Umair A. Shah, M.D., M.P.H.
Executive Director

Harris County Public Health
Building a Healthy Community

2223 West Loop South
Houston, Texas 77027
Tel: (713) 439-6000
Fax: (713) 439-6080

"Investing in America's Economic and National Security"

Testimony of
Umair A. Shah, MD, MPH
Executive Director, Harris County Public Health, TX
Immediate Past-President, National Association of County and City Health Officials

House Budget Committee
February 7, 2019

I would like to thank Chairman John Yarmuth, Ranking Member Steve Womack, and members of the House Budget Committee for the opportunity to testify today on behalf of local health departments across the country.

My name is Dr. Umair Shah, and I am the Executive Director for Harris County Public Health (HCPH) and the Local Health Authority for Harris County, Texas. Harris County is the third most populous county in the United States with 4.7 million people and is home to the nation's 4th largest city, Houston. I am also the Immediate Past President of NACCHO, the National Association of County and City Health Officials (NACCHO), the voice of the nearly 3,000 local health departments (LHDs) across the country.

Harris County Public Health is a nationally accredited, full-service health department that provides comprehensive health services and programs to the community through a dedicated workforce of approximately 700 public health professionals. HCPH has achieved much over the last several years and was recognized in 2016 by NACCHO as Local Health Department (LHD) of the Year for its cornerstone values of **Innovation, Engagement,** and **Equity.** HCPH is a proud remember of NACCHO, and its Texas affiliate, the Texas Association of City & County Health Officials (TACCHO), representing close to 45 LHDs across Texas.

I was tasked with testifying today on fiscal-related matters, and I thank you for this opportunity. Let me start by saying that I am a physician and a public health practitioner first and foremost and not embedded in the day-to-day discussions of federal budget considerations or deliberations about discretionary spending caps. As such, I do not want my testimony to be viewed as simply asking for more money for public health, but rather articulating the absolute critical role that public health plays in building healthy and vibrant communities. In the end, this committee will have to decide how to set the budget and its priorities.

That said, I am truly an expert in health: both clinical healthcare delivery and public health. I am uniquely qualified to provide this perspective because I have seen "health" and its impact from so many different perspectives. And from my expertise and experiences, I can confidently say

the potential for across-the-board cuts to public health will only accelerate the current trend of lower-life expectancy, impact the quality of life and well-being, and further degrade our ability to prevent disease and injury in every community across this country, whether in large jurisdictions like Harris County, or smaller, rural and/or tribal areas where public health capacity is even more scarce.

I have been a practicing physician for the last twenty years. I have proudly served our nation's veterans as an Emergency Department physician at the Michael E. DeBakey Veterans Administration Medical Center in Houston since 1999. Caring for patients, especially veterans, is both a privilege and an honor. Still, in 2003, I made the conscientious decision to "follow my heart" and become a public health practitioner as I wanted to make the difference in people's lives at a larger scale. The first position I took in public health – with a significant pay cut, I might add – was at the Galveston County Health District, before coming to Harris County more than a decade ago. I must say, I have never looked back. And I mention the pay cut only to say that this nation's health system does not incentivize especially physicians and other healthcare practitioners to choose a career in public health, furthering the gulf between these two critical areas of health in our nation.

I have also seen the healthcare system from the patient's perspective. First dealing with the care of our mother after she had a devastating stroke in 1991 while in her 50's. She became wheelchair-bound shortly thereafter. She progressively lost her ability to walk and talk as she has steadfastly fought through 27 years of the impact of her stroke on her world (and ours as well). Additionally, just recently in late December, we lost our father after his long battle with chronic health issues including ailments related to his heart, diabetes, and kidney disease. Over the last several years – culminating in 2018 when he was admitted to the intensive care unit (ICU) setting on eight separate occasions in this one year alone – we provided an incredibly intense level of care for him and his health needs. Fortunately, with my medical training, I knew how to navigate the healthcare system's incredibly complex moving pieces. Even with my training, I must tell you though – it was still not an easy system to navigate. Many Americans are unprepared for receiving healthcare services in a system that seems to forget that the second half of the word healthcare is indeed "care".

