INVESTIGATING PANDEMIC IMMUNITY: ACQUIRED, THERAPEUTIC OR BOTH

HEARING

BEFORE THE

SELECT SUBCOMMITTEE ON THE CORONAVIRUS PANDEMIC

OF THE

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WITNESSES

Written opening statements and the written statements of the witnesses are available on the U.S. House of Representatives Document Repository at: docs.house.gov.

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Documents are available at: docs.house.gov.

INVESTIGATING PANDEMIC IMMUNITY: ACQUIRED, THERAPEUTIC OR BOTH

Thursday, May 11, 2023

HOUSE OF REPRESENTATIVES

COMMITTEE ON OVERSIGHT AND ACCOUNTABILITY

SELECT SUBCOMMITTEE ON THE CORONAVIRUS PANDEMIC

Washington, D.C.

The Subcommittee met, pursuant to notice, at 10:10 a.m., in room 2247, Rayburn House Office Building, Hon. Brad Wenstrup (Chairman of the Subcommittee) presiding.

Present: Representatives Wenstrup, Comer, Malliotakis, Miller-Meeks, Lesko, Cloud, Joyce, Greene, Jackson, McCormick, Ruiz, Raskin, Mfume, Ross, Garcia, Bera, and Tokuda.

Dr. WENSTRUP. The Select Subcommittee on the Coronavirus Pandemic will come to order. I want to welcome everyone.

Without objection, the Chair may declare a recess at any time.

I now recognize myself for the purpose of making an opening statement.

Today the Select Subcommittee is holding a hearing to examine the role of both infection-acquired or natural immunity, and the therapeutic acquired or vaccine-induced immunity it should have and could have played in the public health response to the pandemic and concerns as to why the Federal Government decided almost wholly to ignore, at least, the natural immunity. In the earliest stages of the pandemic, COVID–19 was a novel virus, and there simply was no data. Again, we aren't here to negate the significance of that unprecedented time, but as data changes, so must our decision-making based on data. And as time passed, more and more global research emerged that infection from COVID–19 produced robust, naturally acquired immunity.

Let's be absolutely clear. Natural or infection-acquired immunity is real. It has been known for hundreds, if not thousands, of years. Dr. Fauci himself even said so in 2004. While speaking about the common flu, he said, "The most potent vaccination is getting infected yourself." And, yes, the flu and COVID–19 are different, but the science regarding immunity is the same and should be respected. However, instead of following the science, public health leaders ignored the facts and mandated vaccines for Americans without any regard for a previous infection and immunity that may come from that and did so with the threat of losing one's job. Nowhere in this process was there an opportunity for one to confer

with their doctor, who they know and trust, to discuss risks and benefits to their health.

This is part of the reason we are here today, to ask why naturally acquired immunity was never robustly considered as part of U.S. public health policy, to ask why science wasn't followed. It is essential that we look back and examine the policy decisions that were made, and at the end of the day, science and scientific facts aren't political. For democracy to be healthy, it needs to be transparent, and a transparent, healthy, and free Nation doesn't shy away from the facts.

When the COVID–19 vaccines became widely available, 91 million Americans had been infected with COVID–19. Still, facts and science continued to show that those who had antibodies from previous infection had some form of protection against reinfection. Yet the Biden administration attempted to mandate vaccines, regardless of previous infection, for the military, healthcare workers, large private sector companies, and Federal employees. All around, this is bad public health. Between the mandates and the vitriol showed toward natural immunity, these decisions hurt Americans' trust in public health, a trust that we hope to restore at the end of this process.

To be clear, no one ever advocated for a let-it-rip approach. No one ever advocated for natural immunity to be the end-all public health factor, just that it was to be considered. Natural immunity could have been and, I believe, should have been a force multiplier for good. We could have used thousands of years of science to our advantage, but instead, it was demonized. This should have been part of a conversation between patients and physicians.

And I'll share a personal story. I got vaccinated with the Pfizer vaccine in early January, February 2021 with so many other Americans, especially Americans my age and older and with comorbidities. In August 2021, I realized I must have had COVID when I was cooking and could not smell garlic salt. I was fine. My family was fine, including my 89-year-old mother. All that being said, when I was scheduled to go on a trip to Germany, I was told I needed to get boosted, and so I asked if here at the Capitol if I could get my T-cell count and my antibody levels before getting boosted. I was told that they couldn't do the T-cell through their lab, but they could do the antibodies. I got my results. On the results, it says a number of 40 confirms the presence of circulating IGG antibodies specific for SARS-CoV–2 at high levels. At high levels, 40. My number was 821, yet I was being told, not by a physician, that I needed to get a booster. Why? No doctor involved.

See, public health needs to be educational not indoctrinational. Why were personal medical decisions left up to bureaucrats and politicians, not patients and doctors? I do believe that vaccines saved innumerable lives. We knew from the trials that mRNA-vaccinated people still got COVID. They, in most cases, didn't get us sick and were less likely to be hospitalized. We know that people with certain comorbidities were more vulnerable to severe illness and death. Why did bureaucrats and politicians mislead and confuse the American people?

At a town hall event on July 21, 2021, President Biden stated, "If you are vaccinated, you are not going to be hospitalized, you are

not going to be in the intensive care unit, and you are not going to die. You are not going to get COVID if you have these vaccinations." After the town hall, he stated to a reporter when asked about vaccinated people who get infected, "It may be possible. I know of none where they are hospitalized in ICU or have passed away, so at a minimum, I can say even if they did contract it, which I'm sorry they did, it is such a tiny percentage and it is not life threatening." In May 2021, when asked about new CDC guidance for vaccinated people and masks, Dr. Walensky said, "Data has emerged again that demonstrate that even if you were to get infected during post-vaccination, that you can't give it to anyone else." On March 29, 2021, Dr. Walensky told MSNBC, "Our data from the CDC today suggested vaccinated people don't carry the virus, don't get sick, and that it is not just in the clinical trials." The director added, "But it is also in real-world data."

A spokesperson for the CDC had to walk back their own director's statements a few days later, telling the *New York Times*, "Dr. Walensky spoke broadly during this interview," adding that "It is possible that some people who are fully vaccinated could get COVID–19. The evidence isn't clear whether they can spread the virus to others. We are continuing to evaluate the evidence." At a White House briefing on April 23, 2021, Dr. Walensky offered, "CDC recommends that pregnant women receive the COVID–19 vaccine." However, the CDC didn't recommend that pregnant women receive the vaccine. It only stated that pregnant women can get the vaccine. While small, those are very different statements.

On February 3, 2021, in a White House press briefing, Dr. Walensky stated schools could reopen safely without vaccinating teachers. She said, "Yes, ACIP has put teachers in the 1b category, the category of essential workers, but I also want to be clear that there is increasing data to suggest that schools can safely reopen, and that safe reopening doesn't suggest that teachers need to be vaccinated in order to reopen safely." At that time, the White House attempted to distance themselves from Dr. Walensky, with the Press Secretary Jen Psaki stating that Dr. Walensky was speaking in her personal capacity.

The Biden administration and CDC's false narratives about the necessity and efficacy of COVID–19 vaccine and booster misled the public with scare tactics and deception. These statements fostered a lack of public trust in our health authority during a time when the American people needed that leadership and that truth and that trust the most. We are holding this hearing today to look back to help prepare for a future pandemic, to determine what went wrong, to recommend how to do it better. Asking about the reluctance of the public health elite to consider natural immunity is essential to this question. That is what this hearing is about today.

Science is clear. While for some, no amount of protection may be enough. However, natural immunity is real, it matters, it should have been studied, and it should have been considered fully, and health decisions should be made on a case-by-case basis based on personal and scientific facts. I look forward to a strong on-topic discussion today.

I would now like to recognize Ranking Member Ruiz for the purpose of making an opening statement. Dr. Ruiz.

Dr. RUIZ. Thank you, Mr. Chairman. Today we are here to examine the roles of both vaccine-induced and infection-acquired immunity, both passive and active immunity, in overcoming a deadly pandemic. This hearing comes at a sensitive time for our Nation's public health as misinformation and disinformation stemming from the COVID–19 pandemic has fueled vaccine hesitancy and undermined the greatest tool we have to protect against infectious disease, or, in fact, the only tool we have that helps prevent against developing symptoms from a natural infection that lead to long-term health effects, hospitalizations, and death, all while reducing overall transmission. It is my sincere hope that we approach today's hearing with care and that my colleagues on the other side of the aisle will not draw into question that which we know to be fact, that the COVID–19 vaccines are safe, the COVID–19 vaccines are effective, and the COVID–19 vaccines save lives.

Let me take you back to the winter of 2020 before the rollout of the lifesaving vaccines. Every day, Americans battled a highly transmissible, rapidly changing deadly novel virus. Let me repeat. Every day, Americans battled a highly transmissible, rapidly changing deadly novel virus, and at the height of the pandemic, we were losing more than 3,000 of our fellow Americans daily to this lethal public health crisis, more than 3,000 siblings, parents, grandparents, loved ones, and neighbors lost to COVID–19 every single day. These were some of the darkest times for our Nation.

And so today, as we end the public health emergency, as we look back on the devastation wrought by this virus, we must recommit to preventing future harm and saving lives in the event of another pandemic. This includes looking at how we can build on the Biden administration's implementation of the largest, most successful vaccine administration program in history that allowed us to safely reunite loved ones, reopen schools, businesses, and workplaces, and now declare the end of the public health emergency that we all faced.

In fact, according to the Commonwealth Fund, this achievement prevented an estimated 3.2 million deaths and 18.5 million hospitalizations, plus it saved the United States over $1 trillion in medical costs. Now, let's compare that to the damage that a reckless mass infection strategy would have done to our Nation. This strategy would have, at worst, encouraged people to go out and get sick during a deadly, highly transmissible airborne virus and, at best, willfully disregard preventive precautions at a time when we knew little about COVID–19 and its long-term impacts. Even worse, this reckless strategy was embraced by those at the very top of the Trump administration, such as pandemic advisor, Scott Atlas, who pushed a dangerous mass infection strategy that would have further strained our already over-capacity national healthcare system. The strategy that Atlas and others embraced would have pushed already overwhelmed hospitals to the brink, led to further delays and care for patients suffering from chronic conditions, and this strategy could have caused an estimated 3 million additional deaths, according to projections by the *Washington Post*.

Look, I am a doctor, and I took an oath to do no harm, so it is pretty clear to me that we should not reverse course on basic public health measures. We need to defend basic public health in this

country due to the politicization and the disinformation and the misinformation that has been putting out there that has caused the mistrust in basic public health knowledge that have been proven time and time again from previous pandemics and basic science to reduce harm and save lives. Why would we willfully want to allow people, even healthy individuals, to get sick by an active infection that we know very little about, that now we know can develop long COVID, even in patients who have been asymptomatic? And the more you get actively infected, the more the risk that you will get long COVID, as per the science.

So, because the fact of the matter is, while we can now end the public health emergency because of an overall decrease in hospitalizations and mortality, we must still work to address long COVID and emerging variants, especially for high-risk communities, immunocompromised individuals, and unvaccinated populations. And yet the continued spread of disinformation—"dis" meaning purposefully causing confusion, mistrust, and the misinformation, those who aren't willfully, but they are just sharing this disinformation online about not just COVID–19 vaccines but vaccines overall—pose a serious threat to this work and our ability to protect America's overall health. I am concerned that people listening to this hearing will then say, well, look if active immunity is the way to go, hell, I am going to go get infected. I don't care about taking precautions. That is not the approach or the message that we should be interpreting from this hearing.

So look, the Brown School of Public Health, Brigham and Women's Hospital, Harvard T.H. Chan School of Public Health, and Microsoft AI for Health have found a growing distrust in vaccines, has caused more than 300,000 preventable COVID–19 deaths. What is more, this dis-and misinformation has inflicted serious damage on our efforts to combat diseases that we previously had under control, like polio and measles, so this should be troubling to us all. And I am not speaking here as a Democrat. I am speaking here as an emergency physician, a scientist who has taken an oath, and a public health expert that has studied public health and practiced public health in the field, who cares about Republicans and Democrats to stay alive, to stay out of hospitals, to not get infected with an active virus. Even though you may have mild symptoms, you may develop long COVID. You may then carry it and transmit it to somebody who is immunocompromised, who is at high risk of getting hospitalized and dying.

So, for the sake of public health, for the sake of our neighbors, regardless of political affiliation, I implore everyone here today to remain focused on the facts and come together to identify real solutions that put people over politics to prevent future harm, save future lives, and ensure America is stronger and better prepared in the future. Thank you.

Dr. WENSTRUP. Thank you, Dr. Ruiz. Our witnesses today are Dr. Marty Makary. Dr. Makary is the chief of Islet Transplant Surgery and a professor at Johns Hopkins University. He served in leadership in the World Health Organization Patient Safety Program, elected to the National Academy of Medicine, and has published more than 250 peer-reviewed scientific articles. Dr. Margery Smelkinson. Dr. Smelkinson is a research scientist and

microscopist with expertise in infectious disease. She received her Ph.D. in biological sciences from Columbia University in 2007 and completed her postdoctoral fellowships at the University of California-San Diego. And Dr. Tina Tan. Dr. Tan is a Board-certified pediatric physician as well as a current professor of pediatric infectious diseases at Northwestern University Feinberg School of Medicine in Chicago.

Pursuant to Committee on Oversight and Accountability Rule 9(g), the witnesses will please stand and raise the right hands.

Do you solemnly swear or affirm that the testimony that you are about to give is the truth, the whole truth, and nothing but the truth, so help you God?

[A chorus of ayes.]

Dr. WENSTRUP. Thank you. Let the record show that the witnesses all answered in the affirmative.

The Select Subcommittee—you may be seated—the Select Subcommittee certainly appreciates you all for being here today, and we look forward to your testimony.

