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"Federal Response to the Ongoing COVID-19 Pandemic: A Local Health Department's Perspective"

Testimony of
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My name is Dr. Umair A. Shah, and I am the Executive Director for Harris County Public Health (HCPH) and the Local Health Authority for Harris County, Texas. I am a Past President and former Board Member of the National Association of County and City Health Officials (NACCHO). NACCHO is the voice of the nearly 3,000 local health departments (LHDs) across the country. I am also a Past President and current Board Member of the Texas Association of City and County Health Officials (TACCHO) which represents approximately 45 LHDs across Texas.

Today, I particularly want to acknowledge Michael "Mac" McClendon and Jennifer Kiger, two nationally-recognized leaders in emergency planning and response, who serve as our department's deputy Incident Commanders for COVID-19. They oversee an incredibly strong response team who have all dedicated countless time and effort in protecting the Harris County community.

Never a dull moment.

Harris County is the third most populous county in the United States with 4.7 million people, including the city of Houston, and is one of the most culturally diverse and fastest growing metropolitan areas in the U.S. We are home to the world's largest medical complex, the Texas Medical Center (TMC), one of the nation's busiest ports, the Port of Houston, and two of the nation's busiest international airports.

Harris County is no stranger to significant events, disasters, and large-scale emergencies. These range from natural to infectious disease in nature: Tropical Storm Alison (2001); Hurricane Katrina sheltering (2005); Hurricane Ike (2008); Hurricane Harvey (2017); Tropical Storm Imelda (2019); nH1N1 influenza pandemic response (2008); West Nile virus (WNv) response (2012); Ebola readiness & "response" activities (2014-2015); human rabies death and canine rabies, respectively (2008 and 2015); Zika virus (2016-2017); measles "resurgence" (2019); and three large-scale chemical fires (2019). **From a public health response standpoint, there truly is never a dull moment in Harris County.**

Unfortunately, 2020 adds more to this list, with COVID-19 being the summation of all of these emergencies both due to length of response and more importantly its impact. As our department sent out its first official health alert to regional healthcare partners on January 9th, tomorrow marks fully six months into the HCPH COVID-19 response and we are nowhere near the end. It is truly a marathon and not a sprint when it comes to our response activities and the toll it has taken on our community.

The first cases of COVID-19 in Harris County were tied to an Egypt cruise tour in late February and a number of milestone events and phases have occurred since that time. Our department has been responding continuously since then; yet we are reminded that during nH1N1, HCPH was activated for 18 months and that was a mild pandemic in comparison. Although we are months into the pandemic, **responding to the immediate and long term impacts of COVID-19 will take years.** The pandemic will likely ebb and flow, and does not have the distinct start and end of an emergency such as a hurricane. Preparedness, response, and recovery phases will blur and need to be addressed in tandem.

COVID-19 Response

As you know, local health departments are the chief health strategists for their communities. In January, HCPH in coordination with the Houston Health Authority, Dr. David Persse, began hosting coordination meetings and planning with partners well before the first case of COVID-19 ever reached Harris County. We discussed then that it was not a matter of "if" but rather "when" COVID-19 would impact our community directly.

These partnerships have continued dynamically throughout the response. Important twice weekly calls are held with regional local health authorities as well as separately with the healthcare community through TMC. Key and timely communications and response efforts directed by Harris County Judge Lina Hidalgo have been coordinated through the Harris County Office of Emergency Management & Homeland Security and with other county partners. These have been crucial to real-time coordination and the elimination of barriers to response. Earlier in March, HCPH partnered with Judge Hidalgo to release the foundational "Four T's" approach for addressing COVID-19 (*Test, Trace, Treat, and Teamwork*). More recently, the COVID-19 Threat Level System was unveiled in June to help the community understand the continued importance of COVID-19 prevention efforts for Harris County.