These perspectives have shaped me in different ways; each provided me with a host of experiences that make me the person that I am today. The experiences have not all been positive. Some have been downright terrible. Seeing the ups and downs of taking care of a patient who sadly did not survive. Feeling the loss of a parent functionally and then another permanently has been the hardest thing I have ever faced. Sharing these experiences with those left behind, especially my sister, my wife, our three small children, his grandchildren – all under the age of ten – is not something life prepares us for. Comparing and contrasting that with the handling of emergencies as intense and varied as hurricanes, earthquakes, pandemics, Ebola, Zika, the scourge of commonplace tuberculosis or even vaccine-preventable diseases such as measles has left me with a lasting impression of how challenging a 24/7 response can

be both on me as an individual responder and my team as a collective who must work in concert to ensure the health and well-being of the lives that have been entrusted to us. All these perspectives make me who I am today and make me believe I am the right person to testify about the role public health and healthcare play in our communities each and every day.

So, while I am not dealing every day with the federal budget or spending caps, **I am ready to make the forceful case that an increased investment in health, and not just healthcare, is absolutely necessary for the future of our country.** This investment in health must be predictable, coordinated, and adequate to provide each American with foundational and programmatic public health services have a positive impact on individuals and their communities and in the end save money.

Per a recently convened Public Health Leadership Forum at RESOLV, "All people in America deserve a minimum level of public health protection[1]." This is simple but absolutely correct. Truly, the monies Congress allocates to public health should not be considered as just expenditures on a budget line but rather an investment in preventing future healthcare costs. A down payment, if you will.

It is a testament to this Committee's collective wisdom and knowledge that you have extended an invitation to public health to speak on behalf of our field's impact on both economic vitality and national security. For truly that is what spending on public health also provides. Furthering this notion, an excerpt from a National Association of Chronic Disease Directors (NACDD) recent report, "*Why Public Health is Necessary to Improve Healthcare*," says the following:

> "As the United States seeks ways to regain our economic footing and rebuild prosperity, all should be reminded of the simple but immensely important fact that the nation's collective health bears both an economic and human cost. Poor health of a population can exert tremendous force on employment rates, interest costs and other tangible factors that ultimately affect the ability to maintain a strong global economic position[2]."

Poor health impacts every facet of our community. It impacts not just health and healthcare but economic strength, quality of life, development through the lifespan, and overall community resilience. We do not see health as just related to what happens within the four walls of a clinic but what happens everywhere in a community. Health happens where one *Lives, Learns, Works, Worships, and Plays*. We have seen countless studies that have shown that one's zip code often has a more pronounced effect than even one's genetic code on one's health. Health influences what happens in other sectors such as education, transportation, housing, and the

[1] http://www.resolv.org/site-healthleadershipforum/files/2018/11/PHLF_developingafinancingsystemtosupportpublichealth.pdf
[2] https://cdn.ymaws.com/www.chronicdisease.org/resource/resmgr/white_papers/cd_white_paper_hoffman.pdf

environment, to name but a few of the connections. Optimizing health is the driver for true human potential – and, in turn, it is key for our nation's overall collective potential. Public health response helps us prepare for, respond to, and rebound from a host of emergencies or potential for such. Recent hurricanes in 2017 such as Hurricanes Harvey, Irma, or Maria that devastated communities across the United States including Puerto Rico and the U.S. Virgin Islands as well as our own community in Harris County and across Texas, saw scores of public health responders do what they do each and every day. Additionally, the wildfires on the west coast, acts of violence, even responding to volcanic ash in Hawaii has meant that public health responders were there 24/7 hand-in-hand with other first responders to ensure the health and safety of their respective communities.

