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BOOSTER SHOT: ENHANCING PUBLIC HEALTH THROUGH VACCINE LEGISLATION

H.R. 550, THE "IMMUNIZATION INFRASTRUCTURE MODERNIZATION ACT'';

H.R. 951, THE "MATERNAL VACCINATIONS ACT'';

H.R. 979, THE "VACCINE FAIRNESS ACT'';

H.R. 1452, TO DIRECT THE SECRETARY OF HEALTH AND HUMAN SERVICES TO PUBLISH THE FORMULA THE SECRETARY USES TO DETERMINE THE ALLOCATION OF COVID-19 VACCINES, AND FOR OTHER PURPOSES;

H.R. 1550, THE "PROMOTING RESOURCES TO EXPAND VACCINATION, EDUCATION AND NEW TREATMENTS FOR HPV CANCERS ACT OF 2021'' OR THE "PREVENT HPV CANCERS ACT OF 2021'';

H.R. 1978, THE "PROTECTING SENIORS THROUGH IMMUNIZATION ACT OF 2021'';

H.R. 2170, THE "HELPING ADULTS PROTECT IMMUNITY ACT,'' OR THE "HAPI ACT'';

H.R. 2347, THE "STRENGTHENING THE VACCINES FOR CHILDREN ACT OF 2021'';

H.R. 3013, THE "COVID VACCINE TRANSPORTATION ACCESS ACT'';

H.R. 3655, THE "VACCINE INJURY COMPENSATION MODERNIZATION ACT'';

H.R. 3742, THE "VACCINE INFORMATION FOR NURSING FACILITY OPERATORS ACT'' OR THE "VACCINE INFO ACT''; AND
H.R. 3743, THE "SUPPORTING THE FOUNDATION FOR THE NATIONAL INSTITUTES OF HEALTH AND THE REAGAN-UDALL FOUNDATION FOR THE FOOD AND DRUG ADMINISTRATION ACT''
TUESDAY, JUNE 15, 2021
House of Representatives,
Subcommittee on Health,
Committee on Energy and Commerce,
Washington, D.C.

The subcommittee met, pursuant to call, at 10:30 a.m. via Webex, Hon. Anna Eshoo [chairwoman of the subcommittee], presiding.

Present: Representatives Eshoo, Butterfield, Matsui, Castor, Sarbanes, Welch, Schrader, Cardenas, Ruiz, Dingell, Kuster, Kelly, Barragan, Blunt Rochester, Craig, Schrier, Trahan, Fletcher, Pallone (ex officio); Guthrie, Upton, Burgess, Griffith, Bilirakis, Long, Bucshon, Mullin, Hudson, Carter, Dunn, Curtis, Crenshaw, Joyce, and Rodgers (ex officio).

Also Present: Representative Schakowsky.

Staff Present: Jacquelyn Bolen, Health Counsel; Jeff

Carroll, Staff Director; Waverly Gordon, General Counsel; Tiffany Guarascio, Deputy Staff Director; Perry Hamilton, Clerk; Stephen Holland, Health Counsel; Mackenzie Kuhl, Press Assistant; Una Lee, Chief Health Counsel; Aisling McDonough, Policy Coordinator; Meghan Mullon, Policy Analyst; Kaitlyn Peel, Digital Director; Tim Robinson, Chief Counsel; Chloe Rodriguez, Clerk; Kylea Rogers, Staff Assistant; Kimberlee Trzeciak, Chief Health Advisor; Rick Van Buren, Health Counsel; C.J. Young, Deputy Communications Director; Alec Aramanda, Minority Professional Staff Member, Health; Sarah Burke, Minority Deputy Staff Director; Theresa Gambo, Minority Financial and Office Administrator; Seth Gold, Minority Professional Staff Member, Health; Grace Graham, Minority Chief Counsel, Health; Nate Hodson, Minority Staff Director; Peter Kielty, Minority General Counsel; Emily King, Minority Member Services Director; Bijan Koohmaraie, Minority Chief Counsel, O&I Chief Counsel; Clare Paoletta, Minority Policy Analyst, Health; Kristin Seum, Minority Counsel, Health; Kristen Shatynski, Minority Professional Staff Member, Health; and Olivia Shields, Minority Communications Director.

*Ms. Eshoo. The Subcommittee on Health will now come to order.

And due to COVID-19, today's hearing is being held remotely. All members and witnesses will be participating via video conferencing.

As part of our hearing, microphones will be set on mute to eliminate background noise and, members and witnesses, you will need to unmute your microphone each time you wish to speak. So please try to remember that.

Documents for the record should be sent to Meghan Mullon at the email address we have provided to your staff. All documents will be entered into the record at the conclusion of the hearing.

The chair now recognizes herself for five minutes for an opening statement.

Good morning, colleagues, and good morning, witnesses. Vaccines are a powerful testament to scientific genius. As President Biden said about the COVID-19 vaccine, "Every shot is giving a dose of hope.''

We have seen the power of the safe, effective, and free COVID-19 vaccines. As they become widely available, fewer COVID-19 hospitalizations and deaths are being reported each day than at any point since the pandemic began. COVID-19 vaccines aren't unique in their lifesaving ability. According to the CDC, routine childhood vaccinations have

prevented more than 21 million hospitalizations, and over 700,000 deaths among children born in the last 20 years.

But a vaccine that remains in its vial is zero percent effective. That is why the Vaccines for Children program is one of the most important public health achievements in our nation's history. The Vaccines for Children program provides free and easy access to vaccines to children in low-income families. And thanks to the program, most children are no longer vulnerable to measles or whooping cough.

But this continued success is not guaranteed. The shelter-at-home orders caused childhood vaccinations to plunge last year. According to the CDC, clinicians ordered 11-and-a-half million fewer vaccine doses for children, compared to the previous year. Gaps in vaccine rates could lead to deadly outbreaks among our nation's children.

Fortunately, Dr. Schrier, our subcommittee's resident pediatrician, has introduced the bipartisan Strengthening Vaccines for Children Act. The bill expands the Vaccines for Children program to cover more children and clinicians at more locations, and reduce the financial and administrative barriers to boost vaccine rates. The bill provides vaccine counseling for parents, which is important to address misinformation, as well as making clear to parents that vaccines are free for children, even if they are uninsured or on Medicaid.

Representative Sewell's Maternal Vaccination Act helps make sure that newborns and pregnant mothers are protected from the flu and whooping cough. By receiving the Idap (sic) and flu vaccines while pregnant, mothers avoid serious -- potentially serious hospitalizations, while also providing the mother's gift of antibodies to their newborns.

While the benefits of maternal vaccinations are clear, our health care system does a poor job of helping pregnant women receive important vaccines. A CDC pre-pandemic survey found that only 35 percent of mothers receive both the Tdap and flu vaccine during pregnancy.

Vaccines are important as people age. Seniors should receive vaccines to prevent the flu, pneumonia, shingles, tetanus, and whooping cough. Representative Kuster's bipartisan Protecting Seniors Through Immunization Act ensures that all Medicare Part D-covered vaccines are free to beneficiaries.

Our hearing today will cover 12 bills, most of them bipartisan. The aim is to ensure that every American, no matter their age, race, or income are empowered to receive the dose of hope from vaccine protection. Our communities can be completely free of vaccine-preventable diseases, including COVID-19, so I look forward to hearing from our superb witnesses today how the critical bills before us will help achieve this important goal.

[The prepared statement of Ms. Eshoo follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. The chair now recognizes with pleasure Mr. Guthrie, the ranking member of our Subcommittee on Health, for five minutes for his opening statement.

*Mr. Guthrie. Thank you. Thank you, Madam Chair, Chair Eshoo, for holding this important hearing on vaccines.

Vaccines are the exact reason we can and should be in person today in the hearing room. We are asking Americans to come back to work. Members of Congress should also be back at work in the hearing room. I am forward to -- looking forward to the committee meeting together in person very soon.

Without Operation Warp Speed, we would not have three safe and effective vaccines that are currently being administered to Americans. Congress and President Trump came together to help unleash private-sector innovation to make this possible. Without medical innovation, we would be nowhere close to where we are currently with COVID-19 vaccination numbers. Roughly 52 percent of Americans have received at least 1 dose, and about 43 percent of Americans are fully vaccinated.

We have advanced and improved our COVID-19 vaccine distribution strategies, and continue to do so. Congress has appropriated nearly $4 trillion in response to the COVID-19 pandemic. Most recently, Congress provided 1.9 trillion through the American Rescue Plan, with only 9 percent of the

funding going directly to fighting COVID-19. Of the 9 percent of COVID-19 relief, 7-and-a-half billion was appropriated for vaccine planning, distribution, monitoring, and tracking; 1 billion for vaccine confidence activities; and 6.05 billion for COVID vaccine supply chain; and 7.6 billion for community health centers for activities, including COVID-19 vaccine distribution and administration, testing, and community outreach.

This bill became law four months ago. Have these funds been distributed? How are these funds currently being used?

As a former Republican leader of Oversight Investigation Subcommittee, I believe that oversight is a very important aspect of our response. I have supported much-needed relief for American families, workers, and small businesses, but we must ensure it is being used effectively and wisely. Specifically, I am concerned that a number of these bills are duplicative of current efforts already underway to address the COVID-19 pandemic.

Let me be clear. I support efforts to give every American the opportunity to be vaccinated, and any other vaccine-preventable disease where a vaccination is recommended. But at this point we need to fully evaluate the current situation: Why are Americans not getting vaccinated?

We need to tailor meaningful solutions to these problems. Cost may be part of the problem, but there are

likely other issues that negatively affect vaccination rates.

For example, we are considering today H.R. 979, the Vaccine Fairness Act, which would require weekly reporting of vaccines -- vaccine distribution. I agree with my colleagues that this information is helpful, but this is currently already being done by HHS, and each member of the committee receives its Vaccine Information Weekly.

Additionally, today, we are examining H.R. 3013, the COVID Vaccine Transportation Access Act. This bill would provide grants for transporting -- transportation to receive vaccines. I certainly agree that transportation should not be a limiting factor for an individual, but currently there are already several resources available for these services, including Uber and Lyft, who stepped up to provide transportation. Congress also authorized non-emergency transportation for Medicaid individuals in the December bipartisan COVID-19 relief package. Lastly, many areas offer a phone number that an individual can text and make a vaccination appointment, and they can also help you coordinate a ride.

We do currently have gaps in our vaccine system, and I look forward to discussing H.R. 3742, the Vaccine Information for Nursing Facility Operators Act, or Vaccine INFO Act, which would require nursing homes to provide educational information on the value of getting all of the appropriate

ACIP-recommended vaccines for health care workers to their staff in a similar manner to how they provide educational information on certain vaccines for their residents.

I also look forward to discussing H.R. 1452. This bill would require HHS to publish the formula used to distribute that allocation of COVID-19 vaccines. This bill would allow states, local governments, and certain entities to better prepare for vaccine distribution.

And lastly, I encourage all to get vaccinated. Vaccines save lives and help protect many diseases. The Democrat bill, H.R. 3, would disincentivize further development of vaccines, and hinder development of lifesaving drugs. During a global pandemic they want to advance policies that would lead to fewer cures and treatment. This is very backwards to me, and I hope my colleagues fully evaluate how damaging a slow vaccine development could have been for COVID-19.

Many around the world, particularly the European Union, did exactly what H.R. 3 was trying to get us to do in the United States. These behaviors have resulted in the EU being way behind the U.S. in distributing COVID-19 vaccines to their citizens. We must continue to be a leader of medical innovation, and encourage the development of new treatments and cures in our great country.

And I yield back.

[The prepared statement of Mr. Guthrie follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. Thank you, Mr. Guthrie.

The gentleman yields back. The chair now is pleased to recognize the chairman of the full committee for five minutes for his opening statement.

Mr. Pallone.

*The Chairman. Thank you, Chairwoman Eshoo, for having this very important hearing.

The COVID-19 pandemic has drawn the world's attention to the value of vaccines, and the rapid development of COVID-19 vaccines was a direct result of decades of progress in the immunization landscape, and laser focus on science and safety, and historic investment by the Federal Government and the courage of clinical trial participants.

While the development of these remarkable vaccines mark a huge step forward, this terrible pandemic has also made clear that we must do more to reduce incidents of all vaccine-preventable disease. And this includes taking action to raise awareness of the value of vaccines, improving vaccine-related public health infrastructure, and reduced barriers to access for these lifesaving preventative tools. And this is, obviously, your focus today, Madam Chair.

One of the areas where we can most improve is on adult vaccination rates. As our witnesses will mentioned in their testimony today, while the vaccination rates for childhood vaccines is generally considered high, vaccination rates for

adults are lower across the board. These low vaccine rates increase the burden of vaccine-preventable disease in the United States. Each year there are over 3,000 cases of hepatitis B; 40,000 cases of pneumococcal disease; and about one million cases of shingles. Vaccination rates in the recommended adult population for each of these diseases are all below 30 percent. Moreover, only 48 percent of adults in the U.S. received a flu shot during the 2019-2020 flu season.

So clearly, we need to explore ways to increase these rates, and one place to look is the approach we are taking with children. After all, over 90 percent of American kindergartners receive the majority of their recommended vaccines for hepatitis, chickenpox, polio, tetanus, and measles, among others. And those are strong results, but we must remain vigilant.

Last week the Centers for Disease Control and Prevention reported a decline in childhood vaccination rates during the early days of the COVID-19 pandemic, which could pose a serious public health threat.

And we also know that there are significant disparities in vaccination rates by age, gender, race, ethnicity, and economic status. Black and Hispanic adults have lower vaccination rates than White adults for every recommended vaccine from the Advisory Committee on Immunization, and only 40 percent of pregnant women received the 2 vaccines

recommended during pregnancy to protect the mother and unborn child. Moreover, only 23 percent of Black pregnant women and 25 percent of Hispanic pregnant women received the recommended shots.

So coverage of vaccines by private and public health insurance plays a significant role in vaccine access. And lack of health coverage correlates with significantly lower vaccination rates.

The comprehensive collection of bills we are considering today would make significant enhancements to vaccine coverage for adults and children in Medicare, Medicaid, and the CHIP program. This includes H.R. 1978, the Protecting Seniors Through Immunization Act, which was introduced by Representatives Kuster and Bucshon. This legislation would ensure that Medicare beneficiaries are not charged out-of-pocket costs when receiving a vaccine through Part D.

And H.R. 2170, the Helping Adults Protect Immunity Act, introduced by Representative Soto, would require all state Medicaid programs to cover ACIP-recommended vaccines for adults, and prohibit cost sharing.

And then there is H.R. 2347, the Strengthening the Vaccines for Children Act, introduced by Representatives Schrier, Joyce, Butterfield, and McKinley, and that would enhance vaccines for children. This program provides vaccines to low-income children by extending eligibility and

boosting incentives for providers to participate in the program.

H.R. 951, another bill, the Maternal Vaccination Act, introduced by Representative Sewell, would create a public awareness campaign for maternal vaccinations, with a focus on communities with historically low vaccination rates. This bill is an important continuation of our work to address the maternal mortality and morbidity crisis in America.

And finally, I wanted to mention, Madam Chair, H.R. 550, the Immunization Infrastructure Modernization Act, also introduced by Representatives Kuster and Bucshon. This bill would provide funding for significant improvements to immunization information systems. These systems are critical tools for providers in public health systems, but must be brought into the 21st century information age.

Increasing immunizations in the U.S. will promote longer, healthier lives, while saving billions of dollars in health care costs. And as we climb out of the pandemic, our focus cannot be returned to the status quo. Our mandate is to build a stronger and more equitable public health system, and today's hearing, Madam Chair, and these bills is an important step.

So again, I thank you, and I yield back. Thank you.

[The prepared statement of the Chairman follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. Thank you, Mr. Pallone.

The gentleman yields back. The chair is now pleased to recognize Representative Cathy McMorris Rodgers, the ranking member of our full committee, for five minutes for her opening statement.

*Mrs. Rodgers. Thank you, Madam Chair and Republican Leader Guthrie.

Vaccines are a bright spot in the fight to enable Americans to live long, healthy lives. COVID-19 is the latest chapter in that story. It is also a bright spot to be in the committee room today with my colleagues.

We know that vaccines save lives. Thanks to vaccines, four preventable diseases have been completely eliminated from the Americas today. Between 2011 and 2020, immunization programs in low-income countries are estimated to have saved more than 23 million lives.

And now, thanks to the Trump Administration and Operation Warp Speed, we have three authorized vaccines in record time to crush COVID-19. It is because of the private sector leveraging investment and regulatory flexibility provided by Congress and the Trump Administration to unleash innovation.

Think about it. Today, just over a year since the pandemic began, we are holding a hearing about getting a vaccine to every person who wants one. At the start of the

pandemic, experts were estimated at -- estimating it would take much longer. This record speed is a remarkable story of American innovation.

Since December, when the first COVID-19 vaccine was authorized, COVID-19 deaths have plummeted, countless lives have been saved, and, as more adults are getting vaccinated, cases are decreasing all across the country. Operation Warp Speed has brought us back from the brink, back to work, back to school, attending weddings, visiting grandparents, planning vacations without fear of an unknown virus.

Congress took unprecedented additional steps to make sure every American could get a vaccine for COVID-19 for free. But as we have seen, there is additional barriers to vaccination. I am pleased that we are examining existing programs that aim to improve access to all vaccines, to make sure that those who want vaccines can get them and, in the case of childhood vaccines, parents have the best information to make decisions for their family.

The state and Federal Governments worked together to implement two programs to make sure those who cannot afford recommended vaccines have access. The Section 317 vaccine program has been around for more than 50 years, and authorizes the Federal purchase of vaccines for children, adolescents, and adults.

Additionally, the Vaccines for Children, VFC program,

was established in 1993. The VFC provides vaccines at no cost to children who are Medicaid-eligible, uninsured, under-insured, and American Indian or Alaska Natives. With the creation of the Vaccines for Children program, the Section 317 vaccine program focuses on uninsured adults and under-insured children not eligible for VFC. These programs allow the CDC to purchase vaccines directly from the manufacturer, and then provide the vaccines to states.

As we have learned from the pandemic, state and local public health agencies are best situated to tailor programs for their communities. I am glad that we are looking at these programs today, and I hope that any COVID-19 vaccines approved by the FDA will soon be distributed through these channels.

To win the future, America must lead in the development and the discovery of safe and effective vaccines. I want to make sure that, as we debate access to vaccines, we are not disincentivizing the investment and the risk necessary to study and bring vaccines to market. Unlike drugs for when you are sick, vaccines are given to healthy children and adults. Large studies are necessary to ensure safety and build trust, given the breadth of the population often taking the vaccine. The risk benefit profile is different than, say, a cancer drug, where side effects may be more acceptable, given the risk of the disease.

More vaccines are desperately needed for diseases we know about, like HIV and flu. Just this month, promising reports released about a universal flu vaccine and potential novel ways to vaccinate against HIV.

We also need to be ready for the next unknown virus, as COVID-19 was unknown to us in 2018. The Federal Government needs to continue investing in research, and prioritizing vaccine development, while also making sure that incentives exist for private industry to do the same.

Making sure that patients have access to vaccines, once they are developed and approved, is one important way to promote and unleash innovation, and I look forward to hearing what more we can do. I yield back, Madam Chair.

[The prepared statement of Mrs. McMorris Rodgers follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. The gentlewoman yields back. I thank her for her statement.

Pursuant to committee rules, all members' written opening statements will be made part of the record.

I now would like to introduce our four witnesses that are with us today.

We are very grateful to each one of you. It is an honor to have you as a witness at our subcommittee.

First, Dr. Lijen "LJ'' Tan. He is the chief strategy officer of the Immunization Action Coalition.

So good morning to you, Dr. Tan, and welcome.

Next, Dr. Yvonne Maldonado. She is a professor of pediatrics and epidemiology and public health at Stanford University's Center for Academic Medicine, Pediatric Infectious Diseases. Dr. Maldonado is my constituent, and I am very proud of that. And I am so pleased that our subcommittee is going to benefit from her expertise today.

Importantly, colleagues, Dr. Maldonado is leading the trial of the Pfizer drug for children under the age of 12 at Lucile Packard Children's Hospital.

So welcome to you, Dr. Maldonado. We are thrilled you are with us.

Rebecca Coyle, she is the executive director of the American Immunization Registry Association.

We are so pleased and honored to have you with us.

And Phyllis Arthur, she is the vice president, infectious diseases and diagnostic policy, at the Biotechnology Innovation Organization.

Welcome to you, Ms. Arthur. We are pleased to have you with us.

So, Dr. Tan, we will start with you. You have five minutes for your testimony, and be sure to unmute.

STATEMENT OF LIJEN "LJ'' TAN, CHIEF STRATEGY OFFICER, IMMUNIZATION ACTION COALITION; YVONNE MALDONADO, CHAIR, COMMITTEE ON INFECTIOUS DISEASES, AMERICAN ACADEMY OF PEDIATRICS, PROFESSOR OF PEDIATRICS AND OF EPIDEMIOLOGY AND PUBLIC HEALTH, STANFORD UNIVERSITY, STANFORD UNITED CENTER FOR ACADEMIC MEDICINE, PEDIATRIC INFECTIOUS DISEASES; REBECCA COYLE, EXECUTIVE DIRECTOR, AMERICAN IMMUNIZATION REGISTRY ASSOCIATION; AND PHYLLIS ARTHUR, VICE PRESIDENT, INFECTIOUS DISEASES AND DIAGNOSTIC POLICY, BIOTECHNOLOGY INNOVATION ORGANIZATION

STATEMENT OF LIJEN "LJ'' TAN

*Dr. Tan. Thank you very much, Chairman Eshoo, Ranking Member Guthrie, members of the committee for allowing me to testify today. I am LJ Tan. I am the chief strategy officer for the Immunization Action Coalition. And I also co-chair and co-founded the National Adult and Influenza Immunization Summit. I also serve on the board and steering committee of the Adult Vaccine Access Coalition.

As you have heard, the enormous benefits that we have received as a result of our successful pediatric immunization program, in terms of deaths and diseases averted and health care costs saved, is clear. Policies that facilitate access to immunizations play an important part in that success. For

example, the Federal Vaccines for Children program covers uninsured and under-insured children, so that income status is not a barrier to receiving that lifesaving vaccine. However, our adult immunization coverage rates remain dramatically low.

Before the onset of this pandemic, adult rates across all vaccines recommended by the A-C-I-P, or ACIP, would be low, federally-set targets. These low coverage rates result in significant mortality, morbidity, and cost to the U.S. health care system. It is estimated that more than 50,000 adults die annually from a vaccine-preventable disease. Hundreds of thousands suffer consequences from these diseases, including hospitalizations, time lost from work and family, and reduction in their personal quality of life.