In addition to coordination with a multitude of partners, LHDs such as HCPH play primary roles in disease surveillance and providing guidance to the community that are unique from most of its partners. Preventing spread without available medical countermeasures has been a real issue in the COVID-19 response since there are no vaccines or pharmaceuticals by and large that can address the myriad of issues that COVID-19 presents. This means focus by LHDs on tried and true public health measures such as communications coupled with specific activities such as contact tracing, congregate setting assessments and testing, and community testing are keys to a successful response. These further the main goal of interrupting disease transmission and put a stop to the pandemic.

Harris County, Texas…an increasing hotspot for COVID-19.

Harris County, led by County Judge Lina Hidalgo, and Houston, led by Mayor Sylvester Turner, were rightfully proactive in recognizing the pandemic's threat and proactively engaging the community. On March 11th, the Houston Rodeo, a pillar event for the community (it generated $300 million for the local economy in 2019), was cancelled as soon as there was evidence of the first case of community transmission in the Harris County area. Shortly after, Harris County was one of the first in Texas to issue a "Stay Home, Work Safe" Order to protect Harris County residents.

While not easy, fortunately, the Harris County community listened, and our community was successful in flattening the curve. In fact, Harris County's case and death rate trailed far behind other major communities such as LA, Chicago, and New York City through the earlier stages of the response.

However, to the detriment of public health, those orders quickly became political and the state took away all local authority to issue any orders more restrictive than its own, including the requiring of masks. Of note, the state's stance on masks, just last week, has now changed which is a welcome step but time will tell if it is too late in the response to have the necessary effect. **Regardless of whatever level of government it involves, decisions driving the response to the COVID-19 pandemic should be driven by public health and medical experts without the fear of retribution or political interference.**

The spike in Harris County today demonstrates what I have called the **"layering effect"** of reopening. Starting May 1, 2020, Texas began reopening its businesses such as dine-in restaurants, retail, salons, gyms, bars, and more. The layering effect occurred with these reopening alongside holidays and milestone events such as Mother's Day, Memorial Day, protests and marches, Father's Day, etc. that then "layered" exposure and risk to the community. The effects were even more pronounced as inconsistent messaging at the federal, state, and local level meant that there was simply confusion and complacency at the individual community member level. While local officials – elected officials and health authorities alike – stated clearly that Texas was reopening too quickly, the process of reopening continued and slowly one began noting an increase in numbers of persons testing positive for COVID-19 alongside hospitalizations in Harris County and in other parts of Texas.

Much of the success during the prior phases of response has been wiped out as these numbers have begun to climb. As of July 6th, Harris County has over 36,000 cases and 400 deaths with a steady increase of late, necessitating the community's threat level being moved to its highest level (red). Harris County now has the highest cumulative case count in Texas, surpassing Dallas County. While Texas has now taken steps to "dial back" reopening and require the wearing of masks, the damage may already have been done as our local healthcare system is very busy now and implementing necessary surge plans. It is not just the cumulative numbers that are concerning but the fact that previously 1 in 8 tests in the community were coming back positive for COVID-19. In the last few weeks, this positivity rate has now increased to 1 in 4 tests being positive, or about 25% of tests being conducted in Harris County.

The impacts of COVID-19 are beyond just case counts unfortunately. HCPH evaluated the health of Harris County in a milestone report *Harris Cares: A 2020 Vision for Health in Harris County* released in late 2019 (prior to the COVID-19 pandemic) and found major health disparities. More recently, the Harris County Commissioners Court Analyst's Office released a report, *Disproportionate Impact of COVID-19 on Low-Income and Minority Households*, stating that "the fallout of the COVID-19 outbreak is exacerbating existing financial, health, food, and economic challenges of low-income persons and communities of color." The impact to the economy, the community's physical and mental health, and effects of delayed care (e.g., addressing heart disease or diabetes, children's immunizations, etc.) are ongoing and will be felt well after the pandemic stabilizes. Several recommendations from *Harris Cares*, especially its focus on health equity and community voice, data sharing capacity before emergencies, local governance, and sustainable financing would have greatly enhanced HCPH's response to COVID-19.

