Written Testimony House Committee on Science, Space, and Technology
The Science of Covid-19 Vaccines and Encouraging Vaccine Uptake
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Good Morning Chairwoman Johnson, Congressman Lucas, and members of the Committee. My name is Dr. Philip Huang, and I am the Director and Health Authority for the Dallas County Department of Health and Human Services in Dallas, Texas. I have served in this position since February 2019, and before that started my career as an Epidemic Intelligence Service Officer with the CDC, then spent 15 years with the Texas Department of State Health Services and then 11 years as Medical Director and Health Authority with the Austin Public Health Department. So, I have had experience with the federal, state and local levels.

I am also a Board Member for the National Association of County and City Health Officials (NACCHO), the association that represents our nation's nearly 3,000 local health departments, which have been on the front lines of the COVID-19 response since the beginning. From this post, I have witnessed my colleagues' incredible efforts over the past year to keep their communities safe and the work that they are doing to ensure an equitable and efficient roll out of the COVID-19 vaccines. I am honored to be with you today to discuss the importance of vaccines and vaccine communication, as well as the role that local health departments play in improving vaccine acceptance and access. I mentioned that I have worked at the federal, state and local levels and I have truly come to appreciate that all things happen locally.

The Role of Local Health Departments in Responding to the Pandemic

Local health departments are the unit of local government responsible for safeguarding the public, responding to routine health threats as well as emergencies. We know our communities block-by-block, including the assets and barriers to care in our communities, the industries and living situations that pose particular challenges, as well as the community-level partners and organizations that must be included to be successful. We live in our community and serve our neighbors. We are the front lines of the many questions and concerns that are raised by families, local decision makers, and health care providers—whether they are asked through a call to the health department or in the parking lot of the grocery store. This gives us a both an important insight into both the concerns of the community, as well as helps us identify emerging issues. While the Dallas County Department of Health and Human Services serves over 2.6 million Dallas County residents, local health departments as a whole range in size and geographic location, autonomy, and resources. But no matter these differences, we all have the shared goal of protecting and promoting the public health of our communities.

Even before a single case of the virus was detected on American soil, we at local health departments began to mobilize and engage our community and health care partners. We have also worked closely with the entirety of the federal-state-local governmental public health

partnership, working to bring the local perspective to our national plans. This continues to be critical as we embark on the largest mass vaccination campaign in our nation's history. To be successful, we need to have strong, predictable supply of vaccines. But that is not enough. We must do more to provide clear communication through trusted messengers and health care providers, the opportunity for questions to be asked and an individual's concerns to be thoughtfully considered, as well as targeted outreach via the many unique formal and informal communications channels where people get their information. We need the resources and staff to allow for the time to ensure that individuals can get their questions answered and then strategically organized access points to get the vaccine to the populations we are trying to reach.

Vaccine Hesitancy Prior to COVID-19

In considering how current vaccine hesitancy and access barriers impact the pace of our national recovery from COVID-19, it is important for us briefly acknowledge how these challenges existed for us, at local health departments, prior to this pandemic.

Immunization is one of the most successful and safest public health measures available. In the United States, vaccines have led to the near elimination of several diseases and significant reductions in mortality and improvements in daily life. Despite this, vaccine hesitancy has been a persistent public health threat that has led to outbreaks of vaccine-preventable diseases, particularly among under-/un-immunized individuals and communities.[1]

Local health departments have a long track record of not only providing clinical immunization services, but also providing other essential immunization activities, such as conducting surveillance, providing education to health care providers and the public, and developing communication campaigns to bolster immunization rates. But local health departments have long faced numerous challenges to this work. In 2017, the National Association of County and City Health Officials (NACCHO) conducted an assessment of local health department immunization programs.[2] Fifty-six percent of respondents indicated vaccine hesitancy was one of the top barriers to their local immunization program. Along with this, respondents indicated insufficient staffing (44%), lack of vaccine education and confidence (37%), and lack of funding (27%) as other barriers their local immunization programs encountered.

