

[MUSIC PLAYING]

ELLEN J. MACKENZIE: Welcome to this special broadcast from Johns Hopkins University. I'm Ellen McKenzie, dean of the Johns Hopkins Bloomberg School of Public Health. Thank you for joining us today in the midst of the COVID-19 pandemic that is challenging us all on so many different fronts.

At the School of Public Health, we join the world in mourning the loss of thousands of lives. These are difficult times, and we know that everyone is affected in one way or the other.

To the physicians, nurses, public health practitioners, hospital staff, and other heroes on the front lines of the response, we stand in all of your efforts, and extend our deepest appreciation, and thank you for all you do.

We're here today continuing our series of webcasts on the COVID-19 pandemic, with a focus on Taiwan's response to the outbreak. Taiwan has done a remarkable job in applying the lessons it learned in combating the SARS outbreak in 2003, and standing up a model system that was ready to tackle the unique challenges of today's novel coronavirus.

Our Johns Hopkins coronavirus global map dashboard currently shows that Taiwan, despite its proximity to China, has reported just 428 cases and six deaths. I'll be speaking today to Taiwan's vice president, Chen Chien-Jen, a graduate of the Johns Hopkins Bloomberg School of Public Health, with a doctor of science degree in epidemiology and human genetics.

Our school has a longstanding and very close collaboration with Taiwan. I myself visited for the first time in the early 1990s, and as recently as July of 2019. Out of these many visits have come so many great friendships and collaborations.

We're thrilled to be able to speak with Vice President Chen about the actions Taiwan has taken to control the spread of COVID-19 among its population of roughly 23 million people.

As an introduction to that conversation, we'll first hear from Brent Christensen, director of the American Institute in Taiwan. He'll share some thoughts on the cooperation between the US and Taiwan, on global health security, and beyond. Dr. Christensen, welcome.

BRENT Thank you, Dean MacKenzie, and many thanks to Johns Hopkins University for hosting us all

CHRISTENSEN: today. I am honored to participate in this webcast, which is just one of the many ways the United States and Taiwan are working together to fight the COVID-19 pandemic.

The US-Taiwan partnership is characterized by the breadth and depth of our cooperation. Especially in the area of public health, this cooperation is robust and longstanding. Our health agencies and experts have enjoyed decades of close collaboration. Many of Taiwan's public health officials and leaders, including Vice President Chen, have trained and studied in the United States.

Here at the American Institute in Taiwan, we have quite a few Johns Hopkins alumni, such as our medical officer, who graduated from the Bloomberg School of Public Health. These academic exchanges are part of the foundation and the strong people to people ties between the United States and Taiwan.

Taiwan's CDC investigators have attended the US CDC training program for Epidemic Intelligence. The US NIH has ongoing research cooperation with the Taiwan public and private sector, including on the development of a COVID-19 vaccine.

And a few weeks ago, the United States and Taiwan issued a joint statement, announcing efforts to enhance cooperation on preventing the spread of COVID-19. It is moments like this that give new meaning to the US-Taiwan relationship, which we describe with the expression "real friends, real progress."

That is why Secretary of State Pompeo recently tweeted "During tough times, real friends stick together." Taiwan, a vibrant democracy and a force for good, has emerged as the global model for COVID-19, and countries around the world would benefit from more opportunities to learn about the Taiwan model and other areas in which Taiwan has world class expertise.

Taiwan actively uses its own experiences and its abilities to help others. For example, Taiwan has donated 16 million surgical masks to countries around the world, including the United States, where frontline medical workers are facing shortages.

Long before the current public health crisis, Taiwan was working with countries in Latin America and the Caribbean and capacity building projects. Taiwan worked with the government of Eswatini to improve maternal and infant health care.

In the Pacific, medical professionals from Taiwan are providing health care to the people of the Marshall Islands, [INAUDIBLE], Nauru, and Palau.

Since 2015, the United States has been working with Taiwan to co-host workshops under the global cooperation and training framework. The goal of these workshops is to share US and Taiwan expertise in a variety of topics, where Taiwan has demonstrated strengths.