#InvisibilityCrisis

I spoke previously in Congress about the fact that public health is often times invisible when it does its work. This so-called "Invisibility Crisis" *(or hashtag, #InvisibilityCrisis)* 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. However, the invisibility crisis that has kept public health an under recognized workforce has put Local Health Departments (LHDs) like HCPH undervalued and under-invested in over the decades. This is the recipe for disaster when one is faced with a public health crisis like COVID-19 where public health is expected to be front and center leading the response.

The public often recognizes the vital role of other first responders, such as EMS, Fire, or Police, but the substantial role of public health and the public health workforce before, during, and after a crisis often goes unacknowledged.

We've been here before.

As Judge Hidalgo raised the threat assessment level to red, I stated "enough is enough" to our community in addressing the seriousness of the situation here in Harris County. To this committee, today I stand before you to say also "enough is enough" – we have let the COVID-19 pandemic get out of hand in this nation and must do everything we can to correct the course before more people get infected and more people die.

We need to take my recommendations given to the 2017 House Budget Committee seriously:

- Public health is underfunded and undervalued, yet is absolutely critical to protecting our communities even when its work is largely invisible.
- Public health is like the "offensive line" of a football team – rarely recognized for the success of the football team but absolutely critical, nonetheless.
- Public health and its capacity must be invested in a sustainable and proactive way.

This *#InvisibilityCrisis* has unfortunately led to funding cuts for public health and even more so, public health emergency preparedness at every level of government over time. Despite the significant impact on the community's overall health and well-being, public health is largely invisible, under-appreciated, and as a result underfunded.

These issues are further exacerbated when public health agencies are confused for healthcare. Yet even now it has been forgotten that COVID-19 is a public health crisis with secondary impacts in healthcare. Taking the offensive line metaphor further, the healthcare system is perceived as the all-important "quarterback" and thus receives the attention (and the funding) which makes our communities less safe. It is important to note rising COVID-19 hospitalizations and deaths are an indicator of failure to contain the pandemic through prevention measures that should have happened at the community level. Coming together to support the community while respecting the crucial role that both public health and healthcare play in fighting the virus is imperative to keeping communities and the nation safe.

In 2019, I testified before this committee that strong public health agencies at all levels of government are important because (just as in medicine) there is a science and an "art" to public health decision-making. **All levels of government, federal, state, local, must coordinate better with each other (and globally)** in response activities and planning for the next phases of the COVID-19 pandemic.

Smart, Strategic, Scalable, and Sustainable Solutions

The best way forward is a path that allows all of us to work **smarter** not harder. Solutions should be **strategic** and **scalable** actions to ensure the COVID-19 response is meeting the needs of the community.

Solutions jump-started now must be **sustainable** beyond COVID-19 to fix longstanding issues that have plagued public health and ensure we are prepared for future threats. HCPH supports recommendations offered by NACCHO, the Council of State and Territorial Epidemiologists (CSTE), as well as recommendations offered to the Senate Health, Education, Labor, & Pensions Committee on June 23, 2020, regarding "COVID-19: Lessons Learned to Prepare for the Next Pandemic." Further, HCPH offers the following additional recommendations:

Public Health Workforce Crisis

1.1 **LHDs needs sustainable and consistent financing to secure the workforce and scale our response appropriately**. LHDs depend on mixed sources of funding that are either declining or unreliable.

1.2 LHDs need investment in workforce development to ensure **adequate recruiting, retention, and succession planning** is available throughout the response both for continuity of essential public health services and dynamic COVID-19 response.

Inadequate Public Health Financing

2.1 Congress should require CDC to **report on how much federal funding, especially for COVID-19 such as Epidemiology Laboratory Capacity (ELC) funding, actually reaches LHDs** via state health departments. Congress should explore per capita funding formulas direct to local health departments. Although existing ELC mechanisms may be the fastest way to distribute to many local health departments today, it is not equitable and leaves many populations (such as in the non-Houston portion of Harris County) untouched.