Adults aged 50 and over are particularly susceptible to many vaccine-preventable diseases, and account for a disproportionate number of the deaths and illnesses associated with them. And if that is not enough, data indicates that, for adults over 50 years of age, 4 major vaccine-preventable diseases accounted for about $26.5 billion in annual health care costs.

And as we all deal with the COVID-19 pandemic, adult immunization coverage rates have gotten even worse. You heard about the decline in pediatric rates. Adult rates have also declined drastically. And while pediatric coverage

rates are now improving, adult rates have not been recovering at the same pace.

So, despite all this evidence to the benefits of immunizing adults, particularly older adults, why are immunization coverage rates so low?

Access to vaccines and vaccination is the biggest barrier to improving adult immunization coverage rates. Adult care tends to be acute-based. So you go in to see a physician when you are not feeling well, and well care visits are challenging to adhere to in that busy adult life. As such, patients are often not aware of the vaccines that they need as adults. When you combine this lack of awareness and education with the access challenges facing adult patients, physical and logistical, many adults end up forgoing their recommended vaccines.

Many older adults live on fixed incomes, and studies indicate that additional cost to get vaccinated will delay or even prevent them from getting vaccinated.

We must improve our public health infrastructure, and particularly our immunization infrastructure, to be able to ensure that any adult in the United States is able to receive a vaccine that is recommended for them.

As we emerge from this pandemic, we need to maintain the investments made as a result of COVID-19, and recognize that the time to invest in our capacity to vaccinate all our

adults is now. The ability to deliver vaccines into this population will predict our ability to respond effectively when the next pandemic rears its ugly head. Annual readiness translates into pandemic preparedness.

What can we do to develop the immunization infrastructure that will support not only better health, but, as I suggest, also prepare us for the next pandemic to come?

We must ensure that our most vulnerable adults, our older adults and adults with chronic health conditions, can be vaccinated without barriers. In doing so, we are not only preparing the infrastructure, we are also making immunization of adults a societal norm, a preventive health intervention that we value.

The Protecting Seniors Through Immunization Act ensures all vaccines under Medicare are available to beneficiaries with no cost sharing or deductibles as part of your budget proposal to Congress. This bill brings parity to out-of-pocket costs between Medicare Part B and Medicare Part D plans. The bill also strengthens vaccine confidence by providing education on and increasing equitable access to recommended vaccines for Medicare beneficiaries.

We cannot ignore those who are more vulnerable to vaccine-preventable diseases as a result of their socioeconomic status. For low-income individuals, any financial barrier may impede people showing up to get

vaccinated. We must fix current disparities in coverage and payment in the Medicaid program by providing a baseline of consistent and reliable Medicaid coverage for patients across the country.

The Helping Adults Protect Immunity Act seeks to ensure that all Medicaid enrollees have access to this important preventive health service, and do not face financial burdens to become vaccinated with recommended vaccines.

A fully vaccinated public is an investment in our future, well-being, and economic success of our nation. We can make a difference in terms of morbidity, mortality, and quality of life for our population, and in terms of cost to our health care system. Our annual readiness will translate into pandemic preparedness.

Thank you for your time and your commitment to vaccines. I am happy to answer any questions.

[The prepared statement of Dr. Tan follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. Thank you, Dr. Tan, for your excellent testimony.

Next, Dr. Maldonado, welcome again, and thank you, and you have five minutes to deliver your remarks to our committee.

[Pause.]

*Ms. Eshoo. You need to unmute.

*Dr. Maldonado. Yes, I think I should. I should have known that already, sorry. Okay, here we go.

*Ms. Eshoo. Here you are. Welcome.

*Dr. Maldonado. Thank you so much.

STATEMENT OF YVONNE MALDONADO

*Dr. Maldonado. Chairman Eshoo, Ranking Member Guthrie, and members of the committee, thank you for the opportunity to testify today before you. It is an honor to talk about the importance of vaccines for children. My name is Dr. Yvonne Maldonado, and I am testifying today on behalf of the American Academy of Pediatrics, AAP, a nonprofit professional membership organization of 67,000 pediatricians dedicated to the health and well-being of children.

I am an infectious disease pediatrician, and serve as the chair of the AAP's Committee on Infectious Disease. I am also a professor of pediatrics, epidemiology, and population health, chief of the division of pediatric infectious diseases at Stanford University School of Medicine, where I also practice at the Lucile Packard Children's Hospital. I currently lead several COVID-19 treatment and prevention programs.

The past year and a half has been extremely challenging for adults and children alike, as we have lived through the COVID-19 pandemic. While the vast majority of deaths and severe illness from COVID-19 have occurred in adults, children have experienced severe harmful impacts of the pandemic. Nearly 4 million children have been infected with the virus, over 16,000 have been hospitalized, and more than

315 have died, with more than two-thirds of those being Black and Latinx children.

The pandemic has also led to make limited social interactions with peers and relatives, and curtailed access to other activities that help children develop social, emotional well-being, and maintain good mental health. This is why we are so grateful that we finally have a COVID-19 vaccine for adolescents aged 12 and up. We strongly encourage parents to get the vaccine for themselves and for their eligible children. Vaccinating children and families against COVID-19 will save lives, and help them return to a more normal life.

Pediatricians believe in strengthening child immunization rates as a major path to advancing child health. That is why we must vigorously support the Vaccines for Children program, the backbone of the childhood vaccine delivery system in the United States, which provides immunizations at no cost to children who are enrolled in Medicaid, are uninsured, or under-insured, or who are Native American or Native Alaskan. Since its inception in 1993, the VFC program, which provides half of all vaccines to American children, has increased vaccination rates and reduced the risk of preventable infections across all races, ethnicities, and income groups, and reduced racial and ethnic disparities.

Unfortunately, over the last 15 months, we have seen a

staggering decrease in routine childhood immunizations. Recent CDC data shows that overall VFC provider orders for non-flu vaccines are down by more than 11.5 million doses, compared to the previous year. When children miss recommended vaccinations, they leave themselves, other children, and adults in their communities more vulnerable to outbreaks of preventable diseases like measles and whooping cough, particularly in school settings.

While the VFC program has been a tremendous success, current financial and administrative barriers make it difficult for clinicians to participate. The COVID-19 pandemic has only exacerbated these challenges, as dramatic decreases in revenue from fewer patient visits, compounded with higher overhead costs, has financially stressed many practices.

As such, the American Academy of Pediatrics strongly supports the strengthening of the Vaccines for Children Program Act of 2021, and we thank Representative Schrier, a fellow pediatrician, and Representatives Joyce, Butterfield, and McKinley for introducing this strong, bipartisan piece of legislation. This bill provides incentive payments for participating providers to stay in the program, and entices new providers to join. It also addresses providers' financial burden by increasing Medicaid payment for vaccine administration to match Medicare payment rates for two years.

The legislation also extends VFC eligibility to children enrolled in the Children's Health Insurance Program, and enables under-insured children to receive VFC vaccines in their medical home, as opposed to having to go to another clinic to receive care.

Additionally, the legislation would finally allow VFC payments for administration of multiple component vaccines, vaccines that protect against more than one disease. In short, the Vaccines for Children program is the heart of the childhood vaccine delivery system, and we need to do all we can to support it.

In addition, it is imperative that we bolster immunization information systems, IIS. The Immunization Infrastructure Modernization Act would provide critical resources for IIS modernization, and has the ability to capture and share immunization data, thus improving our ability to keep children up to date on their vaccines.

Thank you so much for the opportunity to testify today. We appreciate the subcommittee calling attention to the importance of vaccines this morning, and we look forward to working with you to ensure that all Americans have access to routine vaccinations, including the COVID-19 vaccines.

[The prepared statement of Dr. Maldonado follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. Thank you, Dr. Maldonado. And you delivered your testimony not using all of your time, which is always noted by members, so thank you very much.

Next, Ms. Doyle (sic), you are recognized for five minutes. And again, all of our thanks for being willing to be a witness before our subcommittee today. You have five minutes, so make sure you unmute. We want to hear every word.

[Pause.]

*Ms. Eshoo. We can't hear you.

[Pause.]

*Ms. Eshoo. We can't hear you.

*Ms. Coyle. Yes.

*Ms. Eshoo. There you are.

*Ms. Coyle. Great.

*Ms. Eshoo. I hope you heard me welcome you. And thank you again for being a witness today. You have five minutes for your testimony.

STATEMENT OF REBECCA COYLE

*Ms. Coyle. Thank you, Chairwoman Eshoo, Ranking Member Guthrie, and members of the committee. I appreciate the opportunity to be part of the hearing today to talk about immunization information systems, also known as immunization registries.

My name is Rebecca Coyle. I serve as the executive director of the American Immunization Registry Association, known as AIRA. AIRA members include IIS and immunization program staff working in state and local health departments, and organizations such as IIS implementers, nonprofits, and others interested in IIS.

IIS are confidential, population-based computerized databases that record all immunization doses administered by participating vaccination providers to persons residing within a state or jurisdiction. IIS exists in all states, territories, and several large cities and counties. Nationally, 96 percent of children, 82 percent of adolescents, and 60 percent of adults have immunization records and an IIS as of 2019. IIS are primarily funded through Federal investments using cooperative agreement funds from CDC's immunization program using section 317 funds. IIS support the administration of the Vaccines for Children program, with a majority of VFC vaccines being ordered by

providers using an IIS.

However, there is no overarching Federal policy that requires VFC providers to record these doses in an IIS. And there is no equivalent vaccination program for adults. Many jurisdictions have implemented reporting requirements, but policies vary by jurisdiction. States have similar but different laws and policies for a variety of functions, including data exchange, vaccine reporting, access, and sharing data with another IIS. And it is these variations that are most often criticized, because not all states function the same.

IIS are part of the immunization program infrastructure, and are powerful tools for managing immunization records and supporting healthier communities. IIS are used to consolidate vaccination data from multiple providers into one record. They are used for vaccine ordering and managing inventory, which minimizes waste and saves money.

IIS has been used in nearly all vaccine-preventable disease outbreaks in the past decade: the 2009 H1N1 pandemic and the current COVID-19 pandemic.

Of the utmost concern is the privacy and security of all system data. Standards set by CDC state that all IIS must have a written policy that clearly defines expectations, such as the type of information contained, and how the data will be used, and who has access to that information. IIS are

expected to mirror industry standards for system security.

COVID-19 vaccine efforts have highlighted multiple areas where investments in IIS are critical. Without an investment, IIS will continue to face failing and capacity issues. The ability to process and manage the volume of data that has been generated from COVID-19 vaccination events highlights the need for systems to move to cloud-based hosting, with scaling and surge capacity capabilities.

To put it simply, most jurisdictions were operating the highway, but with the pandemic traffic there was a need to expand to an eight-lane freeway.

Additional efforts are also needed to identify and expand bidirectional data exchange. Bidirectional means sending information to an IIS, and also receiving a vaccine history and forecast in return. There is a need to onboard small providers that are often located in rural areas, as well as the many unique and varied entities administering vaccinations to adults. It is critical to have a workforce that can support and perform system management functions and leverage new technologies to increase efficiencies. Many of our current workforce are leaving for better-paying jobs.

The present pandemic is the first time near real-time vaccination data has been shared with CDC to provide a comprehensive surveillance at the Federal level. These data are primarily coming from IIS. Special policies were

instituted to allow for this sharing of data. However, these policies do not extend to other vaccines, and this limits our nation's public health agencies' ability to monitor outbreaks and routine vaccine administration from a national perspective. A national policy framework is needed to align reporting and consent requirements, authorized use, and data access.

Congress has an opportunity to improve, enhance, and expand the ability of IIS to securely exchange real-time immunization data, while safely protecting personal information. The Immunization Infrastructure Modernization Act, H.R. 550, introduced by Representatives Kuster and Bucshon, will help provide the needed national framework for IIS operations. Providing resources and supporting policies to modernize IIS will allow better management of routine immunization efforts and enhance public health's ability to respond to pandemics and outbreaks of other vaccine-preventable diseases.

Thank you for this opportunity to share the information with you today, and I look forward to your questions.

[The prepared statement of Ms. Coyle follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. Thank you, Ms. Coyle, for your testimony. The chair is pleased to recognize Phyllis Arthur.

Welcome to the subcommittee. Please unmute. We are happy to have you with us, and you have five minutes.

*Ms. Arthur. Thank you.

STATEMENT OF PHYLLIS ARTHUR

*Ms. Arthur. Good morning, Chairwoman Eshoo, Ranking Member Guthrie, and members of the committee. I am Phyllis Arthur, vice president of infectious diseases and diagnostics policy at the Biotechnology Innovation Organization. Thank you for the opportunity to speak on the vaccine legislation being considered today.

Our association includes companies that are committed to bringing vaccines to people of all ages. Vaccine manufacturers conduct research to the highest regulatory standards to ensure safety, efficacy, and manufacturing quality. And they are a vital -- they are vital to national and global public health.

Vaccines are the cornerstone of public health, reducing or eliminating many infectious diseases. The CDC projects that pediatric vaccines given between 1994 and 2018 will actually prevent over 400 million illnesses, 27 million hospitalizations, and over 936,000 deaths, while saving over $1.9 trillion in societal costs, including 406 billion in direct health care costs.

The pandemic taught us several lessons.

First, public health infrastructure is vital in peacetime and during a pandemic. We saw a dangerous drop in pediatric, adolescent, and adult routine immunizations this

past year. Reinvigorating public health through catch-up vaccination is crucial to avoid future outbreaks from vaccine-preventable diseases. The Immunization Infrastructure Modernization Act seeks to modernize our immunization registries, helping states manage public data on routine immunizations, while enhancing our response to outbreaks and future pandemics.

Second, BIO, like others, partnered with many organizations to educate the public on the COVID-19 vaccines. Education must expand to other vaccines, and outreach to at-risk populations using trusted messengers can increase immunization rates. Congress should pass H.R. 951, H.R. 1550, and H.R. 3742 for these goals.

Lastly, we realize the different barriers to access, especially for people of color, seniors, and those in rural areas. Many faced financial and logistical impediments. Congress acted early to ensure COVID-19 vaccines were covered and accessible. Please do the same for the full complement of CDC-recommended vaccines for adults by passing the Protecting Seniors Through Immunization Act and the HAPI Act. These bills will reduce financial barriers by addressing cost sharing in Medicare and Medicaid.

Cost sharing for vaccines is senseless, because of their immense benefits. Vaccines not only prevent a person from getting sick, they prevent others, as well, and thus, they

generate a high societal benefit.

Infectious diseases exacerbate underlying conditions, leading to long-term negative outcomes. COVID-19 made this clear. Under Medicare Part D, seniors pay significant copayments on vaccine. Not all Medicaid programs fully cover ACIP-recommended vaccines, and many have copayments that discourage uptake. The Protecting Seniors and the HAPI Act will encourage parity by covering vaccines at no cost sharing, just as they are in Medicare Part B and private insurance. Removing this barrier provides direct financial and health benefits, improving access and equity for those adults who will benefit the most from vaccination.

Patient safety is also critical. Vaccines are one of the safest medical interventions, and serious injuries are exceptionally rare. The U.S. has one of the most comprehensive compensation programs, the National Vaccine Injury Compensation Program, or VICP. This no-fault compensation makes compensation quicker, cheaper, and easier for those injured by vaccines. The Vaccine Injury Compensation Modernization Act would update and strengthen the program by providing more adequate compensation, while extending protection to adult vaccinees.

BIO is excited to see bipartisan legislation focused on vaccines, and we should continue the tremendous collaboration that carried us through this pandemic. These policies are --

can dramatically impact the uptake and access to vaccines, leading to a healthier population, a robust economy, and new innovation in vaccines and preventive monoclonal antibodies that tackle unmet medical needs.

Increased investment by vaccine developers of all sizes could lead to new immunization options, and health care savings in the United States and around the world.

Thank you for the opportunity to testify today.

[The prepared statement of Ms. Arthur follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. Thank you very much. We will now move to members' questions, and I -- the chair recognizes herself for five minutes first to Dr. Maldonado, and then a question to Dr. Tan, and a question to Phyllis Arthur.

To Dr. Maldonado, vaccine hesitancy and misinformation, I think, have become a new culture war, with news media and with some politicians who are hyper-focused on highlighting the latest rumors. It is just so damaging, in my view. In looking at CDC data, it -- I think it becomes clear that insurance status and income play a major role in keeping people, especially children, from getting vaccines.

So tell us what you think the barriers are that your pediatric patients face in getting their vaccinations, and what should be done to -- for children, to make it easier for children to get vaccinations.

And then I am just going to state my questions off the top, so each one allow time for the other.

To Dr. Tan, what do you think the barriers are that Congress should address to help more adults get their vaccines?

And to Ms. Arthur, prior to COVID-19, vaccine research was really underfunded, because vaccines are less profitable than other innovative treatments. So can you tell us if you think COVID-19 and the success of mRNA vaccines have changed this?

And what is needed to make sure the United States of America has the strongest pipeline for new and effective vaccines?

So, Dr. Maldonado, back to you.

*Dr. Maldonado. Thank you for this important question. And so I think there are two major components to our failure to vaccinate all of our children.

This is a remarkable opportunity for us to save lives, to make lives healthier.

I have been in practice for over 30 years, myself, and I have seen diseases completely disappear from my practice across the street here, at this children's hospital, where I saw, on a weekly basis, children die from diseases that I no longer see. And that is because -- entirely because of vaccination.

And so what we are seeing are two different things. One is the rise of vaccine hesitancy. I won't say it is new. It has been around since Benjamin Franklin's days and before. What is new is social media, and the -- a rapid spread of misinformation.

I think we need to do a better job of making sure that people hear proper messaging from trusted leaders, that they can feel -- hearing the proper news, the right information about vaccines, and making sure that they know that vaccines are safe and effective, and that here in the United States we

have the safest vaccine development delivery systems in the world.

The second issue that I think is important for children is health and income disparities that really reduce the access for children to get vaccinated. They have to travel frequently to different locations where they can get access to vaccines, for example, through VFC sites that are allowed to give them vaccines.

We are hearing, for example, even before the pandemic, about practices that don't -- can't afford to give vaccines because of the poor reimbursement rates for the cost that it takes them in small practices to give vaccines. They are writing prescriptions to children to go to publicly-funded clinics, where they can get the vaccines, losing their medical home, and losing that trusted source of other routine childhood care.

So those are the two major areas. One is really getting good, safe, proper information out to all venues, public and private venues; as well as to making it easier for our providers, public and private providers, to give vaccines to all children, regardless of their income status.

*Ms. Eshoo. Thank you very much.

Dr. Tan?

*Dr. Tan. Oh, thank you, Chairwoman Eshoo. I am going to be brief. I think, with adults, it is about convenience

and access again.

You know, adults have to get access to vaccines through multiple venues. You know, I am not -- you know, with pediatrics you have got a pediatrician, a family physician. With adults you are talking all over, right? Employers, grocery stores, you know, outpatient settings, and so on and so forth.

So I think, you know, firstly, we need to make sure that access is available. And then that means incentivizing providers to make themselves providers for adult vaccines.

And then secondly, when we then bring our patients in, the patients have to go in and recognize that they are going to be paid -- that they don't have something that is going to get in their way, like financial barriers. When someone goes in and says, "I am ready to get my vaccine,'' and then they find out, oh, you have got a $160 copay, they are going to back away from that, for adults, especially.

So I think those are the two big things I can think about right now.

*Ms. Eshoo. Thank you.

Ms. Arthur, I don't have time for you to answer, but I will submit my question to you in writing. Thank you.

[The information follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. The chair is now pleased to recognize the chairman of the full committee, Mr. Pallone, for his five minutes of questions.

*The Chairman. Thank you, Madam Chair. I just wanted to thank all the witnesses for their testimony. And as I mentioned in my opening statement, we are taking a comprehensive look at how to improve vaccine infrastructure awareness and access in our country. But I wanted to start out with Ms. Coyle.

In your testimony you mentioned that 96 percent of children and 82 percent of adolescents have records in Immunization Information Systems in the U.S., but only 60 percent of adults have immunization records in these same systems. So could you explain why there is such a significant drop-off among adults, and how can we improve these systems so health care providers have ready access to immunization data for the adult patients?

[Pause.]

*The Chairman. Were you guys able to hear me?

*Ms. Eshoo. We can hear you, Mr. Chairman, but we can't hear the witness.

You need to unmute.

*The Chairman. Ms. Coyle?

*Ms. Eshoo. I don't know what happened to her. Why don't you move to your next question, Frank. We will see

what we can do --

*The Chairman. Okay, well, let me just -- Dr. Maldonado, I wanted to ask you, as -- you know, as a physician, can you explain how increasing vaccinations among pregnant women can also protect their infants?

*Dr. Maldonado. Yes. Maternal immunization is a critical new area that has really long been overlooked. And we are really proud and happy to see that more and more maternal immunizations are being administered, for example, for influenza, for -- and for whooping cough, and now for COVID-19.

We know that, when mothers get vaccinated, especially during pregnancy, it does increase the safety of the infant through passively-acquired maternal antibodies that are transferred to their infant. For example, for pertussis, that has been absolutely shown to be the case.

And we also know that it keeps the mother safe from infectious diseases herself during a vulnerable period, and also helps to cocoon the child, protecting the child from infections because she -- this young infant will be very close to their mother.

So we do applaud these efforts to encourage maternal immunization.

*The Chairman. And then, Doctor, it is also critical that we ensure all children get their recommended

vaccinations. Are you aware of any data which shows how improving vaccination rates among pregnant women will affect the likelihood that the child receives recommended vaccines on time?

*Dr. Maldonado. Yes, there are some data that have been published over the years showing that women and families who get vaccinated sooner are more likely to engage in vaccinating their children at a young age. It is important to engage them early on, because children need their first well child visits at two weeks of age, sometimes sooner. And that first vaccinations are given at two months. So engaging families before the birth of the baby has been shown to increase well child visits and immunizations of their subsequent family -- children and family members.

*The Chairman. Well, thank you, Doctor.

And finally, I wanted to mention the importance of having vaccines covered without cost sharing, because, under the Affordable Care Act, individuals in commercial health insurance plans cannot be charge out-of-pocket costs for vaccines they received in network. However, in Medicare Part D and Medicaid, some beneficiaries may be required to pay a copay to receive a recommended vaccine.

So, Dr. Tan, can you explain how having a copay, including at a level that some might consider a low dollar amount, can negatively affect vaccination rates in the

Medicare and Medicaid programs, if you will?