Let me remind the witnesses that we have read your written statements, and they will appear in full in the hearing record. Please limit your oral statements to five minutes. As a reminder, please press the button on the microphone in front of you so that it is on, and the Members can hear you. When you begin to speak, the light in front of you will turn green. After four minutes, the light will turn yellow. When the red light comes on, your five minutes has expired, and we would ask that you please wrap up.

I now recognize Dr. Makary to give an opening statement.

STATEMENT OF DR. MARTY MAKARY, CHIEF ISLET TRANSPLANT SURGERY & PROFESSOR OF SURGERY JOHNS HOPKINS UNIVERSITY

Dr. MAKARY. Thank you, Chairman Wenstrup and Ranking Member Ruiz. You are both good doctors. I respect both of you, even if we have different opinions on some things. You have promoted a very civil discourse here. I believe in civility, so I want to thank both of you. I admire that.

Nothing speaks more to the intellectual dishonesty of public health officials then their complete dismissal of the data on natural immunity, making the U.S. an international outlier in this academic dishonesty. Since the Athenian plague of 430 B.C., natural immunity has been described. It was protective against subsequent disease during reinfection or prevented reinfection. Natural immunity works for every other virus, with arguably the exception of influenza because influenza is unique. It is got two spike proteins and a very leaky polymerase enzyme. It is unique. Every other virus practically that we know of that causes infections in humans, there are two viruses that cause severe illness in humans that are coronaviruses besides COVID. COVID is one of three coronavirus has that causes severe illness in humans. The other two both have long-lasting natural immunity.

So, it is very bizarre that public health officials bet that this would break the rule, COVID would be different. Dr. Ruiz, you mentioned you believe in vaccines. They are safe and effective. I do,

too, but I don't recommend the chickenpox vaccine if you had chickenpox. CDC doesn't either.

Dr. RUIZ [continuing]. Virus than COVID–19. It is a different virus than COVID–19.

Dr. WENSTRUP. Let him finish his statement.

Dr. MAKARY. I don't recommend the chickenpox vaccine if you had chickenpox, nor does the CDC. The same with many other viruses. Over the last three years, there have been 200 studies of natural immunity. The Lancet review of 65 studies from nine countries concluded that natural immunity is at least as effective. The data are clear. The evidence was there all along, but health officials never talked about it, maybe because the real story is they were worried somebody might try to get natural immunity. So, let's not be honest with the public. Was that the idea?

Public health officials, the government, and CDC, NIH privately told me that is what their concern was about acknowledging natural immunity, so they made ignoring natural immunity a political badge. They dismissed it saying there was uncertainty. We don't know how long it is going to last, as if we knew how long vaccinated immunity would last. They had it backward actually. Our Johns Hopkins study published in JAMA was the third most discussed study of all JAMA publications in 2022, according to the JAMA website. We found antibodies present up to two years later. We can have our opinions, but let's not ignore this mountain of evidence.

Big Tech censored my study when I posted it calling it vaccine-hesitant content. Government doctors were privately saying we agree, but we don't talk about it. We had this sort of intense paternalism. We saw this when women wanted home pregnancy tests, and doctors were pushing for it, and the medical elites said, no, women can't handle that information at home. We can't have home pregnancy tests. They fought it for years. Same with home HIV tests, medical paternalism. Universities like my own put their head in the sand, ignoring the data, forcing young, healthy male students to choose between the risk of myocarditis—1 in 6,000 young males—or getting kicked out of school, even though they had natural immunity. That was common.

The media parroted whatever Fauci and the CDC fed them, just like government officials when they fed the media there were weapons of mass destruction in Iraq. Whatever government leaders told them, they parroted without asking any questions. And is anyone surprised that Pfizer or Moderna, which controlled a lot of the narrative, they never talked about natural immunity. Why would they, a reason not to get one of their products? Many practicing doctors knew about natural immunity, the power of it. European doctors, many tailored vaccine recommendations factoring in natural immunity just like you do with chickenpox, and they would tailor medications, and that is the art of medicine.

Now, natural immunity isn't just an academic point. Lives were lost because they ignored it. Thousands of Americans died because public health officials ignored natural immunity, because from December 2020 and April 2021, there was a limited vaccine supply. Thousands of Americans were dying, just as you said Ranking Member Ruiz. We had people dying to get the vaccine. The vaccine

was highly effective against the variant at that time. It saved lives, and they couldn't get it because we were giving vaccines to those already immune with natural immunity. Why would you give two life preservers when some were drowning with none?

If you think healthcare costs too much, we are dealing with a massive nurse exodus, resulting in higher prices. Thirty-four thousand nurses left in New York state alone. Now they are hiring traveling nurses for twice and three times the cost. That is translating into higher medical bills. If you are healthy enough to fight in a war, you are probably extremely low risk for COVID. Thank you, and I look forward to your questions.

Dr. WENSTRUP. Thank you, Doctor. I now recognize Dr. Smelkinson for five minutes of remarks. Thank you.

STATEMENT OF DR. MARGERY SMELKINSON
RESEARCH SCIENTIST

Dr. SMELKINSON. Chairman Wenstrup, Ranking Member Ruiz, and Committee Members, thank you for inviting me to speak today. I am a research scientist with 24 years of experience working in the laboratory, primarily focusing on host-pathogen interactions and infectious diseases. Currently, I am a staff scientist in the Research Technologies Branch at NIAID, where I perform collaborative research with investigators throughout the Institute on projects that focus on infectious diseases, rare and autoimmune diseases, and immunology. As a disclaimer, I am here in my personal capacity and not speaking on behalf of the NIH, NIAID, HHS, or the Federal Government.

The U.S. COVID pandemic response has been plagued by a failure to adjust to emerging data and to account for unintended consequences. One glaring example of this is the handling of school closures, with the CDC guidelines continuously at odds with evidence from other countries and from school districts that opened in the U.S. in the fall of 2020. This disregard for data led to prolonged closures, and a catastrophic decline in academic achievement, and a widening equity gap. This was not the only area where our health agencies failed to acknowledge evidence. They also failed to recognize the protection against COVID afforded by natural immunity.

Natural immunity refers to the immunological response that an individual develops after recovering from an infection. It is part of the adaptive immune response, which produces memory B and T cells that remain in the body and can quickly respond to the same pathogen if it is encountered again. For centuries, natural immunity has been recognized as a vital defense mechanism against reinfection, long before the precise cellular mechanisms were understood.

Throughout much of the pandemic, though, messaging in the U.S. was that there was no evidence of lasting protection from COVID infection, but, in fact, we did know otherwise and early on. In July 2020, a paper published in Nature showed a strong T cell response in SARS CoV–2 recovered patients. It also demonstrated that patients recovered from SARS, the first one, also had T cells that were still reactive to the virus nearly 20 years later, a very good indicator that SARS CoV–2 immunity would be similarly du-

rable. Several more papers came out in late 2020, early 2021, reaffirming these results and that even a mild or asymptomatic infection could produce a strong and long-lasting response. As expected, these immunological data translated into low reinfection rates.

In February 2021, a U.S. study of 3 million people showed a 0.3 percent reinfection rate compared to three percent in those without prior infection during the same time period. Two months later the large Siren study of English healthcare workers estimated that prior infection was associated with an 84-percent lower risk of reinfection. By late 2021, there were numerous studies, including a systematic review, which showed that natural immunity was at least as effective as vaccine-conferred immunity and waned more slowly.

The early data clearly showed that natural immunity was strong. Other countries did acknowledge this by allowing exemptions from mandates and passports, while the U.S. continued to disregard it. In the short term, this provided justification for mandates with no exceptions, an approach that resulted in staffing shortages, particularly in the healthcare sector where we could least afford to lose workers. It also caused needless loss of life as vaccines were given to essential workers with natural immunity instead of being prioritized for the elderly. Additionally, the daily quarantine of thousands of students could have been significantly reduced if districts had at least made exceptions for students with natural immunity, at least.

Disregarding the wealth of evidence of natural immunity led to missed opportunities to implement policies that could have been more effective and efficient in controlling the pandemic and limiting collateral damage. Unfortunately, now vaccination rates for other vaccines have declined, ironically increasing society's vulnerability to infectious outbreaks. While some of this may be due to missed medical appointments and school closures, there has also been a significant loss of trust in public health due to misleading messaging and inflexible policies during the pandemic. Our health agencies must learn from this unfortunate error of failing to be candid with the American public and for the pervasive implementation of policies that were not adequately supported by data. Thank you

Dr. WENSTRUP. Thank you, Doctor. I will now recognize Dr. Tan to give an opening statement.

STATEMENT OF DR. TINA TAN
PROFESSOR OF PEDIATRIC INFECTIOUS DISEASES
FEINBERG SCHOOL OF MEDICINE
NORTHWESTERN UNIVERSITY

Dr. TAN. Thank you. Chairman Wenstrup, Ranking Member Ruiz, and distinguished Members of the Subcommittee, thank you for holding today's hearing and inviting me to testify. As a pediatric infectious diseases physician, I have cared for many patients with serious illness due to COVID–19, and I am committed to saving lives and providing my patients with the best care possible and the best medical advice. And that is why I recommend that all eligible individuals stay up to date on their COVID–19 vaccinations. I greatly appreciate your commitment to hearing from physicians

like myself who have been on the front lines of this pandemic since the pandemic started.

When SARS CoV–2 first emerged, it truly was a novel virus, so we knew very little about it. Increasing knowledge, the emergence of new variants, new tools, and increased population immunity have all caused medical recommendations to change appropriately over time. My testimony will cover what we now know about the benefits and risks associated with immunity after infection and COVID–19 vaccines, the appropriate roles of physicians and the Federal Government in COVID–19 prevention, and recommendations to improve public understanding of vaccines.

Now, the term "natural immunity" to mean immunity after infection, can be somewhat confusing. Immunity acquired from a COVID–19 infection and immunity after vaccination are both natural. Immunity after infection appears to provide protection against future severe disease from COVID–19. The body of evidence for immunity after infection, however, is more limited than that for vaccine-induced immunity, and data suggests that the best immunity comes from hybrid immunity, which is the combination of vaccination and immunity after infection.

Relying only on immunity after infection to prevent COVID–19 can be very risky. Unvaccinated individuals without prior COVID–19 infection have an increased risk of severe disease, hospitalization, and death. Before vaccines, patients with COVID–19 completely overwhelmed hospitals, which compromised our ability to provide care to all patients. COVID–19 vaccines provide substantial protection against severe disease, hospitalization, and death. The bivalent booster COVID–19 vaccines increases protection, and we must encourage more people to receive this booster.

An April 2022 study found the vaccine effectiveness of the bivalent MRNA vaccine booster was 72 percent for COVID–19-related hospitalizations and 68 percent for COVID–19-related deaths. Several studies have also indicated that COVID–19 vaccination appears to reduce the risk of long COVID. A March 2023 study found that vaccinated individuals had less than half the risk of developing long COVID.

COVID–19 vaccines are safe, and side effects after a COVID–19 vaccination tend to be mild and temporary, very similar to those experienced after routine vaccinations. And we know that CDC has conducted extensive monitoring of the adverse events associated with vaccines, and the risk associated with getting a natural COVID infection are far greater than the risk associated with receiving a COVID–19 vaccine.

Now, we know that physicians are considered one of the most trusted vaccine messengers, and 2021 AMA survey showed more than 96 percent of U.S. physicians had been fully vaccinated for COVID–19. And as an ID specialist, I have educated other physicians and healthcare personnel about COVID–19 disease and COVID–19 vaccines. We must better leverage the role of physicians to increase vaccine uptake for COVID–19 and other vaccine-preventable diseases. And to do this, we must expand our physician work force.

Unfortunately, nearly 80 percent of the counties here in the United States don't have a single infectious disease physician, and

in 2022, only 56 percent of adult ID training programs and only 46 percent of pediatric ID training programs filled, and high medical student debt draws many physicians to more lucrative specialties and subspecialties.

The Federal Government has an important role to play in COVID–19 vaccinations, and those roles have evolved over time. The Federal Government provided critical resources, information, and partnerships to support rapid equitable vaccine administration. It also instituted vaccination requirements, and the concept of vaccine requirements is not new. We know that seasonal influenza vaccination requirements for healthcare personnel have been in placed at many institutions for years and really have decreased the amount of transmission occurring from healthcare personnel to the patients they care for.

Prior to the Delta variant, COVID–19 vaccine offered incredibly powerful protection against infection. Reducing transmission could limit the development of variants, ease pressure on hospitals, and save lives. The trajectory of the pandemic, however, has changed. While vaccines remain highly effective at preventing severe disease, hospitalization, and death, they are no longer as effective in preventing infection and transmission. And in addition, most people in the U.S. now have some immunity. Policies should evolve based on the latest data, and data do not support mandatory COVID–19 vaccination requirements at this time.

The other thing that I just want to mention is that routine childhood vaccination rates significantly dropped during the pandemic and remain below pre-pandemic levels, and this is driving outbreaks of diseases, such as measles, pertussis, and polio, with very troubling public health consequences and economic costs.

I thank you for your attention to the important issue of vaccination and this opportunity to testify.

Dr. WENSTRUP. Thank you, Doctor, and I agree with the grave concern about the other vaccines that aren't being administered out of fear at this time.

I now recognize myself for questions, but I do want to say some things. You know, to imply that those that support the idea of studying and considering and researching natural immunity implies that you are against the vaccine, that is false. That should not be implied, and it doesn't mean that the vaccines weren't beneficial and weren't lifesaving, and the emergency use authorization, I felt, was very appropriate, especially for the most vulnerable because of what we knew at the time. But since vaccinated people still got COVID, and we knew that from the trials, you can't say that vaccinated people won't get long COVID because they can still get COVID.

And to say that the vaccines are safe, safe as we know it at the time, but we don't have a five-year study. We don't have a 10-year study. We saw 18-to 40-year-old males getting myocarditis after vaccination. Those are things we need to continue to study and to consider. To make a blanket statement that they are safe is not fair. Safe as we may know it at a certain point, but we are seeing things. In this Committee, we will be looking at our VAERS system, the reporting of adverse events from vaccines. It is important

that we do that and make sure that it is working, and it is to be honest, and it is to be trusted.