2.2 Congress should **increase funding for Public Health Emergency Preparedness** and review funding directed to LHDs as part of other healthcare finance reform initiatives such as through Medicaid reform as a sustainable mechanism for local health departments. Supplemental and reactionary appropriations are necessary now, but do not allow for planned scaling of response or preparation for future crises such as pandemics.

2.3 Congress and states (in partnership with local authorities) should coordinate to **explore the services provided by LHDs and clarification of jurisdictional lines by the nation's web of LHDs** and authorities to inform public health system reform.

Federal Communications and Coordination

3.1 **CDC should be made front and center as a leader** in the current pandemic and communicate clear honest, and consistent guidance with the public on prevention messaging. Inconsistent policies and/or messaging at the federal, state, or local level creates undue confusion and complacency at the individual community member level.

3.2 Scaling of testing (including through federal sources such as Federal Emergency Management Agency [FEMA]) should also include **coordination with LHDs and public health to expedite case investigation and contact tracing**. Testing support should be available when demand and positivity rates have increased.

3.3 Proactive planning is needed now with federal, state, and local governments on **vaccine distribution plans and communications**. This is especially important as many LHDs will continue to handle other important response responsibilities at the time that vaccines become available further exacerbating the issue. Operational roles and responsibilities should be delineated before a vaccine is developed.

Disparate Disease Surveillance

4.1 Health and Human Services (HHS) and CDC should support **standardizing data platforms across state and federal level** for intake of lab data before sharing back to locals. While there is funding to support states in modernizing platforms, locals are not funded to develop or maintain surveillance and reporting systems as they have been forced to do for COVID-19.

4.2 If Congress expects efficient surveillance, the federal government needs to encourage states to bolster local surveillance capabilities for contact tracing and case investigation that are **interoperable across jurisdictions**.

4.3 CDC and other federal partners should coordinate through coalitions such NACCHO, Council of State and Territorial Epidemiologists (CSTE), etc. to **provide technical assistance** to local health departments on policy and planning, data, epidemiology, and other LHD needs. In fact, HCPH has had to reach out directly to many local health departments across the county to share best practices and feedback due to a lack of such sharing mechanisms in comparison to previous emergencies.

4.4 Congress should **invest in modern and responsive data systems,** such as the national notifiable disease surveillance system (NNDSS), electronic case reporting (eCR), syndromic surveillance, electronical vital records systems, and laboratory information systems. Technology alone is not the solution, and **data informatics workforce** also needs support at the local level.

Local Health Department Pain Points During COVID-19

Public Health Workforce Crisis

Local Health Department Perspective

Findings from NACCHO indicate state health departments and LHDs have lost nearly a quarter of their workforce since 2008, shedding over 50,000 jobs across the country. The deficiency is compounded by the age of the public health workforce – nearly 55% of public health professionals are over the age of 45 and almost a quarter of health department staff are eligible for retirement. Between those who plan to retire and those who plan to pursue opportunities in the private sector (often due to low wages), nearly half of the local/state health department workforce might leave over the next several years. Further worsening matters, several public health leaders across the country have been threatened, fired, or pushed out of their job role leaving it necessary to find qualified persons available to take over during a pandemic.

Epidemiologists are the disease investigators and backbone of the COVID-19 response. In order to support epidemiologists in investigating cases and offering control measures, the workforce must also include communications staff to push prevention messaging, data analysts to explore trends and visualize outbreaks and case data, logistics and clinical support for testing and operations, social services and wraparound support for assisting with quarantine and isolation, administrative and business support for massive scaling, policy analysts, and more. Unfortunately, staff in public health across the nation – the invisible workforce – are mission-driven but unduly stretched. **The LHD workforce is diverse, facing burnout, and stretched to its limit.**

HCPH COVID-19 Response

By March 2020, the workload and strain on the HCPH staff to respond to COVID-19 was so great, one of the first internal wellness initiatives was to bring puppies and kittens from the HCPH Veterinary Public Health Division to help our epidemiology staff destress. We began instituting regular mental health sessions, which we have since expanded. Eventually, it was not about mental health breaks, it was having more work than the current workforce had the capacity to handle. In the span of just 3-4 months (March-June), **we have doubled the size of HCPH**.