We have worked with Taiwan to organize workshops for countries around the Asia-Pacific region on combating Dengue fever, Zika, Ebola, MERS, chikungunya, and tuberculosis.

In the coming weeks, our cooperation will also address COVID-19-related disinformation so that we can ensure our communities have access to accurate and up to date information on how to prevent the spread of the coronavirus.

This forum is a perfect example of why Taiwan is a reliable partner and a force for good, sharing its expertise and its resources with governments, universities, and public health institutions around the world.

The United States is eager to work with Taiwan to promote the Taiwan model for fighting pandemic disease. As President Tsai noted in her April 16 article in *Time Magazine*, "Taiwan's success is no coincidence. The most fundamental element of the Taiwan model is transparency, transparency between the authorities and the public in Taiwan and transparency between Taiwan and the international community. The Taiwan model, which is one of the most effective in the world, is the product of a democratic system."

I am very pleased to participate in today's webcast featuring Taiwan's vice president and pre-eminent epidemiologist, Dr. Chen Chien-Jen. Taiwan was fortunate that he was health minister during the 2003 SARS crisis, and that he is now Vice President during the COVID-19 pandemic. I look forward to hearing his insights today on how to best handle this new public health crisis. Thank you very much.

ELLEN J.

MACKENZIE:

Thanks so very much, Director Christensen. And with that, I'd like to introduce Vice President Chen Chien-Jen. As I mentioned at the top of the webcast, Vice President Chen is a graduate of the Johns Hopkins Bloomberg School of Public Health, with a Doctor of Science degree in epidemiology and human genetics.

He also holds a bachelor's degree in zoology and a master's degree in public health from National Taiwan University. Vice President Chen has held a variety of roles in Taiwan, in academia, public health, scientific research, and government.

Vice President Chen, thank you so much for taking the time to speak with us today, and it's great to see you.

CHEN CHIEN-JEN: Thank you very much, Dean MacKenzie and Dr. Christensen. It is my pleasure and honor to share Taiwan's response to COVID-19 with you. Taiwan's CDC learned from online sources that at least seven atypical pneumonia cases were reported in Wuhan on December 31st of last year. We immediately sent reporting emails to inform WHO and China's CDC.

We consider the clustering of atypical pneumonia in Wuhan was a serious, sudden, unusual, and incidental event which required immediate attention and action of the World Health Organization and the China CDC.

We have embedded the concept of prudent action, rapid response, and early deployment into our epidemic prevention system. We studied onboard quarantine of passengers in direct arrival from Wuhan.

We strengthened the suspected case reporting and hospital infection control of the health care system in Taiwan on January 2. An advisory committee on atypical pneumonia in China was organized on January 5, and Level 1 travel notice on Wuhan was announced on January 7, when the causal agent of the new disease was called 2019-nCoV by the World Health Organization.

The emerging infectious disease was announced as classified an infectious disease by Taiwan's CDC on January 15th is to give the warning to all health care institutions and the general public.

When the World Health Organization and China's CDC claimed the limited human to human transmission of nCoV, we activated our Central Epidemic Command Center, CECC, on January 20. President Tsai Ing-Wen held an emergency meeting of our National Security Council to integrate and coordinate interministry efforts on the containment COVID-19 outbreak financial relief and economic stimulus.

The rapid response on COVID-19 is based on experience in the containment of SARS in 2003 and H1N1 pandemic flu in 2009. Our strategies include optimal border quarantine, enforcement of 14 day home isolation and quarantine, mobilization our health care system for infectious disease, adequate supplies of PPEs and other medical materials, quick announcement of travel alert and warning.

We held the CECC daily press conference to provide transparent information, health education, and risk management. We encouraged people to keep appropriate social distance and avoid large-scale gathering.

Financial relief and economic stimulus are also essential in the efforts to contain the COVID-19 outbreak. We are collaborating with the United States and European countries to develop rapid diagnostics, antivirals, and vaccines.

The last but not least is the international collaboration. No country can fight against the COVID-19 alone. We cannot stand by when many countries are in crisis. Since the first case was confirmed on January 21 in Taiwan, as of April 24, there were 428 confirmed cases in six days. Among confirmed cases, 55 are indigenous, 343 are imported, and 30 are [INAUDIBLE].