We know another hurricane, wildfire, earthquake, mass-shooting, disease outbreak, or even terrorist attack will happen. It is not a matter of if but rather when. Public health has responded before and will continue to respond. Yet the capacity of local health departments to respond is not at the levels that it should be at. In fact, emergency preparedness funding at the federal level which supports necessary capacity at the state and local levels has only decreased since the early 2000's. Some of this capacity-building responsibility has been absorbed and transferred to the state and local levels but some has simply gone away. **Simply put, emergency preparedness capacity is not at adequate levels to protect us. We need a national response strategy that does not react to the latest disaster but is proactive in anticipating and investing in preparedness and resilience strategies needed for the next emergency.**

Health impacts our national security in two key ways. First, infectious diseases such as tuberculosis, HIV/AIDS, and West Nile virus can be readily found in domestic settings. Additionally, diseases such as Ebola, Zika, and even influenza can rapidly travel across the globe and be at our doorstep on a moment's notice. This highlights the vital interplay between global health and domestic health. Second, chronic health conditions such as heart disease, diabetes, obesity, cancer, and those related to mental health conditions severely decrease the vitality and well-being of our people and our communities. For example, childhood obesity has become such an epidemic in our nation that retired senior military leaders formed "*Mission: Readiness*" to bring awareness and fight this epidemic. The basic premise was that our military had trouble finding fit enough young Americans that could be a part of the military due to obesity and other health-related ailments that made them ineligible to serve our country by enlisting in the military. **We need Congress to view public health as a key partner to build strong and resilient communities.**

I had the honor to testify last year in the House of Representatives Energy & Commerce Committee's Health Subcommittee. In that testimony, I coined the term that we have an "invisibility crisis" in public health today. Our daily work in public health – whether picking up dangerous animals, spraying for mosquitoes, promoting health and well-being messaging, providing vaccinations, fighting infectious diseases, inspecting restaurants or tending to the environment to keep the public healthy and safe, and a myriad of other examples – often goes

unnoticed. This invisibility crisis means that we have a real problem in our nation when it comes to recognizing the importance of the often behind-the-scenes work that public health is engaged in each day. Numerous studies well beyond this testimony can and do illustrate this point.

While the invisibility crisis may be the problem, I was taught that one should not ever just talk about problems or issues without offering potential solutions. So, in response to this invisibility crisis of public health, I believe the solution is centered in what I refer to as the three (3) V's of public health, namely ***Visibility, Value,*** and ***Validation***. Given the oft-invisible nature of our field, it starts with increasing the ***Visibility*** of public health. When we increase the visibility of the work we do, others begin to appreciate the ***Value*** of the work. When there is value for anything, it brings about ***Validation*** which refers to the notion of validating our work with either pro-health policies or true investment with resources to support the work. This is the ***value proposition*** of public health and more broadly health for our communities. This is the investment challenge that we have in our country right now.

Let me describe the **3 V's** more specifically especially as they impact the bottom line of investing in the health and well-being of our communities.

Visibility

Despite the significant impact to a community's overall well-being, public health is largely invisible and under-appreciated. This is further exacerbated when public health agencies are confused for healthcare. This is true especially in a community such as Harris County, which is home to so many outstanding healthcare institutions. Most people operate in their daily lives without noticing that public health is there working to monitor and prevent diseases and addressing other concerns. Though the news may cover a measles outbreak, few tell the countless stories of public health responders who work to ensure the most vulnerable are vaccinated. The prevention of countless outbreaks seldom makes the headlines. **Public health is truly like the "offensive line" of a football team** – rarely recognized for the success of the football team but critical, nonetheless. Unfortunately, if public health is the offensive line, healthcare delivery is the quarterback. And everyone knows the quarterback.

A consequence of public health's prevention efforts being largely invisible is a corresponding dearth of investment in the field of public health. This lack of investment impedes public health's impact on furthering the health of a community. This diminished expenditure is also true of governmental public health agencies where their departmental budgets often fall behind what is necessary and even that of other governmental agencies. It is no surprise that in order to do their work adequately public health agencies must reallocate funding from other focus areas (the so-called "robbing Peter to pay Paul" phenomenon) thus diminishing or delaying targeted goals across multiple community health indicators.