Before COVID-19, HCPH was staffed with a workforce of approximately 650. Today, we have doubled to almost 1,300 employees and contractors. The HCPH COVID-19 response has grown from 30 staff members under the Incident Command System (ICS) to just under 900 while the HCPH epidemiology group grew from about 25 to 500 staff with 300 contact tracers alone on-boarded by May 22nd. COVID-19 has proved **this scaling is necessary, but without reliable and secure funding outside of reactionary and supplemental funds, LHDs are not prepared for the next pandemic or long-term planning.**

Rapid scaling of HCPH has placed immense strain on our system, and it has required an intense focus on quality control and continuous re-alignment of skill sets. The response has pulled staff from across the health department leaving many critical roles for continuity of operations vacant. Dentists were needed to collect specimens at testing sites. Food safety staff continue to provide data and administrative support for our epidemiologists. Mosquito control staff coordinate teams for mobile operations and contact tracing. **Every week, our command staff review workforce needs for public health essential services and the COVID-19 response in order to shuffle staff, accommodate conflicting needs, and "right size" the response.** Continuity of operations for non-COVID-19 public health services is near impossible for a response that has no clear end in sight.

Inadequate Public Health Financing

A Local Health Department Perspective

LHDs work hard each day to meet the needs of the community and often operate on a tight budget. To this immense work and tight budget, public health added the COVID-19 response. Infrastructure investments must be made now to further strengthen, enhance, and scale up the ability of public health agencies and others to meet demands for future COVID-19 vaccinations and for mitigating the long-term health impact of COVID-19.

Healthcare finance reform has been the topic of discussion for decades. Sweeping healthcare financing reform, although necessary, does not translate to sustainable public and population health capacity. Public health prevention infrastructure has never been funded robustly enough to limit healthcare costs.

However, over the last decade public health has faced steep declines and threats to financing. Public Health Emergency Preparedness funding streams have steadily declined since initial allocation after 9/11. In Texas, instead of expanding Medicaid, the state submitted an 1115 Waiver that is set to expire in 2022. The direct participation of LHDs accounted for 15% of the total DSRIP pool, or about $1.7 billion in Texas. 1115's were an unprecedented and novel pipeline to LHDs for Medicaid dollars. No other mechanisms exist for LHDs in Texas to secure Medicaid funding, despite being a critical component of the safety net.

Public health financing reform is inhibited by the lack of formalization and designation of LHDs in state and federal regulation. Not all LHDs are created the same and offer vastly different services locality to locality. Without a massive effort to inventory provided services, better understanding of jurisdictional lines and amount of population served, and coded designations across state and federal governments for LHDs it is difficult to jumpstart system reform and revise funding formulas.

The primary financing mechanism for state and local governments to expand their epidemiological capacity is through CDC's Epidemiology and Laboratory Capacity (ELC) Cooperative Agreements. These dollars are directed towards 50 states and six major cities. However, allocation from states down to local governments has fluctuated and many LHDs are unsure if the funding provided will be able to last throughout the pandemic.

The ELC funding formula for cooperative agreements to the true "boots on the ground" LHDs is flawed and outdated. After distribution to states, locals often do not receive a significant portion of these dollars to expand their surveillance capacity even though they are expected by their residents to provide surveillance, maintain personalized dashboards, and conduct case investigations themselves. This disparity for LHDs is compounded as CDC continues to use this funding formula for supplementary funding throughout COVID-19 response, continuing to leave many LHDs expected to perform out of the direct funding loop. Accountability and oversight to states and CDC are needed to ensure the Congressional intent of allocating funding to LHDs is fulfilled.