The challenge of vaccine hesitancy is not new to COVID-19, but with nearly half a million Americans who have lost their life to this virus and more challenging variants emerging, it highlights the importance of a successful and efficient mass vaccination effort. While important federal, state, and local efforts were underway before the pandemic to strengthen vaccine confidence through implementing the Centers for Disease Control and Prevention's (CDC's)

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[1] See: https://www.nejm.org/doi/full/10.1056/NEJMoa1912514; https://www.cdc.gov/mmwr/volumes/66/wr/mm6627a1.htm; https://www.mass.gov/doc/guide-for-addressing-vaccine-hesitancy-among-clients/download

[2] https://www.naccho.org/blog/articles/local-health-department-immunization-programs-findings-from-a-2017-naccho-assessment

Vaccinate with Confidence framework, we are still facing substantial needs and work ahead to adequately strengthen vaccine confidence.

Vaccine Hesitancy During COVID-19

Over the course of the pandemic, clear and consistent messages, as well as building trust with the public, have been critical challenges to our work. The same is true when it comes to the vaccines authorized for COVID-19. With much attention being paid to the development push for an effective vaccine, surveys and polls conducted early on during the pandemic highlighted a significant number of adults who did not intend to get vaccinated when it was available. These data described variation in intent to get vaccinated by factors such as race, ethnicity, gender, age, and education with more hesitancy found among communities disproportionately impacted by COVID-19, such as among African Americans.

As communities continue to have questions as they form decisions about getting vaccinated against COVID-19, particularly those who have been historically marginalized by discrimination in the health care sector, engaging with them on an ongoing basis is an important approach to providing the information they need and building the trust that is crucial to their confidence in COVID-19 vaccines and the systems that provide them. In efforts funded by the Robert Wood Johnson Foundation and co-led by the Johns Hopkins Institute for Vaccine Safety and NACCHO, regional and local community conversations, including local conversations with African American, Native American, and Latinx communities, have yielded actions for local health departments to consider or adopt in supporting their communities. These include:

- **Demonstrating trustworthiness by being a transparent and candid partner in decision-making**. This includes recognizing that people are still forming their views around COVID-19 vaccination and that it is valid for them to have questions. This also includes providing answers where they exist while acknowledging when there are insufficient data to address other questions.
- **Seeking to understand the context and values of a community and how they contribute to vaccination decisions.** People consider COVID-19 vaccination in the context of their lived experience and it is equally important to acknowledge that, for some, this lived experience encompasses a deep history of systemic injustices and inequities.
- **Engaging with communities, either directly or through trusted community partners, including healthcare providers, to support decision-making and build trust.** Recognizing that ongoing, meaningful community engagement requires an all-hands-on-deck approach, it is especially critical to involve community partners, stakeholders, and local leaders that represent and serve our communities.
- **Decreasing barriers to vaccine access so that decision-making about vaccination is not encumbered by logistical hurdles.** While we still have a limited supply of COVID-19 vaccine, we must ensure that aspects such as registration, location, and scheduling support equitable access, particularly among those who have been disproportionately impacted by the pandemic.

In Dallas, we have seen vaccine hesitancy among communities of color, especially the African American and Latino communities. The mistrust from the African American community seems to be deep-rooted in history, including the horrific Tuskegee studies of untreated syphilis in rural Black men. Whereas some of the mistrust from the Latino community might stem from mistrust of the government and skepticism of the vaccine development process, such as concerns over the speed at which the vaccine was developed. I have heard that even the name "Operation Warp Speed" leads to people fearing that a vaccine developed under such a program must have been rushed and not fully vetted. Among the Hispanic community we are also hearing questions around whether an undocumented person can receive the vaccine as well as concerns about providing personal information to the government needed to receive the vaccine.

We have also seen a mistrust of the process from some of our healthcare workers. Despite being part of the federal pharmacy program and having early, guaranteed access to the vaccine, we saw that in some long-term care facilities the uptake of the vaccine from the staff was very low, with some facilities only having 42% of their healthcare staff take the vaccine. When questioned by DCHHS, these facilities said their staff were waiting to see how their coworkers responded to the vaccine before taking it for themselves.

During some of our community outreach events, we are seeing many with a general lack of knowledge about the vaccine – ranging from people who did not know a vaccine had been developed and was being distributed to people, to not knowing how to register and access the vaccine. During these events we have also experienced much misinformation circulating in the community, such as people thinking that the government is putting flu virus or something else into the COVID-19 vaccine to track their movements.

