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Committee on Homeland Security

“Confronting the Coronavirus: Perspectives on the COVID-19 Pandemic One Year Later”

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Chairman Thompson, Ranking Member Katko, and members of the Committee, thank you for the opportunity to speak with you today about the COVID-19 pandemic.

My name is Crystal Watson. I am a Senior Scholar at the Johns Hopkins Center for Health Security and an Assistant Professor in the Johns Hopkins Bloomberg School of Public Health. The opinions expressed herein are my own and do not necessarily reflect the views of The Johns Hopkins University. Today, I will provide comments on the status of the COVID-19 pandemic and the US government’s response efforts to date, as well as the major successes and failures of the last year, and what we should look forward to, and prepare for in the coming weeks and months.

The COVID-19 Pandemic: A Retrospective

One year ago, the Director of our Center, Dr. Tom Inglesby, testified to this Committee about the grave threat of COVID-19 and the need for a robust federal, state, and local response. Dr. Inglesby’s warning about the need for resources and coordination was made amidst significant uncertainty about how the pandemic would play out. At that time, there were only 100 recognized cases of COVID-19 and 6 deaths reported here in the US. We did not know how severe the pandemic would be, what mitigation measures would be most effective at reducing transmission, whether we would be able to develop vaccines in time to prevent illness and save lives, and whether masks would be a significant and socially accepted means of limiting transmission, among other unknowns. What we did have at the time was a strong sense that the COVID-19 pandemic could be a once in a generation event, and that great attention and effort would be needed to prevent the worst-case outcomes.

One year later, thanks to the efforts of scientific and public health leaders, we have answers to many of the open questions of early 2020 and are beginning to vaccinate Americans in large numbers. Significantly though, we also have evidence that our national response did not meet its potential and that many thousands of unnecessary deaths have occurred as a result.

As of February 21, 2021, the world has now surpassed 111 million reported cases and 2.4 million reported deaths. In the US alone, we have just reached a terrible cumulative total of half

a million deaths nation-wide and about 30 million cases.¹ More Americans have now died from COVID-19 than in WWI, WWII, Vietnam, Korea, and Gulf wars combined ²

For the last year, the US has held the dubious distinction of leading the world in COVID-19 cases. Despite having only 4% of the world's population, our country has contributed 25% of the total number of reported cases and 21% of reported deaths.³ We are also 8th in the world in terms of deaths per 100,000 population despite having significant success in improved treatment for COVID-19 patients. For those who might suggest that our case numbers are merely a result of more robust testing and surveillance capacity, it should be noted as an example that our Canadian neighbors, who are doing excellent surveillance, have 1/3 as many deaths, with only 58 per 100,000 population compared to our 152 per 100,000.⁴

And these are just the officially reported statistics. The true burden of COVID-19 is unknown but is estimated to be much higher than what is recorded. For example, the US Centers for Disease Control and Prevention (CDC) estimates that there are actually between 4 and 5.4 times as many infections than what we have recognized.⁵

Beyond the numbers

All of these numbers are so large that they are difficult to comprehend. The real toll of this last year cannot be captured in the facts and figures alone. Many of those lost to the pandemic had family, loved ones, friends, and coworkers whose lives have been irreparably altered by their passing.

There are many also who live with the aftereffects of this disease even if their symptoms were initially mild. Recent findings in *JAMA* show that on the order of 30% of people may have “post-COVID syndrome” with persistent symptoms such as fatigue, loss of taste and smell, memory problems, shortness of breath, and chest pain, which affect the ability to perform everyday activities like household chores or exercise.⁶

Many of us have experienced loss during this last year. Every death witnessed by a healthcare worker has taken a toll. People have lost their jobs, livelihoods, been evicted, suffered from isolation and loneliness, and faced extreme burnout from the prolonged intensity of this crisis.

¹ Johns Hopkins Coronavirus Resource Center. <https://coronavirus.jhu.edu/map.html>

² Hedges C. What every person should know about war. *The New York Times*. July 6, 2003. <https://www.nytimes.com/2003/07/06/books/chapters/what-every-person-should-know-about-war.html#:~:text=In%20the%20twentieth%20century%2C%20approximately,148%20in%20the%20Gulf%20War.>

³ Andrew S. The US has 4% of the world's population but 25% of its coronavirus cases. June 30, 2020. <https://www.cnn.com/2020/06/30/health/us-coronavirus-toll-in-numbers-june-trnd/index.html>

⁴ Johns Hopkins Coronavirus Resource Center. Mortality Analysis. <https://coronavirus.jhu.edu/data/mortality>

⁵ US Centers for Disease Control and Prevention. Estimated Disease Burden of COVID-19. Updated January 19, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/burden.html>.

