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Subcommittee on Transportation and Safety
“The Logistics of Transporting a COVID-19 Vaccine”
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Testimony of

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Chairman Wicker, Ranking Member Cantwell, Subcommittee Chair Fischer, and Subcommittee Ranking Member Duckworth and distinguished committee members of the Senate Commerce, Science, and Transportation Committee, thank you for the opportunity to appear before the committee today to discuss the challenges presented by the biggest public health crisis facing this country in the last century, the COVID-19 pandemic. As the United States experiences an exponential increase in new infections of COVID-19 nationwide, we must redouble our efforts to combat the pandemic through a comprehensive and multi-faceted approach. As public health officials and indeed as a nation we have and must continue to apply strong containment and mitigation efforts to combat the virus. These efforts include but are not limited to case investigation, contact tracing, capacity and event limits, encouraging mask usage, and more.

The introduction of safe and effective COVID-19 vaccines will be a critical tool to combat the rampant viral spread in the United States. However, distributing the COVID-19 vaccine along with administering it is a herculean effort, one that our nation has never experienced. Currently, there are two vaccines under consideration by the Food and Drug Administration (FDA) for an Emergency Use Authorization (EUA); and most likely to be the first product that states receive, is the Pfizer vaccine which requires ultra-cold storage capacity and ships quantities of 975 doses that cannot be broken down into smaller allotments. The second product likely to receive an EUA is from Moderna. The Moderna vaccine does not have the same logistical constraints that Pfizer’s product requires. The Moderna vaccine can be stored and handled much like other vaccines that providers use daily.

While we along with public health officials throughout the country spent countless hours preparing this mission is fraught with significant challenges that go well beyond just transporting the vaccine from point a to point b. The challenges to this effort include sufficient funding to rapidly execute a timely, comprehensive, and equitable vaccination campaign; coordination and communication between federal, state, and local health agencies; minimal state or local

governmental public health pre-decisional involvement in key policy decisions such as the use of private sector pharmacy providers, including chain pharmacies, by the federal government to administer vaccines, all confounded by the lack of a coordinated communication strategy to promote confidence in the safety and efficacy of COVID-19 vaccines.

At the Pennsylvania Department of Health, our vision is a healthy Pennsylvania for all. Right now, we are laser focused in moving towards that vision by ensuring all people have access to the lifesaving COVID-19 vaccinations. It will take very careful orchestration to get the right vaccine into the right arm at the right time. However, Pennsylvania, and many other of my state health official colleagues are committed to this task. Running vaccination programs is foundational to our work in public health. We learned a lot through our collective experience during H1N1 and we have detailed plans to meet the challenge of this historic moment; however it will take a comprehensive national approach to ensure its success, making coordinated adjustments along the way, and bring an end to the pandemic.

Pennsylvania is a large and geographically diverse state with population density varying from fewer than 15.0 people per square mile in our most rural counties to 64,263.1 people per square mile in our most urban counties, according to the 2010 US Census.¹ Additionally, there are about 250 hospitals across the Commonwealth that vary in size from small critical access hospitals to health systems offering quaternary care. These geographic, resource, and jurisdictional issues present unique challenges and planning considerations to our statewide COVID-19 vaccine distribution efforts. These challenges are not only presented in Pennsylvania, but across the nation's states and territories.

COVID-19 Vaccine Logistics

The logistics of the vaccine distribution are complicated and the degree of coordination among federal, state, and local levels of government (and commercial and nonprofit entities) required for this enormous undertaking is unprecedented. The direction and pace of each state's vaccine distribution plan is determined by the individual jurisdictional characteristics, vaccine type, amount, and availability. Transport of COVID-19 vaccines to the states will be the sole responsibility of Operation Warp Speed (OWS), and the Centers for Disease Control and Prevention (CDC) in partnership with federal, state, local, tribal and territorial health departments. The Pfizer vaccine, which requires ultracold storage, will be delivered directly from Pfizer, as arranged by OWS, to pre-identified large health systems with existing ultracold storage capabilities. Other vaccines, including Moderna, will be distributed to states through McKesson Distribution. Proper, swift, and reliable transportation, of not only the vaccine but the ancillary supplies that are needed to provide the vaccination, will be absolutely key in getting COVID 19 vaccines into the hands of providers standing ready to administer the vaccine.