Currently, we have over 650,000 people who have signed up on our vaccine registration list and the Dallas County Health Department is only receiving 9,000 doses of vaccine per week. However, our early experiences in registering people highlighted a digital divide in Dallas County as a large percentage of the people who signed up online during the first couple of days were from the northern, more affluent areas of Dallas County. As a result, our registration list did not match the racial and ethnic makeup of the county as a whole. More tech-savvy residents were also able to "hack" into some of the appointment systems and make appointments for persons who were not yet in the high priority groups. While demand is currently outpacing supply of the vaccine, as we ramp up production of the vaccine allowing for larger-scale vaccine administration, we need to address several of the issues I have mentioned.

Local Health Department Roles and Actions to Address Vaccine Hesitancy

Local health departments, as health strategists within their communities, are actively working on these actions to support equitable COVID-19 vaccine administration and uptake across all communities, all races, ethnicities, and other demographics and geographies.

In Dallas, we have prioritized vaccine distribution based on a vulnerability index, which takes into consideration factors such as age, the Area Deprivation Index (ADI – a measure of socioeconomic disadvantage), the zip code a person lives in, chronic medical conditions, and proximity to recent COVID-19 cases, to ensure we equitably distribute the vaccine. This approach, rather than a first come first serve approach, helps address some of the digital divide issues. Additional steps we have taken to address the digital divide include setting up a professional phone bank so individuals without internet access or a smart phone can call the phone bank to register. We have also partnered with community leaders, from local elected officials to faith leaders, to host in-person registration events. We again use our vulnerability index to target the zip codes most in need of these registration events.

Here in Dallas County, we are also launching a paid media campaign to address vaccine hesitancy and get information out to the community about the registration process. We are again partnering with trusted community leaders and prominent figures to act as spokespersons for our vaccine registration campaign. We have seen first-hand how leveraging people that are respected by the community can decrease vaccine hesitancy. For example, at one of our community registration events a 65-year-old African American woman leaned over to her friend and said that she decided to come to the event and register because she saw the actor Tyler Perry on TV that morning saying how important it is that we all get the vaccine.

At our in-person community registration events in priority communities, we have had lines around the block of people wanting to get registered. This is good news and shows that there is demand in the community to receive the vaccine. But it also highlights the need for a comprehensive communications strategy to ensure all communities have access to accurate and reliable information on the vaccine and the vaccination process.

Other Challenges to Ensuring Equitable Vaccine Uptake
Building vaccine confidence is key, but it is only one piece of the puzzle. As previously mentioned, local health departments have had to navigate the current challenges of low vaccine supply, high demand, and hesitancy with insufficient resources, specifically funding and staff, and a lack of visibility and coordination. These challenges particularly hit our ability to ensure an equitable roll out of the vaccine and reinforce the need for us to focus on those populations who may be harder to reach, but who are also more impacted by the virus.

We need more vaccine in our communities, coordinated access points, strong data systems, enhanced planning across the federal-state-local public health partnership, as well as long term workforce and infrastructure investments.

Inclusion in Strategy and Planning
As local health departments, our role in the community gives us keen insight into what is needed to be successful, and our public health expertise gives us the tools to do so. This ground level expertise is critical to ensure that national and state plans and policies to fight the pandemic can be successful. However, when you look at the national picture, there has been varied engagement of local health department expertise in the state and federal planning. We

must strengthen this partnership to ensure that federal and state response and vaccination planning is informed by local health department expertise.

Workforce

Unfortunately, the work of governmental public health—and local public health in particular—has long been under resourced which has a direct impact on workforce. Local health departments were hit particularly hard by the 2008 recession. In many communities they never recovered, and when COVID-19 emerged our local health departments' network across the country was down 21% of their workforce capacity as a whole.