The surveillance data of COVID-19 is shown on the diagram on the left. More than 59,000 reported suspects were tested. The epidemic curve is shown on the diagram on the right. The first small peak in late January included cases from China. And most cases of the second peak in mid-March were imported from Europe and the USA.

This timeline shows the measures of border control in Taiwan. Our CECC raised a travel notice of Level 3 for Wuhan on January 21 and for all countries on March 21. Temporary preoccupation from entering Taiwan was implemented for the nationals of China on February 6, Hong Kong and Macau on February 11, and all countries on March 19.

We implemented a series of quarantine measures for inbound travelers, which include a health check and quarantine hotel booking before boarding, onboard quarantine and announcement, home quarantine notice using mobile phones, fever screening and symptom check at the airport at home, security taxi or rental cars for local transportation, as well as home or hotel quarantine for 14 days.

All inbound travelers are subject to home quarantine for 14 days after entering Taiwan, while close contacts of confirmed cases are isolated at home for 14 days. They are requested to stay at home or a disconnected place.

Local civil and health officers actively monitored quarantined or isolated persons once or twice a day. We use electronic security monitoring system to check the local and health status location and health status of people subject to home quarantine and isolation.

We applied innovative technology to implement several home quarantine isolation-related systems. The quarantine system for entry is used to report personal TOCC. That is travel history, occupation, contact history, and clustering.

The home quarantine tracking system is used to provide care and support to quarantined or isolated persons. The LINE Bot System called Disease Containment Expert is used to report the health status and request for medical consultation and health care services. And the digital physicians tracking system alert those leaving the range of quarantine or isolation.

We provide a series of care and supportive services to persons in home quarantine or isolation by local governments. The services include a 24-hour, seven day hotline for consultation, family visit, meal delivery, garbage collection, support for settlement, as well as health care arrangement.

Currently person with suspected symptoms were sent to the security hospital using ambulance, while medical care is arranged for those with no suspected symptoms.

CECC announced the social distancing measures on April 1. We encouraged the general public to maintain social distance. People are requested to give a personal distance of 1.5 meters indoor and 1 meter outdoor. People are also encouraged to wear masks in crowded area, reduction in person for all temples, national parks, hotels, night markets, and shopping areas is also recommended.

This line shows how general public voluntarily practices social distancing. People keep a distance from each other in public transportation stations, primary school students and food courts customers eat together using a cardboard or plastic bowl, and people wait in a queue or take away.

We have organized a national mask team who expanded 92 production lines for manufacturing face masks and requisitioned a total of 73 manufacturing companies. As of April 16, the average daily production of surgical face masks increased from 1.9 million in January to 16 million in April through integrating raw materials, machines, and production lines, as well ensuring stable power supply.

In addition to increasing the mask production, we allocate masks to every citizen by using national health insurance card to purchase masks at pharmaceutical companies. An online name-based based distribution system has also been implemented for people to order online,

pay by credit card, or ATM, and get mask 10,000 convenience stores, such as 7-eleven or Family Mart.

We arranged charter flights to evacuate Taiwanese citizens from Wuhan, China and Yokohama, Japan. When they arrived in Taiwan, they were required to disinfect their hands and carry-on baggage and undergo fever screening and health assessment.

When the passengers had symptoms, an ambulance was arranged to send them to a hospital for further examination. Passengers with two negative test results were sent for group quarantine by bus. All luggage, aircraft, bus, and ambulance were disinfected. More than 1,400 evacuees have returned to Taiwan safely.

We donated over 17 million surgical masks in April to the United States, European countries, Japan, and diplomatic allies to support medical personnel in containing COVID-19.

We also collaborate with the United States, EU countries to develop rapid diagnostic antivirals and vaccine, and we are helping each other to contain COVID-19 in the world together.

President Tsai Ing-Wen convened a high level national security meeting on March 12 and announced proactive measures to boost Taiwan's economic momentum and vitality. We allocated a budget of 1,050 billion NT dollars for epidemic control, financial relief, and economic vitality, shift in spending to emergency measures, increased government investment and procurement to expand domestic demand, accelerated private investment, and maintain the foreign exchange market stability and stock market momentum.

