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**THE INTERNATIONAL SCIENTISTS AND MEDIA PERSPECTIVE ON THE COVID-19 INFECTION IN ITS DEVELOPMENT (MARCH 2020, SEPTEMBER 2020, NOVEMBER 2020, JANUARY 2021, FEBRUARY 2021)**

**MARCH, 2020**

**How has Taiwan kept its coronavirus infection rate so low?**



Taiwan's number of COVID-19 infections is currently below 400, despite the island's proximity to the outbreak's origin on mainland China. Experts say early intervention has helped stop a public health crisis.

More than two months after a new virulent coronavirus emerged from the Chinese city of Wuhan, more than 1.4 million people in dozens of countries around the world have been infected.

The COVID-19 infection, however, has largely spared Taiwan, despite the island's relative proximity to the virus's origin.

When the outbreak first started in January, some experts predicted that Taiwan would have the highest number of cases outside of mainland China.

However, while mainland China has had over 80,000 COVID-19 cases to date, Taiwan has kept its number of confirmed cases below 400. Some international health experts credit this to Taiwan's quick preparation and early intervention.

**Taiwan took early action**

"Due to the hard lessons that Taiwan learned during the SARS epidemic in 2003, it is more prepared for the coronavirus outbreak than many other countries," said Dr. Chunhuei Chi, a public health professor at the Oregon State University in the US.

Taiwan's government introduced a travel ban on visitors from China, Hong Kong and Macau soon after the number of coronavirus cases began to rise in mainland China.

Anticipating the high demand for masks in late January, the Taiwanese government started rationing the existing supply of masks. Taiwanese citizens can now go to designated drug stores across the island to line up and buy a specific amount of masks on a weekly basis. Chi pointed out that this policy has also been duplicated in other countries like South Korea and France.

"Taiwan leveraged the strength of its manufacturing sector and invested approximately \$6.8 million (€ 6 million) to create 60 new mask production lines," said Chi.

"This increased Taiwan's daily mask production capacity from 1.8 million masks to 8 million masks. This has been called 'Taiwan's Mask Miracle.'"

### **Technology for early detection**

The Taiwanese government has also used data technology to help medical personnel identify and trace suspected patients and high-risk individuals.

In a paper published in the Journal of the American Medical Association, Dr. Jason Wang, a public health policy expert at Stanford University in the US, highlighted Taiwan's use of technology to track the whereabouts of those under quarantine.

"The government will call you and try to figure out where you are," said Wang. "They can track people with their phone, which allows them to make sure all individuals who are supposed to go through the mandatory 14-day quarantine and are not violating the rules by sneaking out of their quarantine locations."

The Taiwanese government also provides support for those put under quarantine. Local village leaders will bring a bag of basic supplies like food or books to quarantined individuals. Since most quarantines are enforced, the Taiwanese government also rolled out a welfare program that provides a \$30 daily allowance to those affected by the quarantine during the two-week period.

"This gives Taiwanese people more incentive to report their symptoms honestly," Wang said.

"That's the way democracies are handling quarantine during the coronavirus outbreak, and it's very different from authoritarian governments. I think this is a case where democracies should leverage their data and technologies appropriately, so they can triage people to the right place and follow up with appropriate care."

### **Taiwan's medical research**

Taiwan has also invested in its biomedical research capacity over the last few decades and research teams have been working to mass-produce a rapid diagnostic test for COVID-19.

A research team at Taiwan's Academia Sinica successfully generated and tested an antibody that can be used to identify the protein that causes the coronavirus. They aim to produce a new rapid test for the coronavirus that can shorten the time frame for diagnosis to 20 minutes.

The lead researcher of the team, Dr. Yang An-Suei, said that the next step for the team is to validate the product before rolling out a rapid test kit in Taiwan.

And although Beijing continues to block Taiwan from rejoining the World Health Organization (WHO), public health expert Wang said that Taiwan continues to share its experience in combating the coronavirus outbreak with other countries.

"Taiwan has been sharing their epidemic prevention strategies with other countries through teleconferences, while helping countries that lack advanced medical capabilities to process samples from patients," Wang said.

"In my opinion, WHO needs Taiwan far more than Taiwan needs the WHO in the fight against coronavirus," said Chi.