⁶ Gupta S. Almost a third of people with ‘mild’ COVID-19 still battle symptoms months later, study finds. *CNN Health*. February 19, 2021. <https://www.cnn.com/2021/02/19/health/post-covid-syndrome-long-haulers-gupta-wellness/index.html>.

Children have lost a year of in-person school and connection with peers, and families with young children are facing incredible pressures without adequate childcare.

The consequences of COVID-19 have been appallingly inequitable. People of color and indigenous people have been disproportionately affected by this virus. When adjusted for age, Black, Pacific Islander, Latino/x, and Indigenous people have all been over twice as likely to die from COVID-19 than white people.⁷

The reason for this inequity is multifaceted, but we know that it stems from deeply rooted problems that long pre-dated the COVID-19 pandemic. First, there are imbedded and long-established disparities in access to healthcare, so getting quality treatment is a challenge. We also know that a history of abuses has resulted in loss of trust in government and the healthcare system, which translates to lower care-seeking behavior and vaccine acceptance among these populations. Furthermore, underlying health problems including diabetes and heart disease, which are more prevalent in minority populations because of systemic inequities and racism, also increase the risk for severe disease and death from COVID-19.

Where we are right now in the US

While the last year has been a nightmare, in the past few weeks there are now glimmers of hope. The number of US cases, hospitalizations, and deaths are all dropping rapidly from the winter peak, which was the highest of the pandemic. Daily case numbers have fallen from a high of over 295,000 reported on January 8 to about 72,000 as of February 20th. Similarly, hospitalizations have come down dramatically from a national 7-day average of about 130,000 to about 63,000; and deaths are following, having dropped from a 7-day average of over 3,500 per day to around 2,000 per day. This is still far too many deaths, but the trend is in the right direction.⁸ Ideally, we will need to reduce daily incidence of COVID-19 to under 10 cases per day per 100,000 population to truly get back to a place where we can effectively contact trace and manage individual cases. If we can do that, we will continue to drive infections down and hopefully prevent future surges.

I hope and expect that we will continue to see cases decrease to a much lower and more manageable level due to a combination of personal and public health mitigation measures like masking, social distancing, business restrictions, and contact tracing; and an increase in population immunity from vaccination and prior COVID infections. As of February 21, about

⁷ APM Research Lab. COVID-19 Deaths by Race and Ethnicity in the U.S. February 4, 2021.

<https://www.apmresearchlab.org/covid/deaths-by-race>

⁸ The COVID Tracking Project. The Data. <https://covidtracking.com/data#summary-charts>. Accessed February 21, 2021.

12.9% of the US population has been vaccinated,⁹ and more people in the US have now received at least one dose of vaccine than the number of people reported to have had COVID.¹⁰

This is great news, and while the vaccine rollout has been far from easy or smooth, it continues to improve. I expect that vaccination rates will continue to increase as manufacturers deliver supplies and other vaccines become available for use in the near future.

My optimism here is somewhat tempered by the emergence of SARS-CoV-2 variants of concern. For example, the B.1.1.7 variant that has been shown to be more transmissible, and the B.1.351 and P.1 variants that have been shown to have some level of immune escape rendering vaccination and natural immune defenses less protective. Currently, the variant of most immediate concern in the US is B.1.1.7 because our surveillance shows that it is already in at least 42 states and is outcompeting other variants, but it is still unclear whether this will result in yet another surge in US cases. In the UK, B.1.1.7 necessitated national stay at home orders because of the steep increase of cases. But the UK surge also coincided with the winter holidays and occurred before mass vaccination had started in earnest, which was the worst possible timing. I am tentatively hopeful that vaccination and current limitations on business occupancy and travel will prevent a similar resurgence in the US. However, it is something we must watch closely.

Variants with mutations that escape our immune defenses like P.1. and B.1.351 may yet become a greater threat, particularly in the fall and winter of 2021. If we are to avoid a resurgence of cases at that time, we need to make sure that our vaccines are as protective as possible, which may require a third dose or vaccine booster. Vaccine manufacturers, scientists, and government officials are currently working hard to plan for this possibility, but it is a significant scientific and logistical challenge that remains for the country.