So, what we have seen throughout the pandemic is the public health establishment disregarding natural immunity. I mean, that has been very clear. We have all lived through that. Let me go down the line, starting with Dr. Makary. Is natural immunity to COVID–19 a real thing that should have been considered, recognized, and studied?

Dr. MAKARY. Absolutely. We lost a million people from the work force roughly because natural immunity was ignored. A million people leaving the work force isn't good for public health.

Dr. WENSTRUP. Doctor?

Dr. SMELKINSON. Yes, I think when it came to mandates, we should have absolutely made exemptions for people with natural immunity to save the work force and to save our precious vaccines for those that were truly vulnerable, which is what many other developed countries did.

Dr. WENSTRUP. Do you think mandates should have been implemented without a consultation with a physician?

Dr. SMELKINSON. I think that mandates, when there is a public health benefit, can be justified. So early on when the vaccines were rolled out, when they did seem to reduce spread, they were justified, but exemptions should have always existed for those with natural immunity.

Dr. WENSTRUP. Then to that point, I will tell you, during the Trump administration, I made the recommendation that America needs to be hearing from the doctors that are treating COVID patients, not politicians, and that would be much more greatly embraced by the American people. Dr. Tan?

Dr. TAN. I agree that you get natural immunity after infection, and I think that is important, but I think early on, we didn't understand or have the data to really support that, you know, natural immunity would be the only thing to rely on. And we knew that as individuals got COVID infection, they were at much higher risk for going on to developing complications, now known as long COVID and multi-system inflammatory syndrome, both in children and adults.

Dr. WENSTRUP. I think we all agree that early on, no one knew exactly what, so we were all clamoring for a vaccine, but at the same time should have been looking at natural immunity as well and take it into consideration in the overall treatment of a patient, as I pointed out with my own numbers there. In the summer of 2021, the CDC removed all references to natural immunity. Dr. Makary, do you know why?

Dr. MAKARY. They never talked about it. They upheld something I would call the Novak Djokovic doctrine. That is, no one who is unvaccinated, regardless of prior recovery from COVID, was allowed in the United States under the false pretense that vaccines prevent transmission, that natural immunity was not a real thing, and that there was no risk whatsoever to the vaccine. And just a quick note. I don't like the conversation framed around all or nothing, entirely relying on natural immunity. Doctors' custom tailor treatments all the time and you know what? If somebody had a natural immunity early on, maybe we recommend one dose or

space out the doses or hold off on the booster, but this all-or-nothing cult around vaccine ignores the Fraiman Study that found that 1 in 662 two doses results in a severe adverse event.

Do doctors do a proper informed consent with that risk? In the early days of COVID when we were losing a thousand people, that risk is acceptable. Now it is not acceptable. We can't have a five-year-old girl gets 77 mRNA doses in her average life span. That is what people are promoting without any data.

Dr. WENSTRUP. I had a situation where a gentleman called me about his son, and he said just to go to school he has to get vaccinated. He has a perfectly healthy son, and I recommended one dose of the Pfizer. It would give him some immunity. Most of the myocarditis incidents were coming after the second dose, so get one dose. Get immunity that way, which the majority of it comes from that first dose, yet he was denied. He was denied accepting that. I said get a doctor's note. The school board was deciding this, not the patient and the doctor.

The CDC website at that time, Dr. Makary, also said, "Get vaccinated regardless of whether you already had COVID–19. Studies have shown that vaccination provides a strong boost in protection in people who have recovered from COVID–19." Any thoughts on that?

Dr. MAKARY. Well, the CDC's own data showed that if you were vaccinated and had prior immunity, that is the so-called hybrid immunity, or you just had natural immunity, you hit the same ceiling of hospitalization rates during the Omicron wave. So, one dose may be reasonable, but we fired 81,000 soldiers just in one swath for not having both doses. That is arrogance, paternalism, and medical elitism. That isn't the humility the American public expects. That is why child vaccination rates are down unfortunately.

Dr. WENSTRUP. Of course. Care to comment on that?

Dr. TAN. Well, I mean, we know that vaccine hesitancy has existed as long as vaccines have existed. You know, with Edward Jenner and the smallpox vaccine, there was vaccine hesitancy then. I think with the COVID–19 vaccines, I think there was a misunderstanding in the general public about the role that they would play, at least, you know, in preventing the serious disease and infections and hospitalizations and death that may occur in individuals. And I think that is why it is so important to really protect those individuals, especially those individuals that have immunocompromised conditions. And children do serve as a vector of transmission to those individuals in the household.

Dr. WENSTRUP. If I could before I turn it over to the Ranking Member for questions, you know, I have recommended any chance I get to say this vaccine is different from the other vaccines, and really this mRNA vaccine has been more of a therapeutic than the other vaccines have proven to be as far as prevention. And I think that people need to know that, and our public health system today should be shouting that from the top of their lungs to parents of young children to make sure they get those other vaccines. But when they say you must get this one as well, I think that is an injustice, and that is harming our system, if that is what they are advocating.

I yield to the Ranking Member for his questions.

Dr. RUIZ. Thank you. I am going to put my doctor hat on right now. Natural infection creates an immune response in immuno-competent people. We have known that. We have known that for a very long time. Nobody ever denied that. Nobody ever said that getting an infection doesn't create an immune response, OK? The immune response and protection depends on several factors and varies based on viral load, age, and immuno-competency, so it is not an easy, standard response that everybody is going to have. However, natural infection with this virus causes severe illness, hospitalization. With this virus, not the chickenpox, can send you to the ICU. With this virus, natural infection can cause deaths, 3,000 per day, in fact. You know, this virus that mutates and that has an immune response that wanes leads to the need of re-boosting your immunity.

The goal is to boost your immunity to mount a rapid and strong immune response so that you don't get symptoms, miss work, or transmit it to a high high-risk loved one or go to the ICU or, God forbid, die. That is the goal here, people. Let's take a step back. Who wants to get sick and miss work? Who wants to transmit this to your little one or your elderly, you know, grandparent even if you have been vaccinated? So, the best way to avoid symptoms from a natural infection or the risk of long COVID or hospitalizations or death is by boosting your immune response passively with a vaccine, OK?

Now it sounds like the narrative being pushed is to get infected with COVID–19, and if you get infected, then you don't need a vaccine, or prefer to get a natural infection over a vaccine for a deadly virus, or that if you get infected, then, disregard the vaccine or the booster. That seems to be the narrative here. That is just wrong, guys. It is just wrong, contrary to medical and public health practice, and it violates the oath of doing no harm.

Look, let me clarify some things. Vaccines don't cause long COVID. Vaccines do not cause long COVID. Natural infection causes long COVID, OK? Active infection, even mild infections cause long COVID. Let me clear up another misinformation already stated. Yes, vaccines help reduce transmission. They help reduce transmission. It is not 100 percent you get a vaccine; you are not going to get infected. It is not 100 percent you get a vaccine; you are not going to spread it somewhere. Again, the immune response, boosted by a vaccine, hopefully is strong enough, rapid enough to defeat the viral load and how fast it replicates in order to prevent it from reaching a level to where you are symptomatic, and you are transmitting it to other people.

So, with people who have that fast, strong immune response boosted by a vaccine, you are going to be able to prevent getting infected, and you are going to be able to prevent transmitting it to other people, definitely hospitalizations and definitely death. But some people who are vaccinated may have received a larger viral load, a mutated virus, and their immune system may not have responded fast enough, and they still may get infected. They still made transmit it, and there may still be hospitalization. Yes, some may still even die. So, it is not a simple black or white, 100 percent or not. It is understanding physiology and the mechanism of the immune response.

So, when President Biden took office, he hit the ground running to expand access to lifesaving COVID–19 vaccines. On his first full day in office, President Biden issued the National Strategy for the COVID–19 Response and Pandemic Preparedness. The Biden administration's National Strategy leverage the Defense Production Act to rapidly increase our supply of vaccines, stand up vaccination centers in communities across the country, and mobilized the public health work force to support a comprehensive COVID–19 response. So, thanks to President Biden's leadership and investments from Democrats' American Rescue Plan, which every House Republican opposed, we were able to get more than 600 million shots in arms, laying the groundwork to safely reopen 99 percent of schools, reignite our economy, and resume everyday life.

Dr. Tan, as a fellow physician, I deeply admire your commitment to protecting your patients, our Nation's kids from the constantly evolving threat of infectious diseases like COVID–19. How do vaccines work to protect patients and forge stronger immunity, even among those who have already experienced infection?

Dr. TAN. So, as you mentioned, vaccines work by boosting the immunity, and we do know that hybrid immunity actually is one of the strongest immunities in preventing hospitalizations, severe COVID disease, and death. It also has been shown that it prevents the development of multi-system inflammatory syndrome, both in children and in adults. And one thing about MIS-C in children is that many of the children who develop this are unvaccinated, and when they do develop it, many of them either have mild or very little in the way of symptoms. So, you cannot predict who is going to go on to develop MIS-C.

Dr. RUIZ. Thank you. Thank you. The Biden administration pursued a multi-pronged approach to encourage uptake of the COVID–19 vaccine and save lives. Alongside decisive action to increase supply and accessibility, the Biden administration instituted commonsense requirements for healthcare workers and Federal workers to get vaccinated. And as the novel coronavirus evolved, the Federal Government move decisively to roll out safe and effective boosters to better protect the American public from new variants.

Let me be clear. These actions saved lives. According to a Commonwealth Fund study published in December 2022, the Biden administration's COVID–19 vaccination strategy prevented 3.2 million deaths and 18.5 million hospitalizations, and without COVID–19 vaccines, the United States would have experienced 4.1 times more deaths and 3.8 times more hospitalizations. Dr. Tan, how have vaccines helped us to reduce the ongoing threat posed by COVID–19, particularly in communities that were hardest hit by the pandemic?

Dr. TAN. So, the vaccine also helps to prevent transmission of the disease to other individuals so that, you know, we know that the more the virus is allowed to circulate in the community, the more it is going to mutate, and the more individuals are going to become infected.

Dr. RUIZ. Thank you. So, this is my last question. So, you know, as we look to prevent and prepare for future pandemics, a crucial component of our work must be investing in the infrastructure to rapidly develop and deploy safe and effective vaccines. Look, the

decision to concomitantly invest in producing the vaccine while we were in the R&D phase helped us rapidly deploy this, so there are lessons learned that we should incorporate in the next response. And in your written testimony, Dr. Tan, you mentioned the need for investments in vaccine infrastructure, infectious disease physician recruitment, research to better understand and combat vaccine misinformation and disinformation, and increased coverage for vaccines. Dr. Tan, why are these measures so important for our future public health preparedness?

Dr. TAN. This is incredibly important because these measures will allow us to protect the largest number of individuals so that we don't have another devastating pandemic where you are going to have lives lost when they could have been saved with the use of an effective vaccine. And, you know, by building infrastructure for vaccines in both the adult and the pediatric populations, you are going to be able to save more lives all across the age span.

Dr. RUIZ. Thank you. I yield back.

Dr. WENSTRUP. I now recognize the Chairman of the full Committee, Mr. Comer, for five minutes of questions.

Mr. COMER. Thank you, Mr. Chairman, I want to thank our witnesses for being here.

The pandemic has definitely undermined trust in public health. We have heard time and time again, those in positions of public trust in the Biden administration making misleading or false statements regarding COVID–19. Now, I want to run through some of these statements and ask each of our witnesses if, at the time those statements were made, if science and data supported these statements.

On June 22, 2021, Dr. Fauci said, "It is as simple as black and white. You are vaccinated, you are safe. You are unvaccinated, you are at risk. Simple as that." Yes or no, Dr. Makary, does science and data support that statement?

Dr. MAKARY. Not anymore.

Mr. COMER. Dr. Smelkinson.

Dr. SMELKINSON. I mean, it did appear like that. In the summer of 2021, it did seem like the vaccines were doing pretty well at suppressing infection and spreading it, but shortly thereafter, it was not, and they didn't look at that in the trials.

Mr. COMER. Dr. Tan?

Dr. TAN. I think at the time, based upon the science that was available, the statement was appropriate, but I think now, the pandemic is evolving——

Mr. COMER. Right.

Dr. TAN [continuing]. So that we have to be agile enough to really go along with that.

Mr. COMER. Right. On May 16, 2021, Dr. Fauci said, the vaccinated became "a dead end for the virus." Dr. Makary, did science and data support that statement?

Dr. MAKARY. In April 2021, we knew vaccines didn't stop transmission.

Mr. COMER. Dr. Tan?

Dr. TAN. It stopped transmission in some individuals but not 100 percent stopping.

Mr. COMER. Dr. Smelkinson.

Dr. SMELKINSON. I agree with what they both said. It didn't, 100 percent.

Mr. COMER. On May 19, 2021, Director Walensky said, "Even if you were to get infected during post-vaccination that you can't give it to anyone else." Dr. Makary, did science and data support that statement?

Dr. MAKARY. No.

Mr. COMER. Dr. Smelkinson.

Dr. SMELKINSON. No.

Mr. COMER. Dr. Tan.

Dr. TAN. You were less likely, but it is not 100 percent.

Mr. COMER. On March 29, 2021, CDC Director Walensky said, "Vaccinated people don't carry the virus, don't get sick." Dr. Makary, did science and data support that statement?

Dr. MAKARY. It did not.

Mr. COMER. Dr. Smelkinson?

Dr. SMELKINSON. I mean, again it may have appeared that way for a while, but the trials didn't look at that.

Mr. COMER. Dr. Tan?

Dr. TAN. Yes, the trials didn't look at that, so the appearance was yes.

Mr. COMER. Finally, on June 21, 2021, President Biden said, "If you are vaccinated, you are not going to be hospitalized, you are not going to be in the ICU unit, and you are not going to die." Yes or no, Dr. Makary, did science and data support the President's statement?

