care per capita as many other high income countries but simultaneously performing worse on health outcomes, with the highest rates of obesity, maternal and infant mortality and one of the lowest life expectancies amongst industrial nations.7 In 1980, life expectancy at birth in the U.S. was similar with comparable countries. Unfortunately, the U.S. is simply not keeping pace. In 2017, U.S. life expectancy was 78.6 years, compared to an average of 82.3 years for comparable countries.8

As a practicing physician, I recognize the absolute importance of clinical care and medicine to those who rely on it. We all know that America’s health care system is a global leader and provides miracle cures to individuals daily. Yet as we look ahead, we must equally realize the value proposition of public health. Research shows that community-based prevention returns $5 for every dollar invested.9 Simply put, public health is an amazing value.

When we invest in public health as a nation, we have the best chance at not just optimizing health outcomes but also in curbing the healthcare spending curve. Again, public health is an amazing value and we must consider even now shifting precious resources from health care to public health or we will continue down this current path:

suboptimal health outcomes despite increased spending. Truly, we must figure out how to recognize the societal value of public health over the long-haul because only smart and sustained investments can realize improvement in the public's health.

This current trajectory of health spending highlights the need to invest in broader government social services, including public health infrastructure, to improve the health of all Americans. Public health practitioners know the problems, have evidenced-based solutions, but require intentional smart, strategic and sustained investments. Even with respect to our current state of affairs with COVID-19, the threat of a pandemic was well known to our nation and Congress appropriated investment in pandemic preparedness starting with President George W. Bush; however, a lack of sustained investment has quickly depreciated this initial investment.

Over the years, I have championed the notion that public health is like the “offensive line” of a football team. Yet we continue to focus on the “quarterback” of that team – often times, this is the healthcare system. While in football the offensive line is continually invested in as it will assure the success of the quarterback and the football team, in the real world, we do not value the offensive line that is public health. We instead spend in healthcare and yet fail to recognize that investment in the offensive line is so crucial. Repeatedly, we let the system capacity diminish so when we do have an emergency – and we always do – that very system is unable to respond as we all expect. I testified as such in Congress prior to the pandemic by saying that if do not invest in advance, “cracks will show and forces will penetrate and overwhelm the offensive line that protects the public’s health.” It should come as little surprise that this is what has played out in COVID-19.

Over the years, public health has faced steep declines and threats to financing. Public Health Emergency Preparedness (PHEP) funding streams have steadily declined since initial allocation after 9/11. Indeed, in addition to the PHEP funding, many federal public health funds have been hollowed out over the years, including the 317 Immunization Grant Program, and the Prevention and Public Health Fund. In Washington – like states across the nation – public health systems at every level are struggling due to chronic

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underfunding, ever-increasing responsibilities, and the emergence of new threats. Public health agencies throughout Washington find themselves constantly reacting to crises, rather than working to prevent them.

We can only imagine what would happen if spending were doubled on governmental public health activities to 1% of GDP (currently less than 0.5%\textsuperscript{16}) not just to address core public health infrastructure, but to implement proven community-based strategies that would equitably improve the health of all Americans. For now, intentional, smart and sustained federal investment in public health infrastructure is necessary to: 1) ensure foundational public health services for all communities; 2) build a 21\textsuperscript{st} century public health workforce; and 3) modernize public health data systems.

**Foundational Public Health Infrastructure**

Over the past 10 years, public health leaders at various levels of government have worked to address two questions: 1) what are the foundational public health services only government can provide? and, 2) what are the funding gaps that must be shored up in the process? In Washington, the governmental public health system (state, local, and tribal) completed a baseline assessment and found significant inequity in foundational public health services across jurisdictions and identified an annual funding gap of $225 million.\textsuperscript{17,18}

Building on the research of Washington and Oregon, the Public Health Leadership Forum proposed $4.5 billion in additional annual funding for the CDC and state, local, tribal, and territorial core public health programs.\textsuperscript{19,20} Research shows national investment in public health capabilities is currently about $19 per person, leaving a $13-per-person gap in annual spending.\textsuperscript{19,20} The funding will support essential infrastructure such as disease surveillance, epidemiology, laboratory capacity, permanent isolation and quarantine infrastructure, all-hazards preparedness and response, policy development and support, communications, community partnership development, and organizational competencies.

For far too long, our nation has neglected basic public health capacity.\textsuperscript{19,20} CDC’s funding remains just above the level with fiscal year (FY) 2008, when adjusting for


\textsuperscript{17} Washington State Public Health Transformation Assessment Report, BERK Consulting, 2018. Retreived from: \url{https://wsalpno.app.box.com/s/j5d2x0n6w250j31q0gwr1gq6xqn2io4o}.


inflation, and funding specific to state and local public health preparedness has been cut 25 percent from $939 million in FY2003 to $695 million in FY2021. That means there has been little room to modernize public health infrastructure let alone address emerging threats. In fact, even today, only 51 percent of the U.S. population is served by a comprehensive public health system.