Current Global Picture

I am focusing largely on the US response in today's testimony but would be remiss if I didn't at least touch on the global status of the pandemic and vaccine rollout.

There are a handful of countries that have been so successful at keeping the SARS-CoV-2 virus out and quenching any introductions before they can turn into epidemics, that they are virtually virus-free. In these parts of the world, citizens are able to live largely apart from the pandemic and go about their normal lives. There are also countries with virtually zero capacity to respond to COVID-19, and in those places, we do not have enough disease surveillance to know how people are affected.

⁹ Huang P, Carlsen A. How is the COVID-19 vaccination campaign going in your state? *NPR Shots*. February 21, 2021. <https://www.npr.org/sections/health-shots/2021/01/28/960901166/how-is-the-covid-19-vaccination-campaign-going-in-your-state>.

¹⁰ US Centers for Disease Control and Prevention. COVID Data Tracker. <https://covid.cdc.gov/covid-data-tracker/#vaccinations>. Accessed February 21, 2021.

Vaccination has been the center piece of the response in the United States and other high-income countries since December, while low- and middle-income countries still wait for vaccine. The international leader in vaccination thus far is Israel, which has over 30% of its population fully vaccinated. The good news from Israel is that preliminary data seems to show that vaccination there has provided both significant protection from infection and from severe disease and death, even in the face of the B.1.1.7 variant as the dominant variant in the country.¹¹

While this is heartening, the success of Israel is in sharp contrast to low income countries that have not even begun vaccinating their healthcare workers, much less the general population, and will likely not have sufficient vaccine for many months to come. This global inequity is resulting in a humanitarian crisis for low- and middle-income countries, and it also represents a significant risk for the entire world; the longer this virus circulates at high levels, the greater the risk of new mutations that could result in dangerous variants which are resistant to vaccines and could prolong the pandemic.¹²

Successes of the US Pandemic Response

Next, I would like to take a few moments to highlight some of the successes and failures of the US response over the last year.

First, the successes. It is so important to recognize that the US response represents collective work of tens of thousands of people across the country, as well as millions of Americans who had to sacrifice tremendously to take protective actions. People working collectively and non-stop over the past year in federal agencies; state, territorial, tribal, and local governments; hospitals and Dr. offices; mental health organizations; universities; laboratories; mortuaries, and many other organizations. It has been a year of constant and extreme stress, and life and death decisions. Many lives have been saved by the actions of our responders, and we should be truly thankful for the heroic efforts of those who have worked to reduce COVID-19's impact.

We also owe a great debt of gratitude to essential workers who have kept our society functioning, our supply chains moving, our shelves stocked, and our power running. People have shown great courage in the face of the virus and have maintained continuity of critical societal functions, allowing us to be more resilient than we might have imagined.

Finally, the biggest and most visible success of the past year is the development of multiple highly safe and effective COVID-19 vaccines in under a year. I cannot emphasize enough what a technical feat this is. The reasons for this success are many, but it is anchored in planning,

¹¹ Mitnick J, Regalado A. A leaked report shows Pfizer's vaccine is conquering COVID-19 in its largest real-world test. *MIT Technology Review*. February 19, 2021. <https://www.technologyreview.com/2021/02/19/1019264/a-leaked-report-pfizers-vaccine-conquering-covid-19-in-its-largest-real-world-test/>.

¹² Shah S, Steinhauser G, Solomon F. Vaccine delays in developing nations risk prolonging pandemic. *The Wall Street Journal*. <https://www.wsj.com/articles/faltering-covid-19-vaccine-drive-in-developing-world-risks-prolonging-pandemic-11613557801>.

capabilities, and science that have been developed over time by the US government, international partners, industry, and academia. This experience should shape our medical countermeasures development planning and investment for the future. There are additional lessons and new technologies that we can harness to be ready for the next pandemic. The COVID-19 pandemic has taught us that we cannot simply plan for known viral threats and limit ourselves to a list-based approach to medical countermeasure development. The Department of Health and Human Services and the Department of Defense should also invest in pathogen-agnostic platform technologies with the goal of quickly developing new medical countermeasures against novel viruses.

Failures of the US Pandemic Response

My time to testify here does not adequately allow for a full reckoning for the failures of the US response over the last year, but there are some that I want to make sure to highlight for this Committee.