Dr. MAKARY. We thought that early on, but they denied the overwhelming data that that was not true and made that statement after that data were clear.

Mr. COMER. Dr. Smelkinson.

Dr. SMELKINSON. That was around the time where breakthroughs were happening more rapidly, so I think that we could have seen that that was going to devolve into more reinfections.

Mr. COMER. Dr. Tan.

Dr. TAN. I think there was some support for that, but, you know, nothing is 100 percent, so I think science and data at that time was evolving.

Mr. COMER. Dr. Makary, by July 21, 2021, were there vaccinated Americans that had caught COVID–19?

Dr. MAKARY. Absolutely.

Mr. COMER. Were there vaccinated Americans in the hospital for COVID–19?

Dr. MAKARY. Absolutely.

Mr. COMER. Were there vaccinated Americans that had died from COVID–19?

Dr. MAKARY. Absolutely.

Mr. COMER. Dr. Makary, was the President lying?

Dr. MAKARY. There was a lot of misinformation spread by public health officials that we had to close schools, that vaccinated immunity was much stronger than natural immunity, that the ideal dosing interval was three or four weeks, that we had to boost young people with no evidence to support it. On long COVID, on ignoring natural immunity, there was a lot of misinformation spread during the pandemic, a lot spread by the CDC.

Mr. COMER. And I think this is why there is a lack of trust in American public health. Our leaders were unwilling to speak the truth and unwilling to follow the facts, and that is a big deal. Mr. Chairman, I appreciate the topic of this hearing. This a very important hearing. We have got a lot of work to do in America to regain the trust of the American people in public health. With that, I yield back.

Dr. WENSTRUP. Thank you. I now recognize the Ranking Member of the full Committee, Mr. Raskin, from Maryland for five minutes of questions.

Mr. RASKIN. Thank you very much, Mr. Chairman. I just want to start with a small semantic problem. Some people are contrasting natural immunity with vaccination, but actually, natural immunity is, well, natural, and our bodies will create antibodies in response to an infection whether it is by contracting the disease or in response to receiving a vaccination. So, in both cases, natural immunity is operating, and nobody is naturally immune to COVID–19. It creates an implication that somehow some people just will never get it, and I don't think there is any studies that demonstrate that. So, if you can activate a natural immunity response either by getting it or by having a vaccine, why not let COVID–19 just wash over the whole population and create herd immunity, which seems to be the subtext of some people's remarks here. It will be cheaper than vaccination, and you don't have to run a government campaign to have people get the disease. They will just get it if you let it run wild.

Well, that was precisely the strategy advocated by key Trump advisors during the Trump administration, and I sat on the Select Subcommittee on the Coronavirus Crisis where we dealt with witnesses and people who specifically advocated this. We revealed in a report last year, which I would love to submit for the record, Mr. Chairman, called the "Atlas Dogma: The Trump Administration's Embrace of a Dangerous and Discredited Herd Immunity Via Mass Infection Strategy," from June 2022. I would ask unanimous consent to accept that report. But the administration embraced this massive infection strategy promoted by pandemic advisor, Scott Atlas, a Fox News pundit with no background in infectious diseases, who amazingly was hired by the White House in the middle of the pandemic in July 2020. So, can I just ask for unanimous consent to enter this report into the record?

Dr. WENSTRUP. So, ordered.

Mr. RASKIN. Thank you.

Mr. RASKIN. Dr. Deborah Birx, who was then the coronavirus coordinator for the Trump White House, told the Select Subcommittee in a transcribed interview that she was constantly raising the alert about the dangers of Dr. Atlas' views on this pandemic. She warned that his wildly irresponsible herd immunity strategy was not implementable, and leading public health experts agreed at the time. Dr. Tan, why is mass infection, just letting the disease run over the population, a bad idea, even though it will activate natural immunity?

Dr. TAN. Well, the problem is that you are going to have a lot of individuals that are going to get seriously infected. They are going to be hospitalized, which is going to completely overwhelm

the system, and there are going to be far more deaths if you let somebody just get infected to be infected. We see that with the chickenpox parties that used to be held where people would know someone that had chickenpox. They would bring their children over to get infected. Some of those children would develop super infections with bacteria that landed them in the hospital with limb loss, other types of disfigurement, as well as deaths. So, trying to have somebody just get a natural infection for immunity is a very risky and dangerous way, and vaccines are the safest way for you to get immunity.

Mr. RASKIN. It will lead to mass unnecessary suffering and death——

Dr. TAN. Correct.

Mr. RASKIN [continuing]. And spread of the disease. Well, a systematic review published in Nature in January 2023 found that hybrid immunity was more protective than immunity after infection alone against the Omicron variant, and the effectiveness of previous infection against hospital admission or severe disease was 74 percent and against reinfection 24 percent. That is just having gotten it. But hybrid immunity, meaning you get the shot two, you 97 percent immunity against severe disease and hospital admission, and 41 percent against reinfection as opposed to 24 without it. So that improves the odds, too.

So, I guess my question is to you is do false and misleading claims about herd immunity and natural immunity ultimately undermine people's willingness to get vaccinated, and why is this debate so politicized and polarized?

Dr. TAN. Well, I am a practicing clinician, so I can't comment on the politicization of it, but I can say that there already is some hesitancy with regards to receiving routine vaccinations, and with all the misinformation that was disseminated, it really fell on the COVID–19 vaccine to sort of push that to a different level.

Mr. RASKIN. I yield back. Thank you.

Dr. WENSTRUP. I now recognize Mr. Malliotakis from New York for five minutes of questions.

Ms. MALLIOTAKIS. Thank you very much, Mr. Chairman. Thank you to those testifying today. You know, ignoring the science of natural immunity led to prolonged lockdowns, school closures, vaccine mandates, people being fired, losing their livelihoods, particularly in a city like mine, New York. We had a labor shortage. We had many issues as a result, and early on, we knew that naturally acquired immunity was present for COVID–19, and just about everyone in the world was studying COVID–19 and finding individuals developed the natural immunity. Various studies showed that reinfections were rare, protection lasted around one year, individuals who were previously infected with COVID–19 were likely to benefit from the vaccination and the natural immunity, right, and a previous COVID–19 infection offers at least the same level or even superior protection as two doses of a Moderna or Pfizer vaccine.

But even with all this data, the CDC and the Biden administration began to present a false message that receiving a COVID vaccination and booster was the only way to protect yourself against the virus. President Biden made multiple statements that simply did not follow the science, as those testifying today are affirming.

He said, "If you are vaccinated, you are not going to be hospitalized. You are not going to be in ICU unit. You are not going to die." That was false. He said, "You are not going to get COVID if you have these vaccinations." That was also false. Dr. Fauci says, "You become a dead end for the virus." That was also false.

And in New York City, all public employees, including teachers, police officers, firefighters, those frontline workers, they were mandated need to get this vaccination or be terminated. And as a result, nearly 15,000 city workers were fired for not complying, many who had been recently infected. So, since I joined Congress in 2021, I have fought for my constituents against these arbitrary and unscientific policies. I led a lawsuit that ended Mayor de Blasio's vaccine passport where you could not even walk into a restaurant to get a sandwich unless you were vaccinated. I joined a lawsuit that struck down President Biden's vaccine mandate on the private sector. We fought New York City to drop vaccine mandates on the private sector and on the public sector and reinstate those that were fired. We also voted to lift that vaccine mandate on members of our military.

Dr. Smelkinson, let me start with you. Did President Biden, Governor Cuomo, and Mayor de Blasio do a great disservice to our economy and society by not incorporating natural immunity into their policies?

Dr. SMELKINSON. Yes. I mean, the data showed that natural immunity was as protective as vaccinated immunity, and when we are talking about equitable policies, lower-income minority communities tended to be less vaccinated, and relatedly, they also tended to have more natural immunity. So, these vaccine passports that were enacted were actually quite inequitable as well since they didn't make exemptions.

Ms. MALLIOTAKIS. I agree, and that is why we sued to stop it. How was natural immunity not even a factor in these policy decisions that negatively impacted so many Americans?

Dr. SMELKINSON. I can't answer why it has been disregarded because other countries have acknowledged it. I mean, that is why these studies were run. When the vaccines came out, they started getting busy on figuring out how does the vaccine compare to natural immunity. There was a big Israeli study to get at the prioritization of the vaccines. And so, I don't know why they disregarded it.

Ms. MALLIOTAKIS. OK. Dr. Makary, do you have any inkling there?

Dr. MAKARY. I think you just heard why people don't want to recognize natural immunity. They associate with a let-it-rip, try-to-get-the-infection strategy. No one is saying that. No one. None of us have said that vaccines save lives. None of us, not even the Great Barrington Declaration folks or Scott Atlas. Look, I get it. You may not like Trump but look at Sweden's deaths and look at Michigan's deaths. As you know, it is not fair to compare Florida and New York because they had infections at different times seasonally, and medicine advanced and it is lowering the infection fatality rate. But Sweden and Michigan are perfect comparisons: same population, same percent of older people, identical popu-

lations. In the end, 37,000 deaths in Michigan; half, 17,000 in Sweden.

Ms. MALLIOTAKIS. Thank you. I need to get one last question in because we recently were successful in getting the state and city universities of New York to roll back their vaccine mandates. Remember, these are young healthier Americans who are attending our universities. Should private universities follow that and rescind their vaccine mandates?

Dr. MAKARY. Yes.

Ms. MALLIOTAKIS. And Dr. Smelkinson?

Dr. SMELKINSON. Yes, of course.

Ms. MALLIOTAKIS. Dr. Tan, I will even let you answer there.

Dr. TAN. I think in certain situations, yes, they should rescind it. And, again, we are in a different time than we were back when all this was occurring.

Ms. MALLIOTAKIS. Thank you very much.

Dr. WENSTRUP. I now recognize Dr. Bera from California for five minutes of questions.

Dr. BERA. Thank you, Mr. Chairman. I think we have to be really careful here because in this debate and dialog, we need to make sure we aren't sending a message to the public that vaccines are bad, right? You all would agree with that. I also think it is very dangerous to think in black and white that infection-acquired immunity was totally discounted. It wasn't. I mean, for folks that were on the front lines. As a doctor and former chief medical officer, you know, when we didn't have vaccines and we were running short on health workers and so forth, we were in consultation with our hospitals and folks that, you know, got infected, survived. We understood that they have some natural immunity, and they often were the ones that were going back and taking care of COVID patients. There was also consideration when we did have antibody tests, do you go out and do mass availability of these antibody tests to determine who has had it and who hasn't had it, and so it was not black and white.

I also understand from a public health perspective, when you are trying to launch a mass vaccination campaign, you often will think about things in broad terms, and mandates sometimes do compel folks to get that vaccine. Should we have been a bit more nuanced? Of course. Should we create exceptions for folks that say, look, I have already had COVID who are hesitant to get that vaccine, who may want to get that antibody test and demonstrate that they have got sufficient natural infection-acquired immunity? Yes, we should always have flexibility. We should always be nuanced.

Should politicians and elected officials be speaking in broad terms and generalities? No. I have never said that the vaccines were going to prevent illness because no vaccine is 100 percent. Are they reducing transmission? Yes. Are they reducing severe illness? Yes. Are they reducing death and morbidity and mortality? Yes. Those are all factual statements that, you know, we get. I also think we have to be very careful because we know COVID–19 is continuing to mutate, and while you may have natural immunity to a prior variant, we can't say with 100-percent uncertainty a new variant will not emerge where that prior immunity is going to be protective. We can also say the same thing about a prior vaccine,

right? Part of the reason, you know, Dr. Makary, that you said we constantly update our influenza vaccine is because it is constantly mutating, and prior influenza vaccinations don't protect against new mutations.

So, we just have to be open to that because we may see a new variant emerge next fall that our current vaccines don't protect against, or prior infection doesn't protect against. And I think we have got to be really, really careful in our messaging. Now, we also may see a new mutation emerge where prior vaccines are very protective and prior infection is very protective, so we have got to be open to that possibility as well. But I think for those of us who are on this Committee, I think we have got to be very careful in making sure we don't feed into vaccine hesitancy.

Let me ask a "yes" or "no" question. I think I know the answer to it. Separating out the COVID–19 vaccine, all of you believe that routine childhood vaccines, measles, vaccines all of that are incredibly important. Dr. Makary?

Dr. MAKARY. The routine child immunizations are important.

Dr. BERA. Dr. Smelkinson?

Dr. SMELKINSON. Yes, of course.

Mr. BERA. Dr. Tan?

Dr. TAN. Absolutely.

Dr. BERA. So, again, I would hope all of colleagues, Democrats and Republicans on this, understand that we have a responsibility. Look, we can debate efficacy of COVID–19 vaccines, we can debate efficacy of natural immunity, but we need to be really careful that doesn't spill over. You know, we are seeing measles vaccination rates drop. We are seeing, you know, routine childhood vaccinations drop, and that is a real dangerous scenario that keeps me awake at night because COVID–19 is not measles. Dr. Smelkinson, as we think about lessons learned, and this is about natural immunity versus, you know, we can look at the Swedish data, and Sweden wasn't the best in the world. It wasn't the worst in the world. It was kind of middle of the road. Their own internal studies have suggested that there were things that could have been done differently.

Dr. MAKARY. That is right.

Dr. BERA. They took a different approach. We should continue to look at these approaches, but what Sweden did incredibly well that helped them end the pandemic is they launched a mass vaccination campaign fairly quickly and actually have higher vaccination rates than we have in the United States. Now, again, they are doing an internal study. I would hope we could do that study to get a sense of what we did right and what we did wrong, and that is what I would hope this Committee does.

Dr. MAKARY. If I could just point out, Sweden does not recommend the COVID–19 vaccine for children under 12. They did good in their vaccine rollout, better than us, but not by a lot. So, I think there are a lot of factors that went into play, but I appreciate every comment you made, Congressman Bera. Thank you.

Dr. WENSTRUP. I now recognize Dr. Miller-Meeks from Iowa for five minutes of questions.