HCPH COVID-19 Response

To scale the COVID-19 response and sync with closing of businesses, several essential public health services have been impacted such as restaurant inspections, mosquito abatement, clinic-based services, Grant funded projects have been slowed, sometimes to a complete halt, with requests for extensions being made across the board. For COVID-19 response, **HCPH has had to divert limited resources from elsewhere in order to scale some of the most important tools available to fight COVID-19**. HCPH's financial and grant portfolios are at risk alongside many other LHDs across Texas and the nation.

For FY 2020-2021, HCPH had an operating budget of $121 million, comprised of 53% grant funding, 32% local funding, and 15% special revenue funding. Making matters worse, HCPH has spent approximately $25 million for COVID-19 over the course of six months and has only received $4.4 million through discretionary and supplementary federal support to date (as pass-through dollars from the state). The majority of costs for COVID-19 response will likely have to leverage county disaster funds. These local disaster funds are not a sustainable solution for public health response and planning. When activating grant funded staff and resources for COVID-19 response, LHDs face the threat of not being able to charge back grants for staff time though the individual remains an LHD staff member. **Had there been more robust infrastructure and regular funding for public health before COVID-19, LHDs would have been better poised to respond in more cost-effective and timely manner.**

CARES Act funding was passed to support counties and cities alike, but without direct designation for LHDs, allocation is likely to be limited for public health since funding constraints mean there is competition for these precious dollars across local governmental systems. However, one promising step related to the CARES Act funding formulas is that it has clear guidelines on shared city and county allocations based on population size. This is not the case for example with ELC funding. For ELC and

other federal funding intended for local health departments, **funding formulas should be reviewed to ensure LHDs such as HCPH receive their appropriate share** (whether based on per capita or another reasonable basis) in a manner similar to the CARES Act funding for local governments as a whole.

Federal Communications and Coordination

Local Health Department Perspective

From the outset of the COVID-19 crisis and continuing today, the public has received mixed and contradictory messages on the severity of the outbreak, the differing roles of federal, state and local government, the availability of tests, potential treatments, the appropriateness of masks, and timelines and approaches for shutting down non-essential businesses and reopening. **CDC has not been publicly visible as the nation's apolitical voice of public health.** LHDs are less effective to respond to early outbreaks when federal, state, and local health messaging and communications are not in sync.

HHS agencies (especially ASPR and CDC) have not coordinated with states and LHDs on how best to access strategic national stockpiles at the federal, state, and local level. As a result, **unnecessary confusion has existed on federal, state, and hospital-level responsibilities in procuring PPE and testing supplies**. Due to shortages, hoarding, increased market prices, and competition between locals, states, and even hospitals the supply chain was unduly compromised.

Inconsistent or unavailable guidance from the Food and Drug Administration (FDA) on Emergency Use Authorizations (EUA), especially for the reliability and availability of emerging testing technology, has pushed LHDs to have to internally track unreliable vendors for testing kits. This has been problematic throughout the response because vendors have reached out directly to local health departments and local elected officials.

Proactive planning is needed now with the federal government on coordination for mass vaccinations. The federal government should seek input from local governments on how to best operationalize a COVID-19 mass vaccination. As was done during 2009 H1N1 response, federal and state governments should work with private partners to distribute the vaccine while having a set priority criteria to ensure the vaccine is available to those at most need first. Local public health departments cannot be expected to run the mass vaccination operation while also continuing other key response activities. Delineated roles and responsibilities should be in place before a vaccine is developed so widespread distribution plans among private and public partners is clearly laid out.