*Dr. Tan. Well, thank you for that question. Absolutely.

I think one of the things that we found out, especially people from lower socioeconomic status and older adults who are on fixed income, is that when you tackle all the logistical barriers and get them to a point of vaccination, when they show up and they find out all of a sudden that they have to pay a copay, there is a -- there is already data that shows that they do what we call abandoning the prescription. They basically turn around and walk away without getting that lifesaving vaccine.

And it is a surprise to them, if you are going in thinking the vaccine is free because you are hearing from your child, for example, right, that -- who is under a commercial private plan, that, "Hey, I got my flu vaccine for free, Mom. You need to go get in and get vaccinated,'' and they go in and, you know -- or for shingles, for example, and then they find out, you know, I can't get vaccinated without a copay, they are going to be very surprised and walk away. And that is a major challenge.

I think it is important also to recognize that providers are important reason why adults get vaccinated. And a lot of providers have uncertainty with the Part D copays, especially as to what is going to be there for their patients. And as a

result, they hesitate to recommend vaccines as strongly, because they don't want to succumb their patients to a copay.

Thank you very much.

*The Chairman. Thank you.

Thank you, Madam Chairwoman.

*Ms. Eshoo. The gentleman yields back, and now anyone that understands Latin, mea culpa, mea culpa, mea maxima culpa. I made a mistake. Mr. Guthrie, our ranking member, was to be next, and I blew it.

So all of my apologies to you, Mr. Guthrie. You have five minutes for your questions.

*Mr. Guthrie. Thanks, Madam Chair. I knew it was an oversight. And if we were sitting next to each other, we could have elbowed each other and said, "Hey, it is time to'' -- so, hopefully, we will be back together soon.

So, thanks to Operation Warp Speed and the successful development and deployment of 3 safe and effective COVID-19 vaccines, millions of American adults, adolescents, and recently children age 12 years old and older, are being vaccinated every day. These vaccinations are key to combating the COVID-19 pandemic.

Yet we still have many not getting vaccinated. CMS released data last week breaking down vaccination rates among staff in nursing homes by state. States range from 78 percent vaccinated to 39.9 percent vaccinated. I was alarmed

to see Kentucky only had 44 percent of staff vaccinated.

And we talked about logistics in getting people all the various vaccines. When you consider vaccines are free, and retail pharmacies went to nursing homes and offered staff and residents vaccination through their partnership with the Federal Government, the challenge for Americans to obtain a COVID-19 vaccine isn't about affordability or an individual's health insurance coverage. Instead of tossing more money of the billions of dollars we have already allocated for vaccine distribution, testing, and pandemic mitigation programs, among others -- need to evaluate how we get more individuals vaccinated.

So, Ms. Coyle, the nationwide average for vaccinated nursing home staff is only 60 percent. I would hope these individuals can see the value of vaccines, considering they work with the most vulnerable population. How can Congress better leverage Immunization Information Systems to address vaccination gaps and reach more people?

[Pause.]

*Mr. Guthrie. Ms. Coyle?

*Ms. Eshoo. I think IT is working with her, Mr. Guthrie.

*Mr. Guthrie. Okay, well, let me switch to my next question, then --

*Ms. Eshoo. But we have lost her, and that is

unfortunate. But why don't you go on with your --

*Mr. Guthrie. Okay --

*Ms. Eshoo. -- questions, and perhaps we will get her back.

*Mr. Guthrie. Okay, good.

So Ms. Arthur, maybe you might want to speak to that, but my real question that I had for you was can you please speak to vaccine innovation that is on the horizon?

And I know there are many interested in the flu COVID vaccine shot. Do you see this possible in coming years, where there will be universal flu, along with the COVID shot?

And then how would any policy, such as maybe H.R. 3, affect that innovation?

*Ms. Arthur. Thank you very much, Congressman, for the question. So definitely, we are excited by the pipeline of vaccines that could be coming in the future. You have mentioned companies that are working on combining COVID with influenza, given the potential seasonality, companies that are working on universal flu vaccines so we may not have to get a vaccine for flu every single year. And of course, the technologies used for the COVID vaccines could be used for multiple unmet medical needs in the future.

I think -- I am an expert in vaccines, and not so much in reimbursement. But I do think it is extremely important to note that we always worry about policies that

disincentivize private and public-sector investment in new technologies and new medicines. And so there are some concerns that some policies put forward could actually make companies think of investing not so much in infectious diseases. It is extremely important for us to have incentives for industry to continue to invest in solving these unmet medical need problems.

H.R. 3 could actually have companies decide that they don't want to invest in things that are as complicated and, as I think Chairwoman Eshoo said, not as much a return on investment as vaccines. And this could mean that we don't have some of the novel vaccines that are in the pipeline, or actually leverage this technology for new unmet medical needs in the future.

Thank you for the question.

*Mr. Guthrie. Okay, thank you. And my remaining question is for Ms. Coyle, so I will submit those for the record.

[The information follows:]

**********COMMITTEE INSERT**********

*Mr. Guthrie. So thank you, and I will yield back.

*Ms. Eshoo. The gentleman yields back.

And again, my apologies to you.

The chair is pleased to recognize the ranking members of the full committee, Mrs. McMorris Rodgers.

*Mrs. Rodgers. Thank you, Madam Chair, and thank you to all our witnesses for joining us today.

I wanted to start with a question for Ms. Arthur, and ask what we, as Members of Congress, can do to make sure that America remains the leader when it comes to vaccine innovation, and if there is any ways that we can improve the regulatory process.

*Ms. Arthur. So thank you so much for the question. In actuality, a lot of the great things that happened during COVID were -- happened because of the collaboration of sponsors, Operation Warp Speed, and the regulatory agencies. They really worked very hard to work with sponsors of drugs to shorten the timelines for doing some of the key things we needed to do for research for the vaccines, the treatments, and the diagnostics, while still maintaining that high caliber standard of efficacy, safety, and manufacturing quality.

And so many of those things actually could remain. And I think, as we work through the next steps of pandemic preparedness, we should be thinking about incorporating some

of those regulatory advantages: de-centralized clinical trials, use of telehealth in our trials, master protocols for therapeutics. These kinds of activities could help us go faster the next time, but also could help us shorten development.

A second part of your question that is very important is actually that we need to continue to support these great platforms we developed in the United States, and make sure the incentives are there to really get the full maximum benefit out of the investment we made. There is quite a bit of great technology we have developed, in partnership with the U.S. Government and with industry, and we need to make sure we maintain that in the United States, and actually offer it from the U.S. to the world. It is an American strength, to say the least.

*Mrs. Rodgers. Thank you. As a follow-up, would you speak to the challenges that manufacturers face when they are researching and developing innovative vaccines to treat either existing or emerging infectious diseases?

*Ms. Arthur. Absolutely. Companies actually approach their vaccine programs from a global perspective. And so they want to make sure that they have thought about how they are going to manufacture for the world, what is their strategy for where they place their manufacturing sites, how are they going to make sure they have the broadest clinical

trials, how are they going to make sure that they have all the data needed for regulators, both in the United States, in Europe, and around the world?

We work a great deal with those countries, those companies and organizations that serve low and middle-income countries. So how do we make sure we are working with big -- WHO and others? It is a global strategy that companies need to undertake, and they make sure that they are investing in the safety worldwide, the manufacturing scale-up worldwide, and that they are able to bring that product to as many people as possible through their partnerships with other organizations, other manufacturers, and non-governmental organizations.

It is quite a complicated process, because you are vaccinating healthy people everywhere that you go.

*Mrs. Rodgers. Right. Are there any innovative technologies in the pipeline that you are especially excited about?

And would you just take a minute to describe the potential that they have to transform health care in the United States, as well as around the world?

*Ms. Arthur. Absolutely. So very excited about what we might accomplish with the platforms being used for COVID. I think we are going to see these platforms become the springboard for a lot more innovation, in terms of conquering

some diseases we had not been able to conquer scientifically in the past. So you are going to go for cytomegalovirus virus, better flu vaccines, malaria, and other diseases that are travel or endemic in -- here and in other places.

And then I think you are going to see innovations around new platforms that might oral. You are going to see innovations in using monoclonal antibodies as preventions for diseases. This is another opportunity to actually leverage new technology we developed during the pandemic, and use it to actually more quickly get immunity and protection for more people, and could be a very good strategy, coupled with regular vaccination. So there is quite a bit of exciting vaccine and immunization technology on the horizon.

*Mrs. Rodgers. That is great. Well, thanks for being with us today. I really appreciate hearing your insights.

I will yield back, Madam Chair.

*Ms. Eshoo. The gentlewoman yields back.

I just want to add something, and that is that vaccines are not profitable, for the most part. It was the Federal Government that put the billions and billions of dollars into this, and we have seen the success. And now that -- those successes, I believe -- and I think everyone on the subcommittee would like to see built upon. So -- but it was the Federal Government's investment that guaranteed that to the companies, guaranteed a market.

So where do we go? All right.

Now the next on deck is the bridegroom, the gentleman from North Carolina, with all of our congratulations to you, Mr. Butterfield. We are thrilled. And it was a beautiful wedding. I couldn't wait to tune in, and we are all thrilled for you. So you have five minutes for your questions.

*Mr. Butterfield. Thank you. Thank you very much, Madam Chair. Thank you for your friendship, and thank you for joining Sylvia and I on our very special day. The day was May 31st, and it was one of the best days of my life. Thank you so very much, and thank you for convening this very important hearing.

And thank you to the witnesses for your testimony today. All of you are experts, by any definition.

Let me just, before I get started, let me join my Republican friends in hoping that we can very soon resume in-person hearings. There is no substitute for an in-person hearing when it is possible. My Election Subcommittee that I chair will be experimenting with in-person hearings very soon. But, you know, it would be very, very helpful if all members would publicly disclose whether they have been vaccinated. That is the fly in the ointment, if you will. We need to know who has and has not been vaccinated.

I saw on television this morning that eight states -- eight states -- are reporting that infections are actually

rising.

But having said that -- first question to our witnesses -- witness, Dr. Maldonado -- I cannot pronounce it properly, please excuse me.

But, Doctor, routine childhood immunizations are important tools to keep children safe and healthy. We heard during today's testimony that the pediatric vaccines given through the Vaccines for Children program will prevent over 400 million illnesses, over 900,000 deaths. The benefit is absolutely clear. That is why I am proud to co-lead H.R. 2347, the Strengthening the Vaccines for Children Act of 2021, along with my colleagues, Dr. Schrier, Dr. Joyce, and Mr. McKinley. This bill will make improvements to the program to ensure that physicians can afford to participate in the program, and children can continue to have access to lifesaving vaccinations.

And so, Doctor, in your testimony you said that the program, the VFC program, has increased vaccination rates across all ethnicities, and has reduced racial health disparities among children -- are down by more than 11.5 million doses, compared to last year.

What can we expect to see regarding vaccination rates among different racial groups? Help us with this.

*Dr. Maldonado. Yes, it is a major concern. What we have seen since the pandemic began is a reduction, overall,

of 27 percent of -- among visits to pediatricians for well child care. And a lot of that was, understandably, due to fear of going out. Part of it was lock-down. Part of it was practices that couldn't handle dealing with multiple sick visits plus well child visits.

So what we have been doing at the American Academy of Pediatrics is providing resources. I serve on a number of guidance committees for masking, for distancing, for return to school. We were one of the first to advocate for returning to school last June, in a safe manner, providing guidance to pediatricians to make sure that they understood how to bring children back, not only to school, but to their practices. And we are pushing that information out to all of our 67,000 members, as well as to federally-qualified health centers and others around the country, so that they can actually encourage children to come back.

We are trying to get children to be visited in whatever their medical home is, and we believe in the value of their medical home. It is what gets the children through their formative years. So --

*Mr. Butterfield. Our children -- you work with children every day, and, you know, children are precious. Can you explain why it is so important that we catch children up on the vaccines that they have missed during the pandemic, and how contagious are diseases like measles and mumps,

compared to COVID?

*Dr. Maldonado. Measles is almost 10 times more infectious than COVID-19. It has a very different mechanism of transmission. Very few diseases are as infectious as measles, chickenpox, and tuberculosis. And we, fortunately, have suppressed most of those infections. But we run the risk, if we don't get our children back up to par on vaccinations for those diseases, to having measles outbreaks again in the U.S., mumps outbreaks, which can lead to -- that can lead to sterility, for sure, and other --

*Mr. Butterfield. My last question, I am going to ask you to give it to me in writing, if you will. Insufficient payment rates for vaccine administration have contributed to a decrease in participation in the VFC program. This decrease has coincided with an increase in Medicaid enrollment.

How will the incentives in H.R. 2347 work to ensure that physicians continue to participate in the program, and children are able to access the vaccines that they need?

I would ask that you give me that response in writing.

[The information follows:]

**********COMMITTEE INSERT**********

*Mr. Butterfield. Thank you, Madam Chair. I yield back.

*Ms. Eshoo. The gentleman yields back.

Actually, Mr. Upton is next, but he is not immediately available.

So we will go to Dr. Burgess of Texas for your five minutes of questions.

*Mr. Burgess. I thank the chair, and I thank the witnesses for being here this morning. This is an important topic.

Madam Chair, I do have an opening statement that I will submit, ask that it be made part of the record.

Dr. Maldonado, you have a difficult task, with the advent of the -- now vaccinating the pediatric population for the coronavirus, and I think you have written some about this. There are some concerns about perhaps some side effects that have emerged, and let me just hasten to say I wasn't entirely convinced that the pause on the J&J vaccine was the correct response.

I understood how it was important that the FDA and the CDC show that they were serious about evaluating any potential complications, but we have seen just the data since the J&J pause, the actual vaccine rate, nationally, seems to have declined. And whether that is just because we reached that point, where so many people had already been vaccinated,

that now it is just getting harder -- the last mile of the vaccination line is the hardest one to reach.

But now also, in the pediatric literature, there is surfacing the question about some potential for some side effects. And let me just stipulate this is a difficult problem. With a therapeutic, someone who is sick, and they need help, and you administer a therapeutic, and you accept a certain risk of side effects. With a vaccine, though, it is entirely different. You are giving it to a person who is not ill. And then, of course, any side effects or any untoward effects will be magnified.

But could you speak a little bit to that? I know the CDC convened an emergency meeting. Can you give us any update as to where things are with the vaccine for the younger-age population?

*Dr. Maldonado. Yes. So, very briefly, there are vaccines that were -- we are vaccinating today and the rest of this week with some of the vaccine trials in the children in 5 to 11, and we will proceed with children under 5, as well, soon.

So the -- as I mentioned in my initial opening statements -- and thank you for the question -- we know that COVID-19 is critically important to prevent in children. We know that it is not as serious as it appears to be in adults. But currently it is still the 10th highest cause of death in

children in the United States. And that is because children are not supposed to die. So when you see 300 to 600 children die, with 16,000 hospitalizations, it is a serious disease in children. It is two-and-a-half to three times more likely to kill children than the flu.

And so we do recognize that vaccines need to have the highest standards for safety. And at this point, the CDC will give us more data this Friday at an ACIP meeting. And the FDA convened a seven-hour meeting last week around the safety of the vaccines in children.

So in summary, there is a concern that there might be a link to cardiac inflammation. But so far, that link, if it exists, is extremely rare. And the children that have been followed so far have recovered from that illness. So we will find out more on Friday. And we have been clear at the American Academy to make those data as transparent as possible to all pediatricians and all families, to make sure they can calculate the risks and the benefits that they think are involved in getting their children vaccinated against COVID-19. Thank you for that --

*Mr. Burgess. Yes, well, to be sure, it is something that is -- I mean, it is hard to get everything right, but this is one that just simply doesn't allow any margin for error.

Ms. Arthur -- Dr. Arthur, if I may ask you just a brief

question on some of the issues surrounding the pause in the patents that the Administration has proposed, how do you see that as impacting investment in new and innovative vaccines?

*Ms. Arthur. Thank you very much, Dr. Burgess, for the question.

In actuality, we, as BIO, are very concerned about this particular policy around intellectual property. We think that -- we definitely share the same goal as the Administration, in the sense of getting more vaccines to more people, worldwide. This is everyone's mission, everyone's mission. And companies are extremely committed to this. They are ramping up production right now, worldwide. And we are on track to, through the 250 partnerships that companies have engaged in worldwide, deliver about 11 billion doses -- that is with a B, billion doses -- this year, and many of those going through COVAX, and also to the African Union and PAHO.

So we think that, in essence, this particular policy is not the answer to the question. Intellectual property is not what is blocking us from getting more doses to more people worldwide. We are very concerned this could disincentivize pandemic response in the future.

*Mr. Burgess. Right, and the public-private partnerships have been so critical. And it is not three vaccines. We always forget about AstraZeneca, and now

Novavax has come on the scene, not to mention the Soviets and the Chinese. I mean, the Russian and Chinese vaccines that were also produced. So it really is phenomenal, with a year's time, to see this many agents.

But I thank you for your testimony today. I have other questions. I will follow up with questions for the record.

[The information follows:]

**********COMMITTEE INSERT**********

*Mr. Burgess. And thank you, and I yield back.

*Ms. Eshoo. The gentleman yields back. It is a pleasure to recognize the gentlewoman from California, Ms. Matsui.

You have five minutes for your questions, it is great to see you.

*Ms. Matsui. It is great to see you, too, and thank you very much, Madam Chair, for having this very, very important hearing. And I want to thank the witnesses for being here today. You know, this question is for Dr. Tan.

Our healthcare workers have been true heroes during the pandemic. However, I have been troubled by the fact that a large number of nursing home staff have not been vaccinated against COVID-19, despite the devastating impact the virus has had on seniors living in nursing homes and long-term care facilities. And a lot of these healthcare workers have seen the consequences if -- when the vaccine was not available.

In March the Centers for Disease Control and Prevention reported that over 80 percent of nursing home residents had received at least one dose of the vaccine, but only half of the facility had even been partially vaccinated. And Dr. Tan, just briefly discuss the reasons behind this trend, because I have other questions for you.

*Dr. Tan. Thank you for the opportunity. Absolutely. I think, you know, we have done some work in nursing homes,

and a lot of it has to do with outreach and education of the nursing homes -- nursing aides. The predominant number of unvaccinated folks resides in that nursing aide population. And we need to help them understand why is it that, not just do we want to vaccinate the patient, we also need to vaccinate them to cocoon the patient, so that they don't spread infection to that one patient that might not have taken the vaccine well.

I think sometimes they feel, oh, my patient is vaccinated. Therefore, I can decline. And part of that declination comes from a hesitancy that results from misinformation that they might have heard from friends, family about the potential or alleged side effects of a vaccine.

*Ms. Matsui. Well, this immunization of the healthcare workforce is important. Do we see similar trends in other vaccine-preventable diseases, such as flu and pneumonia?

*Dr. Tan. Yes, absolutely. So we have done a study, actually, in nursing homes, and a lot of the challenges of influenza vaccination of nursing aides is actually turnover. And that also partly turns -- is -- plays into this idea of education and outreach, as well. Nursing homes turn -- aides turn over very rapidly.

And so, with influenza, for example, having to make sure that they get vaccinated when they first start the flu

season, by the time the season is in full swing, many of those nursing aides have already turned over and moved on to other facilities. And so -- basically, make -- tracking is really, really difficult. So there are logistic problems with that.

*Ms. Matsui. Okay, certainly the legislation we are discussing today, the Vaccine Information for Nursing Facility Operators would really require healthcare workers are educated on the benefits of ACIP-recommended vaccines.

*Dr. Tan. Yes, absolutely --

*Ms. Matsui. Thank you, Dr. Tan. And I have a question -- is Dr. Coyle here?

I can see you now, I can see you on the screen now, great. I wanted to ask you, following up on your testimony, that you mentioned that 96 percent of children and 82 percent of adolescents had records in Immunization Information Systems. But only 60 percent of adults have an immunization records in these systems.

Can you explain why there is such a significant drop-off among adults? And how can we improve these systems, so healthcare providers can have ready access to these immunization records for their adult patients?

*Ms. Coyle. That is a very great question, and thank you for that.

I think it is important to note that the history of IIS

really started with the pediatric population. And so these systems are really designed to get kids in, because they were the ones receiving the bulk of the immunizations. As the platforms have been built out for an adolescent vaccine platform, and now more vaccines are administered to adults, we are just slowly seeing that growth within those populations.

I should also note that those statistics that I gave you, that is all pre-COVID. So we don't actually know what it is going to look like, you know, post-COVID. But my assumption is those adult capture are going to be significantly higher.

*Ms. Matsui. Okay, well, I really believe it is something we have to do, because I know when you are growing up, and you are -- you know, you get a vaccine all the time, and your parents keep track of that so closely. But once it is an adult, we just kind of get our shots whenever we feel we need them.

I also want -- so thank you for touching on the importance of interoperability in your testimony. Can you expand on how -- use financial incentives to play a role in helping to establish provider interfaces with IIS?

*Ms. Coyle. Certainly. Thank you for the question. So back when interoperability was first being established between electronic health records systems, which are the

systems that are employed by a lot of physicians and health care systems, the idea of connecting to a registry was sort of that Holy Grail. Like, this is a great idea, let's do this. But it was really difficult to try and get providers to invest the time and energy and resources to make that connection.

Meaningful use did a lot to really enhance those connections, and we saw a tremendous number of systems being able to connect. So pre-COVID we had about 117,000 live connections with systems and IIS. So it is a very broad network that has really been leveraged during this pandemic.

*Ms. Matsui. Well, thank you very much. And we certainly have a responsibility here to help our public health surveillance systems modernize. And I appreciate the committee prioritizing this work.

Thank you, and I yield back.

*Ms. Eshoo. The gentlewoman yields back. It is a pleasure to recognize the gentleman from Michigan, the former chairman of the full Committee of Energy and Commerce.

Mr. Upton, you have five minutes for your questions.

*Mr. Upton. Well, thank you, Madam Chair. Sorry, I am in and out. We have got a lot of different activities, but obviously, this is a very important hearing, and I am very pleased, actually, to see legislation that I am leading with Representative Doggett on the list. The Vaccine Injury

Compensation Modernization Act is on the list of bills that we are discussing today.

This bill provides updates for the Vaccine Injury Compensation Program, which, frankly, hasn't been substantially updated since its creation in the 1980s. It provides much-needed modernization to address case backlogs, inappropriately low damages involving vaccine market. Obviously, it is time -- we experienced this last year. I look forward to the committee moving the bill to the House floor soon.