Dr. MILLER-MEEKS. Thank you, Mr. Chair, and I appreciate the comments, but I am going to clarify some misinformation by my

colleagues. No. 1, as a physician and as a former director of public health, it is understood in medical vernacular and public health circles that natural immunity refers to immunity after infection or infection-acquired immunity, not immunity from vaccine. Would you agree, Dr. Makary?

Dr. MAKARY. It has always been the case.

Dr. MILLER-MEEKS. Dr. Smelkinson?

Dr. SMELKINSON. I mean, it is all the same cells being generated. In that sense, I guess it is natural, both of them, but one is a therapeutic and one is from the virus.

Dr. MILLER-MEEKS. Correct. And Dr. Tan?

Dr. TAN. No. I mean, agreed that, you know, you are generating the same cells to produce immunity to protect yourself, so in that sense, they are both natural.

Dr. MILLER-MEEKS. Correct, but when we say, "natural immunity," we are referring to infection-acquired immunity. I want us to have the same language, and the reason that is important is because, although I agree with almost everything Dr. Bera said, where I disagree, was that natural or infection-acquired immunity was not discounted. I can tell you that I was censored. I was reported to the Board of Medicine in my state. I was, you know, threatened to be taken off platforms. I have been on this Committee now. This is my third year. I have asked this question of Dr. Fauci and of Dr. Walensky and of public health directors behind me, who even into 2021 and 2022, were reluctant to acknowledge that there was infection-acquired immunity. And let me say I was vaccinated. I gave the COVID–19 vaccines in all 24 of my counties.

And when you talked about natural immunity, no one was suggesting that people go out and attend a COVID–19 party and not get vaccinated. What we were asking for, the nuance that you mentioned, which was that we acknowledge that there is infection-acquired immunity, and, therefore, we risk stratify who we recommend vaccinations to, especially when you don't have enough vaccine to go around, and it is extraordinarily costly. That prepares us for the next pandemic, how we risk stratify.

And this also goes into the concept of herd immunity, which is, again, that doesn't distinguish between natural immunity or vaccine-acquired immunity. It is the percent or the prevalence of the population that is immune. I even put forward a bill because of this difficulty with recognition of natural immunity. It was if public health professionals and medical doctors lost their sense of their education in denying that there was such a thing. I put forth a bill to mandate testing by all insurance companies of both humoral immunity and T cell immunity so people could document that they were immune and then not be fired from a job in the military or in the healthcare work force or another job.

And so, if I sound passionate about this, I am extremely passionate about it because we have to get the science right. We have to get the messaging right, and the message was very wrong when we didn't acknowledge infection-acquired immunity. We can do both. We can walk and chew gum. We can say there is infection-acquired immunity, but depending upon your risk level, it could be very detrimental for you to wait to get infection-acquired immu-

nity. We can do both of those things, and it is important to do them.

So, I apologize. You can see the lack of responsiveness I got from four public health officials. We knew early on in 2021 about infection-acquired immunity, about a better level of immunity from both infection-acquired and COVID vaccine. And, Dr. Makary, you conducted one of the first long-term studies to look at COVID antibody levels nearly two years after infection. You know, what was it like trying to do this study, and did the NIH or CDC support your inquiry?

Dr. MAKARY. It was nearly impossible to study natural immunity. My Johns Hopkins colleagues and I published a study on natural immunity, basically drawing the blood of people who had COVID in the past and did not have vaccines, to measure their antibody levels, and we found those antibodies were present and durable up to nearly two years after infection. Why did the NIH or CDC not invite people who were infected in the early days to test their blood? No one was supposed to talk about natural immunity. It was misinformation, even if it was scientifically valid, because they thought maybe somebody might try to get the infection, so let's not be honest with the American public. That is the basis for it, and that is what public health officials told me privately.

Dr. MILLER-MEEKS. So, like me, you have no idea why they ignored it.

Dr. MAKARY. There was no money for it, they didn't want to talk about it, and they wanted to promote an indiscriminate, all-or-nothing vaccine strategy that meant all the vaccines could be four today or seven, depending on your age, or nothing. And if you don't do all of them, you are not fully vaccinated, and you don't meet the criteria of the Novak Djokovic doctrine. You are not allowed to travel into the United States. You are not allowed to play tennis outdoors. It was an absolutism. That is what ruined public health credibility is not being honest.

Dr. MILLER-MEEKS. And I apologize. Did this also lack of acknowledgement of infection-acquired immunity play into how often we recommended people to be boostered and the age at which they should both get COVID–19 vaccine and boosters, even if they had both infection and vaccine?

Dr. MAKARY. Yes, for public health officials, it was all or nothing. Doctors on the ground were customizing their vaccine recommendations. You have had COVID twice, including four months ago? I am not going to recommend the booster because you are young and healthy, and there is no data to support it. That is how doctors practiced medicine, but that was labeled misinformation by the medical elites.

Dr. MILLER-MEEKS. Thank you so much, and if I may, I would like entered into the record a letter that the Doctors Caucus sent to Dr. Walensky in September 2020 asking questions, and making inquiries into infection-acquired immunity, and looking at real-world evidence and data and research from other countries.

Dr. WENSTRUP. Without objection.

Dr. MILLER-MEEKS. Thank you, sir. I yield back my time.

Dr. WENSTRUP. I now recognize Mr. Mfume from Maryland for five minutes of questions.

Mr. MFUME. Thank you very much, Mr. Chairman. I want to take exception with something that I heard here in this hearing, and that is that racial minorities across our country had a greater sense of immunity and were impacted less by this disease. In fact, infection-acquired immunity and all the other things were even more dangerous in minority communities, both when looking at death rates and broader inequalities in the healthcare system. In fact, the total cumulative data that we have and is available to all of us show that black Americans, Hispanic, American Indians, Native Alaskans, Native Hawaiians, and Pacific Islanders all suffered higher rates of COVID–19 cases and deaths. That is the record, so the suggestion from some that, well, it was not that bad in these minority communities I think is a biased, xenophobic, and absolutely incorrect proposition to be putting forward. So let the record really reflect that those communities got hit harder, and those deaths rates were higher, and those cases went up.

I think what we ought to do here is to sort of transport ourselves back to the dark, difficult days of COVID. We are looking back now is if we are looking through Alice in Wonderland's looking glass at what took place, and we all run the risk of being Monday morning quarterbacks. What we were dealing with we were dealing with in real time. Were there assumptions that were incorrect? Yes. Were there efforts underway to try to grab and get ahold of this? Yes. Did some of them work? No. Did some of them work? Yes. But when you are in the middle of a crisis, you are not trying to look to find the perfect way out. You want a way out to be able, particularly in this case, to save lives. So, it is great to look back and say if we could have, should have, would have, but the fact of the matter is that this entire Nation was dealing with something in real time.

People were washing their hands and told they need to wash them 20 to 30 times a day. Many of us thought that this disease was transmitted by touching. Others thought it was transmitted because of closeness. There were quarantine times that varied from 7 days to 17 days. Students on college campuses and other young people were afraid to get a vaccine because the social media posts were saying it will create infertility among you. We were washing our groceries as they were being dropped off at our door before, we brought them into our homes. So, we were in real time, and in real time you are going to get some things right and you are going to get some things wrong, but at the end of the day, the real key is to try to find a way to save lives.

Now, my bigger concern, Mr. Chairman, is that we don't play into the notion of vaccine hesitancy. It takes us down a dark, difficult path and one that we all, I hope, don't want to go down, particularly when we see now that measles, mumps, and even polio are starting to reemerge in this country because of hesitancy, in many instances by parents who don't want to get vaccines for their children, and in other instances just because people have this boogeyman theory that somehow or another, if you put something in your arm that has been scientifically and medically researched and approved that it is going to distort you, change your DNA, create a monster, or do something far worse.

So, I hope and really pray that this hearing does not add to this notion of vaccine hesitancy. Is it important to look back? Absolutely, yes. That is the only way we can identify things that we agreed with, disagreed with, things that worked and didn't work. But to assign blame when we were all trying to figure this out together, I think, is absolutely the wrong way to go, and that means Republican blame, Democratic blame, Independent blame. We were all in real time.

So, it troubles me when I continue to see the sort of political machinations that are taking place, pointing the finger and blaming, and say we created a worse problem than we had. Actually, I thought we did pretty good getting out of the problem that we did have, and I think we have our larger medical community to thank for that and the number of people who were on the line, who were not physicians but regular men and women who worked in jobs where they were very susceptible of becoming ill, who went to work every day, who we don't even talk about now because we took them for granted.

So, we have come a long way since we were in the middle of this crisis, and I think it is important to always keep that in consideration and in the right context. I yield back. Thank you, sir.

I now recognize Mrs. Lesko from Arizona for five minutes of questions.

Mrs. LESKO. Thank you, Mr. Chair.

Dr. WENSTRUP. Actually, if I may before you begin. We will reset the clock. Mr. Mfume, you made a statement that I could recognize from the panel that they are confused on who you thought made a statement, and I would like them to have the opportunity to maybe clarify or rectify or respond to the accusation of what someone said, you know——

Mr. MFUME. Sir, you are the Chair, so you——

Dr. WENSTRUP. Which doctor? Which doctor? I would like to let them have the opportunity——

Mr. MFUME. Dr. Smelkinson.

Dr. WENSTRUP. Thank you.

Dr. SMELKINSON. Yes. Thank you for giving me the opportunity to respond. I actually do agree with you, and I said that the lower-income communities did tend to have more natural immunity. They were more impacted by COVID–19. They also tended to be less vaccinated. I think that those things are linked. When it came to the vaccine mandates that made no exemptions for natural immunity, my point was that those mandates were not very equitable because if you are if you are not making exemptions for natural immunity, those communities weren't able to live up to the mandate.

Dr. WENSTRUP. Thank you. Mrs. Lesko, you are recognized.

Mrs. LESKO. Thank you, Mr. Chair, and this is a great discussion because the purpose of this Committee, from my understanding, is to try to learn from what we did right and what we did wrong so when the next pandemic comes along, we aren't going to repeat it, hopefully.

So, my first question is for Dr. Makary. In October 2020, Rochelle Walensky, who would later become CDC director, co-authored a memorandum published in the Lancet that stated, "There is no evidence for lasting protective immunity to SARS CoV–2 fol-

lowing natural infection." Was there any data at the time that would have supported her statement or refuted her statement?

Dr. MAKARY. Well, first of all, the absence of evidence isn't the evidence of absence, and she should have known that all other viruses yield natural immunity with ultra-rare exceptions, including the two other coronaviruses that cause severe illness in humans. Both were studied to have long-term immunity, so I think it was intellectually dishonest. But even worse, she dug into her position as the data were overwhelming, even to this day the Djokovic doctrine in place yesterday in America prevented teachers at federally funded schools from working. We won't allow people with natural immunity to work unless they have the full vaccine primary series. Well, guess what? We are hurting children from ignoring natural immunity.

It is not historical. It is not looking back and blaming. It is right now. A hundred and sixty schools in Missouri have gone down to a four-day school week because they don't have enough teachers. They have left. Hospitals are understaffed. Response times are longer for first responders, not because of a historical mistake. They are still ignoring natural immunity. Even at my university, you can't go to school without the primary vaccine. Even if you have had COVID three times and were in the ICU with myocarditis, you still need to get the COVID vaccine. That is intellectually dishonest.

Mrs. LESKO. Thank you. That is very passionate, very appropriate because our last hearing we had was about school closures and how that adversely affected students. You know, did you bring this up, and I haven't done the research. So, did you bring up the natural immunity, and were you shut down? Were you censored?

Dr. MAKARY. I was not censored. I always cited data, but I can tell you that natural immunity was considered misinformation by our public health oligarchs as they spread their own misinformation on many other topics.

Mrs. LESKO. And a related question to all three of you, in the early stages of the pandemic, do you believe that Federal public health officials were aware of the centuries-old knowledge of infection-acquired immunity?

Dr. SMELKINSON. Yes, they were definitely aware of that, but even if they thought SARS CoV–2 was different, certainly by mid–2020, there was a lot of immunological data showing that recovered patients had a very robust B cell and T cell response, and they were seeing that it was lasting over many, many months, so they did, and it was very similar to the T cells that were made by SARS–1 that were still reactive almost 20 years later. So yes, I think they knew early on that natural immunity was strong.

Dr. TAN. I think they knew that there was some natural immunity. I would imagine that the question they were asking is how much do you need to be protective. And, you know, at the time because there was so much disease going around, they had to make very difficult decisions as to what was going to be beneficial for the majority of the individuals.

Mrs. LESKO. Did you want to add anything?

Dr. MAKARY. If I could just add, because in my role as editor-in-chief of *Medpage Today*, the second largest trade publication read

by doctors in the first two years of the pandemic, I asked has anyone seen a healthy person who has recovered from COVID show up in an ICU. The answer was always no. Maybe there is somebody out there, but by and large, it protected against severe disease in the first two years. It was always right in front of our eyes. A New England Journal of Medicine study where the editors are your friends and they called it misinformation, that was establishment group-think, and the reality is we always knew those precious life-saving vaccines should not have been going to people, first in line already immune with natural immunity, as thousands died a day.

So, it was not a philosophical point. Thousands of Americans died from natural immunity and over a million people left the work force, and we are still suffering in schools and hospitals, in all sorts of settings because of that ignorance. And they still haven't issued any kind of apology, rehiring, or back pay in the vast majority of those instances.

Mrs. LESKO. Thank you, and I yield back.

Dr. WENSTRUP. I now recognize Ms. Ross from North Carolina for five minutes of questions.

Ms. ROSS. Thank you, Mr. Chairman. I'd like to start out I know we have pointed a lot of figures and a lot of places on both sides of the aisle, but I want to commend the Biden administration's work in delivering and deploying COVID–19 vaccines. And there is no doubt that the strong coordination between public health organizations, governmental agencies, and healthcare professionals helped save countless lives. And that happened in my home state of North Carolina, where our Department of Health and Human Services went to every corner of the state, worked with Latino medical professionals, worked with the Native-American community, helped the African-American community overcome vaccine hesitancy from, you know, a history of racial discrimination. And we need to praise the people who made sure that people who needed vaccines got them as quickly as they possibly could, and these efforts are a testament to our Nation's ability to respond to a health crisis.