While supplemental funding is critical to support the current response to the COVID-19 pandemic, continued and increased investments through the annual appropriations process for CDC is necessary to expand capacity to address other existing and future public health threats. Investment in the CDC – which has traditionally been the trusted voice of public health in this nation prior to its unfortunate plight during the last few years – translates into funding that is then passed down to state and local public health departments in order to serve community members. While health activities occur in local communities, state governments such as Washington’s play important roles in serving as the intersection point between federal and local entities. With stronger investment, public health agencies can continue their work to mitigate the current pandemic, reduce the risk of future threats, and improve the health of all Americans.

21st Century Public Health Workforce

Professional organizations representing state, local, and territorial public health agencies reported a decline in the size of the public health workforce since the Great Recession of 2009. This has only been further accentuated by the ongoing pandemic when the public health workforce has been stressed like no other time in recent history. Not only has the public health workforce been underinvested over the years, it has now become the target of vilification and unfair blame which has further impacted its sustainability. Indeed, there is an urgent need to build back and modernize this nation’s capacity to protect and promote the health of all Americans.

In Washington, the state DOH had to expand rapidly its workforce to respond to the COVID-19 pandemic. This translated into the hiring of over 500 staff members and the contracting of over 1,000 additional personnel, including for work in laboratory settings, case investigation and contact tracing, surveillance and informatics, outbreak response, public affairs/communications, diagnostic testing, and incident management and control for dealing with the logistics of testing, contact tracing, PPE distribution and

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21 In FY 2008, CDC funding was $6.375 billion (at the program level). FY 2020 funding is $7.694 billion (program level). Adjusted for inflation, the 2008 number would be $7.5168 billion in 2020 dollars.


vaccinations. This “just in time” building of capacity in the midst of a crisis is no rational way of preparing our nation for future emergencies.

The diminishment of the public health workforce has affected all levels of the Washington public health system. Many local health departments transferred contact tracing to the state because they did not have local capacity. Having to hire skilled staff and train them while responding to ongoing and growing needs during the pandemic further strained the ability to continue other important work. The local and tribal public health system in Washington has performed admirably but after a year of sustained response is simply fatigued.\textsuperscript{25} And yet the system’s work is far from done.

Going forward, it is crucial to position public health agencies to have the skilled workforce required for pandemic response already in place. Many other essential public health programs had to put their work on hold as staff were shifted to assist with the pandemic. Essentially, public health has had to repeatedly “rob Peter to pay Paul” in the process. This nation must ensure that vital public health services are not compromised during an emergency regardless of its scope and scale, impacting the work in those equally important other areas.

A significant effort to rebuild the public health workforce is needed, but that workforce should not just replace lost positions. Rather, if we are to “build back better,” the public health workforce must be thoughtfully expanded not only to meet the immediate needs to address the ongoing COVID-19 pandemic, but also deal with future and critical prevention efforts whether for communicable disease or beyond. Recruiting, hiring, supporting, and modernizing the public health workforce will require considerable alignment between local and state needs and federal resources and leadership to be successful. That is what Americans should expect from decision makers as we eventually get to the recovery phase of this horrific pandemic.

Guiding principles include: (1) \textbf{predictable and sustained funding} through an established public health infrastructure fund that is flexible to meet ongoing and emerging needs; (2) a \textbf{focus on diversity and equity} to ensure the workforce represents the entirety of the community it serves; and (3) \textbf{expanding the public health workforce} to include highly-trained public health scientists, nurses, specialists and public health paraprofessional workers such as community health workers.

To reach the level of capacity required to build back the public health capacity needed to control COVID-19 and protect the public from future pandemics, ASTHO estimates approximately 100,000 new public health workers are needed in the following three broad categories based on: core public health capacity positions; public health clinical positions (especially nursing); and public health community engagement and outreach specialists.

Public Health Data Systems

There is significant need to modernize the nation’s public health data systems. In 2009, as part of the Health Information Technology for Economic and Clinical Health (HITECH) Act, the federal government invested $27 billion to encourage hospitals and providers to adopt electronic health records.\(^{26}\) There has not been a similar federal investment for public health. The lack of 21\textsuperscript{st} century public health data/IT infrastructure has strained the ability for public health to aggregate data quickly furthering informatics-based decision-making. It has been a vulnerability throughout the response.