Given the differences in the logistical requirements of the Pfizer and Moderna vaccines and the anticipated limited supply of vaccine in the early months of the vaccination efforts, each state

¹2010 Census: Pennsylvania Profile
https://www2.census.gov/geo/maps/dc10_thematic/2010_Profile/2010_Profile_Map_Pennsylvania.pdf.

and local department have had to develop plans taking into account their own jurisdictional characteristics (geography, storage capabilities, among others) and healthcare system capability to develop a strategy to most effectively use the two vaccine products as they become available. Due to the less than optimal logistical constraints of the Pfizer vaccine, Pennsylvania intends to direct the Pfizer vaccine to go to large health systems that have ultracold storage capacity and the ability to vaccinate many adults in a short period of time meeting the storage and administration requirements. Pennsylvania intends to use the Moderna product in more rural settings (hospitals and providers) who may not have the ability to store an ultracold vaccine and may have smaller numbers of staff and patients to vaccinate at once.

In addition to the complexities around transportation and storage of both vaccines, each vaccine requires a second dose in a specific timeframe. At this time, both vaccines have been shown to have some side-effects which may prompt some people to be more hesitant to receive a second dose. Disadvantaged and marginalized communities will face more hurdles to achieve their access to care.

States and territorial public health departments are responsible for identifying the health systems, hospitals, and providers to receive vaccines and coordinating with CVS and Walgreens regarding their access to long term care facilities.

COVID-19 vaccine providers are required to sign a specific provider agreement; which notes that the site is responsible for documentation, storage, and administration of the COVID-19 vaccine. The sites are also responsible for security of the vaccine while in their possession. Any additional transferring or moving of vaccine is at the discretion of the facility as long as the provider agreement is being adhered to.

Like most states, Pennsylvania's COVID-19 vaccine plan is broken into three phases, with Phase 1 divided to protect the highest risk or most critical workforce. In Phase 1a, when limited doses are expected initially, Pennsylvania will align with the recommendation of the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices in identifying the priority populations of health care personnel in hospitals and skilled nursing facilities and residents of skilled nursing facilities as the first groups to be vaccinated.

Ten large health systems distributed across the Commonwealth will be responsible for immunizing their providers, as well as providers from nearby hospitals. Pennsylvania has opted into the Pharmacy Partnership with CVS and Walgreens. Under this partnership, those organizations will send personnel into skilled nursing and assisted living facilities and personal care homes to vaccinate residents and staff.

Phase 1b will include health care personnel who were not vaccinated in 1a and utilize partnerships with pharmacies and Federally Qualified Health Centers to reach our rural settings. Additionally, the Emergency Management agencies located in each of the 66 counties will be essential in coordinating community-based vaccination in those counties.

At the same time, Pennsylvania will shift focus to other congregate settings, correctional facilities, businesses, critical workers, colleges, and universities. This will be done through partnerships and unprecedented collaboration with providers and pharmacies who know their communities best.

In late spring or early summer, we will hold mass vaccination clinics in communities across the Commonwealth to ensure accessibility to all who desire to be immunized. Pennsylvania specifically focused our COVID-19 vaccine plan with deliberate intent to reach individuals of rural, ethnic, religious, homeless, differently abled, immigrant, refugee and LBGQT populations. These efforts will be executed in close partnership with our Office of Health Equity and already established community partners through our COVID-19 testing initiatives.

Health Equity

As with other communicable and chronic diseases, COVID-19 has disproportionately impacted communities of color, people living with disabilities, and those living in rural and frontier areas. Immediate policy changes that support investments in social and environmental health factors and address these disparities head on are needed to reduce COVID-19 illness and death in all populations, especially in communities of color, settings where individuals with disabilities live and rural and frontier communities. This focus on equitable access to the COVID-19 vaccine and addressing health disparities is a key tenet of Governor Wolf's administration. Pennsylvania's COVID-19 vaccine plan was developed through a departmental health equity lens, heavily influenced by the Secretary's Vaccine Crisis Committee, a group of hospital specialists including vaccinology, gerontology, and medical ethics, as well as representation from the pharmacist association, federally qualified health centers, business, and aging, which developed our ethical allocation strategy, and was informed by our departmental Health Equity Workgroup.

When we talk about vaccinating "healthcare workers," we're not just talking about physicians and nurses. We intend to prioritize all personnel who work in healthcare settings in that top tier of need for early vaccination. This includes all paid and unpaid persons serving in healthcare settings who have potential for direct or indirect exposure to patients or infectious material. These healthcare workers could include emergency medical service personnel, nurses, nursing assistants, students and trainees, environmental services, laundry, and volunteer personnel.

Communications

According to a recent poll conducted by the Kaiser Family Foundation, the share of adults who trust CDC to provide reliable information has decreased by 16% since April.¹ Moreover, public health experts and institutions have been attacked, threatened, and intimidated by the public. To date, there has been little clarity on a CDC and HHS plan to raise public confidence in COVID-19 vaccine safety. We believe this communications strategy is imperative and must be tailored state-by-state to address our nation's diversity, as well as local concerns that may not apply nationwide. This pandemic has reinforced the value of consistent and coordinated communication between the federal government, state and territorial government entities, and stakeholders. In this case, it is key for state government entities to have a clear understanding of their anticipated vaccine allotments, and the absence of

that information can and has presented challenges in vaccine planning operations and logistics. It is important to emphasize that distribution including transportation of the COVID-19 vaccine is just one component of this mission.