The rapid development, which I would give the Trump administration credit for, the delivery and the administration of vaccines was not only critical for our domestic response but played a major role in the international community and was instrumental in saving lives around the world. We sent vaccines around the world, and our vaccine strategy strengthened our relationship with many of our allies and reaffirmed our commitment to addressing the pandemic on a global scale. I would also like to address the fundamental representation that some, not all, of my colleagues on the other side of the aisle have made, which is that somehow infection-acquired immunity replaces the need for a vaccine. We need them both. We need them both.

While COVID–19 infections do confer immunity, it does not reduce the role that vaccines play in safely promoting widespread immunity. For example, any argument that assumes that everyone will survive a COVID–19 infection fails to take into account various risk factors that people face, particularly the elderly, and we saw that in nursing homes, people with underlying conditions and people who are immunocompromised. And many of those people live

in households with young, healthy people who might bring COVID into the home. My brother has lupus and lives in a household with teenagers. Dr. Tan, what risks do infections pose to the communities that I mentioned?

Dr. TAN. Actually, you bring up a really good point. Infection in those communities, so immunocompromised, the elderly, the very young under a year of age, and those with, you know, underlying comorbidities, infection really significantly increases the risk of the development of complications, hospitalizations, and dying from COVID–19.

Ms. ROSS. And did we see people dying?

Dr. TAN. Absolutely.

Ms. ROSS. And does vaccination reduce the threat of infection posed to these particular communities?

Dr. TAN. Absolutely.

Ms. ROSS. Also, I want to talk about long COVID. Long COVID has been shown to be more frequent and more severe among people who are not vaccinated. Dr. Tan, how do other effects of long COVID factor into the vaccine versus infection-acquired immunity conversation?

Dr. TAN. So that is a very good point in that we know that if someone is vaccinated, they are significantly less likely to develop symptoms of long COVID, and the same is true for multi-system inflammatory syndrome, which is one of the consequences that we see both in children and adults, but much more in children. And those that are unvaccinated are much more likely to go on to develop MIS-C as opposed to those that are vaccinated.

Ms. ROSS. In the few seconds that I have left, Dr. Tan, in your written testimony, you note, "The body of evidence for infection-acquired immunity is more limited than for vaccine-induced immunity." Can you explain this a little bit more?

Dr. TAN. So, you know, I think what we are learning is that with vaccine-acquired immunity, we know that it does provide protection and that the amount of protection has changed a bit with regards to the emerging variants of Omicron that have now become the main players for COVID now. And so, with that, we are able to produce a vaccine that is going to be effective and provide better immunity against the Omicron variants. Likewise, we know from one of the studies that the immunity that you get from infection-induced immunity prior to the Omicron does not protect as well against preventing reinfection with an Omicron variant.

Ms. ROSS. Thank you, and I yield back.

Dr. WENSTRUP. I now recognize Mr. Cloud from Texas for five minutes of questions.

Mr. CLOUD. Thank you, Mr. Chairman, and I wanted to take a moment and kind of clear up some of the, really, misinformation even coming from this campaign. The Ranking Member has alluded a number of times, along with some Members of his side of the Committee, that that those of who are saying the public officials should have considered naturally acquired immunity and the data there, and the over millennia of scientific understanding about that, that we were somehow advocating for COVID-catching parties, it is ridiculous and itself is misinformation.

Using that same logic model, I could claim that they are advocating that the government public officials should be lying to the American people in order to enforce mandates and do other kinds of things that happened to keep people out of their profession, to keep medical experts who were speaking to this issue out of their scientific understanding and data, that they should have been banned from Big Tech, and conspiring with Big Pharma to do that. I am not making that accusation, but that is exactly what the same logic model would do.

And so, I think it is about time that we get back to talking about what happened because vaccine hesitancy is an issue. I am thankful that the vaccine was created. I am thankful that was developed, and for those that it helped. What is a big issue and even a bigger issue, and certainly within jurisdiction of this Committee as a subcommittee of government oversight, is to make sure that our taxpayer-funded public health officials aren't conspiring against the very people they are supposed to be serving.

Time and time again, the American people were told by Dr. Fauci and the Biden administration to take the vaccine, and at the time it was experimental at best. The data was very new. It was necessary, you know. There was emergency use authorization because we didn't know what we were dealing with, but then it began to be mandated on the people. People lost jobs. Suddenly vaccine passports are made a reality. And if the shutdowns weren't damaging enough, we had medical people that were taken out of the industry when they were supposed to be helping people. These people, many of them decided not to take the vaccine, not because of conspiracy theories or anything like that, but just because they had a natural immunity. Many studies early on, or at least certainly a few months into it, gave us data that this was an issue that should have been concluded.

I would like to submit to the record an August 2021 study later published in the Journal of Clinical Infections and Infectious Diseases, which found that natural immunity offered up to 13 times more protection than vaccine immunity versus Delta, suggesting that winning vaccine efficiency and robust and durable immunity for previously infected persons; an August 2021 study published by the Journal of Science, which found broad antibody response from infection-derived immunity that protected against a wide variety of COVID variants; a September 2021 study published in Nature, which showed natural immunity offered as good or better protection against the Delta variant; a November 2021 article in the *Lancet* regarding natural immunity, which stated that "Protection from reinfection is strong and persists for more than 10 months of follow-up," and also asked why naturally immune persons weren't given the same considerations as vaccinated people; a November 2021 response to a FOIA request by the CDC in which they stated they could not provide any documentation of naturally immune persons getting reinfected and then being transmitted to someone else; and a September 30 *ABC* article that was titled, "Hundreds of Hospital Staffers fired or Suspended for Refusing COVID–19 Vaccine Mandates," that talked about President Biden mandating vaccines for the healthcare industry.

Mr. CLOUD. Dr. Makary, I would like to ask you about the ethical concerns you have about the Federal Government mandating or compelling medical treatment that provides such treatment that Big Pharma basically can benefit from.

Dr. MAKARY. I heard from many parents who said, look, my child, we are concerned about myocarditis. Maybe they had myocarditis in the past and they are being told you still need to get the vaccine. They already had high levels of antibodies. A nurse, who was going to get fired for not being vaccinated, already had high levels of the antibodies that neutralize the COVID virus, but they were antibodies that Dr. Fauci didn't recognize. And so, we had a million people leave the work force, and hospitals are understaffed.

So, Dr. Fauci in early 2022 sees the mountain of evidence out there on natural immunity, including the studies you cited, and he says, you know what? We have got to address this. A Biden administration official has a phone call with Dr. Fauci and four invited doctors, loyal friends of the Biden administration who supported mandates and restrictions. And they ask them, should we give credit for a vaccine if you had natural immunity. The vote was tied 2–2, and Dr. Fauci says, you know what? We are just going to continue to ignore natural immunity, and we have the Djokovic doctrine that lives up until yesterday. Why would you put such a critical vote on policy in front of a straw poll of a couple like-minded friends?

Mr. CLOUD. That is tragic, literally. I yield back.

Dr. WENSTRUP. Mr. Cloud, without objection, the articles you referenced are submitted for the record.

Mr. CLOUD. Thank you, Mr. Chairman.

Dr. WENSTRUP. I now recognize Mr. Garcia from California for five minutes of questions.

Mr. GARCIA. Thank you very much, Mr. Chairman. I was mayor of Long Beach for the last eight years, so we have a large public health department, about half a million people, so I saw firsthand the impact of our vaccine rollout and how important it was to public health. And our region and broader L.A. County was hit really hard during 2020/2021 during that winter surge, of course, before vaccines were available. Our regional healthcare system was at a breaking point. ICUs were full. On certain days, we were losing dozens of lives across L.A. County. It was a horrific experience. In my city alone we lost 1,300 people from our community. We know that across the country, we have lost over 1.3 million American lives. One of those lives was my mother. Another was my stepfather. I know the impacts of this pandemic and how destructive it can be on families.

I want to remind us that during that time, there was a Regional Quality Health Index on the quality of air, and the amount of crematoriums that were actually having to be in operation where damaging air quality. That is how horrific the time was, and I think it is important to remember how bad the pandemic actually impacted us because I think we have a tendency to forget the lives impacted and the real impact to our economy as well.

We did everything we could to get folks vaccinated in Long Beach. We were the first city to vaccinate 99 percent of our seniors in California, the first city in the state of California to vaccinate

our teachers. Both the Governor and the President called our approach a national model, but I am very concerned about the attack on vaccination efforts. I am very concerned when folks within the Congress, even on this Committee, put out disinformation about what vaccines are.

There are 3 million Americans today that are likely alive thanks to vaccinations. We know this, and despite this, many of our colleagues in the majority have chosen to undermine COVID vaccinations in general. I want to also point out that misinformation hurts our efforts. We know that Republicans in general are 2 1/2 times more likely to believe misinformation, and studies have shown that states with higher vaccination rates have had significantly fewer COVID deaths, so these are facts.

I want to share some examples of this harmful misinformation today and the rhetoric that has actually led to, I think, huge public health emergencies in this country. This is one tweet that has actually been sent out by a Member of this Committee, which essentially says that we are suggesting that COVID vaccines are associated with nearly 6,000 deaths and actually encouraging folks to not get vaccinations. Dr. Tan, what do you think about this claim about the 6,000 deaths around vaccinations?

Dr. TAN. Well, in this country, we have a very, very robust vaccine system that looks at all the different potential adverse effects that may be associated with vaccines. So, the problem is that some of these deaths, even though they are reported, it may have been the vaccine was given, but the death was not due to the vaccine itself.

Mr. GARCIA. Absolutely. Absolutely right, and actually to say, no, do not get the vaccine is completely irresponsible. Would you agree with that?

Dr. TAN. I agree.

Dr. JACKSON. Mr. Chairman, point of order.

Mr. GARCIA. Dr. Tan——

Dr. JACKSON. Mr. Chair?

Mr. GARCIA [continuing]. I also would like to go to the second——

Dr. WENSTRUP. The gentleman will suspend.

Dr. JACKSON. His remarks are clearly disparaging and sullying a Member of Congress.

Mr. GARCIA. I am just clearly pointing out facts from public statements.

Dr. WENSTRUP. The Chair reminds the gentleman from California to observe proper decorum. The issues we are debating are important ones that Members feel deeply about. While vigorous disagreement is part of the legislative process, Members are reminded that we must adhere to established standards of decorum in debate. It is a violation of House rules and the rules of this Committee to engage in personalities regarding other Members or to question the motives of a colleague. Remarks of that type aren't permitted by the rules and aren't in keeping with the best traditions of our Committee. The Chair will enforce these rules of decorum at all times and urges all Members to be mindful of their remarks.

Mr. MFUME. Mr. Chairman?

Dr. WENSTRUP. You may proceed.

Mr. MFUME. I have a point of order on this side.

Dr. WENSTRUP. You are recognized.

Mr. MFUME. Mr. Chairman, I don't know that the gentleman from California was disparaging anyone. He put up a tweet, that is a fact, that exists online, available for anybody to look at. And so because we customarily throughout the Congress will take quotations and quotes and use them once they appear in the public record, I think this is in keeping with that, and I don't think this was an effort to disparage but an effort to instead point out what a particular Member or Members of this Committee may have put out themselves in the public space that we all refer to as social media.

Dr. JACKSON. Mr. Chairman, I believe that the Member said she was clearly trying to cause harm.

Dr. WENSTRUP. At this point, it is the ruling of the Chair that the gentleman may proceed. However, I remind the gentleman to be cautious and to understand the decorum as he proceeds with his remaining time of 1 minute and 46 seconds.

Mr. GARCIA. Thank you very much. I will just read the next few public statements. I appreciate that. This next tweet actually, and I will just go ahead and read what it says here, it says, by a Member of this Committee, "The FDA should not approve the COVID vaccines. There are too many reports of infection and spread of COVID–19 among vaccinated people. These vaccines are failing and do not reduce the spread of the virus and neither do masks." You can read the rest of it here. Dr. Tan, what do you think about this tweet, about the FDA not approving vaccines? Do you think that is helpful or hurtful in vaccine information and misinformation?

Dr. TAN. I think it would be hurtful if the FDA did not approve the COVID vaccines because we know that COVID vaccines saved millions of lives——

Mr. GARCIA. Thank you.

Dr. TAN [continuing]. By their approval and their use.

Mr. GARCIA. And I will show you one last one just to ensure that we were on track, and, again, I will just read the tweet. It is a public statement. This tweet actually says that "Vaccinated employees get a vaccination logo just like the Nazis forced Jewish people to wear a gold star. Vaccine passports and mask mandates create discrimination against un-vaxed people who trust their immune systems to a virus that is 99 percent survivable." Do you think that this tweet which compares vaccinated people to Jewish folks living under the Nazis, what kind of impact would this have, you think, on public health?

Dr. TAN. I think it would have a negative impact on public health, and I respectfully disagree with that particular sentiment that has been put forth. I mean, we know that vaccines are lifesaving, and they should be made available to everyone so that there is no disparity.

Mr. GARCIA. Thank you very much, Dr. Tan. I really appreciate that. I think it is really important for us to remind the Committee and the public about public statements that are made by Members of this Committee, particularly as questions are asked, and so thank you very much, all, for your service. I yield back.

Dr. WENSTRUP. I now recognize Dr. Joyce from Pennsylvania for five minutes.