(<https://www.dw.com/en/taiwan-coronavirus/a-52724523>)

## SEPTEMBER 2020

Author: Huynh Tam Sang, Vietnam National University, Ho Chi Minh City



Taiwan's efficient response to COVID-19 has given renewed impetus to President Tsai Ing-wen's New Southbound Policy (NSP). Taiwan has enhanced its commitment to its NSP partner countries through its 'mask diplomacy', showcasing the effectiveness of its democratic institutions for public health crisis governance. Taiwan's strong response to COVID-19 and its assistance abroad has helped raise its global profile and visibility.

Taiwan has actively supported countries and partners by donating surgical masks to countries in need under the motto 'Taiwan can help' and 'Taiwan is helping'. Taipei offered millions of face masks and urgent medical aid to many, including NSP countries in need. And under the Ministry of Health and Welfare's 'One Country, One Centre program', Taiwan is working with countries to promote industrial supply chain links and build disease prevention networks with like-minded partners in South and Southeast Asia.

The first major round of mask donations began in April 2020, with 11 million given to the United States and 11 European countries. The second round targeted Latin America and Southeast Asia as urgent demand for surgical face masks shifted. The shipment included India and six ASEAN countries — Singapore, Malaysia, the Philippines, Vietnam, Myanmar and Indonesia. As the third wave hit in May, 1.8 million masks were directed towards Taiwan's NSP partners, mostly Southeast Asian countries.

Uncertain relations with China for many poses a challenge to Taiwan's relations with Southeast Asia and beyond. In the post-pandemic era, Taiwan should continue to promote the success of its 'Taiwan model' as an illustration of 'the fundamental role of respect for democratic values and individual freedom in harnessing technology, especially during a public health crisis'.

Taiwan can continue to support countries hit hardest by COVID-19 — like the Philippines and India — through sharing its expertise in coordinating responses across government departments. Taiwan can also elevate its exchange of modern prevention measures, contact tracing and big data analysis to monitor the treatment process. The Taiwanese government has a role cut out for it in engaging with officials and experts from these countries to promote its pandemic approach through dialogue on issues like 'border controls, government policies to the public, and ways that medical institutions can keep a pandemic under control'.

Hsin-Huang Michael Hsiao suggests that the success of the Taiwan model lies in Taiwan's medical and health insurance systems. Taiwan should stand firm on promoting the 'NSP 2.0' by exporting its model of pandemic prevention.

Cooperative projects for personnel training, academic exchanges and technical discussions are vital in promoting this model of governance. Fostering cooperation with New Zealand and Australia would also allow Taiwan to closer incorporate itself into the club of democratic countries in the Asia Pacific. Engagement with partner countries further strengthens the

government's deep-seated commitment to 'achieving multifaceted cooperation and establishing mutual prosperity' with NSP countries.

Southeast Asian countries are stepping up investments in healthcare in response to COVID-19. Fostering links between Taiwan and NSP countries here — through soft power, supply chains, regional markets and people-to-people connections — will gain renewed impetus. Taiwan should leverage its profile by promoting its medical industry in Southeast Asia and providing healthcare-related assistance to NSP countries.

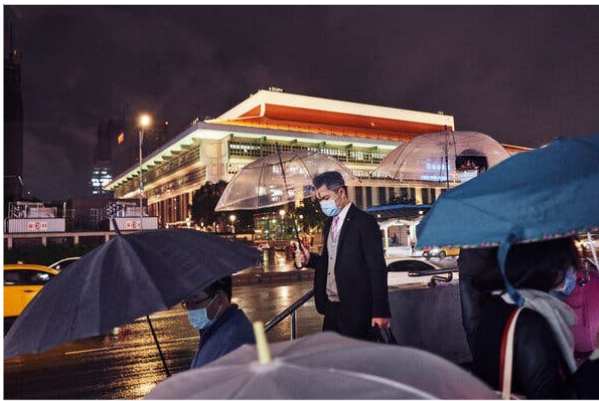
Jeremy Huai-Che Chiang stresses the vital connection between the NSP and collaborative pharmaceutical efforts with Southeast Asian countries, foreseeing that 'successful flagship projects such as medical supply chain cooperation will be strengthened, while critical ones such as educational exchange will obviously continue'. The NSP's medical and industrial arms are now well-positioned to work in conjunction with regional countries, both during and after the pandemic.

The NSP will continue to serve as the lynchpin of Taiwan's foreign policy during Tsai's presidency. Taiwan navigating the pandemic by fostering deeper relationships in this region through an innovative policy approach, firmly attached to the NSP, can only yield good outcomes.