We have fewer staff serving larger populations with increasingly complex public health challenges to tackle. With these circumstances, local health departments are forced to shift resources from other public health activities to adapt to the demands of emergencies. The pandemic has been no exception. Since the start of the pandemic, local health department staff have been pulled away from other essential areas like food safety, HIV prevention, overdose prevention and response, and immunization. When NACCHO asked last spring how COVID-19 had impacted regular local health department immunization programs and services, most who responded (88%) indicated that they had to reassign their immunization staff to support the response. A number of local health departments (17%) also indicated that they needed to shift money from their regular immunization program budgets to support the response.[3]

While much has changed since the spring, this context is important as the same local health department staff who are responsible for vaccinations and protecting our communities from outbreaks of vaccine-preventable diseases like measles and influenza, were the same staff who were pulled away from those duties to support activities like COVID-19 contact tracing and supporting people who needed to isolate or quarantine. We are now relying on the same people to vaccinate us against COVID-19 and will need more support as vaccines become more widely available. We need a strong focus and investment in restoring jobs in local public health, but also in recruiting top talent and retaining them in the field.

Data

Local health departments also need data. While local health departments have firsthand knowledge of their communities, we need timely, comprehensive and granular data to track where vaccines have been allocated and what populations have been vaccinated, identify which populations are and aren't receiving vaccine, and what areas need to be targeted. This data is critical to doing our work. While some local health departments have access to this information, others have faced challenges with having full visibility. This poses significant challenges for prioritizing resources and vaccine access points, as well as confusion for the public.

Funding

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[3] https://www.naccho.org/blog/articles/report-from-the-field-the-impact-of-covid-19-on-local-health-department-immunization-programs

We are very grateful for Congress' emergency funding and the package passed in December to help support the vaccine roll out and administration. For the vast majority of local health departments, those funds are the first and only that we have/will receive to support this vaccination work, and frankly they are coming months into our vaccine rollout. Those funds have been sent to states who will decide if, how much, and when they will share those resources with local health departments. While the flow of funds has not been as big of a challenge in Texas, I know that some of my colleagues at health departments in other states have had a different experience, and we are hopeful that local health departments across the country will get the resources they need in a timely manner to actually build out their vaccine infrastructure.

Long-term investments

While today's hearing is about COVID-19 vaccine hesitancy, it cannot be understated that this is an issue that was a challenge for public health long before the pandemic and it will likely outlast the pandemic as well. Our efforts to build confidence in vaccines are long-term and continuous, but every day we work on it and build relationships within our community brings us one step closer to getting our population fully vaccinated. It is critical that we maintain a focus on and investments in this work now and after the pandemic to truly improve our nation's vaccine confidence. We can and must learn from these long-term failures to invest as we continue to work through the pandemic and prepare for the next crisis.

Closing

I am proud to serve the Dallas County community where I grew up, and to work with dedicated colleagues each day to address all aspects of the pandemic response. The opportunity that the authorized vaccines provide is incredible, but we can and must do more to address barriers to acceptance and access to achieve our goals in an equitable way. Local health departments across the country work directly with individuals in our communities and are ideally situated to address vaccine hesitancy, combat vaccine misinformation, and increase vaccine confidence. The efforts and lessons learned from local health departments and their community partners in supporting equitable COVID-19 vaccine uptake have the potential to also address vaccine hesitancy, build confidence in routinely-recommended vaccines more broadly, and better protect our nation against future vaccine-preventable diseases.

Thank you again for inviting me to testify today and I look forward to your questions.

Philip Huang, MD, MPH

Dr. Huang has been the Director and Health Authority for the Dallas County Health and Human Services Department since February 2019. Prior to this he served for 11 years as Medical Director and Health Authority for the Austin Public Health department. He received his undergraduate degree in Civil Engineering from Rice University, his MD from the University of Texas Southwestern Medical School, and his Master's in Public Health from Harvard with a concentration in Health Policy and Management. Dr. Huang completed his residency training in Family Medicine at Brackenridge Hospital in Austin, and served two years as an Epidemic Intelligence Service (EIS) officer with the Centers for Disease Control and Prevention assigned to the Illinois Department of Public Health where he conducted epidemiologic studies in chronic disease and infectious disease outbreak investigations. He is currently an Assistant Professor with the University of Texas at Austin, Dell Medical School, and an Adjunct Assistant Professor with the University of Texas School of Public Health, Austin Campus. He has served as Principal Investigator for numerous CDC and State-funded public health cooperative agreements.