Dr. JOYCE. Thank you, Mr. Chairman. Let's regain the focus of this hearing, which is, and again, "Investigating Pandemic Immunity: Acquired, Therapeutic, or Both." In January 2022, data from the CDC Morbidity and Mortality Weekly Report showed that during the Delta surge, case rates for individuals with previous infection and no vaccinations were nearly four to five times lower than case reports for those individuals who were only vaccinated. CDC data showed the hospitalization rates also followed that similar pattern. Yet despite this data and decisions made by other nations, including the EU, to recognize the recovery from COVID–19 on the same level as vaccination status, the administration still maintained or fought to maintain a variety of vaccine mandates, either through CMS, the Department of Labor, that failed to account for the importance of natural immunity.

Dr. Makary, in your opinion as a physician, what impact has the administration's disconnect between the data and the policy regarding natural immunity had on the credibility of the CDC and actually the Biden administration at large?

Dr. MAKARY. Well, there were a lot of broken promises, regardless of what political party somebody is a member of. The promise by the Biden administration and Dr. Fauci is that we would not have vaccine mandates. That was a broken promise. They ignored natural immunity right up until this day in all their policies, and this has resulted in damaged public trust.

Now, we have been for centuries building public trust in the medical profession. A lot of that went down the drain when they lied to the American people saying that schools have to be closed for two years and cloth masking of toddlers was important to stop the transmission. They never even gave us the proper data on COVID and children. Ask any pediatrician or public health official or CDC official or Fauci or Walensky how many healthy children have died of COVID in the last three years. They can't tell you. Was it 90 percent of the deaths in children with special medical conditions? That matters because when you have a healthy young male who is at the lowest risk of COVID and the highest risk of myocarditis, you might want to modify the vaccine recommendation if they already have circulating antibodies from natural immunity. They did not, and that was the intellectual dishonesty we saw from public health officials.

Dr. JOYCE. Thank you. Dr. Makary, do you feel the processes by which the CDC drafts and formulates, seeks input from internal and external stakeholders, and finalizes its recommendations and guidance, including morbidity and mortality weekly reports, are sufficient, and do they properly reflect the views of the outside or any contrarian opinion?

Dr. MAKARY. No. The CDC's own non-peer-reviewed journal, called MMWR, MMWR is a joke. It is a joke. They publish their own flawed studies. They weaponize research. They looked at a small sliver of data from the state of Kentucky. It was the most horrific methodologic study you could possibly design, and they conclude, hey, natural immunity is no good. The study was entirely flawed, and everybody falls for it. The medical community claps

like seals and this is great, ignoring the 130 studies at the time and the incredible historical record, all the way back to 430 B.C. that natural immunity is effective. And we never saw people the first two years who were healthy come back with severe disease after they recovered, and that should have been a sign that we were being deceived by the weaponization of research itself.

Dr. JOYCE. And you bring in an interesting discussion point. You called it a joke, but the American people are not laughing. The American people want to understand, does natural immunity work? And we have evidence now that it does. Many of us on this panel felt the CDC was very slow in reporting data, specifically related to vaccines and natural immunity, that they did have throughout the pandemic. How can we promote better data stewardship through the CDC, and, most important, how do we restore the trust in the CDC with a public, which I stated, are not laughing, with a public that is increasingly skeptical with the mandates, with a public that does not respect top-down government approaches. Is there a way through this?

Dr. MAKARY. We need an apology from public health officials. We need to have scientific debate, not using censorship, but instead using scientific evidence, and I think we need some humility from public health officials. Neither vaccinated immunity nor natural immunity are perfect. Let's not try to suggest the other side is all evil, but it is not an either. We can be honest with the public about the data and still recommend safe practices today.

Dr. JOYCE. Thank you for the discussion about honesty. I thank you for being here today, and, Mr. Chairman, I yield.

Dr. MAKARY. Thank you.

Dr. WENSTRUP. I now recognize Dr. Jackson from Texas for five minutes of questions.

Dr. JACKSON. Thank you, Mr. Chair. As discussed here today in this hearing, the science we had at the time when vaccine mandates were put in place supported the concept that infection-acquired immunity not only provided protection but looks like it actually provided superior protection compared to immunity acquired by the vaccine. This is also something that we probably knew was true based on many other studies of other coronaviruses, such as SARS and MERS.

It was stated earlier that natural immunity was not disregarded in the healthcare system. I just want to point out that that is absolutely not true. Natural immunity was discounted in the medical community, and that was evidenced by the large number of healthcare workers that were subsequently fired because they refused to get the vaccine, ones that had documented COVID infections and had recovered from it.

And that brings up a point. A point was made earlier that you needed to rely on antibody testing, and that made it impossible to use natural immunity as a reason to let people come to work or stay at work and not be dismissed. That is also not true, and it is somewhat of a ridiculous excuse that was used in the efforts to undermine any ability to be able to use natural immunity for the purpose of keeping people at work or school or wherever. You didn't need that. If you had otherwise healthy individuals with documented COVID and they had recovered, you could reliably credit

them with natural immunity. We know this, right? If they tested and people were testing extensively, if they tested and they tested positive, they went home and they recovered from their infection, they came back, you could reliably say they had the infection, they recovered from it, and they would have a natural immunity. We know this for a variety of reasons, some of which I just described.

Dr. Tan, I want to ask you to speak on a few things. Can you speak on why hospitals nationwide fired rather than hire unvaccinated nurses, physicians, and other staff with infection-acquired immunity?

Dr. TAN. I don't have a comment on that. I don't know the reason that hospitals did that, but, you know, I think now there is more data on the fact that you do have immunity after infection, and that immunity can play a role in be being protective. But I can't comment on why hospitals would have fired individuals.

Dr. JACKSON. I mean, this kind of stuff is still going on today, and we obviously know this now, and it is still happening today. Why did hospitals implement the vaccine mandates without providing exceptions for staff with infection-acquired immunity? Do you know the answer to that?

Dr. TAN. I don't know the answer to that. I can say that it was probably because they wanted to protect as many patients as possible from not getting COVID from the person taking care of them. And again, the pandemic has evolved, so that, you know, when some of this was occurring early on, it was a matter of trying to protect the patients and the people providing care to the patients so that we didn't have COVID being transmitted in the hospital setting.

Dr. JACKSON. Can you tell me how many staff members were let go or put on leave at your hospital for not getting the COVID–19 vaccine?

Dr. TAN. So, people were not fired at my hospital.

Dr. JACKSON. So, if they refused the vaccine, they were allowed to continue to work and provide care to patients?

Dr. TAN. In certain places in the hospital, yes.

Dr. JACKSON. So, no one at your hospital was dismissed at all for refusal to get a COVID vaccine?

Dr. TAN. I don't about "at all," but if there were a number, it was really very, very small. I mean, we really tried to retain as many individuals as possible.

Dr. JACKSON. Well, I wish I could say that was the case all over the country, but it definitely wasn't. It wasn't in the area that I represent. There were many healthcare workers that either had the choice of leaving voluntarily or being fired because they refused to get the vaccine, and many of them are doing it because they understood that they had natural immunity because they had previously had an infection and had recovered from it. Some of them had actually been sick more than once and had recovered, and they had been tested multiple times, and it was well-documented.

And I just think it led to a lot of problems, and it probably led to a lot of excess deaths. We had these shortages nationwide when we had providers that were sitting at home, not able to take care of patients. With that, I would yield back, Mr. Chair.

Dr. WENSTRUP. I now recognize Dr. McCormick for five minutes of questions.

Dr. MCCORMICK. Thank you, Mr. Chair. I am happy you are here. I consider you experts. I consider you highly qualified to be in front of us today, and yet I find it somewhat ironic, as we did our pre-interview, before you started testifying, we talked about the number of patients that we treat, and it is ironic that there are a lot of people out there that consider themselves experts without your intelligence, without your experience, without your acumen that were able to censor people like myself, who has seen more patients than probably all three of our experts here today, for COVID, that is.

And indeed, as a matter of fact, probably in all the hearings we have had so far, all the experts that have come and testified before us are very smart people and have so much great expertise, and yet I was censored, censored by the government, who had not treated one COVID patient, censored by experts who had seen a minimal, if any, patients, and that was allowed. Matter of fact, it was encouraged by the government. When the President's press secretary says we are openly working with media outlets "to decide who to censor." That is our government talking about censoring experts. So, I wanted to point that out, the irony already.

I think it is really important when we talk about treating patients and when we are exposed. By the way, it may surprise you to know that I am one first people to ever get a vaccination in America because I was on the front lines of COVID, and it was a novel virus, and I didn't know if I had immunity or not. Now, I knew it had been around for a while because we had all kinds of weird fevers and symptoms, so probably I might have had some immunity, but I got the vaccination because I believed in the science.

But as science developed and so did our immunity, the irony is that once we were known to be immune, once I had the vaccination and I continued to be exposed to thousands of patients, the booster shot continued to be explained to be something that is beneficial, even when the CDC admitted that it was at best minimally effective for the highest-risk patients. And yet still, we are pushing it on pediatric patients who had been exposed and symptomatic with no studies on the side effects of this vaccination.

So how am I supposed to trust a government that is pushing something with no evidence and possible real harm when our whole Hippocratic Oath starts with "do no harm?" And so, I wanted to ask you, sir, I have read your book, and I think you are an expert in the field. I want to ask you what do you think this does for the trust in our government, our CDC, and those people who play politics with medicine.

Dr. MAKARY. I think public health officials need to come clean and say we got natural immunity way wrong. We were so wrong on this, long after the data were available. We are sorry lives were ruined. If you look at what social media and Big Tech did to any data, scientific or an experience of a parent, on vaccine complications, it is entirely un-American. You have a rate of myocarditis of 1 in 6,000, and when parents asked about that, shut up. You shouldn't be asking those questions. If you posted any study that pointed out the complications, it was censored.

Ask any pediatrician recommending the COVID vaccine, three shots for a young healthy 12-year-old girl, what is the rate of myocarditis. Ask them what do you think of the Swiss study that two percent of people after the vaccine had an elevated troponin, an indicator of heart damage, as you know as a physician. Ask them about that.

Dr. MCCORMICK. So, I am unlimited time, so I couldn't agree with you more. Here is the problem. We in America have been very shorted on the studies allowed to find out the damage of vaccinations. And, in fact, I am sure any immunologist would know that once you are immune to something and you are exposed to it repeatedly, you are likely to have a hyper-immune response because your body is already prone. And it is something that causes you hyper-coagulability or inflammation that can cause a stroke, a heart attack, a DVT, or any sort of pleural thickening in your lung, things that are life threatening to expose yourself to a pathogen, even if it is a vaccination, and that immune response that could cause real harm has not been studied. We have not had an honest conversation.

And I point out another point of hypocrisy in our government, by the way. These same people that worry about disease in our population are the same ones who opened up the Southern border, and, ironically, they limited our travel, United States citizens' travel, and business by their vaccination status and their testing status. Meanwhile, they let hundreds of thousands, maybe actually millions of people across the Southern border without a test, without a vaccination, and indeed, disseminated them during the worst part of the pandemic all over the United States. Hypocrisy. Hypocrisy.

And by the way, my ER was overwhelmed, overwhelmed by an incredible amount of people who were infected by COVID, and you had civilians, citizens paying taxes, waiting behind in line for people who were not only not paying taxes but not paying their bills so that they could pay the bills for those people who were are waiting behind. Think about that and let that set in as you pay your taxes this year. With that, I yield.

Dr. WENSTRUP. I now recognize Ms. Tokuda from Hawaii for five minutes of questions.

Ms. TOKUDA. Thank you, Mr. Chairman. Let's set the record straight on the role COVID–19 vaccine policies and boosters have played in reopening America's schools and businesses, preventing hospitalizations, and, most importantly, saving lives. In the winter of 2020 when we were battling a new surge of COVID–19 hospitalizations and deaths, we needed to meet the moment and rapidly deploy safe, effective vaccines to the American people. Thanks to Democrats' American Rescue Plan, we did just that.

The American Rescue Plan included $7.5 billion for vaccine distribution and administration nationwide, quickly getting shots in those arms. Of these funds, $20 million went to my home state of Hawaii, which helped fully vaccinate over 80 percent of Hawaii residents, one of the highest vaccination rates in the country. The rollout of COVID–19 vaccine has been so successful and, in large part, thanks to the American Rescue Plan's bold investments and the Biden administration's decisive leadership to protect Ameri-

cans' health and safety with commonsense policies that encourage vaccinations across the board.

In fact, after President Biden announced vaccination policies for Federal employees and contractors in July 2021, we saw a 40 percent increase nationwide in vaccination rates in just four months. Coupled with additional measures to protect healthcare workers and robust Federal investments in vaccine distribution, these policies have resulted in a decline in COVID–19 deaths by 95 percent and hospitalizations by 91 percent.

Let's put this another way. In the first nine months of the pandemic, the U.S. recorded 798 COVID–19-related deaths. By comparison, we saw less than half that amount in the following two years from December 2020, when vaccines were first made available, through November 2022. That is a huge deal.

Dr. Tan, as a physician who has been on the front lines of the pandemic, had we not taken these clear, decisive, coordinated steps to get people vaccinated as quickly as possible, would more people have died? Would more Americans today be experiencing severe illness? Would hospitalization still be strained in terms of the number of patients coming through our doors?

Dr. TAN. Absolutely.

Ms. TOKUDA. Thank you. Now, we know that if we relied solely on immunity through infection, which was what we had part of the vaccination being developed when we saw more than twice the amount of deaths than we have in the last two years, the situation in the United States would have been much worse. The state where I am from in Hawaii, we saw quick adherence to vaccination requirements. This led to a record amount of vaccinations, but also what it led to was the lowest death rates and rates of infection across the country.

Something else I would like to touch upon is the importance of vaccines keeping pace with the highly infectious variants we are seeing emerge today. Dr. Tan, we know that immunity from infection alone doesn't adequately protect against variants. Can you explain how COVID–19 booster shots have been critical to protect us against emerging variants but also helping us to keep schools open, a topic we have discussed in this Committee, businesses up and running, and the rest of society safe as we reopen and try to keep our communities clean of infection as well?