I guess my first question for -- is for Ms. Arthur. The 21st Century Cures Act, which every one of us voted for, was introduced by DeGette and myself. We really wanted to solve healthcare problems, and expedite the approval of drugs and licensing -- we do, in fact, have a better understanding of reforms that still need to be embraced -- patients need.

We understand better today than what we did back in 2019 the importance of vaccines to prevent illnesses from diseases. And we know that some segments of our patient population is -- difficult, the majority of patients do not. That is why Representative DeGette and myself will be putting out our latest discussion draft in the next few days. It is going to help support vaccine access, and coverage -- improve coverage for new cures, modernize our healthcare programs, and improve development and better medicine.

As we have witnessed recently, vaccines are preventative measures and also medical responses. Global health --

[Audio malfunction.]

*Mr. Upton. So as we consider reform to our healthcare system, I am interested in the ways to improve vaccine access. Part of that puzzle is how do we encourage manufacturers to develop the drugs and vaccines needed to prevent the next global pandemic?

What recommendations might you suggest as we tackle the issue of improving vaccine access and use in the future?

*Ms. Arthur. Thank you so much, Mr. Upton. And, actually, thank you so much for the work that you and Congresswoman DeGette did on Cures. Many of the provisions there helped to stimulate vaccine investment. And so it is extremely important, and we look forward to working with everyone on Cures 2.0 when that happens.

So I think that access is extremely important to all of us in the vaccine community. The best success of vaccines is when everyone gets them. It is a very unique medical intervention, in the sense that my getting vaccinated protects you and me, and that is what makes them such a special part of the medical and public health infrastructure.

So I think that what we would like to do is, therefore, support the legislation, any of the legislation that are being discussed today, because they are meant to remove some

of those barriers like financial barriers, access barriers that keep people from getting the vaccines when they are standing there in front of a learned intermediary, a healthcare professional who is telling them about the value.

I think, in addition, we need to do education, and springboard from what we have learned from COVID, all the education we have done in the last year about vaccines, using the trusted messengers that have been out there, talking about COVID in our communities, and have them explain to people why they need to get the other vaccines that are already recommended for their health.

Doing these things actually makes the vaccine space an extremely important area of investment for vaccine companies. These things go hand in glove. So we support access, because we want everyone to be able to get the vaccines that are recommended for them by the process. And that brings more vaccines to people, as they understand the value.

*Mr. Upton. Ms. Coyle -- and I will be quick in my question -- so Michigan, we rank 23rd out of 50, in terms of the percentage of the eligible population getting vaccinated. I represent 6 counties, and there are a number of counties in my district that are under 40 percent vaccinated. These numbers are surprising from a state that -- you know, the several of the devastating waves of deaths and hospitalizations, we were number one for a number of weeks.

Vaccine hesitancy remains a huge part of the problem.

Can you talk about how this vaccine injury compensation program can be used as a tool to help us to get to a better percentage?

*Ms. Coyle. So I think the question was directed at me. However, I am not going to be your best witness to talk about the Vaccine Injury Compensation Act.

*Ms. Arthur. But I can just say to your point, Congressman, that I think having a vaccine injury compensation program that is robust, that is clear to patients, that actually quickly takes them through the injury compensation process is extremely important to reinforcing our very strong safety system in the United States. And it is a part of how we help people understand that, although injuries are rare from vaccines, there is a system in place to make sure they are compensated, should something arise.

*Mr. Upton. Thank you. I yield back. Thank you, Madam Chair.

*Ms. Eshoo. Yes, the gentleman's time has expired.

It is a pleasure to recognize the gentlewoman from Florida, Ms. Castor, for your five minutes of questions.

*Ms. Castor. Well, thank you, Madam Chair, and thank you to our expert panel for being with us today. I am so appreciative that you have included my bipartisan bill with Congresswoman Schrier, the Prevent HPV Cancers Act.

Colleagues, if the NIH's Dr. Francis Collins called a press conference today to announce that a cure for cancer had been found after the years of funding research, it would be cause for celebration. Well, you know, since 2006, there has been a safe and effective vaccine that prevents cancer. It is pretty remarkable. It has saved lives. The human papillomavirus causes six types of cancer, including cervical cancer, and head and neck cancer.

And by the way, the rates of head and neck cancer in men over the past two decades have increased fivefold. So we have special work to do there. And unlike cervical cancer, there is no test for head and neck cancer.

The -- what has been very concerning is, with all of these vaccinations, is during COVID we have had a very dramatic drop-off. And before the pandemic the HPV vaccination rates were lower than most other childhood vaccines, especially for adolescents in rural areas, and in boys.

But now, with the COVID effect, the childhood vaccination rates, especially for HPV, are way down. HPV doses fell by almost 64 percent for kids ages 9 to 12, and 71 percent for young people 13 to 17, compared to the last 2 years. So last year alone, more than one million doses were missed.

Our bill takes four necessary steps to raise awareness

about HPV cancers and the vaccine that can help prevent them. It creates a national public awareness campaign at CDC, it increases help to the NCI to expand and coordinate research, it gives states additional resources, and an additional focus on early detection. This is about saving lives.

So for Dr. Maldonado and Dr. Tan -- first, maybe, for Dr. Maldonado -- AAP has been doing great work over the years on your efforts to increase HPV vaccination rates. How do you think the -- a targeted new effort would benefit families across the country?

*Dr. Maldonado. Well, I can tell you the first thing that we have been pushing very strongly to do at the AAP is to reinforce to families that the vaccine can be given at nine years of age. The current ACIP recommendation is 11 to 12, with as young as 9.

We think -- and there are data now that support -- that giving vaccines at nine years of age, before children enter adolescence, actually -- it strengthens the immunization rates, because the children are easier to access at that age. So that is a simple thing that can be done. It is already approved at that age group. And if we could just reinforce getting them vaccinated younger, it is easier for them to come back for their second dose.

And the AAP has been putting -- it supports the bill, overall. There are some issues around the NIH provisions.

We tend to favor more broad, non-restricted research opportunities for NIH to distribute the funds how they see fit.

But in addition, we actually have put together resources, HPV tool kits for families and for providers. And I do think that the biggest challenge is getting those adolescents back. So moving the vaccination back to the age where it is already approved at nine years would improve, right off the bat, immunization rates.

*Ms. Castor. Dr. Tan?

*Dr. Tan. Yes, I think I am just going to follow up and say that we shouldn't forget also the older adolescents that have, obviously, had a huge decline in immunization coverage rates for HPV vaccine, and they aren't recovering as fast as the pediatric population. So we want to make sure that, as part of this education, we help bring them back in, as well, for their catch-up, so that they can complete the HPV vaccination series.

And then also to remind us, speaking for the adult population, again, you know, there is a shared clinical decision-making recommendation from ACIP regarding HPV vaccination for women -- sorry, for adults 19 through the age of 45. So 26 through the age of 45. My apologies. So I just don't want to leave them out, as well.

*Ms. Castor. And -- but thank you very much.

Ms. Coyle, I am sorry I don't have time for your input, but thank you so much. You have been very helpful, as we did broad outreach in building the provisions in this bill. So I will ask you to respond for the record.

[The information follows:]

**********COMMITTEE INSERT**********

*Ms. Castor. Thank you so much. I yield back.

*Ms. Eshoo. The gentlewoman yields back.

I hope the witnesses will tell us -- feel very comfortable in telling us what you think we are missing.

I mean, we have 12 bills. Half of them are bipartisan. And I am listening very hard to each one of you, and trying to figure out if -- what you are pointing out, if we have actually covered the bases. If we haven't, please say so, because we need your expertise.

Now to the gentleman -- and he is a gentleman -- from Virginia, Mr. Griffith, for your five minutes of questions.

*Mr. Griffith. Thank you very much. You are very kind, Madam Chair.

Ms. Arthur, it is my understanding that vaccine developers have received emergency use authorization, but when they receive that they are not free to communicate information about their vaccine, because the vaccine doesn't have an FDA-approved label. Is that true?

*Ms. Arthur. So, yes. Under an EUA, companies that have that authorization cannot directly talk to healthcare providers.

*Mr. Griffith. And so what -- you mentioned healthcare providers. What entities are prohibited from receiving information about vaccines that do not have the FDA-approved labeling, in addition to healthcare providers that you just

mentioned?

*Ms. Arthur. So, by and large, companies focus their direct energies on information to health care providers: pharmacists, nurses, doctors. So that is the primary audience they would probably want -- they would mostly share information with, and those providers would share information with the general public.

*Mr. Griffith. And so --

*Ms. Arthur. Companies also do talk to insurance companies and state health departments, as well.

*Mr. Griffith. I know it has gotten a lot of attention, but how might these entities use that information about vaccines?

And if we see a problem developing in the future that maybe -- not shuts the whole country down, do you think it would be helpful if companies were able to share that information with --

*Ms. Arthur. I do.

*Mr. Griffith. -- healthcare providers?

*Ms. Arthur. I think that it is extremely important, because companies should have a way to, with the approval of the FDA, and with the shared messaging, following the guidelines of their authorization, to be able to actually speak to healthcare providers so that healthcare providers have the latest possible data.

Healthcare providers are extremely busy, and they can't necessarily keep up with all the information that is happening every day. We are all trying to do that. So certainly, as we go into this next phase of the pandemic, where we are going to have updates on -- by age, we are going to have updates on the performance of the vaccine for variants, healthcare providers probably have quite a number of questions they are getting from their patients and from mothers and fathers. And this would certainly help them more quickly answer those questions, if they could have a systematic interaction with the companies on the approved information.

*Mr. Griffith. Well, and as a parent of children who are in that 13 to 16 age bracket, I might want to know, okay, ask my healthcare providers, "Which vaccine do you think is better for my child, with his background'' -- they are both boys -- "with his background?''

And so, in answer to the question that the chairwoman asked, what are we missing, I have recently introduced a bill, H.R. 3705, that would allow vaccine sponsors who have received an EUA to communicate information about the vaccine to certain entities without fear of violating the law. And based on what you have said, I think you would think that something along those lines would be helpful for the -- both the producers of the vaccines, the developers, but also for

the healthcare providers, and then those of us who rely on our healthcare providers to give us the information. Am I reading that correctly?

*Ms. Arthur. Yes, sir. You are.

*Mr. Griffith. All right. I appreciate that. I am going to switch over. Thank you so much for your testimony. I am going to switch over to Dr. Maldonado, briefly.

And I am changing gears on you just a little bit, but in talking with Mr. Butterfield, you mentioned tuberculosis. I have been looking at phage therapy, and I don't know -- because that is a bacterial infection, I don't know, do we have a vaccine, or is there a vaccine in the works for tuberculosis?

*Dr. Maldonado. Oh, we have been working on vaccines for tuberculosis for 30-plus years. There are some recent updates. There has been a vaccine in the last five years that seems to do a reasonable job. That is, it is about 30 percent effective. But we really haven't advanced as well.

Tuberculosis is a very complicated disease. It is a bacterial infection, and we don't really understand very well how it grows. And so I -- we are urging additional resources to understand, first of all, how the bacteria itself causes latent or silent infection, because that is the key. It somehow manages to slow down, and then pop up at unexpected times. And that has been very difficult for vaccination.

But there are a number of breakthroughs that we hope will be coming through with innovative new technologies at this point. But certainly one in three people in the world is infected, and clearly a very important target for research. Thank you for bringing that up.

*Mr. Griffith. Yes, absolutely. And as we deal with it, it is something I have been interested in, because I read a marvelous book on -- I think it was -- but on phage therapy, which deals with bacterial infections, not TB particularly, but bacterial infections that are now resistant or immune to our current antibodies, and I think that is something this committee and the O&I Committee should look at.

I yield back, Madam Chair, thank you.

*Ms. Eshoo. The gentleman yields back. The chair is pleased to recognize the gentleman from Maryland, Mr. Sarbanes, a name that is revered in the State of Maryland. You are recognized for five minutes for your questions.

*Mr. Sarbanes. No more so than the name Eshoo is revered in the State of California, Madam Chair.

In any event, thank you for holding a hearing today. It is very, very important.

During this pandemic, we have all witnessed the power of timely, effective health care, and particularly the power of vaccinations. As we continue to come out of the pandemic, we

must make sure that we are building on the lessons that we learn, and investing in reforms from healthcare workforce reforms to increased investment and preparedness that can help bolster the healthcare infrastructure, and make sure that health care is available and accessible to everybody in our communities.

On access to health care, particularly preventive health care, it is especially important for our children. That is why I am a very strong supporter of school-based health centers. SBHCs provide high-quality, comprehensive healthcare services to primarily low-income children and adolescents across the nation.

During the COVID-19 pandemic, many SBHCs have been using telehealth to provide key healthcare services to their student populations. As children return to school, these school-based health centers will play a critical role, along with many other providers, in making sure that children can access the important health and mental health services that they need.

One of those key services, of course, is vaccinations. Last fall, data from the Centers for Medicare and Medicaid Services showed that rates of vaccinations, primary and preventive health care, had declined for children in Medicaid and CHIP during the pandemic. In other words, across the board. Today's hearing is so important so we can examine the

ways that Congress can act to make vaccinations and other key services even more affordable and accessible.

Dr. Maldonado, I would like to ask you a few questions on this. Your expertise as a pediatrician is critical to our discussion. Pediatricians, obviously, are a very trusted voice for parents, when explaining the importance, safety, and effectiveness of vaccines, and play a central role in getting children vaccinated.

The Vaccines for Children program, which you have talked about, is perhaps the most critical tool we can use to bring childhood vaccinations back on track, especially for very vulnerable communities. In your testimony you discussed some of the financial and administrative barriers to improving the vaccine delivery system for children. I would like to elaborate on this, and discuss how the legislation we are considering will enhance the pediatric workforce and vaccine landscape.

Compared to other physician specialties, what challenges do pediatricians face in recruiting a sustainable workforce to meet the needs of children in communities throughout the country?

*Dr. Maldonado. Well, thank you very much for that question.

Pediatricians, if you look at the compensation scale -- and I know we all think that physicians are highly-paid

individuals -- but pediatric providers are at the very low end of compensation among physicians. They frequently serve under-insured and uninsured populations, and frequently the vaccine components of their practice, which is a major component in addition to other well-care services, is highly under-compensated, and has been for a long time. And that is why we were really excited to see that the VFC bill proposal would actually help to provide some parity.

So what happens with pediatricians is they have to give multiple component vaccines, and that is good for children, because they can get multiple vaccinations in one shot. But they spend a lot of time explaining, rightly so, vaccines to children and to their families. And they are not compensated for that time that they spend in the office. So this bill would actually help provide some parity to pediatricians, who are spending that amount of time building that trusted relationship so that they could get some compensation for the time that they are spending.

They would also be able to provide resources to provide separate refrigerators, which are required for different types of vaccines versus public and private-funded vaccines, and also to incentivize some providers to accept VFC patients, which some don't do because of the reductions in their ability to be compensated for their time.

So, again, while we don't like to think about

compensation as a primary driver, it does -- and especially in these times -- keep our practitioners afloat, especially in areas that are rural, and lower-income areas where patients don't have the wherewithal to provide have insurance.

*Mr. Sarbanes. Excellent. Thank you very much for that testimony. I want to thank Congresswoman Schrier and others who have helped put forward important legislation in this space.

With that, I yield back, Madam Chair,

*Ms. Eshoo. The gentleman yields back. We thank him for his questions.

It is a pleasure to recognize the other Greek from -- this time from Florida. Mr. Sarbanes from Maryland, Mr. Bilirakis.

You have five minutes for your questions. Great to see you.

*Mr. Bilirakis. Good seeing you, too.

*Ms. Eshoo. What are you doing, growing a goatee? My goodness.

*Mr. Bilirakis. Yes, yes, yes.

*Ms. Eshoo. We will call you "Professor'' pretty soon.

*Mr. Bilirakis. I am experimenting with this. We will see what happens.

But anyway, some people seem to like it. My wife seems

to like it, which is more important --

*Ms. Eshoo. Well, that is what counts the most.

*Mr. Bilirakis. Yes, exactly, exactly.

Okay, here we go. Dr. Tan, how easily can infections spread in nursing home facilities?

And are vaccines effective at lowering transmission rates in these settings?

I know that you could -- if you could answer that question quickly, and I have got some follow-ups here.

*Dr. Tan. Oh, absolutely. It is like a spark into dry hay. It goes really, really fast. You have got people who are vulnerable because of some compromised immune responses, and then you have got family members coming in and out. So absolutely, it can spread very, very quickly.

*Mr. Bilirakis. Okay. Why has there been COVID vaccine hesitation among healthcare workers? It seems ironic, no?

*Dr. Tan. Yes, I think it has --

*Mr. Bilirakis. I know you mentioned this, but if you could elaborate a little bit, please.

*Dr. Tan. Yes, absolutely. I think you have to kind of figure out the healthcare worker, and who the healthcare worker is getting information from. I think you will find that surveys have recently said that there are -- physicians, pharmacies have actually been showing an increased acceptance and, actually, vaccination rate.

I think we still have challenges with healthcare workers, such as nursing aides, who work predominantly in nursing homes because of education. And I think -- and also because of the fact that these healthcare workers are extremely high stressed, and they are also looking to continue to move on in their careers. There is a lot of turnover.

And so I think, as a result of that, I think we need to continue to emphasize the education and outreach to healthcare workers in nursing homes -- nurses, nursing aides -- because they don't always have access to the most important information. And sometimes the anti-vaccine messages may predominate in some of their social circles. So I think we need to be very, very aware of what they are hearing, what they are listening to. And providing education is, indeed, one of the most important ways we can move them along, with regards to, obviously, accepting a COVID-19 vaccine, and getting those rates up among the nursing aides and nurses.

*Mr. Bilirakis. Thank you very much. The nursing home facilities with higher reported rates of vaccination in residents, staff have lower rates -- in other words, if they are vaccinated, and I know that not everyone has access to a vaccine -- are there lower rates of infection?

*Dr. Tan. Yes, absolutely. So not only just --

*Mr. Bilirakis. We have stats?

*Dr. Tan. Yes, we do have data on that, not just in terms of what we see with COVID-19, where the effect of vaccination of both the patients and the staff has been tremendous in reducing mortality, we also have data with regards to the more traditional adult vaccines, like influenza, and how vaccinating staff, as well as the patients, have reduced infections in those facilities, as well.

*Mr. Bilirakis. Now, what about other -- in other words, other diseases, as far as educating staff, what have you, with regard to other vaccines?

I mean, one silver lining is that we have learned so much during the pandemic. But shouldn't we go further with other vaccines?

*Dr. Tan. That is a great point, sir. I think absolutely. I think what COVID-19 vaccination education has shown us is that we have got a public that is hungry for information about vaccines. And the great news is that now, when I speak to the public, I don't have to go into those details about why vaccines are important anymore.

And so I think this is a rising tide that can lift all boats. We can make sure parents, patients, adults, younger adults, adults with chronic conditions all understand the importance of vaccination and getting a vaccine. And I think

this is so critical. This is what COVID-19 has shown us. And I think we need to build upon that, and make sure that now, when these adults and these other patients show up to get vaccinated, they don't get turned away because of a financial or logistical barrier.

So thank you very much for that question.

*Mr. Bilirakis. Well, my pleasure. And I would like to recommend -- I have said this before to the committee, Madam Chair -- I had a telephone town hall meeting, and plan to do some in-person meetings, as well, with my constituents. And we invited experts to come in and answer questions with regard to the vaccine. I think it is so very important to get the word out there.

Thank you very much, Madam Chairman, and I will yield back the 45 seconds. Thank you.

*Ms. Eshoo. I thank the gentleman. And I do telephone town hall meetings every week into the communities in my district, and Dr. Maldonado is the trusted voice to my constituents.

And so I join the gentleman in making that recommendation to all of our colleagues. It really makes a difference to our constituents, to have doctors come home with us. And boy, am I grateful, deeply grateful, and get terrific feedback from them.

Okay. Now to the gentleman from Vermont, Mr. Welch.

*Mr. Welch. Thank you very much.

*Ms. Eshoo. There you are.

*Mr. Welch. Thank you very much. I want to thank the witnesses.

You know, we are really excited in Vermont. As you may know, we hit the 80 percent vaccine rate yesterday. And Governor Scott, our Republican governor who has done an incredibly good job, incredible job, was able to announce the reopening. So there is a view in Vermont that vaccines work, and a lot of excitement. And we are a rural state.

And one of the areas I wanted to ask is how do we address this difference in vaccination uptake in rural versus urban areas?

The CDC found in rural counties about 39 percent versus 46 percent. And Dr. Tan, knowing of the rural access differences, are there things we can do better to reach rural communities?

*Dr. Tan. Yes, absolutely, and I think, with rural communities, I think there are some lessons that we are learning from COVID-19.

I think, certainly, we need to be finding individuals in those communities that can be -- that can serve as representatives for vaccination, in general, you know, folks that are trusted leaders in that -- in those communities that the rural community listens to. They can be church leaders,

they can even be farmers. I mean, there is initiatives going on right now with rural outreach to the farming community, using farmers that have sought out and got COVID-19 vaccines, to communicate why they did so.

*Mr. Welch. Okay, one other question. You know, this vaccine, the COVID vaccine, was free. And by all accounts, it made a huge difference. It eliminated the barrier all together. Does it make sense, from a public health standpoint, to have vaccines be free?

*Dr. Tan. In my personal opinion, absolutely. I think we need to make sure that access to all these lifesaving vaccines across the lifespan happens with no cost to the patient.

*Mr. Welch. Thank you.

And Dr. Maldonado, I am a big supporter of the work of my colleagues, Congresswoman Schrier, Butterfield, McKinley, and Joyce on their Strengthening Vaccines for Children Act. That is one of the bills before us. It would increase provider payments for beneficiary counseling and education.

Can you just comment on the role of hesitancy, and how that comes into play, and how my colleagues' bill may be helpful in addressing that, and increasing vaccination rates?

*Dr. Maldonado. Yes, so I have been involved with the National Vaccine Advisory Committee for two different appointments. And over that period of time, we have spent

some time with the National Vaccine Plan, and assessing how well we are doing as -- at a national level in vaccine hesitancy and vaccine confidence. And I do think that messaging to individuals is important.

The vast majority of people are not anti-vaxxers, they are vaccine questioners. They want information. In this day and age, with social media and access to the Internet, people have a lot of information that they cannot always digest properly on their own. And I do think that the role of the trusted provider, the trusted local leader, whatever that person might be, or whatever their profession is, is going to be critical to providing information to people, helping them answer their questions, because most people, as I mentioned, are just questioning.