The incoming administration should execute a robust communications strategy across the entire federal government, and “flow down” throughout all levels, including state, local, and tribal governments. A robust scientific evidence base should be utilized devoid of political interference. This communications strategy ensures a unified approach to combatting COVID-19 without sending confusing mixed messages. Communications about COVID-19 should leverage the expertise of local leadership, celebrities, and businesses to target hard-to reach-populations. The information should be shared in a culturally competent way for multiple audiences

Among all Pennsylvanians and especially with our underserved communities, appropriate and effective communication strategies will be vital. We have been working hard to deliver key health messages related to prevention of COVID-19 and increase access to testing to all Pennsylvanians through multiple channels. We have been relying on community partners on COVID-19 education and testing access and will be leveraging those relationships when the time is available to do community-based vaccinations.

There is a baseline level of governmental distrust among Pennsylvanians, and a historic national distrust of the medical enterprise among our black and indigenous people of color that could significantly negatively impact vaccine uptake in the Commonwealth. Combatting this vaccine hesitancy and building trust in these communities is a cornerstone of the Commonwealth’s vaccine plan. In addition, given the unprecedented speed these vaccines have gone from concept to production has caused a level of distrust among the American people that will need to be addressed with accessible, actionable, and coordinated messaging. My communications team, along with other state’s communications teams, have a host of creative ideas and concepts they would love to bring to fruition.

Challenges

Unfortunately, states and territories do not have the adequate funding to support communication campaigns to promote the safe and effective vaccines, recruit and train the necessary workforce to reach communities of color and other vulnerable populations, stand up federally supported supplemental vaccination sites and promote new strategies for mass vaccination, enhance existing public health infrastructure and strengthen vaccine confidence. The \$340 million allocated for states, territories and big cities to date is simply not enough. If you break it down, that’s about \$1 per American to mount an immunization enterprise that is unparalleled in scale and complication. The Association of State and Territorial Health Officials along with our partners at the Association for Immunization Managers are requesting that Congress provide \$8.4 billion in emergency supplemental funding for a mass vaccination campaign which will include funding for workforce, infrastructure, cold supply chain management and outreach to priority populations, communications, and educational efforts to increase vaccine confidence and combat misinformation.

This will not be a short-term operation. We expect this operation will take months to vaccinate all the citizens across the states and territories. This task will be undertaken by a public health and healthcare system that is already strained and stressed by the current and ongoing response to COVID-19. The resource challenges – monetary and personnel – are enormous. Although vaccination will be accomplished through many healthcare partnerships; states and territories understand that some portion of this will fall on public health and public health nurses, who are already overtasked with case investigation and general public health response. The public health infrastructure and investment in this country has been systematically stripped away over decades. What we have seen is that this pandemic has revealed the devastating impacts of that reality, along with the disconnect between public health and medicine.

In recent mock shipments of vaccine to train and test the transportation/logistics planning that has been done by OWS, there have been varying levels of success. While the authorization of a vaccine, is a great step towards the ending the pandemic, it is critical that vaccine and ancillary supplies arrive in a timely manner to the appropriate location. In approximately ¼ of states, at least one significant issue arose during the mock shipment that requires attention prior to shipping actual vaccine. States experienced vaccine arrivals with a 2-day lag in the arrival of ancillary supplies. Vaccine that arrives without the ancillary supplies required to administer it will delay the vaccination of key prioritized populations.

Lastly, following a successful rollout of vaccination, states and territories will need to continue to work with CDC, Health and Human Services (HHS), and Centers for Medicare and Medicaid Services (CMS) as to how the vaccination will impact those who have already had COVID, and how this will impact CMS guidance on frequency of staff and resident testing which are real operational and funding initiatives that we would be better able to plan for if we understand where things are going. Continuing these multi-level discussions will be key to a coordinated nationwide plan.

Conclusion

Despite these challenges I outlined today, I am proud of the immense amount of public health work that have led in the mitigation and containment of the virus not only in Pennsylvania, but throughout the nation. This pandemic has reinforced the need for investment in public health, collaboration among public and private partnerships, and public health education.

There is a grave need for additional funding to support additional personnel and the creation of an impactful communication campaign to ensure that we can achieve the life-saving goal of vaccinating everyone who wants it in order to bring the COVID-19 pandemic under control.

Thank you for the opportunity to offer this testimony and for all your partnership. I am pleased to take any questions you may have.