HCPH COVID-19 Response

Since March, HCPH has been supported by two FEMA fixed site testing locations in Harris County (two additional FEMA sites are within the city of Houston jurisdiction). These sites were set to cease federal support by June 30th – at the very time that Harris County was seeing increasing demand for testing, increase in cases, and increase in positivity rates for tests performed. To maintain federal support for testing, HCPH requested that FEMA remain for two months. After much advocacy at the local, state and federal level, FEMA fortunately agreed to continue its testing support for longer. However, it is still scheduled to cease this support by July 14 even while testing remains more important than ever.

In addition to the federal testing support, in order to meet additional testing demand throughout Harris County, HCPH has partnered with private labs to provide testing at-home, in mobile locations noted as

"testing deserts" (utilizing county-owned mobile units), and through testing strike teams for congregate settings. In fact, HCPH has spent $16 million (of its total $25 million expenditure) on testing efforts in Harris County. Overall, to date, HCPH has tested 100,000 residents.

While things have become more coordinated now, earlier in the pandemic, lack of coordination resulted in disjointed contracting and securing of supplies and resources, many of which were largely unavailable because they were also held by the federal government. Local partnerships were needed to create local supply chains for PPE and testing supplies. Without consistent or reliable testing options, HCPH had to secure its own stockpile and build systems for local supply chains and donations. When faced with shortages in viral transport media that threatened operations, HCPH had to consider even retrofitting its mosquito control lab to have capacity to produce 5,000 vials per week. At times, **it felt every LHD was left on its own trying to create a system for response in real-time due to these limitations at hand.**

Scaling of government supported testing sites has not resulted in expedited contact tracing or scaled prevention because results are not readily available to LHDs. In Harris County, FEMA community-based testing centers instructed people being tested to contact their local health department for their results when HCPH was not part of the system and had no way to access the test results. Because federal testing sites utilized labs outside of the state, **results were delayed weeks before the LHD was ever able to access the result.** This resulted in widespread frustration with LHDs such as ours and the residents we serve. Scaling of congregate and mobile testing through the state of Texas done without full public health engagement has resulted in similar issues for Texas.

In fact, HCPH has faced strong pushback from congregate settings to investigate and test within facilities, in part due to overlapping state and federal jurisdictions of facilities. The federal government should partner with states publicly to **empower local health departments to assess and test congregate facilities** such as nursing homes, assisted living, homeless shelters, detention centers, etc. due to the concern about increased risk in these settings.

Disparate Disease Surveillance

Local Health Department Perspective

Efforts to modernize public health surveillance and data systems have been made over the years, but the categorical, disease-specific approach to funding and implementing improvements has resulted in uneven progress.

The nation's public health infrastructure is so fragmented and antiquated that healthcare providers who already have the data collected and stored in electronic health records cannot rapidly share these health data because LHDs cannot receive them electronically. **The data is moving slower than the disease**. LHDs are responsible for investigating cases and notifying potential contacts to break chains of transmission, but that job becomes impossible when data shared to LHDs is inconsistent, missing key information, or delayed. This issue area is not new and has plagued public health response regularly.

Data Gaps for Timely Investigations

1. Labs have consistently reported **incomplete results** to state health departments (which are in turn later shared to LHDs) through **multiple data pipelines**, including facsimile (i.e., fax). LHDs must perform background checks for basic contact information of known cases when data is

incomplete. Although HHS released guidance on data fields that must be reported to states starting August 1st, it is far too late and limited mechanisms exist for enforcement.

2. Across the nation, there are **unclear jurisdictional lines of LHDs and authorities**. As mentioned above, without formal designations and definitions of LHDs, states and the federal government often send results outside of the LHD jurisdiction hoping that LHDs will work together to share across the system. However, there is **limited interoperability**, if any, to share efficiently case and contact information across LHDs and no way to ensure cases are not falling through cracks.

3. **Disparate disease specific surveillance systems exist for many LHDs**. Data collection requirements from the state and CDC during the case investigation and monitoring of cases have consistently been modified throughout the response. No system has proven robust enough to meet local needs for reporting data requested in multiple formats, including fillable PDFs and spreadsheets. Additionally, surveillance systems lack the ability to measure key performance indicators which are often needed to justify funding. Locally created solutions to track disease and performance of contact tracing have required real time development alongside an ongoing pandemic.