Taiwan's response to COVID-19 pandemic has been widely recognized for its rapid mobilization, swift decision-making, thorough implementation, coordinated resource distribution, transparent information, and advanced technology.

Taiwan is willing to share its experience with other countries and continue to support medical personnel in seriously affected countries. I would like to assure that Taiwan can help, and Taiwan is helping, an answer to an urgent call of greater international cooperation. Thank you very much.

ELLEN J.

MACKENZIE:

Thanks so much, Vice President Chen. It's a remarkable story, and I want to start by congratulating you and your colleagues for an incredible response to the pandemic.

Let me start with the following question. It's very uncommon for political leaders to have deep

technical expertise in public health. Can you tell us how your training in epidemiology equipped you for helping to lead Taiwan's response to this pandemic?

CHEN CHIEN-JEN: Yes. My training in epidemiology at the Johns Hopkins University School of Public Health gave me essential knowledge and experience to design and execute our national strategies which contained large scale epidemics in Taiwan, such as SARS in 2003 and H1N1 pandemic flu in 2009.

The training empowered me to implement a comprehensive preparedness, [INAUDIBLE] surveillance, and rapid response to pandemic infectious diseases.

The principles and methods I learned from Johns Hopkins, not only in epidemiology but also in biostatistics and information science, public health administration, and human health behavior are very important for me to fight against emerging infectious disease, hosted by new infectious agents such as COVID-19.

So I'd like to thank Johns Hopkins for this brilliant and very excellent training.

ELLEN J. MACKENZIE: Well, it's great to see you put your training from Johns Hopkins to the test and succeeded. It's fantastic. You have talked about your experience in battling SARS and H1N1, but could you talk a little bit more about how Taiwan has learned from previous outbreaks, and more specifically, how this knowledge shaped your response to COVID-19?

CHEN CHIEN-JEN: After the SARS outbreak, we made a comprehensive review and amendment of our Communicable Disease Control Act, and we organized our Taiwan CDC, and we also established a national health command center to coordinate the interministry efforts for containment of pandemic diseases.

We've learned several strategies are important for the containment of emerging infectious disease like COVID-19. The first one is continuous monitoring of emerging infectious disease in the world, especially in populated countries in this region, such as China.

And the second is optimization of border quarantine. And the third, strengthening of infectious disease reporting in health care system. And the fourth, combination of response plans for emerging infectious disease and contact drills.

And the fifth, upgrade of laboratory, for possibility of early detection and diagnosis. And the sixth, comprehensive public health education of schoolchildren and the general public.

And the seventh, the open and transparent information of the outbreak. And the last, the eighth but he not the least is very important. It's the international collaboration in pandemic containment, as well as research and development.

ELLEN J. MACKENZIE: So no doubt when COVID-19 hit, you had a lot of valuable knowledge and experience to apply, but no doubt you've learned some additional lessons in response to these newest and somewhat different challenges.

Can you tell us what some of the key lessons you've learned in the past four months that will prepare you for the next outbreak?

CHEN CHIEN-JEN: Yeah, this time COVID-19 is very contagious, and was a lot of outbreak and quite fast. So though I think that it tells us that a very important thing is that infectious agents respect no border, and no country can fight against a pandemic alone.

So all nations have to work together to prevent and control the pandemic infectious disease. And outbreak information sharing, border quarantine, home quarantine, as well as social distancing are essentially important, especially when antivirals and vaccines are not available.

And so I think the development of rapid diagnostic and antivirals and vaccines through international collaboration is an urgent need, and we have to collaborate with each other and make it available as soon as possible.

And last but not least is that financial relief and economic stability is as important as pandemic containment.

CHEN CHIEN-JEN: So as you know, the policy conversations here in the US have focused heavily as of late on whether and how to relax population-based social distancing measures and reopen Taiwan's economy.

How are you reopening your economy? What's working? What have you had to adjust? How can we learn from your experience?