We also know that there is a now-new group that we have called vaccine apathy. So these are people who don't see the value, because they don't see the disease in front of them. We, as providers, see the diseases, but most people don't generally see that on a daily basis. And getting that apathetic viewpoint away, and making it clear that this can affect them and their family members, is another critical way to communicate.

So a lot of this comes down to communication, getting those VFC providers back on track, so that they can actually provide the important information that our academic societies

provide to them is going to be important. And making sure that that happens across the board is important.

Let me give you an example. In the 1980s we had a big measles outbreak in the United States. And at the end of the day, when people thought it was due to a failure of the vaccine, it was actually because of a failure to vaccinate. And the failure to vaccinate occurred in urban inner-city populations that had just been overlooked, because they didn't have access. With the strengthening of that process, access to -- in their urban inner-city areas, we have essentially eliminated measles in this country, so far.

But we need to keep vigilant, because these diseases are not gone yet, and they can come back at a moment's notice. So really, keeping our providers access to vaccine and messaging out is really important. Thank you so much for that question.

*Mr. Welch. Thank you very much, and I yield back.

*Ms. Eshoo. The gentleman yields back. It is a pleasure to recognize the gentleman from Missouri, Mr. Long. And I would add that, if there were to be an auction of vaccines, there would be one person in this country that would make sure it was the most successful auction.

So we now recognize you from your five minutes of questions.

*Mr. Long. Thank you, Madam Chair.

And Dr. Tan, I would like to start out by talking about the situation that happened to a Member of Congress and his wife during the COVID epidemic. And I don't know how many cases like this went on, but when our medical system was completely upended, routine things were delayed, or whatever. But unfortunately, Representative Andy Barr's wife, Carol, who was 39 years old at the time, went to her doctor. And on her chart the doctor wrote, "Echo when virus subsides.'' That is echocardiogram. Unfortunately, she subsided before the virus did, leaving Andy with two beautiful young daughters to raise. So there was a lot of things like that that went on during this epidemic that are not reported, I don't think counted in the totals.

But, as I mentioned, COVID-19 upended a lot of routine care with lockdowns, and with the strain it placed on our overall healthcare system. What have we seen in terms of utilization of recommended vaccines for adults over the course of the last year? And how did that compare to the year 2019?

*Dr. Tan. Thank you, sir, for that question, and my condolences to the representative. I am so sorry to hear that. And indeed, that is -- those are stories that we are hearing, and they do count to that toll.

I have to say the last year has seen similar dramatic impact, as we have heard, not just on pediatric, but also on

adolescent and adult vaccination coverage rates. We have got numbers like 85 percent reduction in coverage rates for one particular adult vaccine. We have had a tremendous reduction, in terms of vaccines that have been going out to adults. And a lot of it has to do with the fact that, you know, a lot of the preventive care visits that a lot of our older adults used to go to declined dramatically, as well, during this past year, as you have mentioned.

So yes, we are, unfortunately, really in the pit here, with adult immunization coverage rates. We are trying to dig back out of it. We are not doing as well as the pediatric population right now. And that is because of wonderful people like Dr. Maldonado working really hard to get them vaccinated.

The adult population is more challenging. It is broader, it is more diverse. And we need to, therefore, make sure that, when you can get them out of the pit, they don't find reasons to not get vaccinated. So thank you for that question, sir.

*Mr. Long. Excuse me. We are getting back to routine healthcare services, but there are still issues with older Americans getting vaccines recommended by the CDC, whether it is for measles, or for shingles, or whatever the case may be. What is the biggest impediment for vaccine utilization for older adults?

Is it cost, or lack of adequate information about recommended vaccine, and how does H.R. 1978, the Protecting Seniors Through Immunization Act, address both of those concerns?

*Dr. Tan. Thanks for the question. All of the above. I took the easy way out on that one.

But specifically, with the Protecting Seniors Act, I think one of the things that -- you know, if you think about how adults over 65 get -- pay for their vaccines, they go either through the Medicare Part B or the Medicare Part D plans. And some of those vaccines, you know, flu, pneumococcal, and hepatitis B are in Part B, and there is no cost sharing.

In the Part D plans, unfortunately, that is where some of the more recent vaccines for adults have gone, and we do have a lot of research and development that you have heard about that will introduce better and newer adult vaccines into the market. They will all, at this time, currently, will go into Medicare Part D, where, unfortunately, there is a copay for those Medicare Part D beneficiaries.

When those beneficiaries go in, they are not aware as to what that level of copay may be, and that number may actually give them sticker shock. You know, they are looking at others getting vaccines for free, like if their kids are on private plans, and they go into their pharmacy to get, let's

say, their shingles. And they find out that there is a $150 copay, for example. It gives them sticker shock. They turn away, and say, "You know, I can't afford that right now, because I am on fixed income.''

So absolutely, sir, I think we need to think about how this Act will actually even that playing field between copays, between B, which has none, and D, which has a varying and confusing array of copays, and make them all the same, which is no copay to the patient.

*Mr. Long. Okay, let's talk about the longer-term financial cost. Vaccines, of course, have an up-front cost, as you mentioned, but what are the longer-term financial costs that vaccine-preventable conditions have on the system, particularly for older adults?

*Dr. Tan. So, as you know, I think, to talk about costs, we are talking about the cost of caring for an adult who perhaps develops shingles, and perhaps postherpetic neuralgia. All those costs are extremely expensive to the healthcare systems, not to mention just the cost of hospitalizations for flu and pneumococcal disease.

The other cost I think we need to remember is there is a quality of life cost to the older adults. Now, when I talk to older adults, most of the time they are not talking to me about fear of death, or hospitalizations -- a fear of death, sorry. They are talking to me about whether their quality of

life will suffer. So I think we need to just also remind ourselves that it is not just actual dollars, which are immense, but also this cost of quality of life.

*Mr. Long. Okay, I have run over my time and, Madam Chair, thank you again, and I do yield back.

*Dr. Tan. Thank you, sir.

*Ms. Eshoo. The gentleman yields back. It is a pleasure to recognize the gentleman from Oregon, Mr. Schrader, for five minutes of questions.

*Mr. Schrader. Oh, thank you very much, Madam Chair, great hearing, great panel today.

As a veterinarian, I have relied on vaccinations my entire career to prevent a lot of the serious diseases that incapacitate or kill some of my clients' patients. And frankly, it is a much lower-cost way to prevent the higher-cost, more invasive chemical, you know, treatments and stuff that go on. So it is hard for me to believe people will not vaccinate either themselves and, certainly, their children.

And to that point, I guess, Dr. Maldonado, I -- we have talked a lot about this. I may have missed a specific point, but what is the actual cost for, you know, some of these childhood vaccinations? I know it all varies. The seniors' ones are a little more expensive, potentially. But what is the actual cost to the pediatrician?

And then what is the commercial -- if there is such a

thing as the average commercial reimbursement, and what is the reimbursement for Medicaid, and what is the reimbursement for Medicare?

*Dr. Maldonado. You know, those are great questions. And as you said, it is a complicated formula. The cost will vary, depending on the product, and depending on whether you are a public or private recipient, and I won't be able to provide you the specific numbers, unfortunately, but we can certainly get those numbers to you, and provide them for the record. Yes.

*Mr. Schrader. Yes, and I would appreciate if anyone on the panel has some examples. I just wanted everyone to hear. I mean, the cost of vaccines in -- for most of them, or for many of them, are actually not that high. And the problem that the physician has is, as you have alluded to, and Dr. Tan, and others, that, you know, it is just the cost of administration. I mean, you have got to store the stuff. That is a cost. You have got to have the refrigeration, in some cases. That is a cost. You have got to train your staff. The staff person gets paid --

*Dr. Maldonado. Yes.

*Mr. Schrader. -- they spend the time. So the cost of administration is really what we should be trying to reimburse our physicians and physician assistants and nurses for at the end of the day. I think that often times gets

lost. But I would really love to get some examples in front of the committee, so they can see the great disparity that is out there.

Could you talk a little bit about the difference between Medicaid and Medicare reimbursement?

*Dr. Maldonado. Yes, absolutely. So the Medicaid reimbursement will vary from state to state. As you know, each state provides its own limits.

And as you had mentioned before, while I can't give you the specific numbers, they actually pale in comparison, say, to the cost of major invasive procedures that insurance frequently will cover, or other -- Medicare or other providers will cover. Immunizations are not expensive on the grand scale, but pediatricians and, in particular, family practitioners, who may only provide vaccines to a portion of their population, may find them prohibitive because, while they aren't quite as highly cost-driven, there are -- they are, many times, un-reimbursable, and they may wind up taking a big hit, overall, because the volume, especially for pediatricians, of immunizations is such a large component of their practice.

And so, when you are taking a -- actually, a loss, which many of them do on these amounts over time, it really does affect their bottom line and their ability to take new patient and -- and patients.

And so, yes, so the Medicaid is really all over the map, truly, literally and figuratively. Every state has its own reimbursements, and --

*Mr. Schrader. Dramatically below Medicare --

*Dr. Maldonado. And it is absolutely below Medicare. So in many cases, actually bringing providers' reimbursement up to the Medicare rate, even for a short period of time, would bring them back up to parity, especially during this time when, again, we have seen the visits really plummet for most of our providers. And they are really, really on the precipice, especially in those rural and smaller population areas, just having a hard time keeping their doors open, as well.

*Mr. Schrader. Very well said, very well said, I totally agree.

Dr. Tan, you talked a little bit also about the problem of getting seniors vaccinated. It would seem like a no-brainer, again, to me, because that age, you know, some of us don't respond as well to a lot of the more invasive procedures, or newer drugs that have other side effects. It seems like a no-brainer to get your vaccination.

What are some of the things we could do to encourage the seniors -- you have talked a little, others have talked a little about this -- but encourage seniors to get the vaccinations?

And what is the best way, easiest access way, for seniors to get the vaccinations, in your opinion?

*Dr. Tan. So I think we have to deal with, firstly, the logistical challenges some seniors face. There are mobility issues, for example. And I think transport issues remain a challenge for a lot of seniors getting to vaccines. So I think, by increasing more access points, bringing pharmacies, bringing in community centers where seniors can actually get to easily, is a great way to start. And then, taking away that financial barrier when they get there, so they don't get sticker shock.

But then thirdly, I think very quickly, I think we need to be reminding the seniors that vaccines do more than just prevent infection. They protect them from getting hospitalized and, in many cases, quality of life. I sometimes say to seniors that I talk to, you know, "If you don't get the flu vaccinations, you may walk into a hospital with influenza, but chances are you might actually walk out with a walker four weeks later, because of influenza.''

*Mr. Schrader. Very good, very good. Thank you all very much for your testimony.

And I yield back, Madam Chair.

*Ms. Eshoo. I thank the gentleman, and he yields back. It is a pleasure to recognize one of the terrific doctors that we are so fortunate to have on our subcommittee, the

gentleman from Indiana.

Dr. Bucshon, you have five minutes for your questions.

*Mr. Bucshon. Thank you, Madam Chairwoman. I very much appreciate that.

I would like to thank Chair Pallone, Ranking Member McMorris Rodgers for holding this important hearing, and including two bipartisan bills, H.R. 1978 and H.R. 550, that I authored with Representative Kuster. These bills aim to prioritize preventive health care through vaccines, and modernize our nation's vaccine infrastructure, respectively.

It is a great frustration of mine that Congress often times doesn't properly incentivize and want to pay for preventive care, simply because of its budget impact over a 10-year budget window, completely neglecting the fact that keeping patients healthy by preventing disease and sickness actually saves the system much more in avoided hospitalizations, doctor visits, et cetera. It leads to a better quality of life outcome over time, and keeps people active in society and contributory, which is why I believe that H.R. 1978 is such an important bill.

Dr. Tan, we have been over some of this territory, but I want to talk about this bill a little bit. Do commercial insurance plans cover vaccines under their medical benefit, their pharmacy benefit, or both?

*Dr. Tan. Yes, so thank you for that question, sir.

Commercial, private plans cover vaccines under both pharmacy benefits, as well as under medical benefits. And in fact, that is the reason why, you know, someone who is under a commercial private plan can go in and get a vaccine and, essentially, there is no copay to that person.

*Mr. Bucshon. Right. And I think you have already went over this, but it is different than Medicare under Part B and D, and you -- can you summarize that again, just -- because I think this is a really important point.

*Dr. Tan. Yes, absolutely. So, for Medicare Part B, there are three vaccines: flu, pneumococcal, and hepatitis B vaccines that are covered with no copay for the patient.

Unfortunately, because of the Medicare Modernization Act, a lot of new adult vaccines now go under the Medicare Part D plan. And in the Medicare Part D plan, those plans are subject to copay to the patients. And as you know, that copay will vary, depending on individual patients and on the carrier plans, of which there are thousands in the United States, which adds a lot of confusion, a lot of variability to the patient.

*Mr. Bucshon. And that is why our H.R. 1978 extends Medicare Part B cost sharing policy to Medicare Part D plan coverage of vaccines which are recommended for adults by the Advisory Committee on Immunization Practices. The bill removes the application of the beneficiaries deductible

coinsurance initial coverage limit and annual out-of-pocket threshold for ACIP-recommended vaccines. And it also requires the Medicare new handbook to include relevant vaccine coverage and cost sharing information. I do believe this bill will increase the utilization of vaccines in the adult population.

Ms. Coyle, another subject, the COVID-19 pandemic has revealed some important deficiencies that Representative Kuster and I have introduced legislation to help address. Immunization Information Systems serve as a vital link between public health officials, community providers, and individuals, not only in cases of disease outbreaks or emergencies, but also during routine vaccination efforts.

Can you talk a little bit about how these systems have been traditionally used by healthcare providers, how the provider use of these systems changed during the pandemic, and what lessons we should take away from this experience to improve immunization data exchange efforts?

*Ms. Coyle. Thank you for your question, and thank you for your leadership in this area. We really appreciate that attention.

So, in terms of how providers have typically accessed this system, particularly within our pediatric and family practice and larger medical systems, they are connected to Immunization Information Systems using electronic data

exchange. That has been the traditional way. We have certainly seen a lot of different settings, where vaccines have been administered, such as baseball stadiums, parking lots, you name it. And so those types of settings may or may not yield a system with which to connect. And so there is often some data entry that has to happen on the back end of that.

Reporting is critical. There is certainly a required timeframe for reporting, and that has been very different this time around. While we always want fast information, it is important to make sure that we also have accurate information.

So, where this -- what we have also seen is just that volume, with -- the number of vaccines that are flowing on any given day, you know, are significantly more than what we have ever seen before. And what that has really called to light is a need to really modernize and beef up a lot of our systems. Without that, the ability to actually query an immunization registry for a provider history -- or sorry, patient history is limited. And in some cases that has had to be turned off, just so that the IIS could receive vaccines, let alone not -- they just don't have the bandwidth to push that information back out.

So we have seen some real gaps over the last several months.

*Mr. Bucshon. Thank you very much for that input, and that is why I think H.R. 550 is so important.

With that, Madam Chairwoman, I yield back. Thank you very much.

*Ms. Eshoo. The gentleman yields back, and we all thank you for your good work.

And I would just add to that that I believe that it was our former colleague, Donna Shalala, and former Secretary of HHS, that was the original sponsor of the bill. And now you have taken it up with Ms. Kuster, and we are grateful to you for it. It is important work.

The chair now recognizes the gentleman from California, Mr. Cardenas, for his five minutes of questions.

*Mr. Cardenas. Thank you, Madam Chairwoman and Ranking Member, for having this very important committee hearing to discuss these very excellent bills that -- we hope to have all of them move forward as soon as possible, addressing issues of vaccination of seniors, children, and everybody in between.

But equally important, I think, it is wonderful to see so many experts coming before us, Members of Congress, to educate us and also the American people who are watching this public hearing, as it should be. Deliberating and discussing the policies that affect everyday life of Americans and beyond is important for us to continue to do that in full

view of the public. Thank God for modern technology.

We are getting through this COVID-19 pandemic. Things are improving, but we are not out of the woods yet. And what this pandemic has proven is that there are wide inequities that persist. They persisted before this pandemic, and this pandemic exacerbated the truth of these inequities.

For example, Hispanic populations continue to contract this COVID-19 virus at the highest rates of any other race, while having some of the lowest rates of vaccine uptake. According to recent polling conducted by the Kaiser Family Foundation, Hispanic adults are about twice as likely as White adults to say that they want to get the COVID-19 vaccine, yet have expressed facing more barriers to accessing the vaccine than their White counterparts.

Barriers to access include, but are not limited to, concern regarding missing work, trust in their provider, and travel to vaccination sites. That is why Representative Barragan's bill, H.R. 3013, the COVID-19 Transportation Access Act -- I am pleased to see that she has introduced it, and I am glad to cosponsor that bill, as well, along with many of my colleagues.

With that said, our efforts cannot stop there. We need to make sure that people are aware of the resources that we are working to provide for them.

Research has also shown that, despite the vaccine being

available free of cost, thanks to the leadership of our committee and others, 59 percent of Hispanic adults have reported concerns about having to pay out-of-pocket costs to get the vaccine.

Similarly, despite all U.S. adults being eligible for the vaccine, no matter their citizenship status, 42 percent of Hispanic adults are not sure whether they are currently eligible to get a vaccine where they live. So awareness is a big, big issue to make sure that what -- the good work that we do, the good things that we fund actually -- that people can actually have the confidence and ability to realize that we are there for them, and that we are providing these resources for them.

And discussing vaccine efforts more broadly, and as we continue to work to better our public health systems, let us learn from the successes and failures of the COVID-19 vaccination efforts to ensure that every person has equitable access to information, resources, and vaccinations.

Further, equity should be intertwined in every conversation we have, and we should commit to finally understanding and meeting the needs of the populations we have historically failed to consider and serve, as well as some others.

From the perspective of our witnesses, what are some -- and you are teaching us some of the largest lessons learned

throughout the COVID-19 pandemic, and how we can use those lessons to build better, more equitable legislation to guide future vaccination programs.

So my question to you, Ms. Maldonado, is there anything you would like to share with us that we can express from the -- what we have learned from this COVID-19 pandemic, when it comes to disparities?

*Dr. Maldonado. Yes, thank you for that important statement. I actually set up one of the first outpatient outdoor tent treatment centers in the country, here at Stanford. We did it, actually, in the football field parking lot of the university, when everything was shut down last March. And I helped run that site, and continue to help run the site.

And what we saw were Latino families coming in in large numbers, carloads of families who were infected, people who were afraid to come in, because they knew that, if they were sick, they would have to stop going to work. People who had no resources for food, we were trying to help provide them with resources to get delivered food and -- through food -- to food banks and other places.

The disparities here in California, as you probably know, were just incredible. We were completely unprepared for the disparities that we saw in these communities. And I actually witnessed a couple that came in with their two

children. They were -- the children were not sick, the parents were sick. They were both urged to be hospitalized, but there was nobody to take care of their -- the children. So they had to decide which one was sicker to be hospitalized here, at our hospital. The other one went home to take care of the kids.

This is just one story, but it is absolutely representative of what is happening across our entire country, with all of our racial, ethnic, and lower socioeconomic populations facing the biggest brunt of this disease now. Initially, obviously, it was the older population, but now, with that high vaccination rate in the old people --

[Audio malfunction.]

*Dr. Maldonado. -- in our racial, ethnic, and lower socioeconomic minorities. Thank you for those questions.

*Mr. Cardenas. Thank you. It is unfortunate to hear stories like that happening in America. Let's do what we can to make sure that we end that.

So thank you, Madam Chair. I am sorry I went over my time. I yield back.

*Ms. Eshoo. The gentleman yields back. The chair now recognizes the gentleman from Oklahoma, Mr. Mullin.

And we hope that your son is feeling just better and better and better.

*Mr. Mullin. Thank you, Madam Chair. I -- Bakersfield right now, and I -- he is doing much better. So --

*Ms. Eshoo. Great.

*Mr. Mullin. Thank you for asking.

*Ms. Eshoo. Thank you.

*Mr. Mullin. This month he has been testing, and everything is looking good. So I appreciate your concern.

Sorry about the bad connection. I have very bad reception, even though I am in Bakersfield. We need a rural development out here, too, I guess, not just in my district.

But I got a couple of questions, and I -- Madam Chair, I appreciate so much you holding this meeting and this hearing, because it is important to all of us. Unfortunately, sometimes it does become political, and my questions may not seem to be much different, but we want to make sure that we are being transparent with the American people.

Ms. Phyllis Arthur, Russia and China both have pre-approved -- vaccines utilize mRNA technology?

*Ms. Arthur. The vaccines that have been authorized in China do not use the mRNA technology at this time, although they do, it appears, have an mRNA vaccine in development in China. Not sure where the technology comes from.

*Mr. Mullin. What about Russia? Are we familiar with that?

*Ms. Arthur. Russia does not have an mRNA vaccine in

development in their labs and companies.

*Mr. Mullin. Well, the reason I ask is these countries are both a significant threat to our democracy. I mean, obviously -- an advisory over the years. And do you think that it is wise for the Biden Administration to hand over a novel vaccine technology to these adversaries?

*Ms. Arthur. I think it is extremely important to maintain the great biotechnology industry innovations that we have developed over decades within the private sector, and in partnership with the U.S. Government, regardless of the Administration.

And so, knowing that we have actually had decades of research and development in all of the different platforms that led to the COVID vaccines, I think it is very important that we put forward policies that allow us to maximize that in the United States, and also partner, as we should, with countries that guarantee that the great work that we have done in U.S. companies, in partnership with others, is protected and allowed to bring other innovations forward.

*Mr. Mullin. Right. Under the Trump Administration -- Operation Warp Speed produced three COVID vaccines in under a year, which was unheard of. In any issue we have ran into throughout the country, we have never seen the development of -- the partnership between -- the private-public partnership come together like we did during Operation Warp Speed. What

can we learn from the success of Operation Warp Speed?

*Ms. Arthur. So thank you very much for that question. Operation Warp Speed was definitely a success, in terms of the public-private partnership it represented. It leveraged the skills and management of the U.S. Government, and the expertise and skills and decades of experience of industry in developing safe and effective vaccines.

One of the hardest parts about going so quickly was figuring out what things could be done in collapsed time, and what things had to be done in the regular amount of time we use for development, because we wanted to make sure the American people -- actually, people all over the world -- could feel like they were getting vaccines that were researched in a safe way, that they could see themselves in the data, and that we were manufacturing to proper quality.

And it is -- I think Operation Warp Speed is an example of the kind of public-private partnership that brings forward success, especially during an emergency. It is extremely important to learn how we thought about the collapsing of timelines. How we approach the manufacturing scale-up was another success. I think, more importantly, Operation Warp Speed really leveraged all the investments government and industry had been making all this time in platforms, which allowed us to go quickly.