4. LHD epidemiologists must manually call infection control practitioners to track the status of hospitalized patients because consistent access to electronic health records is not consistently available to LHDs. Hospitals are required to send data directly to federal and state governments, but **no interoperability exists for LHDs to access and analyze healthcare data directly for surveillance, decision making, or planning.**

5. Technology solutions for disease surveillance are not feasible without stronger investment into dedicated **informatics workforce support at the local level** as well as hardware availability.

Disease Modeling and Planning for Local Officials

Additionally, LHDs are expected to provide disease trend analysis and modeling projections to inform local decision making on non-pharmaceutical interventions and planning. Although many federal modeling and projections are available at the state level, **no sufficient options exist for LHDs to maintain situational awareness.** Local models and dashboards from academic partners and others have been ad-hoc and inconsistently maintained. Without accessible healthcare data, aggregate data must be manually scraped from reporting healthcare coalitions to inform healthcare utilization projections. LHDs need disease modeling support, especially when the population of some LHD jurisdictions is comparable to the size of small states (of note, Harris County itself has a population larger than 25 states).

Data analysis support is also needed to determine local outbreak trends and prevalence for granular, place-based decision making that can inform local operations such as congregate setting outbreaks or super-spreading events. Index case and social network analysis is impossible without shared contact trace and case information across jurisdictions. If federal governments expect efficient disease surveillance, they need to encourage states to bolster local surveillance capabilities. Knowing simply that a county or state has increasing disease rates does not inform proactive prevention measures, testing, or outbreak containment for LHDs. CDC should assist LHDs to track genetic trends and seroprevalence.

HCPH COVID-19 Response

HCPH, for example, was forced to invest in ad-hoc and internally housed disease surveillance symptoms to catch up with the reporting needs at the local, state, and federal levels. While this may have been true across other LHDs, HCPH created its own data reporting platform as "off the shelf" systems were simply not robust enough to capture the data elements and needs of the local context.

Because lab results are often delayed when sent by the state through multiple platforms, HCPH has had to secure direct partnerships with labs to share data, in addition to their already required state reporting. To ease communications with infection control physicians, HCPH has been able to request direct access to one hospital's Epic electronic medical record system. **These "one off" solutions are not practical system wide for data exchange and are an indicator of failed public health and healthcare interoperability for LHDs to access needed data for case investigations and data analysis.**

HCPH was one of the first LHDs in Texas to develop a public facing dashboard using its own internally created surveillance platform that it then incorporated public health data from its Houston Health Department partner. When reporting cases out to the public, changing guidance on CDC's probable case definitions led to delay and confusion on how to classify cases using newer testing technologies and unknown labs. This unclear guidance has resulted in complicated historical data integrity and has limited any possibility of efficient data sharing across jurisdictions. Additionally, third party contact tracing apps and surveillance solutions have continued to reach out to LHDs. HCPH has spent much time in reaching out and following up on contact tracing app solicitations without consistency from the state (or federal) government. Potential solutions from the public or private sector for technology must be regional or state-wide to account for the mobility of residents, especially in a community such as Harris County.

Conclusion

On behalf of Harris County Public Health, and the nearly 3,000 local health departments across the country and those in Texas, I appreciate again the opportunity to testify today. This behind-the-scenes dedicated public health workforce, under continues to work around the clock to protect our communities even as it is stretched to its limits. Our work would be impossible without the leadership and support of Judge Hidalgo and county leadership.

The pandemic is an unprecedented time for our country and our nation's public health preparedness is being tested like it never has before. **Smart, strategic, scalable, and sustainable investments are needed now to prevent continually subjecting public health to trial by fire**.

We join you in working toward strengthening a public health system that protects our economic vitality, national security, and the very health of our people. Thank you for your support in building safe, healthy, and protected communities across this great nation of ours.