Value

Public health agencies and their programs work "upstream", well before health issues become true problems. They are all about prevention. As we know, "an ounce of prevention is worth a pound of cure." Though we may know this adage, we simply do not follow it. **Investing in prevention up front means that expensive healthcare costs down the road are averted.** Local health department investments in maternal and child health programs, for example, are associated with a significant reduction of rates of low birthweight in communities.[3] In another fact, the March of Dimes estimates the cost to Medicaid of premature and/or low birthweight babies is nearly ten times the cost of a healthy, full-term baby.[4] In a community such as Harris County, the effect of this relationship is even more pronounced given that Harris County's uninsured rate of over 20% means that many of the costs of low birthweight fall onto the "safety net" healthcare provider system.

Simply put, public health prevents more expensive healthcare activities. True health is so much more than what happens within the four walls of a doctor's office, an emergency department, or even a hospital. Healthcare delivery is certainly necessary but not sufficient in achieving true health for our nation. Much of what determines the health of our communities relates to activities happening in the community, well outside of the reach of the traditional healthcare system. This is why it is **important to raise the visibility of public health and in turn raise the value proposition of what the field brings to the table. The offensive line, not just the quarterback, truly does matter.**

Validation

The final element of this equation, validation, is really what it is all about. As we raise public health's visibility and show its value, it leads to validation. **Validation by investing in pro-health policies and by true investment of resources.** It's where the rubber meets the road and begins to turn the tide against the sea of spending that is made in the healthcare system further downstream. Validation is critical as it ensures that our investment is made upstream in prevention.

According to a recent report published by AcademyHealth, "the evidence is nearly unanimous that higher total public health spending is tied to better health outcomes[5]." Investment up-front translates into a multitude of community-wide benefits. Early investments in public health would create long-term savings in healthcare, education, the workforce and the economy, to name but a few. **Investing in public health is not just about improving health, it is about investing in our people, our communities.**

The evidence is growing that cuts to public health create a false economy, by saving pennies today, governments wind up with a dollar of cost tomorrow. A recent study in Public Health

[3] https://www.ncbi.nlm.nih.gov/pubmed/24842733
[4] https://www.ibm.com/downloads/cas/WWDZPDL2
[5] https://www.academyhealth.org/publications/2018-06/return-investment-public-health-system-spending

Reports found that a 10% increase in local public health expenditures corresponded with 7.5% fewer cases of infectious diseases and a decrease in 1.5% Years of Potential Life Lost – a technical term to measure premature mortality[6]. A recent systematic review of 18 different public health programs found that investments in local public health had calculated substantial, positive ROIs[7].

Yet today, rather than investing in public health, I can tell you we are doing absolutely the opposite. Increasingly constrained budgets with unpredictable futures mean that public health agencies across the country – whether large or small – are making priority decisions based not on true community health needs but on fiscal considerations. And related to budgetary considerations and spending caps, if community health impacts when making budgetary decisions are not given the highest priority, it will make this discussion only about dollars. The current value proposition would worsen and pressure further the budgetary inequities that are already in place. Fiscal cuts to public health are too costly, not sustainable, and cannot be made across the board or in a vacuum. **Public health truly matters, and careful deliberation and intention must be given to ensure budgetary decisions reflect the complexities and nuances of public health's value proposition.**

The entire public health system including the workforce needs investment and public health foundational capabilities should be seen as part of the nation's key infrastructure. As mentioned, the RESOLV convened [8]national experts in the public health community to begin developing policy options for long-term, sustainable financing (I was also invited to serve as a contributor). After much deliberation, PHLF proposed establishing a Public Health Infrastructure Fund as a means to close the gap in foundational public health capabilities across the country. This of course would require a significant transformation of the American public health system supported by dedicated, sustainable resources. The fund would be resourced by new dollars to address the $4.5 billion shortfall in public health funding across the board nationally.