Over the last year, public health leaders, scientists, and many others who have spoken out in defense of scientific fact and truth about the pandemic have suffered retribution and terrible treatment. Health officials and experts who have implemented or recommended evidence-based interventions including masking, contact tracing, and business restrictions, have been threatened both verbally and physically. They have been harassed online and had threatening packages mailed to their homes. They have faced political pressure and backlash from elected officials from the top of government on down and have at times been stripped of or resigned their position in the midst of the pandemic. More than 27 health officers in 13 states have resigned or been fired in the last year, leaving our public health agencies even less equipped to respond. This is unacceptable and dangerous.¹³

As colleagues eloquently stated in a recent JAMA commentary, “Instead of attacking their health officials, elected leaders should provide them with protection from illegal harassment, assault, and violence.”¹³ They should also be turning to their health officers for public health advice and providing them with the resources that will make their jobs more successful.

This leads me into a second and related failing of this response: the politically driven failure to heed expert advice, silencing or sidelining of federal experts, and censoring or cherry-picking of data. As examples, the previous administration reportedly sought on several occasions to withhold important data from the public about the impending crisis. And, on multiple occasions in 2020, political appointees altered CDC’s *Morbidity and Mortality Weekly Report* publications and other reports that did not align with the White House’s messaging about pandemic risk or preferred courses of action.¹⁴

¹³ Mello M, Greene JA, Sharfstein JM. Attacks on public health officials during COVID-19. *JAMA*. August 5, 2020. <https://jamanetwork.com/journals/jama/fullarticle/2769291>.

¹⁴ Viglione G. Four ways Trump has meddled in pandemic science – and why it matters. *Nature News*. November 3, 2020. <https://www.nature.com/articles/d41586-020-03035-4>.

High level denial of the severity of the pandemic and disempowerment of scientists and public health experts led both to under-resourcing of the response and significant confusion for the public. Furthermore, overt politicization of the public health measures intended to keep people safe allowed the virus to flourish as people were convinced that wearing a mask was weak, that public health officials were trying to steal their identities when conducting contact tracing, and that restrictions on businesses were scientifically unfounded. This is why we have so many more cases and deaths than other countries.

Within the response itself, there are a few significant issues that should be highlighted. Our public health agencies have been underfunded and overburdened long before COVID-19, through multiple Republican and Democratic administrations, but they were also not sufficiently resourced or supported by the federal government during this response. While funds from the Cares Act did go to health departments, it was not enough.

Support for state, territorial, and tribal vaccination planning is a particularly damaging failure. While the US government has understandably spent billions of dollars on vaccine development, only \$200 million was provided to states for the actual distribution and administration of vaccine in the largest mass vaccination effort that our country has ever undertaken. This is despite pleas from public health experts for additional funding and guidance.¹⁵

Support for our healthcare response has been similarly dismal. States often had to ‘go it alone’ in ensuring supply chains for important things like ventilators, testing supplies, and personal protective equipment for frontline health workers.

Last, but certainly not least, the United States’ withdrawal from the World Health Organization and the withholding of contributions to COVAX both weakened our position as a global health security leader and limited burgeoning global vaccination efforts. I am encouraged to see that the United States has reversed these positions and has pledged significant support to COVAX.

New Administration Priorities and Continued Progress

With the new Biden administration and this Congress in place, I am hopeful that our response to the remainder of the COVID-19 pandemic will be much more evidence-based, coordinated, and effective.

Recent decisions to support acquisition of additional vaccine and enable health and scientific experts to communicate directly and honestly with the American people are already paying dividends.

¹⁵ Florko N. Trump officials actively lobbied to deny states money for vaccine rollout last fall. *Stat News*. January 31, 2021. <https://www.statnews.com/2021/01/31/trump-officials-lobbied-to-deny-states-money-for-vaccine-rollout/>.

The administration should continue to prioritize strong leadership for the response in federal agencies, including by appointing an Assistant Secretary for Preparedness and Response (ASPR) within the Department of Health and Human Services as soon as possible; ensuring that sufficient federal support and resources are being provided to enable equitable access to vaccine; and making every investment necessary to prepare for the possibility of updating vaccines to protect against immune escape variants.

Finally, I am glad to see that the American Rescue Plan legislation currently being considered by Congress provides significant support for the ongoing response as well as funding and authorization for new programs that will begin our investment in our future preparedness. I look forward to the passage of this bill and better days ahead.

That concludes my testimony. I am grateful to the Committee for inviting me to contribute to the hearing and would be happy to take any questions.