Dr. TAN. Yes. The bivalent boosters give you specific immunity to the Omicron subvariants, and that is currently what is circulating at this time. And by having high immunity to that, you basically are protecting individuals so that they are able to go out into the community and resume more activities of daily life, such as going to work, going to school, patronizing local businesses, meeting with family members, et cetera.

Ms. TOKUDA. Thank you. You know, in the small remaining time I have left, I wanted to touch upon one other topic. Unfortunately, misinformation about vaccine safety, a side effect of the COVID–19 pandemic, has undermined confidence in long trusted safe and effective vaccines. UNICEF has warned parents of the danger presented by vaccine misinformation. The world is experiencing the largest global decline in decades in the number of children receiving basic immunization, and today these declining vaccination

rates are driving outbreaks of previously controlled diseases, like polio, whooping cough, and measles.

Doctors, I understand, take a Hippocratic Oath—we just heard about it—to do no harm. As we see a resurgence of once-dormant diseases as a result of vaccine misinformation, how harmful is this erosion of vaccine confidence to the health and wellness of our children, our families, and our communities?

Dr. TAN. It is normally negatively impactful. If we start to see outbreaks of vaccine-preventable diseases, you are going to get a lot of morbidity and mortality that may be associated with that are occurring, especially in the pediatric population, in people that are immunocompromised and in the elderly. So, we need to be able to control these diseases because all of these diseases are and can be fatal.

Ms. TOKUDA. Thank you. If I am hearing you right, you know, eroding confidence and vaccines results in deaths. Thank you very much, Mr. Chair. I yield back my time. Thank you, Dr. Tan.

Dr. WENSTRUP. I now recognize Ms. Greene from Georgia for five minutes of questions.

Ms. GREENE. Thank you, Mr. Chairman. While some Members on this Committee have decided to use their time to disparage me and my tweets and provide misinformation at this very important Committee hearing, I would like to talk about the biggest spreader of misinformation, and that would be the President of the United States. As a matter of fact, just months before the FDA approved the experimental COVID vaccines, President Biden said if you get vaccinated, you won't get COVID. Then it just so happened, one year later, the press secretary announced that after four vaccine doses, COVID vaccine doses, that President Biden tested positive for COVID again and was experiencing mild symptoms. That is quite a lot different than if you get vaccinated, you won't get COVID–19. That is spreading misinformation.

Also, I would like to talk about how the definition of "vaccine" was changed, and this is really important to talk about. Pre–2015, the CDC's definition of "vaccination" was "an injection of a killed or weakened infectious organism in order to prevent the disease." Then in 2015 to 2021, the definition of "vaccination," according to the CDC, is the "act of introducing a vaccine into the body to produce immunity to a specific disease." Produce immunity. Then just right after, literally right after, the FDA approves the experimental COVID–19 vaccines, they changed the definition of "vaccination" again. The new definition was changed to "the act of introducing a vaccine into the body to produce protection from a specific disease." Talk about spreading misinformation. I think that it is our governing bodies and the Biden administration and many Democrats that were spreading misinformation about these so-called vaccines.

And I am going to tell you right now, I don't think these are vaccines at all. A vaccine would stop the spread of a disease. A vaccine would provide immunity, but obviously the President of the United States got four COVID–19 vaccines and still tested positive for COVID. Dr. Makary, what is the difference there if after four COVID–19 vaccines, clearly vaccine so-called immunity, if the

President had had natural immunity, would he have continued to get tested or promoted this experimental vaccine?

Dr. MAKARY. I don't know. I do know that people who are against the COVID vaccine and I may not see eye to eye on everything, but I understand why they are angry. I understand where they are coming from because they have been lied to time and time again, even recently. The bivalent vaccine we heard from the White House podium; the data are crystal clear. Oh really? It was approved based on data from eight mice. Where is the randomized-controlled trial? Instead, they weaponize research in the government and say, OK, here is a non-randomized trial. People who got the bivalent did better. Well, guess what? They are a different type of person. They are a different risk profile.

That is the ultimate failure of our government is the lack of a critical appraisal of important research on vaccines, on vaccine complications, and on so many other issues like natural immunity.

Ms. GREENE. I agree with you, and I actually support many vaccines but not an experimental vaccine that was government mandated on the public. Dr. Tan, you said that COVID vaccines are safe and side effects are mild. I would like to talk to you about so-called, according to you, mild side effects. Let's talk about how nine days after receiving the vaccine, a 6-foot–9 healthy 17-year-old, Everest Romney, was admitted to the ICU with blood clots in his brain. Anyone who talked about the incident on social media was censored. Nine months later, he was admitted for a second time. Doctors found another blood clot, a deep vein in his right leg and potentially permanent heart inflammation.

Let's talk about myocarditis, like the NCAA Division 1 student athlete golfer, John Stokes, diagnosed with myocarditis four days after receiving a second dose. On his own Tik-Tok video in the hospital, he was explaining what happened to him. That was not misinformation that was his own testimony, and many other athletes and especially young men, who have had myocarditis. And it can be a lifelong, disabling condition, as you know. So how can you call those side effects mild?

Dr. TAN. In the vast majority of individuals, the side effects from COVID–19 vaccine are mild and temporary, and that is why the VAERS System in this country works so well because, you know, of the billions of doses of——

Ms. GREENE. I will remind you that there are 948,617 VAERS reports about the COVID–19 vaccine. That is way higher than the flu, and that is much higher than the Zoster vaccines. Thank you. I yield back my time.

Dr. WENSTRUP. Thank you, and I want to thank all of our witnesses here today for your testimonies. It is greatly appreciated. And at this time, I would now like to yield to the Ranking Member Ruiz for a closing statement, if he would like one.

Mr. RUIZ. Yes. Thank you, Mr. Chairman. We have heard a number of different perspectives today, and I want to bring us back to where we started. In the early days of the pandemic, we were dealing with a deadly, highly transmissible and highly mutating virus. As we planned our public health strategy, we prioritized saving lives and the prevention of future harm, and keeping our

healthcare system at or below capacity, and that strategy was successful.

As I said at the beginning, the Biden bind administration's implementation of the largest, most successful vaccine administration program in history prevented an estimated 3.2 million deaths. As an added bonus, it saved the United States over $1 trillion in medical costs. So, as we wrap up this conversation and as we have future conversation in this Subcommittee, I just ask that we keep our eye on the ball and focus on the prevention of harm and the prevention of getting infected.

This will almost always involve the proven public health measures that we know work, such as vaccines that are known to be safe in a public health perspective, effective, and vaccines that have saved lives, and let us be cautious about the impacts our words can have. Nuance is good, yes, but we cannot get to a place where we are explicitly or implicitly sowing distrust in COVID vaccines by focusing on the small percentage of, for example, the severe side effects when we know at a population base, it is safe and the symptoms are mild, and it has helped us get to where we are today.

So, we have a process to study vaccines, and they were studied, and we know who are at high risk because of those studies. And there are contraindications to people getting this vaccine, and there are risks, or some people, and those are the people that physicians use the data to recommend not getting the vaccines, so let's be nuanced. Let's use our words carefully, and let's sow trust in public health measures.

Let's go back to understanding that this virus spreads from airborne oral aerosols to the public and that any covering blocks that aerosol from leaving your mouth. Now, some coverings are better than others, some aren't as good, but by reducing those molecules, you reduce the risk of transmission. So, yes, masks help to reduce the risks of transmission. Just like if these molecules are transmitted by your mouth when you speak, you cough, you scream, or sing, the further you are, the less likely you will come by being infected with a droplet that either you breathe in through your nose, your mouth, your eyes. So yes, in these circumstances, social distancing is a preventive measure, public health measure.

So, vaccines do work. Vaccines are safe. I do not wish anybody, regardless of whether a natural infection can cause a more robust immune response, to go and get infected or to want to get infected or to disregard the importance of a vaccine. I don't want a Republican or a Democrat or anybody to get the symptoms to have enough viral load to transmit it to a more higher-risk person, or to risk themselves being hospitalized or even death. And those who have been vaccinated, if you fall under the category of being high risk or not immunocompetent, then I would still recommend to take all the precautions because you can still get sick, and you can still be hospitalized, and you can still die.

So, it is nuanced, and, you know, we have to work within that nuance. And I do believe that in future pandemics, we shouldn't be stuck, that are unknown viruses that can kill people, that are rapidly transmissible, that we should be focusing on just disregarding safety precautions by saying that getting infected is going to be a

protection. So, let's just be careful on the way we present this, and let us work always to put people over politics. Those are my hopes for this Subcommittee, and thank you, Mr. Chairman. I yield back.

Dr. WENSTRUP. I thank the Ranking Member, and I will say that I continue to look forward to working with Dr. Ruiz through this process over the next year and a half as we have worked well together in the past, and I think we will continue to do our best to, possibly have differences of opinions, which doctors sometimes do, and move forward with something that we can present to the American people as a better pathway for the next pandemic.

You know, we are advocating for a multi-pronged strategy to defeat COVID or the next pandemic. A majority of Americans have had COVID and have had infection-acquired immunity. We can learn a lot from that, and we should try to. I don't believe that herd immunity was ever the Trump White House's strategy. I know people talked about it, but I don't think that was ever the strategy. Protecting the most vulnerable I saw was, as we saw an emergency use authorization for the vaccine, and it was there for the elderly and those with comorbidities, and that was always a priority. And reality suggested that this contagious disease would continue to spread throughout the Nation.

Understanding infection-acquired immunity and protections it offers is essential, in my opinion, or to resume normal life in America and end things like lockdowns. It needs to be considered, and false statements, no matter where they were coming from, especially if they are coming from leadership position, is wrong. And we can look at studies and we could look at comparing Sweden and Michigan. You know, Michigan had severe lockdowns and mandates. Sweden did not. Sweden had half the deaths. What is up with that, right? Why can't we look at that?

So, you know, as doctors, if you are honest with yourself, as doctors, researchers, you can look at a study and say this is a flawed study, or this was a very good study. This is a very good study without any type of bias whatsoever. We know how to do that, and we need to do that and not pretend. You know, I am curious because I haven't ever seen anything on the initial studies, and I was very involved. We were involved with, as the Doctors Caucus, looking at was taking place with Operation Warp Speed and understanding the technology, but also how the studies were being conducted. Normally before FDA approval, you have 8,000 to 10,000 people in a study. They had 30,000 to 40,000 people, and I applaud those brave Americans that got in these studies that helped us produce a vaccine.

The one thing I am curious about is those that got the placebo and got COVID, did we look at their immunity from it? Did we make that part of our study? As far as I know, we did not. We missed that. We should have done that. That should have been part of what we were doing, lesson for the future, in my opinion. You know, we have two or three doctors on this very Committee that have actually been treating patients during COVID, and, you know, I can tell you that they feel, and they said today that, you know, infection-acquired immunity was ignored, and when they spoke about it, they were censored.

These are facts that are coming out. We got to address this, and quit playing politics with it, and say that was a wrong thing for any government to do on behalf of the health of the American people. Look, I got vaccinated. I also was out in military uniform with the National Guard testing people, driving up testing. I was out giving shots with the National Guard and when my local hospital said can you come out, or can you come out to the fairgrounds and vaccinate people as they are coming through to be part of this mission. So, when the implication is that, you know, people on one side or the other are saying, oh, it is natural immunity only, that is not true, and it doesn't help this Committee when we have comments like that coming from this Committee. Let's be serious about what people were actually doing and saying and what their concerns are.

And by the way, an opinion is far different from misinformation, and if we aren't allowed to have opinions in the medical community anymore, then we are doomed. We are absolutely doomed going forward. More times than one, I would say to a patient, here is what I believe, and if I see some hesitancy, I would say, I would like you to get another opinion, and I think that is a wise thing to. So, when we have opinions, it is not necessarily misinformation, but the fact of the matter is false statements were made by many.

Whether they intended them to be false or they knew they were false, I don't know, but they were false statements that were being made, and some of these people served on both administrations that were doing this. You know, I don't think it helped with that. That does dissipate trust in our public health system. As I said earlier, I had recommended under the Trump administration let America hear from the doctors treating COVID patients every day, not someone sitting in a lab, not someone that is not bedside with anybody. Let them tell us what is actually going on, and I think that is a lesson learned that we have to move forward.

And I heard Miss Ross say she gave credit to the Trump administration for creating a vaccine, but I don't think it helps when a candidate for office says, well, if it is made during the Trump administration, I am not going to take it. That didn't help build public confidence in what was going on. You know, we talked about say something safe. The honest discussion you have with your patient is we think this helps and here is why, but also honest is, I don't know what I will say five years from now or 10 years from now, and here are some of the adverse events that we are seeing. And you have a discussion with your patient, and you decide what what's best for you.

Look, many people got COVID. They got infection-acquired immunity. It is not necessarily that they didn't want to get the vaccine. It is because it was not available to them. And there is a lot of information we could have gained from those people that got COVID and how their body responded to it. You know, some didn't even know they got COVID. Some people got tested or checked for antibodies and found out, oh, I must have had it. I don't know when. This is all important information and data, and it is very important.

And you know what? You are not supposed to hear from Dr. Facebook or Dr. Social Media. You are supposed to talk to you, Dr. Tan, you Dr. Makary, you, Doctor. That is who people need to go

talk to, and we have to supply doctors with accurate data without flawed studies. That is the important thing. That is one of the takeaways that we need to come away with from this Committee.

One thing I never heard about, and I have never heard anyone discuss or studying, the possibility of hyper-immunity. You have had COVID. You have had the vaccine. You get the booster. What are the effects of that? Those are fair questions. Hyper-immunity is real. So, I hope that we can continue to go down this path and have good conversations, conversations with experts and amongst ourselves to where we can really have some good results and good recommendations to make for the future.

With that and without objection, all Members will have five legislative days within which to submit materials and to submit additional written questions for the witnesses, which will be forwarded to the witnesses for their response.

Dr. WENSTRUP. If there is no further business, without objection, the Select Subcommittee stands adjourned.

[Whereupon, at 12:43 p.m., the Select Subcommittee was adjourned.]

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