According to the respected non-partisan policy group, Trust for America's Health, "the United States spends $3.5 trillion annually on health, but only 2.5 percent of that spending is directed to public health. That equates to an average public health expenditure of about $280 per person. By contrast, total healthcare spending in the United States in 2017 was $10,739 per person[9]." We know prevention works, yet we are not investing adequately in it. In addition to the infrastructure elements as above, major investments in public health workforce development are needed. Public health has traditionally struggled to retain highly talented and qualified individuals due to non-competitive salaries.

---

[6] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3234401/
[7] https://www.ncbi.nlm.nih.gov/pubmed/28356325
[8] http://www.resolv.org/site-healthleadershipforum/files/2018/11/PHLF_developingafinancingsystemtosupportpublichealth.pdf
[9] https://www.tfah.org/report-details/trust-for-americas-healths-legislative-priorities-for-the-116th-congress-january-2019/

This problem gets compounded when budget cuts lead to workforce reduction. Reductions in the public health workforce strain the ability of state and local public health departments to protect and promote population health. From 2012-2016, the estimated number of full-time health agency employees slightly decreased (at least better news than the significant decreases of previous years). But to make things worse, according to the recent Public Health Workforce Interests and Needs Survey (PH WINS) survey, 38 percent of workers plan to leave their current position before 2020[10]. And this is not only about the number but also about the core competencies of these people. In particular, there is a need for increased training for existing staff in the data science skills necessary to understand public health issues impacting communities. Artificial intelligence (AI), machine learning, natural language processing, are powerful tools that are often missing in a local public health agency's toolbox. While retraining and upskilling workforce is a massive endeavor, it would allow this gap to be addressed.

Truly, Congressional investments in public health can be validated by improvement in key outcomes such as: life expectancy, rates of preventable diseases, and improved resilience to disasters and public health emergencies. These outcomes can further be validated by the prevention of poor outcomes: diseases that are not spread; diabetes that never manifests; overdose or suicide deaths that never occur. Validation comes in the form of stronger national security: a population fit to serve; the necessary capacity to respond to bioterrorism; and robust global surveillance and prevention program to stop diseases that might otherwise enter.

Conclusion

The Centers for Disease Control and Prevention (CDC) announced last fall that life expectancy in the United States had declined again in 2017, a dismal trend not seen since World War I, largely due to heart disease, stroke and diabetes, suicides, and drug overdoses. In my own community, this very week, we confirmed three cases of measles, a terrible, deadly disease that is making a comeback into our communities. Clark County, Washington, far smaller than Harris County, is dealing with a measles outbreak involving over 40 cases. And the list goes on.

While I am not immersed in Congressional budgets every day, I can confidently testify that public health funding must be given high priority. I know this because of my experience and expertise in health. Current funding is inadequate, and we are losing the battle. If nothing changes, we will get more of the same: more disease, diminished quality of life, and lower life expectancy. My experience teaches me how to prevent this from happening and reminding me how much anguish and suffering will be felt if we don't.

My experiences from a health systems stand-point, as a healthcare provider, and the son of both parents who themselves experienced likely preventable health conditions and then the challenge of helping them navigate the healthcare system, all lead me to the same conclusion: **we can and must do better. Investing in health up-front is critical to our success as a nation.**

[10] https://www.debeaumont.org/phwins/

Failure to do so will lead us to where we already are and that is not where anyone of us should be satisfied with from a health stand-point.

We are at a crossroads. It will be up to the wisdom and judgment of our elected leaders – all of you in Congress – to either act now and invest in public health or react later and overspend dearly to undo that which could have been prevented. As per "The Future of the Public's Health in the 21st Century" landmark report by the Institute of Medicine in 2003, "In the United States, governments at all levels (federal, state, and local) have a specific responsibility to strive to create the conditions in which people can be as healthy as possible[11]." This indeed captures it all. We can and must do more – and we must do it together.

On behalf of Harris County Public Health, and the nearly 3,000 local health departments across the country, I appreciate again the opportunity to testify today. We join you in strengthening a public health system that protects our economic vitality and national security. Thank you for all you do in building safe, healthy, and protected communities where we live, learn, work, worship, and play, across this great nation of ours.

Thank you.

[11] https://www.nap.edu/read/10548/