So galvanizing the FDA, NIH, and other agencies and

industry really allowed for that success. And it was that coordination and that reliance on expertise that allowed that to happen.

*Mr. Mullin. Thank you. Thank you so much. I hope that the Biden Administration rethinks this before they start handing over the intellectual property, because, you know, American people, we invested a lot in this. And we are not just talking about the investment of the tax dollars, but it is also part of our national security. So we need to make sure we put those first, before we start handing out this intellectual property, especially to our adversaries.

And with that, I will yield back. Thank you so much.

*Ms. Eshoo. The gentleman yields back. It is a pleasure to recognize the gentlewoman from Michigan, Mrs. Dingell. And we are so glad that you are feeling much better, Debbie.

*Mrs. Dingell. Thank you, Madam Chair. It is good to be feeling better. I really want to thank you --

*Ms. Eshoo. Some person needs to unmute -- to mute in their offices, because there is a background conversation, and the gentlewoman from Michigan is recognized for her five minutes. Thank you.

*Mrs. Dingell. Thank you, Madam Chair -- thanks, Madam Chair and Ranking Member Guthrie, for convening this very important bipartisan hearing to discuss improving public

health through vaccination.

You know, it is -- but I think we need to, you know, continue to look at the broader picture. As we have seen in the current pandemic, vaccines, if properly deployed, are one of the most single effective public health interventions we had to address COVID-19. But as well is influenza and other vaccine-preventable diseases like measles, chickenpox, et cetera.

However, too often the cost in our fragmented health care infrastructure serves as a barrier to immunization. We have got to ensure people get vaccines when recommended throughout their lifetime, not just when they are kids, but also throughout adolescence. But most vaccines are given to protect our very young. In our older populations, the fact of the matter is that we have got to ensure -- fall through the gaps in the in-between, and there are a lot of vaccinations we need to be keeping up with throughout our lifetime.

So I have a question for each of you, and I will go one by one.

Dr. Maldonado, can you talk more about the importance of immunizations as part of healthy aging?

As a pediatrician, how can we set kids and adolescents up to get recommended vaccines as they move throughout their --

*Dr. Maldonado. Yes, I think this issue -- thank you so much, Representative Dingell, for this question.

We do think something called life course is a really important issue. And that is, as a pediatrician, as pediatricians, we focus on prevention. It is -- fundamental to how we work with children is how do we prevent diseases that will affect people 20 or 30 or 40 years or more in their life course. And we are doing more and more research in this area.

What is it that we do for the pregnant woman, for the young infant, and the child, and the adolescent that will affect their lives, and even their children's lives? And so this is an area that we are starting to study in more detail, as we have more access to genomics and precision health and precision medicine.

But from the immediate perspective, well child care, preventive care, anticipatory guidance, that is all really fundamental to every single pediatric provider. That is why the Vaccines for Children and other bills are important to really bring families in. This is what really brings the families in, knowing that they need these vaccines.

But what comes along with that is the ability to provide all the other platform information that families need around -- all the guidance that families would need to raise their children properly, give them proper food, proper nutrition,

and track all of the milestones that they need to develop as young children.

And as adolescents, the same thing is important. We need to start talking to them about issues that children may -- that age group may not talk to their parents about, and they will trust their provider to discuss. And these are things that I personally have seen over the years, as well. So these are things that will help us move our -- into the adult age group.

And as you have heard from my colleagues, adult immunizations are important, as well, making people aware that it is not just the vaccine, but everything that comes along with it.

*Mrs. Dingell. Thank you, Doctor. I am going to -- I had a couple, and I am probably not going to have time, so Dr. Tan, do you have recommendations on how to help spread this important message in order to help more older adults, especially those with chronic conditions, understand the role of immunization in healthy aging?

*Dr. Tan. Well, thank you for the question, Representative Dingell, and I want to point out that the Seniors Act is going to also talk about education for the adults, and I think that is extremely important.

I think we need to think about helping them understand what the access to -- what vaccines they are -- they need to

have, and then also finding ways to get them access and removing those potential financial barriers to that vaccine.

I want to pick up also a little bit on something you said about the chronic diseases that might sometimes impact adults that are perhaps between the ages of 50 to 64 years of age. We sometimes forget that they are also vulnerable. So they are outside the Medicare population, but they are also vulnerable to severe consequences from vaccine-preventable diseases. So I think helping to reach out to them, as well, is probably as important, to make sure that, if you have got a chronic illness, you are recommended for immunizations, and you should be seeking those out.

*Mrs. Dingell. And I am really not going to have enough time to ask another question, Madam Chair, but I would also -- and we were talking a little about it, the other question, getting accurate -- I was -- accurate information to people is really important. I had Guillain-Barre from a swine flu shot, but I still know -- I am not an anti-vaxxer -- how important we need to educate ourselves, and get information. I was scared to death of the COVID vaccine. But here I am, alive and well, and in a normal life. So working with people really -- okay, maybe -- Anna, but I survived the COVID vaccine, and I yield back my time.

*Ms. Eshoo. The gentlewoman yields back. And as I said at the top of the meeting, we want to get -- hear the rest of

the bounce in your voice returned. So please take good care of yourself.

The chair is so pleased to recognize our colleague from North Carolina, Mr. Hudson, for your five minutes of questions.

*Mr. Hudson. Thank you, Chairwoman Eshoo and Ranking Member Guthrie, for holding this hearing. And thank you to our witnesses for your time and testimony today.

As a proud cosponsor of H.R. 1978, the Protecting Senior Through Immunization Act, and the lead on H.R. 3743 supporting the Foundation for NIH and the Reagan-Udall Foundation for the FDA, I am particularly happy to be here discussing these important issues.

I would also like to thank Chairwoman Eshoo for her leadership and her partnership in introducing H.R. 3743 together. This bill builds on our work together in the last Congress, and I am pleased to say the bill has already passed the Senate Health Committee last month under the leadership of our old friend, Senator Lujan, as well as Senator Collins.

This bill seeks to build upon the immense success we have had over the past year with public-private partnerships for medical breakthroughs.

Both the NIH and FDA have nonprofit, independent organizations established by Congress to help carry out each agency's mission. These organizations create and manage

relationships between public and private institutions, administering research programs, supporting education and training, and providing support to patients. Together, the Foundation for NIH and the Reagan-Udall Foundation have been incredibly successful over the years, and are strong stewards of promoting innovation.

In fact, the FNIH was a crucial supporter of creating ACTIV, the partnership in April 2020 in response to the COVID-19 pandemic. ACTIV brought together agencies, academia, philanthropic organizations, and --

[Audio malfunction.]

*Mr. Hudson. -- promising COVID-19 vaccines and treatments. As a result, six COVID-19 treatments are now well underway.

We also saw the success of Operation Warp Speed, another public-private partnership that, in my opinion, and because it really -- not receive the credit it deserves. Putting politics aside, though, Operation Warp Speed, through that program, we were able to develop, manufacture, and distribute vaccines in record time.

One critical way we can build on this success is to continue to support our public institutions, and encourage them to further partner with private entities. I am honored to work with Chairwoman Eshoo on this bill that would increase the level of funding that NIH and FDA transfer to

their foundations to do just that. This bill will continue to build on the success of ACTIV, and Operation Warp Speed, and other public-private partnerships to develop novel vaccines, diagnostics, and therapeutics at even faster rates in the future.

Turning to Ms. Arthur thank you for your testimony so far today. I have two questions I will ask, and then I will let you use the rest of the time to answer.

The first question is I mentioned ACTIV, with the support of FNIH, has been extremely successful. Can you explain how my bill, H.R. 3743, might further enhance these partnerships, and bring more innovative vaccines to the American people?

And then my second question, in response to the COVID-19 pandemic, key sectors of the pharmaceutical industry acted as partners with the U.S. Government to mobilize and unleash innovation. However, recent news about the Biden Administration's support for waiving IP patents for COVID-19 vaccines is extremely alarming to me. I believe doing so would jeopardize industry incentives for innovation, undercut America's leadership in the life sciences, and endanger over four million pharmaceutical jobs. Could you speak about industry might respond if the U.S. Government suddenly undercut the decades of research and billions of dollars invested in R&D innovation, and how this might impact our

future response to pandemics or public health emergencies?

And I will mute and let you answer, thank you.

*Ms. Arthur. Thank you.

First, I just want to add something to the great discussion on what we can do to have more people get vaccinated. Dr. Tan mentioned that we want to make this a social norm. And so I think it is important to continue to build on the great investments we made in trusted messengers for very -- for many communities. A lot of African American, Latinx, Native American organizations rose up and educated on COVID. We can't lose all the investment in what they built, in talking to their constituents, and I hope we make sure that we think of that as a gap, and we do something about that, moving forward.

For ACTIV, Congressman, I think ACTIV was an excellent way to spearhead research across many different therapeutics and vaccines. And it actually could be a model, moving forward, for pandemic preparedness response, so that we have a more organized way to approach the R&D we need to do in a pandemic, when we have millions of patients, and many products coming forward. And I think that it was an example of what could be done across many stakeholders, including industry.

Lastly, I think we have talked about the waiver. Industry is definitely concerned that, if the waiver moves

forward, not only would it jeopardize the way we are managing a very constrained supply chain, globally, because we would have to have all these different manufacturers around the world who might want to start manufacturing the product, but aren't necessarily ready to do so, it could actually, more importantly, jeopardize the way industry thinks about their investments in both the commercial sector, and then, as congresswoman Eshoo mentioned, in the way they think about pandemic response.

Companies brought 950 products to bear on COVID-19 across the world. They brought every technology they had, and they stopped working on what they were working on before to turn their attentions to COVID, regardless of whether they were going to get funded by the U.S. Government. We want to make sure that we guarantee companies continue to do that every time we need to respond to an unknown pathogen or known pathogen. And one of the cornerstones for industry in doing that is knowing that there is intellectual property protections.

*Mr. Hudson. Thank you, and I yield back, Madam Chair.

*Ms. Eshoo. The gentleman yields back. It is a pleasure to recognize the gentlewoman from New Hampshire, Ms. Kuster, for your five minutes of questions.

*Ms. Kuster. Thank you so much, Chairwoman Eshoo, and thank you for holding this important hearing to discuss

efforts to improve public health through specific and targeted vaccine initiatives. And I particularly appreciate the inclusion of two bipartisan pieces of legislation that I have authored this Congress.

Before I dive into questions, I want to take a moment and encourage all Americans to consult with your doctor and get vaccinated against COVID-19. We have recently passed the grim milestone of 600,000 Americans who have died from this terrible pandemic. And while we have over 43 percent of our adult population fully vaccinated, Americans are still ending up in the ICU, and succumbing to this disease because they have not yet been vaccinated.

We have come too far to allow this virus to move us backwards. So please roll up your sleeves and do your part to crush this awful virus.

As we continue to make progress toward ending the pandemic, it is critical that we not lose sight of the lessons we have learned. And one lesson we have learned is that our system for adult immunization needs serious improvement, and we need to expand access.

While the COVID-19 vaccine is free of cost, regardless of your insurance status, for other routinely-recommended vaccines Medicare beneficiaries may still be required to pay a copay or coinsurance out of pocket. And that is why I have partnered with my colleague and friend, Representative -- Dr.

Larry Bucshon, on introducing the Protecting Seniors Through Immunization Act, which provides Medicare beneficiaries with Part D coverage the same access to vaccines that individuals under the age of 65 currently enjoy. Medicare beneficiaries should not be forced to choose between getting a provider-recommended vaccine or other medicines to manage chronic or acute medical issues.

So I have a question for Dr. Tan.

Could you speak to the importance of initiatives that prioritize high-value care for seniors and expand access to routine vaccination for seniors?

And in your opinion, would the Protecting Seniors Through Immunization Act help improve access to recommended vaccines under Medicare?

*Dr. Tan. Oh, yes, thank you very much, and thank you to you, and also to Representative Bucshon, for introducing this bill. Thank you.

Yes, absolutely. I think part of the bill also talks about the fact that there is an education component and an outreach component. And I think that is really, really vital to not just help seniors understand that they can get access to these vital vaccines, hopefully, at no copay, but also to help providers understand that, as well.

Sometimes provider hesitation to recommend vaccines is because they don't want to put a burden of a payment on their

patients, especially those who are on fixed incomes. And so, by taking that concern away, we can also strengthen that provider recommendation, "I recommend you get the vaccine because it doesn't cost you anything,'' and they can say that with confidence. So I think that is extremely important. And --

[Audio malfunction.]

*Dr. Tan. -- playing field, right, as you have said. We need to make sure that my grandparents -- well, actually, my parents -- can get a vaccine the same way I can get one through commercial health plans. So that is an important, important part of the bill, as well. So thank you very much for that question.

*Ms. Kuster. Thank you. I also want to highlight -- excuse me -- I also want to highlight my bipartisan bill, also with Dr. Bucshon, that would provide critical funding to bolster our immunization infrastructure around the country, and bring it into the 21st century. The Immunization Infrastructure Modernization Act would boost funding to improve information technology, data collection, and interoperability between IIS systems.

This is a question for Rebecca Coyle: Through your work and experience working with IIS systems, what has hindered states and local health departments from bringing their systems into the 21st century?

*Ms. Coyle. Thank you for that question, and I really appreciate your leadership in this area. I think the question you ask is great. You know, what has hindered us from moving forward?

And quite frankly, it boils down to prioritization. There are a number of different things that public health is faced with trying to navigate.

And then the other piece is funding. There has not been any sort of dedicated resources for immunization information systems. They are part of the much larger immunization program funding, which then relies upon the state or jurisdiction to dictate where their priorities rest, and making those modernization efforts.

I think, as a result of that, we have seen a variety of different systems across the U.S. Some are more highly functioning than others, and I think our goal here is to really try and improve that flow and the operation to the same level.

*Ms. Kuster. Great. Perfect timing. My time is up and, with that, I yield back.

*Ms. Eshoo. The gentlewoman yields back. It is a pleasure to recognize another one of our outstanding doctors on our subcommittee, and we are so fortunate to have them.

Dr. Dunn of Florida, you are recognized for your five minutes of questions.

*Mr. Dunn. Thank you very much, Madam Chair, for your kind words, and Ranking Member Guthrie, for hosting this hearing today.

You know, the United States has a wonderful story to tell when it comes to the development of the vaccines. It is my hope that the success of this public-private partnership that brought us these vaccines can be leveraged to continue innovating, and move towards eradicating vaccine-preventable diseases in the U.S. and beyond.

For any vaccination we know that immunity may fade over time. The most appropriate way to ensure that a vaccine has produced a strong immune response is to test for persistent immunity in both a qualitative and quantitative sense. Testing for immunity can be an important tool in determining when, after any vaccination, a booster shot may be needed, or to determine if someone was previously infected with a specific virus, and already has significant immunity.

Some viruses principally evoke a B cell immune response, such as hepatitis B and A. This we measure with antibody titers. In other viral diseases, the principal immune response is mediated by T cells. We call this humoral immunity, and it is best measured by testing for activated T cells, not antibodies, which are fleeting after vaccination or infection with SARS-CoV-2.

Coronavirus is such a virus. Testing for antibodies is

of little use in detecting or quantifying immune status. T cells are available -- T cell tests are available, although not nearly as widely or cheaply yet. But our experience in Singapore, SARS-Cov-1 showed, essentially, 100 percent immunity to this disease in survivors fully 17 to 18 years later. This was measured by testing for activated T cells to SARS-CoV-1. Interestingly, these same patients demonstrated a similar level of immunity to SARS-CoV-2.

This underscores the obvious conclusions that we need to have readily-available T cell immunity testing, so that we can definitively determine who has immunity and who does not. Someone may have had the vaccine, but failed to mount a significant immune response, as some five percent of vaccine recipients do. Or they may have unknowingly had a subclinical infection, and still demonstrate clinical immunity, significant clinical immunity, thereby not needing the vaccination.

Indeed, there may be a small, but real risk that vaccination in these patients, especially the younger ones, may excite a cytokine storm response that renders them seriously ill.

So on that subject, Dr. Maldonado, do you have anything to add regarding the importance of being able to test for humoral immunity, T cell immunity, compared to antibody testing when it comes to COVID-19?

*Dr. Maldonado. Yes. Clearly -- thank you so much for that comment, Representative Dunn.

So we have a Human Systems Immunology Center, here at Stanford, and there are centers all around the country and within, actually, the industry, as well, that are conducting, actively, very cutting-edge work around measurement of T and B cell immunity. So clearly, humoral and cell-mediated immune markers are critical for understanding not only how this virus is producing the effects that it does, but also the --

*Mr. Dunn. But also the vaccines. I am going to reclaim my time, because we are running out, and I have other questions for you.

Are other members of your specialty pediatricians routinely using T cell testing?

*Dr. Maldonado. So we are --

*Mr. Dunn. In this country.

*Dr. Maldonado. So we are doing T cell testing here at Stanford, absolutely. We are working with NIH, and FDA, and others to do studies. I have a -

*Mr. Dunn. But outside academic centers, I think it is not as widely available, am I correct?

*Dr. Maldonado. There are some T cell assays, but we don't have a good understanding of how they are going to work. So, yes, absolutely, we need to understand them better

so they could be potentially commercially used.

And then the question will be, of course, whether we should use them -- use these to identify booster –

*Mr. Dunn. Okay, I am going to move on, but I appreciate that. And I am -- by the way, I will be submitting questions in writing after this.

As the industry seeks to -- this is to Ms. Arthur -- as the industry seeks to determine the specifics of when COVID-19 booster shots might be necessary, if -- or if they are necessary, do you know if vaccine manufacturers are evaluating T cell immunity data to drive decision-making?

*Ms. Arthur. So I am not sure. I think that companies are working with the FDA to look at different markers, and so they are trying to look at --

*Mr. Dunn. So I am going to -- again, I am going to interrupt, because we are -- but I would urge your companies to look at the Singapore data. They have a lot of experience with this and SAR-CoV-1. It was very good data. I look forward to learning more about this testing in the future, and how we are using it clinically, and in research. And I would submit the data on human immunity would be extremely valuable to doctors treating patients on a daily basis, and to our vaccine makers. And, as I say, I will be submitted questions.

[The information follows:]

**********COMMITTEE INSERT**********

*Mr. Dunn. And thank you very much, Madam Chair and Ranking Member Guthrie. I yield back.

*Ms. Arthur. Dr. Dunn, I would love to have that question in writing so we can respond to you.

*Mr. Dunn. You will. You will, I promise.

*Ms. Arthur. Thank you.

*Ms. Eshoo. The gentleman yields back. It is a pleasure to recognize the gentlewoman from Illinois, Ms. Kelly, for your five minutes of questions.

*Ms. Kelly. Thank you, Chairwoman Eshoo and Ranking Member Guthrie, for your leadership, and for holding this hearing to discuss improving vaccination rates, especially in populations that are at higher risk for vaccine-preventable diseases.

According to the CDC, pregnant people, and recently -- pregnant people have a higher risk for severe illness from COVID-19, compared to non-pregnant people. A recent study published in JAMA found that people with COVID-19 diagnosis have an increased risk of maternal morbidity and mortality, and that newborns of people with a COVID-19 diagnosis had a higher risk of morbidity. We must, must ensure that COVID-19 vaccinations make it to the arms of the people who need it most.

Unfortunately, vaccination rates tend to be low on pregnant people, overall. In 2019, only 40 percent of

pregnant women received recommended vaccines. The rates were even lower for Black and Latinx women, with 23 percent and 25.4 percent, respectively, getting vaccinated, compared to 46 percent of White women.

This is personal to me. My daughter just had a baby, so I have a grandbaby, another one, as of two days ago, and she hasn't been vaccinated yet.

So Dr. Tan, why aren't all pregnant women getting access to potentially lifesaving vaccines?

And what actions are needed to ensure that maternal populations and providers who care for them are able to make preventive health measures such as that?

*Dr. Tan. Thank you very much for that very important question.

I think, when I was in the National Vaccine Advisory Committee, we actually issued a report on maternal immunization, looking at some of the barriers. And I think it is important to recognize that one of the major reasons why a pregnant person gets vaccinated is a healthcare provider recommendation. And so it is because of that recognition that a lot of work was done to bring on board OB/GYNs to become immunizers, to provide recommendations for immunizations, and give the vaccines. I think that has been a testimony to ACOG on their efforts on that.

But I think, that being said, I think we have now hit a

point where we went from 15 percent to about 50 percent, for example, for flu, and we are not getting much higher. And I think that reflects, actually, some traction with regards to what other providers can we engage to provide access to vaccines for pregnant women.

And I think one of the challenges that we have is that it does cost providers a lot of money to start vaccinating. You know, the family physicians have been vaccinating for forever. Pediatricians have done this very well for a long time. But when we start expanding to providers of health care to pregnant women, internists, we need to figure out ways to incentivize them to absorb -- to take on these costs, to start up, to vaccinate people. And I think that is one of the most important things that we can do, with regards to the provider component.

And the maternal immunization bill that is in front of us, actually, is really, really important, because it starts that conversation between the patient and the provider by providing education and outreach on why maternal immunizations are important.

I am going to just wrap by saying, you know, there is a lot of new vaccines coming up for maternal immunizations, and it would be a shame if we did not move this forward to a point where we get to see the benefits of those new vaccines. Thank you so much.

*Ms. Kelly. Well, I very much support H.R. 951, the Maternal Vaccinations Act. I think it is really important.

Dr. Maldonado, some women are reluctant about these vaccines for safety concerns. As a physician, can you speak to the safety and importance of maternal vaccinations, specifically the inclusion of pregnant people in vaccine research?

*Dr. Maldonado. Yes, absolutely. Thank you so much for this important question.

As we know, these vaccines are recommended by the CDC now for use in pregnant women. The ACOG, American College of Obstetrics and Gynecology, also recommend the safety of these vaccines for pregnant women -- persons. The issue is that there has been some misinformation on social media that has been circulating much faster than others -- than people was -- were expected, that there is -- around the inability of -- the ability of the vaccine to potentially cause infertility. That is absolutely baseless. It is based on non-science, and it has frightened a number of individuals into not getting vaccinated, for fear of fertility issues.

But in addition, it has also frightened pregnant people into not considering getting the vaccine. So I do think that, again, coming back to this issue of providing more support, as LJ mentioned, we published this paper, white paper, many years ago on maternal immunization efforts. And

there are some, still, very good recommendations there on how to educate our OB/GYN providers, our private practice providers, our communities around the safety of these vaccines, because we do have an extremely safe surveillance systems. The FDA, CDC, and others do track vaccines very carefully and cautiously. And we have the highest confidence in vaccination of pregnant people.