In Washington – as elsewhere across the nation – many local health departments do not have data management systems for notifiable conditions, including COVID-19, and they rely on receiving faxes for lab results and case reports. The local health department then must manually enter this into the state’s central data system for disease reporting. This has slowed the state’s ability to aggregate data from labs, hospitals and clinics and rapidly detect changes in the spread of COVID-19. Similarly, Washington’s Immunization Information System (IIS) has been taxed in dealing with the push to vaccinate for COVID-19. Indeed, ongoing and sustained investment in building state-of-the-art public health data systems would have allowed public health agencies to identify COVID-19 “hot spots” and rapidly deploy resources to reduce further community spread.

State public health agencies are thankful to Congress for providing $500 million in emergency supplemental funding in the CARES Act for CDC’s Data Modernization initiative and for additional annual funding of $50 million in FY2021. CDC’s roadmap\(^ {27}\) and the vision of national public health organizations for data modernization\(^ {28}\) gives hope public health can get to this end goal if properly funded. Annual funding of at least $1 billion for CDC’s Data Modernization Initiative (DMI) and for data modernization across state, territorial, tribal, and local public health agencies is necessary to bring data systems in to the 21\textsuperscript{st} century.

This initial investment will provide an essential and immediate injection of resources that must be sustained yearly through robust annual funding to build enterprise-level systems and forge public-private partnerships for new and innovative solutions. Now, more than ever, it is critical to have strong, interoperable, national public health data systems that detect and facilitate immediate responses and containment of emerging health threats that have no regard for county or state borders. Only by investing in a modern, national public health data infrastructure – and the qualified workforce to operate it – can our nation combat threats collectively to protect the health of residents and sustain the economy in the process.


Equity in the COVID-19 Response

The COVID-19 pandemic has acted as the “great revealer” of long-standing systemic and structural health inequities across our nation. The inequitable distribution of morbidity and mortality amongst black, indigenous, and people of color (BIPOC) and other populations demonstrates the absolute critical nature of addressing long-standing health inequities. To reset, reform, and rebuild throughout this challenging time and beyond, federal investments must prioritize and resource equity.

Public health and healthcare alike must work together to employ a health equity lens to ensure investments reach communities often marginalized and utilize a “health in all policies” framework to address the factors of health and well-being that fall beyond the scope of traditional public health and healthcare, such as housing, transportation, economic security, education, and children, family, and social supports. This work must be done intentionally in working with a variety of partners in addressing the social and structural determinants of health.

Of late, our nation is coming to grips with inequities even in COVID-19 vaccine administration. While some argue that one cannot vaccinate effectively and do so equitably, this is a false dichotomy. Our nation must value vaccinating as many Americans as quickly as possible to reach “herd immunity” but also to focus on equity in the process. It is not an “either-or” but a “both-and.” We can and must do both.

The state of Washington has been focusing on doing just that in its ongoing vaccine efforts and while much work remains, much progress has already been made. Recently, the Washington DOH launched two key initiatives. In the first, DOH established the Vaccine Action Command and Coordination System (VACCS) discussed earlier, and the Vaccine Implementation Collaboratives (VICs) which affords careful and sustained community dialogue, stakeholder feedback in addressing equity in vaccination. The combination of the VACCS and VICs show how states can work together to address both in achieving their vaccine goals.

Conclusion: Road Ahead

As I have testified previously to the U.S. House Energy and Commerce Committee, Health Subcommittee, the impact of the current pandemic underscores how crucial it is,
Such efforts will not only help communities recover faster from an emergency but will reduce the impact of that very emergency. The more resilient a community is, the better it is able to resist, respond, and recover from a disaster. The strong and incredibly important work of...(public) health departments – the invisible offensive line of our communities – across the country should not be kept hidden but made more visible so all of us can recognize the absolute value proposition of what public health brings to the table, just like our partners in law enforcement, fire, EMS, and emergency management. With optimal and necessary support from the federal government, state and local public health partners can continue to perform the incredibly critical work that they do on a daily basis even if it remains invisible to the vast majority.\(^29\)

Federal funding is foundational for emergency preparedness and response capabilities for state, territorial, tribal, and local health departments as well as their ability to provide health promotion and disease prevention work. As our nation looks to recover from the impact of the COVID-19 pandemic, it is critical to approach recovery efforts with a focus on transforming all communities by advancing efforts to create healthier and more resilient communities.

In closing, COVID-19 is the challenge of our lifetime but it is also a watershed event to improve the health and well-being of all Americans through more robust, smart, and sustained investment in our public health system. On behalf of our state and my colleagues at ASTHO and across the public health system in this nation (and beyond), we stand ready to work with you to begin the process of proactively investing in public health. It is what our nation needs and what our nation requires to move forward successfully.

Thank you for holding this hearing and increasing awareness about the importance of funding public health infrastructure.

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