CHEN CHIEN-JEN: Well, in spite of the fact that most of the confirmed cases were imported in Taiwan, and infection source could not be identified for only 10 locally transmitted cases, but we still consider that to implement our measures of social distancing in Taiwan is very important, and it is considered all the more-- especially for this moment when antivirals and vaccines are still under development.

And people in Taiwan go to work, and students go to school as usual, but we encourage them to reduce unnecessary social activities and avoid large-scale gathering. And we consider home quarantine of confirmed cases and their close contacts as very important.

And I think also important is that these quarantined people have to prevent the transmission at home or in the office through wearing face masks and washing hands with soap frequently.

The most severely affected industries in Taiwan include the tourism, restaurant, hotels, recreation, and public transportation. And our manufacturing industry was much less affected.

If the outbreak situation in a city become better, I would suggest to implement the measures for the early identification and home quarantine outcome from the cases and their close contacts, and all other people have to practice social distancing and good health behavior in these public areas.

And through this way, I think that people that live in a so-called semi-normal WAY to go to school, go to work without any kind of restriction on that.

ELLEN J.

Sounds like all great advice. So let's talk a little bit more about testing, and contact tracing, and isolation.

MACKENZIE:

First of all, many countries that have acted early to respond to-- excuse me-- COVID-19 and have been successful in reducing or keeping low their case numbers are now facing a situation in which they are surrounded by countries with rising incidents, as you are experiencing.

This, no doubt, makes it harder to keep your case numbers low. Can you tell us what your plans are for dealing with this situation?

CHEN CHIEN-JEN: Indeed, it is a significant challenge to Taiwan. And we know that if our neighboring countries have a high number of COVID-19 cases, we are still in danger. So we hope this COVID-19 may be contained as soon as possible in our neighboring countries and even in the entire world.

However, we still have to prepare for the sudden potential surge of case number if some imported were not identified at their entry to Taiwan. And this is the reason why we still have to enforce border quarantine, home quarantine, and social distancing in Taiwan. So for the time

being, we are still in a challenge of crisis, and consider this kind of effort of border quarantine, home quarantine, and social distancing as still very important.

ELLEN J. And that's why cooperation, global cooperation, is so critically important.

MACKENZIE:

CHEN CHIEN-JEN: Yeah, exactly.

ELLEN J. Yeah. So there's been a lot of discussion about how much testing for COVID-19 is necessary.

MACKENZIE: Different countries have taken different approaches with how much their population they are testing. Can you tell us a little bit more about what Taiwan's approach to testing for COVID-19 has been? Have you had to change your strategy since the pandemic began, and do you anticipate having to change it in the months and years to come?

CHEN CHIEN-JEN: Well, in Taiwan, most cases have traceable infection sources and the close contacts. And we tested reported suspects and they across contacts other than the general population. And we consider it is more efficient and cost effective in this way.

By now we have tested almost 60,000 suspects and contacts, and there is only 428 positives. It means that it's 7 per 1,000, and the positive rate in Taiwan was one of the lowest in countries where more than 50,000 tests have been done. So I think that our strategies for the close contacts as well as the suspected ones are still useful.

However, we consider to carry out a thorough epidemiological survey of suspects and close contacts in high risk groups, including the health care workers, cashiers, and public transportation drivers to check whether our coverage of RT-PCR tests is sufficient enough or not.

So I think that it's important for us to double check whether our strategy is indeed very useful and appropriate.

ELLEN J. And tell me a little bit more about the role of contact tracing. Can you tell us more about how you've used technology in particular to help with tracing of contacts of infected?

CHEN CHIEN-JEN: Yes, are our CDC officers are very good at this contact tracing. There are only a few confirmed cases without traceable infection sources in Taiwan. So we consider than contact tracing is important, even more important to Taiwan.

And in addition to this investigation carried out by CDC officers, we also use telecommunication records of mobile phone companies to help confirm cases, to record their footprints in the last 14 days. And we also use the database of National Health Insurance Administration and Immigration Department to remind the history of hospital or clinic visit and international traveling of people that are under contact tracing.