*Ms. Kelly. And I know I am out of town -- time, but I just want to say passing the Helping Adults Protect Immunity Act is critical to ensuring access to vaccines.

And I thank Representative Soto for his leadership here, in -- continue pushing my bill, the MOMMA's Act, which would mandate Medicaid programs to expand postpartum coverage from 60 days to 1 (sic). Together, these changes will ensure that both pregnant people and new moms can receive the vaccinations they -- receive.

Thank you, and I yield back.

*Ms. Eshoo. I thank the gentlewoman for her terrific work.

It is a pleasure to recognize Mr. Curtis from Utah for your five minutes of questions.

*Mr. Curtis. Thank you.

*Ms. Eshoo. And thank you for your patience.

*Mr. Curtis. Thank you, Madam Chair. A special thanks to Representative Kelly. Congratulations on that new, little

grandbaby. As a grandfather of 11, I can really relate to your joy.

I can also relate to some of the concerns expressed. I have heard this from my own daughters, who are -- some expecting, and some -- I have six kids, by the way. And it has been real frustrating to me, as their father, somebody who is a strong advocate of getting a vaccination, to watch them struggle with this personal decision. And we just have to do a much better job of getting information out there, and I am struggling in my own family to do that.

I have been a strong proponent for getting vaccinations. I had an early vaccination myself, and yet I represent a district --

[Audio malfunction.]

*Mr. Curtis. -- are reluctant to get a vaccination. And I feel compelled just to speak for them, just to some degree, to say that it is still a personal choice, and something that cannot be forced upon them. As a matter of fact, I think the more we talk about it in these terms, the more resistant they are to doing it. It reminds me a little bit of somebody who is diabetic, or susceptible to diabetes who wants to sit on the couch and watch TV, no matter how much we talk and tell them to go out and exercise. They don't.

I am a little frustrated when I hear things like we

can't hold our committee meetings until we know who vaccinated and who is not. Nobody has exactly explained that science to me, of why we need to know that. And I realize there is many cases that are quite personal, where we don't know that.

I would like to switch gears just a little bit to vaccinations, in general, and ask Dr. Maldonado, how many annual immunizations are recommended for children, and at what ages are children recommended to receive these immunizations?

And then, a follow-up to that is, is there an age bracket in which we see these drop, the immunization rates drop? And, if so, what can we do to close that gap?

*Dr. Maldonado. Yes, thank you. There are over 27 different types of diseases that are prevented by immunizations, not all of them recommended for every single child. So it really depends on whether children have underlying risk factors or not.

But the vaccinations generally start by around two months of age in this country, and they can continue all the way through adulthood, as we know, for HPV, for example, and pneumococcal diseases. But the age groups are generally concentrated in the first five years of age. And then they tend to have an adolescent platform, where there are vaccines recommended in the 11 to 12-year-old age group and above, and

then there are some vaccines that are recommended for young adults, and then, again, pregnant people, and then finally for seniors.

So there is a whole, very nicely put-together schedule that the American Academy of Pediatrics harmonizes with ACIP. It is available on the CDC website, and it includes regular vaccinations, vaccinations for catch-up, and for different ages.

*Mr. Curtis. Thank you.

Ms. Arthur, there has been a lot of discussion at today's hearing about President Biden's Administration proposal to hand over the COVID-19 vaccine intellectual property. I think you have been pretty clear about how you feel about that. And I might say that I think those are legitimate fears.

But let me kind of change that question just a little bit, and say we all agree that we want to get vaccinations out to the world. What can we be doing, without losing an intellectual property?

In many ways, I think we have seen a great display with that, with President Biden's recent commitment to put a half a billion out there. But what would you advise us, as Members of Congress, that we can do, short of giving away that intellectual property to get vaccinations out to the world?

*Ms. Arthur. Thank you so much for that question, Congressman. I think that is actually exactly where we would like to focus the policy energies around COVID for the world, is actually thinking about those very important things we can do right now to get more vaccines produced.

We have put out our BIO Share program, and we have encouraged anything the government could do to help reduce export controls around the world that limit the free movement, particularly of the key raw materials we need to manufacture more vaccines, not just here, but in other countries that are also serving their nations and other nations.

Secondly, the donations that are organized are really, really important.

And third, we need to actually use, as the President said, our arsenal of power in the United States, and all the manufacturing capacity that we built over the last year, to actually export doses to countries, so that companies can honor the commitments they have made to COVAX and to other nations to bring more doses as quickly as possible to people.

*Mr. Curtis. Thank you. It appears to me that that is actually a much quicker way to get vaccinations out to the world, rather than letting people redevelop so many things that you have already done.

*Ms. Arthur. These are things that could happen today,

and are happening right now.

*Mr. Curtis. Thank you. I am out of time.

Madam Chairman, I yield. Thank you.

*Ms. Eshoo. The gentleman yields back. The gentlewoman from Delaware, a small state, but with big representation.

Ms. Lisa Rochester, you are -- Blunt Rochester, you are recognized for five minutes.

*Ms. Blunt Rochester. Thank you so much, Madam Chairwoman, for the recognition, also of the recognition of our small wondrous state, and for calling this important hearing today. I would also like to thank the witnesses for being here.

President Biden declared June a month of action in order to help the country reach the target goal of 70 percent of adults immunized against COVID-19 by the Fourth of July holiday. While the United States has vaccinated more people than anywhere else in the world, we are still working on connecting vaccines to individuals at that last mile, especially among racial and ethnic minorities.

Due to investments from the American Rescue Plan and leadership from the Biden Administration, we have seen healthcare providers, community-based organizations, civil rights and religious leaders come together around targeted COVID-19 vaccination campaigns.

And in my state, Beebe Healthcare and local partners

have re-purposed a bus normally used as a mobile library with vaccine workstations to, literally, meet people where they are. And while we have made progress, the data shows we still have much work to do. According to the Kaiser Family Foundation, Black and Hispanic individuals have received smaller shares of vaccinations compared to their shares of cases, and compared to their share of total population in most states.

Dr. Tan, can you talk about how these outreach activities have helped reach these critical populations, and what more can be done?

*Dr. Tan. Well, thank you so much for that question. I think it is -- I think COVID-19 woke us all up to the discrepancies that we see in our access to care. And I think these initiatives that came out of that have been very successful.

I think one of the big pictures it has shown us is that with rural, with low socioeconomic, with ethnic and disparate populations, we need to figure ways to bring the vaccine to the community. And that starts, also, with bringing people in the community to the vaccine, in the sense that -- you know, bringing leadership that can speak to the benefits of getting vaccinated.

In the African American population there has been previous work that has demonstrated success where, when you

engage a respected pastor to talk about vaccination, vaccination being offered in his or her church, that increases immunization coverage rates. And I think these programs that you talked about that started with COVID-19 are achieving that success.

What I would urge is that we continue to use these techniques, that -- these interventions that we have learned to do this with all the adult vaccines, going forward, and to build on that, so we don't lose that momentum.

*Ms. Blunt Rochester. Well --

*Dr. Tan. Thank you so much for that question.

*Ms. Blunt Rochester. Well, you actually read my mind, because my next question was, how can this increased coordination be utilized to help with catch-up activities for routine immunizations, as well?

*Dr. Tan. So that is a great follow-up. Thank you for that. I would like to speak a little bit longer to that, absolutely. And I think this is the other thing that we are also beginning to figure out with COVID-19, is that -- this exquisite collaboration between state public health, county public health, and the communities that they serve, are really required in order to bring these programs to fruition.

And on that note, I think it is important to recognize that a lot of the work that we are doing, you know, needs to be sustained with improvements in our public health

infrastructure. And I think that is the big picture that we also want to not forget, that, in order to continue and sustain these improvements, we need to fund public health infrastructure the way it has not been funded before. Thank you again.

*Ms. Blunt Rochester. Yes. You testified that coverage is key for getting people vaccinated. What does the data tell us about how health coverage affects vaccination rates among racial and ethnic minorities?

*Dr. Tan. Yes, a one-word answer. The more someone has to pay out of pocket for a vaccine, the more likely they are going to refuse or not even show up for that vaccine. So we need to make sure that patients have no copay, so that they will get the vaccines that will potentially save their lives.

*Ms. Blunt Rochester. I really want to thank you, Madam Chairwoman, for this hearing. This, as we know, is consequential to not only our physical and mental recovery, but also to our economic recovery. And this is such an important moment for us.

And I am glad also, Dr. Tan, that you mentioned rural communities. I represent the entire State of Delaware. We are small, so we only have one congressperson. And so I am -- we are representing urban, suburban, and rural communities. And so us being creative, and innovative, and finding these different ways in multiple entry points is going to be very

important, not just for today, but also, as you mentioned, for the future of our health care and our health infrastructure. So thank you so much.

And I yield back the balance of my time.

*Ms. Eshoo. The gentlewoman yields back.

I think you are the only senator in the House of Representatives, so we love you.

It is a pleasure to recognize the gentleman -- oh, I am sorry, another one of our great doctors on the subcommittee, Dr. Joyce from the State of Pennsylvania.

You are recognized for five minutes.

*Mr. Joyce. Thank you for the kind words. And thank you, Chair Eshoo and Ranking Member Guthrie, for convening this hearing. And thanks to the witnesses for appearing today on such an important topic.

The COVID-19 pandemic has caused disruptions in almost every aspect of Americans' daily lives over the last 15 months. And thanks to President Trump's Operation Warp Speed, we have seen multiple vaccines authorized for use in record time, and a return to normal life. Children have been greatly affected by the pandemic, as we have seen school closings, loss of activities, and limiting of routine social interactions, which have drastic impact on learning, on mental health, and on the social development of our children. With the authorization of the COVID-19 vaccine for children

12 and up, all of these activities must resume in full.

Now I would like to take -- turn to another matter of vaccines in children, and the troubling drop that we saw last year in routine childhood vaccinations, particularly early in the pandemic. These were especially prevalent in the DTaP and the MMR vaccine rates, which prevent several highly communicable –

[Audio malfunction.]

*Mr. Joyce. My question first is for Dr. Maldonado.

Thank you for your testimony earlier, when you laid out some of these issues, and for highlighting the Strengthening the Vaccines for Children Program Act of 2021, which was introduced by my fellow physician, Representative Kim Schrier, myself, and our colleagues, Representative Butterfield and McKinley.

In particular, I did want to focus on an issue that impacts doctors participating in the Vaccine for Children program.

Dr. Maldonado, can you please discuss how the current program reimburses physicians for vaccines that protect against these multiple communicable diseases, and how this poses challenges?

*Dr. Maldonado. Yes, thank you so much, Representative Joyce, for that question.

So currently, the -- it really depends on at what level

the provider works. So, for example, if they are in a large practice or a large health system, they are largely protected from the day-to-day work, but they still have quite a bit of paperwork to do. It only gets exacerbated if you are in a smaller practice, or in a rural area where you might be the only provider for many, many miles, for a large geographic region.

What happens is these requirements are really broken down between Federal and state requirements, because there are separate payment stream fund flows -- funds flow for payments. So you may have private-insured patients, you may have state-funded patients, you may have Federal-funded patients. And the ability to streamline these processes would really take a big bite out of the time that providers have to spend after seeing their patients in completing all of the paperwork, hiring back office individuals to just do that work, which keeps them from seeing more patients and providing the care that they need.

So the administrative and bureaucratic issues that -- streamlining VFC and CHIP, for example, really would go a long way to reducing the financial burden, the administrative burden. It would increase the ability of pediatricians and other providers, such as family practitioners, as well, to see patients face to face, rather than to spend time doing a lot of the paperwork that is necessary to get this

reimbursement.

*Mr. Joyce. Thank you for bringing that into the discussion. The area that I represent in south-central and southwestern Pennsylvania you described. There are many small practices in rural areas, and these individual pediatricians and family practice physicians are obligated to take care of these children, and provide them with the necessary vaccinations.

Finally, do you believe that the bill, Strengthening the Vaccines for Children Program Act of 2021, will alleviate the concerns that you just laid out?

*Dr. Maldonado. I do believe that this will make a -- take a -- take us a long way into addressing issues that we have been bringing up for many years now around the alignment of funds flow into practices, especially those that were already impacted even before the pandemic, and which has been exacerbated by current fiscal constraints that the pandemic has imposed on practices around the country.

So this would have an immediate, immediate impact on the ability of practices to really gear up and get back into the business of taking care of children, and keeping them safe and healthy.

And then the long-term impacts would be important in keeping -- in enticing more providers, as I mentioned, to come into VFC and be allowed to participate in providing more

care for children, giving them those medical homes that they really need.

*Mr. Joyce. Thank you so much for your answer.

Chair Eshoo, thank you. I see my time has expired, but this is such an important issue, I definitely appreciate your indulgences in allowing us to continue this conversation. Thank you.

*Ms. Eshoo. We appreciate you on the subcommittee, Doctor. So -- and thank you for yielding back.

It is a pleasure to recognize a great new member of our subcommittee, the gentlewoman from Minnesota, Ms. Craig, for your five minutes of questions.

*Ms. Craig. Thank you so much, Madam Chairwoman, for holding this important hearing today. And thank you to our panelists, who have stuck in there for the majority of the day today.

With over 309 million doses administered within the United States, we have made historic progress in developing and delivering vaccines. Earlier this year I was proud to vote for the American Rescue Plan, which provided $7.5 billion to CDC for vaccine distribution and administration.

However, as we all know and we heard today, those persistent gaps persist. In Minnesota, the statewide vaccination rate among Black, indigenous, and Hispanic Minnesotans is around 50 percent, compared to 62 percent

among White residents. In rural areas, the vaccination rate among Black, indigenous, and Hispanic individuals is even lower. The most recent racial and ethnic data from CDC includes 57 percent of people who have received at least 1 dose of the vaccine. While the national data indicates a narrowing in those disparities in vaccination rates among Hispanic, Black, and Asian communities, we still do not have state-level data.

Earlier this year, I introduced H.R. 979, the Vaccine Fairness Act, which would direct HHS to provide regular updates on their efforts to ensure the COVID-19 vaccine reaches the groups most at risk. It would require HHS to report disaggregated data vaccine distribution data by age, race, ethnicity, and zip code. I want to thank the committee for including H.R. 979 in today's legislative hearing, and allowing me to raise awareness about vaccine equity in Minnesota.

With that in mind, I wanted to ask you, Ms. Coyle, about the critical role immunization information systems play in how we respond to outbreaks like COVID-19. We also know how difficult it is to address racial, ethnic, and geographic barriers to care without robust and accurate data. Can you expand on the ways that outdated Immunization Information Systems inhibit states' ability to collect demographic data, and respond appropriately?

*Ms. Coyle. Sure, and thank you for your question. So I think, you know, in terms of equity, it is very important to understand how all of that is calculated.

One of the significant challenges that we faced going into this pandemic is really the emphasis on trying to capture some of that race and ethnicity data. Some of that data hasn't typically flown into an IIS before, through data exchange, for a variety of reasons: one, perhaps the clinic is not actually collecting that information; two, perhaps the system doesn't actually submit that information. Or I think even more troubling is that our actual systems -- and this includes EHRs -- don't actually capture the broad depth of which we need to capture for race and ethnicity data. It is very limited in nature to about seven fields, whereas we know race and ethnicity is very -- more complex than that.

So the way that we have been able to see this, I think, sort of morph, and the attention placed on all of this, we saw all of our states, all of our jurisdictions be able to capture that information, and be able to save that information with the patient. Right now we are at a little over 50 percent of all of the COVID-related data containing race or ethnicity information. But we recognize that there is still a long ways to go, and it is a shared responsibility between those capturing the information, the medical clinics, and then, also, for the systems to maintain that information.

*Ms. Craig. Ms. Coyle, just as a follow up, if we were able to capture that data more accurately, what are the ways that we can leverage that data to improve vaccine equity?

How would we put that into practice?

*Ms. Coyle. Certainly. Well, with access to data it certainly can highlight some of the areas that may need additional focus. We know that sometimes, with certain populations, they need an outreach that is conducive to their cultural or -- ways of thinking. And it is one of those things where, the more data you have at your hands, the more specific you can be in your response.

And I think that is truly the best tool for these IIS, is that you have that complete knowledge and that complete look, then being able to leverage that to target your interventions.

*Ms. Craig. Thank you very much, and thank you again to all of our panelists here today.

And Chairwoman Eshoo, with that, I will yield back.

*Ms. Eshoo. The gentlewoman yields back, yielding back some extra time, we thank you for that.

Now the -- it is a pleasure to recognize the gentleman from Texas, Mr. Crenshaw, and we are so happy that you are with us, and hope that you are feeling really well.

[Pause.]

*Ms. Eshoo. You need to unmute.

[Pause.]

*Mr. Crenshaw. Working now.

*Ms. Eshoo. There you are.

*Mr. Crenshaw. Yes. I was unmuted, but the settings weren't correct. I had to utilize my Millennial background to -- with troubleshooting.

*Ms. Eshoo. I hope you are feeling really well. It is great to see you.

*Mr. Crenshaw. Well, thank you. Thank you, Madam Chairwoman, and I do. I feel -- I am, basically, back to my sense of normal, which is a complicated normal, but I am, basically, back. So I really appreciate all the prayers and well wishes.

And thank you to our witnesses for being here today, discussing the important issue of the vaccinations and the amazing efforts by American industry to create, manufacture, and distribute vaccines at a record pace.

I want to just briefly discuss one of my bills here today. I was disappointed it was not included in the budget reconciliation. I know a lot of my colleagues on both sides of the aisle have the same concern on the topic of vaccine allocation and transparency.

Every American who wants a vaccine can get a vaccine. We are fortunate to have an excess supply to share with the world. It really is an amazing thing to be an American. But

I want to remind us of where we were in February. And by us, I particularly mean Texans. The Houston Chronicle ran a story with the headline, "Nobody is Getting Enough: Why Texas Ranks Near the Bottom for COVID-19 Vaccines Per Capita.'' Again, of course, that is comparing to other Americans and other states, not the world.

I would like to submit that article for the record.

This wasn't an aberration. It was captured in a moment in time on January 14th. The CDC was reporting that total allocations to Texas were 7,602 doses for 100,000 individuals. On that day to the national allocation to the states was 9,339 per 100,000 individuals. Fast forward to March 12th, where reporting shows that Texas was allocated 37,000 per 100,000 individuals, compared to the national average of just under 42,000 doses per 100,000 individuals.

So the Administration set out to allocate the most basic metric out there with population, but even a population-based formula will still have variances, and that is why my bill would require HHS to make their methodology public. I would love to see this committee continue a robust debate on how to prepare for pandemics. And I do think this bill will ensure that allocation transparency should be standard practice in the future.

In addition, I am submitting for the record my letter to the GAO, asking them to investigate allocations, as well as a

bipartisan Texas delegation letter to the CDC on this issue, as well.

Thank you, Madam Chair. I will yield back the remainder of my time.

*Ms. Eshoo. The gentlemen yields back. It is a pleasure to recognize our resident pediatrician, whose name has been mentioned many times today by our witnesses.

Dr. Schrier from the State of Washington, you have five minutes for your questions, and thank you for your great work.

*Ms. Schrier. Thank you, Madam Chair, and thank you for those kind words. Thank you to all the witnesses who came to speak today.

Yes, as both a pediatrician and a mom, I have been carefully watching the development and approval process for COVID vaccines in children, and also worrying about the drop in routine childhood immunizations during this pandemic. And this has been most dramatic in the tweens and the teens, many of whom are now missing the shots that protect them from pertussis, which is highly contagious, and HPV. So a big thank you, first, to my colleagues, and to you, Dr. Maldonado, for your support of the Strengthening the Vaccines for Children Program Act.

We just saw updated data from the CDC that, although immunization rates are improving, they still haven't sped up

sufficiently to achieve catch-up coverage. And since more than half of childhood vaccines are given through the VFC program, shoring up this already efficient program is critical, as we have all heard, to making sure all children get caught up on their shots.

Also, given the drop in middle and high school vaccination rates, again, where it is most pronounced, I was really happy to see the CDC recommend that tweens and teens can get their COVID-19 shots together with their routine immunizations. It is absolutely the most expedient way of catching them up, and getting it all done at their next doctor's visit.

Dr. Maldonado, I trained at Packard Children's, and it was exciting that you are studying COVID vaccines in younger children there. And I have been following the discussion about -- and even Dr. Burgess talked about this -- kind of how you weigh the risks and benefits of the COVID vaccines in younger kids, particularly as community spread of the disease, hopefully, continues to drop.

With current rates of disease, my assessment is that the risk of the disease, whether it is the acute, or the multi-system inflammatory syndrome, or long COVID, far outweigh the remote risk of mild myocarditis that might be associated with the second dose of an mRNA vaccine. That calculation could change, though, if vaccinations -- if circulating levels of

disease continue to drop. And so I was wondering if you could just talk about that balance, and how you view that.

*Dr. Maldonado. Well, absolutely. And thank you, Representative Schrier, for all of the work you have done. And we recall your work, here at Packard, of course.

So I have been involved with the vaccine efforts from the beginning. And we have been part of the ACIP and FDA meetings from the very beginning of the pandemic, as well, and we have been following the data. And I think the issue is, as you mentioned, always a risk benefit calculation. My sense is, as I mentioned earlier, that COVID is going to be -- continue to be a major risk for children, even more than the vaccine could be, given how safe and effective these vaccines have been, given, as you have heard, that millions and millions of doses have been given with minimal safety signals. And in children we have seen the signal of potential for myocarditis.

At this time it looks like, at the at the moment -- and we will see an update from the ACIP on Friday -- it looks like it is a signal of about 16 cases per million doses of vaccine given. So if, in fact, it is associated -- and we don't know that yet, but if it is, the risk is extremely low. Not to undermine that at all, but when you consider how many children have been hospitalized and died from COVID itself, and if you consider what may be happening with the Delta

variant, and the fact that the Delta variant has now been shown to actually increase the risk of hospitalization for people -- in adults, obviously -- we don't know the impact in unvaccinated children, because we won't have vaccines for kids under five for at least the end -- through the end of the fall, maybe even the winter.

I do think that the risk benefit needs to be looked at very carefully. I would have full confidence in the FDA and the CDC in helping us calculate those risks, but continue to think that those will be low, and we did write a commentary on --

*Ms. Schrier. Dr. Maldonado –

*Dr. Maldonado. -- just a couple weeks ago.

*Ms. Schrier. -- I have just quick, yes-or-no questions for you, because, doctor to doctor, I have been seeing a lot of rumors about vaccines, and I wondered if you could help me dispel some myths.