So we use big data with the help of this artificial intelligence to remind this, all these confirmed cases to recall their possible contacts.

ELLEN J.

So we've talked about testing, and we've talked about the importance of contact tracing, but

MACKENZIE:

we also know that effective quarantining, isolation of individuals who have been exposed to the virus is also important. But it's not always easy, especially among those who are economically challenged and those who are living in crowded households.

I think Taiwan has done a remarkable job in supporting these individuals. So could you tell us a little bit more about what you've done and provide some advice that you could offer other countries?

CHEN CHIEN-JEN: Indeed, it is very difficult to ask the people to be home quarantined, or home isolated for 14 days. So we try our best to provide care and support services to the quarantined individuals. In addition to that, they also receive a daily subsidy of \$1,000 NT for 14 days.

And we also give them, every quarantined person a mobile phone, and actively monitor once or twice a day. And we also use this and a digital fencing tracking system to alert those leaving the range of the quarantine.

So we try our best to use modern technology to help us to improve our home quarantine measures.

ELLEN J.

It's amazing what you've done, and it's so critical. As an epidemiologist, you know how critical

MACKENZIE:

timely cross sectoral data are to mounting an effective response. So can you tell us a little bit more about the challenges you faced in setting up a real time surveillance system? What worked well, and what might you have done differently?

CHEN CHIEN-JEN: Yes, it is really necessary to set up a real time surveillance System and data sharing and transparency is also very essential. Fortunately, in Taiwan, we have our National Health Insurance, which is administered by the government and covers almost the entire population.

So our database of our National Health Insurance can provide a very good real time data. And each one who visits any clinic or hospitals, and we use our smart, that's an ID card, and then the information will be transmitted to our National Health Insurance Center database immediately. So it's quite easy for us to do this real time surveillance.

And in addition to that, Taiwan CDC also set up infectious disease surveillance system through the reporting from the sentinel physicians reference laboratory and medical centers. So there is real time surveillance in Taiwan. Fortunately, we relied on big data as well as a very good integration of all this, and very capable physicians and laboratory people, as well as good medical center administrators.

ELLEN J. MACKENZIE: So switching gears a little bit, can you tell us about how Taiwan has approached the challenge of obtaining essential supplies, such as personal protective equipment or testing reagents? Are you able to produce these domestically?

CHEN CHIEN-JEN: Well, yes, for now. Basically, we came across the shortage of surgical masks, face masks, in January. And we tried our best to increase the production through expanding production lines and reconditioning of factories. And we also developed a name-based distribution system to assure every citizen a purchased mask at a low Price

And we also have a shortage of our raw materials for protective clothing. And fortunately, we can purchase them from the United States under our partner against the coronavirus agreement. So for the time being, yes, we may produce to our protection equipment as well the diagnostics in Taiwan.

And nowadays we are trying our best to help the health personnel containing COVID-19 in seriously affected countries.

ELLEN J. MACKENZIE: So let's talk a little bit about research, which is also critically important in our response. What medical countermeasures have currently been evaluated in Taiwan? And are there other COVID-19-related research efforts underway?

CHEN CHIEN-JEN: Yes, for COVID-19 research in Taiwan, fortunately, we have the chance to collaborate with the United States and the EU countries to develop this rapid diagnostic and antivirals as well as vaccines.

And in addition to that, we also collaborate with other countries to do this now virological study, and epidemiological study, and clinical study of this COVID-19. And we consider that these

clinical studies are very important to be carried out internationally. And this international collaboration on research is definitely very important.

So all fortunately, on March 18 Taiwan and the USA signed this an agreement for the coronavirus collaboration. And so I think that we can help each other to do this research with the researchers in the United States.

And indeed, our Academia Sinica, our National Health Research Institute, as well as researchers universities and the private industry are working together and also collaborate with international research institutions to do various researches, including virological clinical spectrum, host immune response, and efficacy of diagnostic and therapy, as well as a frequency and cost effectiveness of containment measures.

**ELLEN J.
MACKENZIE:**

So, Vice President Chen, you have talked a number of times, you've referred a number of times to the importance of collaboration and our working together globally. Can you just talk a little bit more about how Taiwan has been working to help other countries in their response to COVID-19?

And again, why is global coordination so critical in a public health crisis?

CHEN CHIEN-JEN: Sure. I just mentioned that no country can contain any pandemic alone. And we have to help each other and collaborate with each other. And our president of Taiwan once said that Taiwan cannot stand by while other countries are in need or help, and Taiwan is actively fostering cooperation with all countries and is willing to provide assistance to the international community in the areas of face masks, pharmaceuticals, and technologies.

And I just mentioned that US-Taiwan's joint statement on partnership against the coronavirus gives us a good basis for our bilateral collaboration. And our collaboration, I think that it's not only good for two countries, it's good for the entire international community.

So I would say it's of win-win-win situation. So we have to work together. And this is the same scenario when there was the SARS outbreak. We are fortunate only to have a chance to collaborate with the US CDC, and two teams worked hand in hand, and shoulder to shoulder, heart to heart, and from morning till night.

So we helped each other, and we controlled our SARS outbreak quite successfully. We would like to thank the United States for your help. And I think that this time we can also help each

other, and also help other countries together.

ELLEN J.

Yeah, I think we're all learning important lessons from this pandemic as to how to move

MACKENZIE:

forward and assure the best health and health care for all our people. Well, again, Vice President Chen, I want to thank you so very much, and Director Christensen, for your remarks. Thank you both for joining us today.

We applaud all you have and continue to help to control the spread of the coronavirus, both in Taiwan and globally. And we wish you and your colleagues good health and well-being in the months and years to come. And I look forward to my next visit to Taiwan soon.

CHEN CHIEN-JEN: You are welcome. Thank you so Much

BRENT

Thank you very much.

CHRISTENSEN:

ELLEN J.

Thank you.

MACKENZIE:

This webcast is just one of the many ways Johns Hopkins University experts are sharing their knowledge on the COVID-19 pandemic. You can find expertise from across the university at coronavirus.jhu.edu, including our recently enhanced map dashboard and data center.

We at the Bloomberg School of Public Health also have a daily podcast, *Public Health On Call*, where we're having conversations with experts, different experts every day. Subscribe wherever you get your podcasts, or visit jhsph.edu/covid-19.

You can also sign up for our COVID-19 daily roundup email to stay up to date with all of our latest content and be notified of future broadcasts. Again, thank you so much for joining us, and thanks to everyone involved in the global fight against COVID-19. Please, stay well.

[MUSIC PLAYING]

There's one and only one Johns Hopkins Bloomberg School of Public Health. We were the first and we're number one. We work around the clock and around the globe on the world's biggest health problems. And we're restless, always looking for new ways to secure a healthier future for everyone.

With five strategic priorities and the support and hard work of a diverse global community, we're pushing forward. We're reimagining our educational programs to help our students become the chief health strategists of the future. We are training students to be interdisciplinary thinkers, who are skilled in team science and creative problem solving, and always committed to the fundamentals of good scientific practice.

We are also extending our reach by creating new opportunities to pursue coursework online in the field and in the workplace. We're transforming our research ecosystem to accelerate lifesaving discoveries, and we've dedicated \$4 million to our new SCIBAR initiative, which builds on our excellence in both basic and applied sciences to solve the most challenging public health problems.

We amplify our impact by nurturing new partnerships with communities and organizations outside the traditional boundaries of public health. We're working across sectors, such as housing, criminal justice, and transportation. In the US, the Bloomberg American health Initiative is working with more than 150 organizations to tackle five urgent health challenges facing the country.

And globally, our collaborations reach from Baltimore to Uganda and India. To fuel creativity and excellence, we're investing in a diverse body of students, faculty, and staff.

Our new dean for diversity, equity, and inclusion is helping to foster an environment where people of all backgrounds can succeed and thrive. We're finding new ways to communicate across more channels. We aim to make sure our knowledge is shared, understood, and applied in policy and in everyday practice.

New leaders and advocacy and communications are infusing all of our efforts with new energy and direction. Our strategic priorities inform everything we do as we seek a healthier future for everyone. Thank you for being part of this amazing community.