One, do mRNA vaccines change your DNA?

*Dr. Maldonado. Absolutely not.

*Ms. Schrier. Does the mRNA vaccine even enter your nucleus?

*Dr. Maldonado. No.

*Ms. Schrier. Does taking the COVID vaccine make you magnetic?

*Dr. Maldonado. No, not that I am aware of, but I would

heartily say no.

*Ms. Schrier. Will the COVID vaccine insert some sort of a microchip into your body?

*Dr. Maldonado. No, no.

*Ms. Schrier. Does the COVID vaccine decrease fertility?

*Dr. Maldonado. No.

*Ms. Schrier. Now, do any of the vaccines we give today have long-term effects, other than long-term protection from disease?

*Dr. Maldonado. We are not seeing that signal. Of course, we don't have long-term data yet, but absolutely no long-term effects.

*Ms. Schrier. Great. So I had no hesitation about getting my 12-year-old vaccinated. We are looking at a really fun summer, with sleepovers and summer camp. And thank you for all the work that you do.

*Dr. Maldonado. Thank you, as well.

*Ms. Schrier. Wonderful yes-no series of questions, and thank you.

It is a pleasure to recognize the gentlewoman from Massachusetts, Mrs. Trahan, a terrific, new member of our committee.

You are recognized for five minutes.

*Mrs. Trahan. Well, thank you, Madam Chair, and thank

you to the witnesses here today.

It has recently been reported that there is not one community in the State of Massachusetts that is in the red zone. And that is a huge milestone for the state, as we continue to build back better. However, even in highly-vaccinated states, like Massachusetts, our job is not done.

Dr. Ashish Jha, a physician and health policy researcher, and dean at Brown University, recently referred to Massachusetts as, "a tale of two cities when it comes to inoculation rates in the state's more affluent communities versus rates in historically underserved communities.'' And these disparities present themselves in my district, and are reflected in states across our country, and are clearly driven by education levels, income, and race, and are all related to access.

Lawrence, Massachusetts is a gateway city in my district, where 80 percent of the city's residents are Hispanic or Latino descent, and 20 percent of the residents live at or below the poverty line. And throughout the pandemic, Lawrence has had to get really creative in their vaccination efforts. In March, Lawrence General Hospital launched a mobile vaccine program in an effort to bring vaccines directly to their residents. And this past weekend the city held a vaccine block party, with access to walk-up vaccines, music, free food, and family activities. One

hundred and fifteen individuals received their first dose at this event.

But despite all these efforts, inoculation rates in Lawrence are still trailing inoculation rates in other, more affluent communities across the state, a telling sign of the -- various cities like Lawrence still face.

So, Dr. Tan, although Lawrence has taken creative steps in vaccine efforts to reach the most people, city officials have discussed with me and my team that having the mobile units and physical vaccines is one thing, but they still lack the appropriate resources for outreach, and education, and public health infrastructure to continuously put on vaccination events like the one they held this past weekend. Can you speak to how investments in a public health workforce and public health infrastructure in gateway cities like Lawrence is essential to getting through this pandemic, and preventing a future one from occurring?

*Dr. Tan. Oh, thank you so much for that question. And absolutely, I think in these gateway cities like Lawrence, that you are talking about, I think it is absolutely essential that we have a very strong public health department that is able to drive some of these -- and sustain is the critical word -- some of these innovative practices into the community.

I don't think it is a one-time intervention. I don't

think you can just drive a mobile van into a community and be done. I think it requires multiple efforts. So I think any kind of resources that we can give to these local public health departments to sustain some of these efforts is critical to maintaining this.

And I build upon what we said earlier, and this idea that, once we do this, we are preparing ourselves for future immunization efforts, and also for future pandemics, heaven forbid, should they show up again. So I think, absolutely, that is an important thing to think about.

The public health infrastructure -- I think Dr. Anne Schuchat in a New York Times piece said recently this was always the little engine that could, until COVID happened, then it was the little engine that couldn't anymore. I think we need to make sure that this little engine is no longer a little engine, but a big engine that can deliver all these lifesaving vaccines to -- across the lifespan to our public. So thank you for the question.

*Mrs. Trahan. Oh, and thank you for the response.

You know, certainly another group I want to make sure is adequately covered -- and always is with Dr. Schrier on the committee -- is our children and adolescents. You know, my own 7 and 11-year-old daughters are too young to get vaccinated at this time. However, we too are counting down the days until they are each able to get their COVID-19

vaccines.

Due to the COVID-19 pandemic, routine vaccination rates, as well as pediatric visits, have declined. And with school starting back up in just a few short months, the last thing we need coming out of the pandemic is an outbreak of another preventable virus. According to CDC, after initially decreasing in early 2021, adolescent hospitalization rates for COVID-19 increased during March and April. So clearly, children are not immune to the serious effects of the coronavirus.

So, Dr. Maldonado, as we get more creative in the way we are reaching folks with vaccinations, can you speak to the role that pediatricians and family physicians can play in educating families, boosting vaccine confidence, and reaching our children with vaccines?

*Dr. Maldonado. Well, as you probably know -- thank you so much for this question, but, as you probably know, when polled, it turns out that families trust their providers, their pediatric providers, almost more than any other person in their community. Pediatricians are really bonded together, in terms of keeping children's health at the forefront.

The American Academy of Pediatrics provides resources free to all providers. They actually provide resources on their website to families, toolkits, information, webinars.

It is a constant supply of information. Pediatricians are extremely responsive to what the Academy does for them, and they have full confidence in that information.

And of course, we work with CDC and FDA and other partners to make sure that our information that we get from them is accurate, and that we give them our concerns, as well.

So keeping the pediatricians engaged, and keeping them enrolled, for example, with VFC, and getting them to provide as many vaccines to as many children as possible, is not only a good way to prevent diseases, but also, as I mentioned earlier, to make sure that they can address other noninfectious issues that arise in these troubling times, when children have had -- suffered social, developmental, and mental health issues as a result of the pandemic.

So thank you for that question.

*Mrs. Trahan. Thank you, Doctor.

I am sorry for going over my time, Madam Chair. I yield back.

*Ms. Eshoo. You are welcome. It is a pleasure to recognize yet another one of our terrific doctors on our committee, the gentleman from California, Dr. Raul Ruiz.

You are -- you have five minutes for your questions.

*Mr. Ruiz. Thank you, Madam Chair. I am so proud that equitable access to COVID testing and vaccines have been

highlighted by this committee throughout the duration of this pandemic.

And I must say that this is a very good set of vaccine equity bills that we are putting forward. In particular, the bills by our very own pediatrician, Representative Schrier, Representative Kuster, Representative Barragan, and Representative Soto, those bills, in particular, will go a long way in reducing health care disparities in our nation.

When the first vaccines became available, there was concern that Black and Hispanic individuals would have greater amounts of vaccine hesitancy than White individuals. But that is not what I am seeing on the ground. I have gone into the hardest-hit, hardest-to-reach Hispanic farm worker communities in my district to administer the vaccine, and I have heard their stories. The problem is not hesitancy; it is access. It is not about whether someone wants to get the vaccine; it is whether there are barriers preventing them from doing so.

And I applaud the work of the Biden Administration to give vaccines to -- into the underserved areas of our communities through programs like direct distribution to retail pharmacies and FQHCs. It has made an enormous impact. And I know, firsthand, after organizing retail pharmacy mobile clinics, taking vaccines to the people in my district.

The thing is, many of my constituents do not have a car,

with limited access to public transportation. So, for many of my constituents, even getting to a pharmacy five miles away is difficult, as many cannot afford to take a lot of time off of work to get to a vaccination site.

So today I want to talk about H.R. 3013, the COVID Vaccine Transportation Access Act, which authorizes grants to communities to provide transportation to vaccination sites. The bill was introduced by congressional Hispanic Caucus member Congresswoman Barragan, and I was proud to join her as one of the lead sponsors.

Dr. Maldonado, can you address this issue, and talk about the importance of removing last-minute barriers like the lack of transportation?

*Dr. Maldonado. Thank you, Representative Ruiz, for that question.

I, too, helped organize some of the first testing sites here, in our Santa Clara County area, for our federally-qualified health centers, as well as setting up vaccination sites and testing sites for some of our migrant farm worker camps in the area. So I know how important this work was, early on, in getting people vaccinated, and making them aware of this disease. So I do think that it is a really important issue. We need to really underscore the importance of getting access to our population.

The other thing that I noted, when I was taking care of

patients, we have now since shut down our tents. They are bringing our patients in to clinics. But initially, it was impossible to find transportation for sick people to come in, because of COVID restrictions. And especially for those who didn't have access to their own cars, we almost could not bring people in for treatment. It is a critical issue for children, as well as for adults. And the issue of equity is critical for all of us, not just for those populations, because, as long as this virus circulates anywhere in our communities, anywhere in the world, it will affect each and every one of us.

So I absolutely agree that bringing equity to this issue is so important to keeping the entire world healthy and safe. And --

*Mr. Ruiz. Thank you --

*Dr. Maldonado. I can't overscore that -- underscore that issue. Thank you so much –

*Mr. Ruiz. Thank you. Right now, our focus is on the critical issue of COVID-19 and vaccinations. But let's look beyond this immediate crisis, and take some of the lessons we have learned from it, and apply that to the future for all vaccines. Routine vaccinations are also critical for our public health, and these same barriers that exist for COVID vaccine access will continue to exist after the public health crisis is over.

Dr. Maldonado, as a pediatrician, can you address the importance of access to routine vaccines for children, in particular, and how a grant program like this with transportation could help reduce those barriers?

*Dr. Maldonado. Absolutely. Transportation is an important piece of all of the puzzle pieces that it takes to keep children healthy and safe.

And again, here at Packard Children's, we do have vans. We have access to vans that can go and transport children in and out, if we need them. But not everybody has that ability –

*Mr. Ruiz. Thank you.

*Dr. Maldonado. -- to schedule a van, and we -- it is critically important.

*Mr. Ruiz. Thank you. Well, as a student and an advocate for health equity to reduce disparities, my -- almost my entire life, I am so enthusiastically waiting to vote these bills out of committee, and send them to the House floor to make a lasting difference, once and for all.

Thank you, I yield back,

*Ms. Eshoo. The gentleman yields back.

Thank you, Dr. Maldonado, for raising the issue of the farm workers. Most people don't think, or wouldn't even guess, that we have farm workers as part of the Silicon Valley district that I represent. And yet they are there,

and that they have your care is a great, great blessing.

And speaking of blessings, the gentlewoman from California, Ms. Barragan, is recognized for your five minutes of questions.

*Ms. Barragan. Thank you, Chair Eshoo, for holding this important hearing, and including my bill, the COVID Vaccine Transportation Access Act, in the discussion.

I also want to thank my committee colleagues, Representatives Cardenas, Clarke, Ruiz, and Soto, for cosponsoring this legislation.

Our bill will create a grant program in HHS to remove transportation barriers in underserved communities, so people can not only get to COVID vaccine appointments, but also future access for -- appointments for boosters. This will help reduce disparities in access to care.

Vaccinations are how we will finally defeat this pandemic. However, I have heard from many people in my district who want to get their COVID shots, but don't have an easy way to get to the sites. One man told me about having to take three buses, and travel for hours to get his vaccine. It is common sense. Removing barriers that prevent people getting to and from vaccine sites will increase the number of people who can get vaccinated.

We have spoken about this a little bit, but Dr. Tan, can you discuss the continued need to provide underserved

communities with help to get to and from vaccination appointments?

Also, do you believe it is important to continue providing resources to these communities, beyond what Congress has already allocated, so that people in these communities are able to access COVID vaccine boosters -- shots, as they become available?

*Dr. Tan. Oh, yes, absolutely. And I think, you know, beyond the communities of color that you have discussed, and the communities of low socioeconomic status, I want to add older adults to that list, as well. I think we all know that transportation to a COVID-19 vaccination clinic can be challenging for those communities that we discussed.

In particular, I think you want to think about issues that face these patients, such as, you know, do they -- if you are older and vulnerable, do you want to be getting into, let's say, you know, Uber or Lyft van with someone who may not necessarily be protected?

And I think finding alternative ways to get COVID-19 vaccination sites, the patients -- to get patients to these COVID-19 vaccination sites is incredibly important. So I actually agree with you that, if we can provide transportation solutions, we will also improve immunization coverage rates.

*Ms. Barragan. Thank you, Doctor. This next question

is for you, as well.

A recent report from the CDC released on May 28 found that, despite our best efforts, there are growing disparities in terms of COVID vaccination rates between communities that are affluent and those that are low-income, and communities of color. Thus, communities that are more likely to be enrolled in the Medicaid are not achieving adequate vaccination levels, even through Medicaid, even though Medicaid covers the vaccine, its administration, and is the only publicly-financed health insurance that guarantees non-emergency medical transportation to the vaccine site.

Due to these disparities, wouldn't it make sense to incentivize states to remove barriers to non-emergency medical transportation, and affirmatively reach out to Medicaid patients to schedule and transport them to a vaccination site, by enhancing the Federal match rate to 100 percent for transportation to the vaccine site, as we have in the American Rescue Plan for Medicaid vaccine purchase and administration?

*Dr. Tan. So, yes. I think one of the things that we have always talked about is how do we get patients who are of lower socioeconomic status into vaccination access points.

I think one of the challenges we face with that is, actually, not necessarily a transportation issue. So I think we need to look bigger than just transportation. We need to

look at this idea that, with lower socioeconomic status families, it is also about time and resources. You know, who is going to take care of my child, if I have to go in and get vaccinated?

So I think transportation is, indeed, one very important component, but I think it is one component of a bundle of challenges that we face with these populations in order to get them into vaccination clinics, even if the vaccine is free, even if the administration fee is -- there is no copay. I think we need to think and recognize that there are more broader challenges, of which transportation is indeed one of them.

*Ms. Barragan. Thank you very much for that, and for all of our panel today. It is important that we continue to work on ways to reduce the disparities, and removing the barriers, including transportation.

So thank you for having this hearing. And with that, Madam Chairwoman, I yield back.

*Ms. Eshoo. The gentlewoman yields back, and we thank her for her important work.

Last, but not least, the gentleman from Georgia, the pharmacist on the committee.

You are recognized --

*Mr. Carter. Thank you, Madam Chair. I appreciate the opportunity. I appreciate all the panelists. This has been

a good hearing --

*Ms. Eshoo. You are not in your car.

*Mr. Carter. I am not in my car. I am not, thank goodness.

First of all, let me say that, you know, the Administration has supported waiving the World Trade Organization's trade-related aspects of intellectual property rights. And that is very concerning to me. My fear is that the Administration lacks the understanding of this complex science, and goes into biopharmaceutical innovation, or the economics, and -- encourage private investment in new biotech products and vaccines.

As a practicing pharmacist for over 30 years, I have seen what has gone into research and development. And I know how important intellectual property is to companies. And this really concerns me, that the Administration is proposing to give the intellectual property of the vaccine to China -- China, who -- we know that this virus originated in China.

My question to you, Ms. Arthur, do you agree that a TRIPS waiver for COVID vaccines would discourage innovation and future investment in new cures and vaccines?

*Ms. Arthur. I do agree that this is not the right solution for bringing more doses to more people around the world. It would actually hinder the ability for companies to safely partner outside of the country with these new

technologies. And it could also hinder companies' willingness to respond to the next pandemic, with all the great innovations that we have been working on.

*Mr. Carter. I couldn't agree with you more, Ms. Arthur.

I mean, you know, the fact that these pharmaceutical manufacturers -- and I know we talk about the price of pharmaceuticals being too high, I get that, and I happen to have the belief that it is -- that a lot of the problem, most of the problem, is with the middlemen, with the PBMs, the pharmacy benefit managers, who are bringing no value whatsoever to the healthcare system, but are responsible for what has been estimated to be 47 percent of the cost of medications.

But in order for these pharmaceutical manufacturers to continue to invest in research and development, they need to know that their intellectual property is going to be safe. I mean, we have had 200 years of a patent system here in America that has worked, and has led to nothing short of miracles in the way of drug development. And certainly, what we have witnessed here with the vaccine, I think, will go down -- and Operation Warp Speed will go down as being one of the great medical achievements of our generation. And for us to even consider -- or for this Administration, I say, I should say -- to consider to give the intellectual property

away, that is just insane, to me.

Ms. Arthur, what would be a better way for us to be able to get that -- the vaccines to people who need it?

I am okay sharing it. I am okay sharing. As long as Americans are taken care of first, we have access, then I am okay with that. What do you think would be the best way, Ms. Arthur?

*Ms. Arthur. So I think, first, we applaud the Administration for doing one of the things we absolutely suggested, which was starting to donate. You just brought this up, Mr. Carter. And I think donating doses has been pivotal, particularly as we try to wait for the resolution of the crisis in India, which actually hampered some of the production that companies counted on to deliver doses to low and middle-income countries. So we have to recognize this is a global system. And the more we can have high-income countries support donations of their doses to COVAX and other countries, the better off will be.

And in the interim, the other thing we can do is absolutely get a free flow of goods, get the supplies we need, and manufacture doses both here and America and abroad, through the great partnerships that are already happening in manufacturing. There is -- over 250 partnerships that industries entered into with developing-country manufacturers all over the world to deliver doses as quickly as we can.

And they are projected to make about 11 billion doses this year. That, coupled with the great donations promised by the G7 this week, should really help to get more doses to more people as soon as we can.

*Mr. Carter. And thank you for mentioning that. The obvious solution is to ramp up production here, in the United States. That is the quickest way we can get it out there. It saves American jobs. It makes all the sense in the world to me. So thank you for bringing that up.

Very quickly, Dr. Tan, I wanted to ask you -- health savings accounts, they include vaccines as a reimbursable expense, and commercial insurance plans also cover --

[Audio malfunction.]

*Voice. I am sorry --

*Mr. Carter. -- how high deductible health plans, coupled with health savings accounts, encourage and cover vaccines, and how we can apply those lessons to public programs like Medicare?

*Dr. Tan. I am so sorry, Representative Carter, I think you cut out on me a couple of times, so I didn't catch your whole question. I heard something about health spending accounts.

*Mr. Carter. Yes, commercial and private plans that are covering vaccines, and in combination with health savings accounts, don't you -- I just wanted you to speak to how

high-deductible health plans, when they are coupled with health savings accounts, and how they can encourage and cover vaccines.

*Dr. Tan. I think that is certainly a wonderful option for those who have those accounts. I think we are -- we also have to be aware that, you know, the access to those kind of accounts are not available to a lot of adults who are vulnerable to vaccine-preventable diseases. And so part of the great -- the greatness of these two bills that we are looking at, you know, the Seniors Act, as well as HAPI, is to try to actually remove those -- the payment that is required there.

I think, even with health service -- HSAs, as well as high-deductible plans, there is, obviously, that initial copayment. And unfortunately, a lot of times, what happens then, again, as we have discussed many times, you know, even someone who is on those plans may not see that as the best investment of their copay dollars, if you get what I mean.

So I think this is about equalizing it across, for all adults.

*Mr. Carter. Great. Well, I am over, Madam Chair, thank you for your indulgence, and thank all the panel for your testimony today, as well.

Thank you, and I will yield back.

*Ms. Eshoo. The gentlemen yields back.

I want to pay all the tribute that I possibly can to our witnesses today. You have been -- you spent early morning, mid-morning, late morning, early afternoon, now almost mid-afternoon with us. So you have missed at least a couple of meals.

But you have really advanced and broadened the case, relative to vaccines, whether it is for adults, whether it is for younger people or children, where are -- the shortcomings are in our country, how we maintain innovation, but address the issues where there are shortcomings. I think this has just been a superb hearing, and it was because of you.

And you gave us wonderful validation of the legislation, because today's hearing was a legislative hearing. And so you gave us excellent input on the legislation that we are considering. So on behalf of every member of the Health Subcommittee, I salute you, and I thank you for your work. It really is your life's work, and our country is better because of you. And I couldn't mean that more. You are a blessing to our country, a true blessing to our country, so thank you. Thank you. Thank you. Thank you.

And I know that you will respond to the questions that members submit to you in writing. Many of them made reference to that. And if you can do so in as timely a manner as possible, we will all be better for that.

[The information follows:]

**********COMMITTEE INSERT**********

*Ms. Eshoo. So thank you to each one of you. Dr. Tan, Dr. Maldonado -- I am just bursting with pride, I mean it, because she is my constituent. They are all so wonderful. But of course, we always have a special sense of pride when someone is testifying that we represent. And Ms. Coyle and Ms. Arthur, just A-plus, A-triple-plus. Gold stars. I am trying to think of what the nuns would always put on my papers if I did well. You deserve it all. So thank you to you, really. You moved the needle today. You moved the needle today.

And now I have a unanimous consent request. To my friend, our wonderful ranking member, we have 10 documents, Mr. Guthrie. And there isn't anything in here that is, I don't think, objectionable. And we just handwrote some in that Mr. Crenshaw gave to us. So if you would like me to read them all out, I would be glad to, but --

*Mr. Guthrie. There is no need to read. And I don't -- we do not object.

And I just want to echo what you said to our witnesses. And the vaccines is certainly an example. Operation Warp Speed was Congress working together with the Administration, both administrations, as we have switched administrations. And so when we work together, we do big things. So thank you, and thanks for our witnesses for being here.

*Ms. Eshoo. And thank you for being such a wonderful

partner.

For the members that are still on board -- maybe they are all gone -- I want the members of the subcommittee to know that I am doing everything I possibly can to take up as many bipartisan bills in our subcommittee. Mr. Pallone is probably long gone from the hearing, but he can attest to the fact that I, during this period of time that we were at home, I would call him every single day, with the exception of Saturdays and Sundays, I gave him a break. But otherwise, I was like gum stuck to his shoe to move these things.

So we are doing everything -- I am doing everything I can to take up as many bills as possible. Members, I think, deserve that kind of consideration of their bills. Certainly, the American people deserve the results of these of these bills, legislation that then becomes law, and the words walk right into their lives, into their daily lives.

So thank you to all of the members for your marvelous questions and participation. And again, to the witnesses, absolutely superb and outstanding. And on behalf of all of the members, I once again thank you.

So having -- you have -- members, of course, have 10 days to submit additional questions for the record. And I have already asked the witnesses to respond as promptly as possible when they receive them.

And without anything else here on my desk, I thank the

-- do I have something to hit my desk with here? My cup on the desk, how is that?

The subcommittee will now adjourn, thank you.

[Whereupon, at 2:23 p.m., the subcommittee was adjourned.]