<https://www.eastasiaforum.org/2020/09/12/exporting-taiwanese-influence-abroad-during-covid-19/>

## NOVEMBER 2020

### Taiwan to begin COVID-19 vaccinations as early as 1st quarter of 2021



TAIPEI (Taiwan News) — Taiwan could begin the immunization program against COVID-19 as early as the first quarter of 2021, according to the nation's health authorities.

Central Epidemic Command Center (CECC) Spokesperson Chuang Jen-hsiang (莊人祥) said on Sunday (Nov. 22) that inoculations can be expected to start no later than mid-2021, if not the first quarter.

Priority will be given to people in the following order: medical workers, disease control staff, airport inspection employees, the police, military police, military personnel, nursing center staff and social workers, seniors aged 65 and over, high-risk groups aged 19 to 64, those with rare and serious diseases, and people aged 50 to 64, reported CNA.

A budget of NT\$11.55 billion (US\$404 million) has been set aside for the procurement of COVID-19 shots through COVAX, a global initiative coordinating countries' access to coronavirus vaccines. The CECC has been seeking front-runners Pfizer-BioNTech (BNT) and Oxford-AstraZeneca (AZ) vaccines since June, but it does not rule out the possibility of enrolling another promising candidate — Moderna — whose vaccines are touted as being 94.5 percent effective and can be stored in a normal refrigerator, wrote UDN.

Vaccines against the novel virus can be administered in Taiwan through emergency use authorization (EUA) requests, as is the same in many countries, according to Wu Shou-

mei (吳秀梅), director-general at Taiwan Food and Drug Administration. Taiwan-developed vaccines, including those made by Adimmune Corporation (國光生技), United Biomedical (聯亞生技), and Medigen Vaccine Biologics (高端疫苗), have proceeded smoothly in the first stage clinical trial, the official added.

## JANUARY 2021

### *How Taiwan Plans to Stay (Mostly) Covid-Free*



The island's success against the coronavirus has created a sinking feeling for many residents: How much longer can their good fortune last?

Commuters in Taipei in December. Life in Taiwan has remained normal for most of the past year, and gross domestic product is still forecast to grow.

TAIPEI, Taiwan — Consider for a moment, in this time of anguish and loss and death, of mass unemployment and flattened national economies, the Twilight Zone alternate reality that is Taiwan.

For months and months, life on the island has been, in a word, normal — spookily so. Weddings have been held, worry free. People have packed pro ball games, attended cello concerts and thronged night markets. Taiwan's population is larger than Florida's, but its Covid-19 death toll can be counted on two hands.

It is the kind of off-the-charts success against the virus that has created a sinking feeling in the stomachs of many residents: How much longer can the island's good fortune last?

For Chen Shih-chung, Taiwan's health minister and head of its epidemic command center, success is all the more reason not to waver on the bedrock of the government's coronavirus strategy. The island has been sealed off to most visitors since March. People who are allowed to enter still have to quarantine under tight watch for two weeks, including Taiwanese citizens.

The high walls have kept the island from being deluged with infections, but they risk isolating Taiwan economically and politically if the rest of the world relaxes its defenses as vaccinations get underway.

The government is not likely to budge on those policies until there are vaccines that are a proven, lasting weapon against the virus, Mr. Chen said in an interview. Taiwan will not be like one of those places, he suggested, that eased lockdowns under public pressure only to have to tighten them again later.

Taiwan's health minister, Chen Shih-chung, is the face of the island's fight against the virus.

"I believe there will be another wave," he said. "Because everybody thinks, 'I've gotten the vaccine, or I'm getting the vaccine next week, I've waited so long, I can be free now, right?'"

Once there is more evidence about whether the current vaccines offer enduring immunity, “only then can we really start to relax a bit,” he said.

As vaccinations begin around the globe, the question of how and when to ease Covid border controls will also confront other places, such as Australia and New Zealand, that have used their geographic insularity as a primary defense against the pandemic.

Taiwan has already held fast to its entry restrictions and quarantines for much longer than many governments could without facing a big public backlash. The island’s economy has slowed along with the world’s during the pandemic but it continues to grow at a decent clip.

Japan and South Korea, two other Asian democracies praised for their virus responses, are now grappling with large flare-ups of new infections.

But as successful and tireless as Taiwan’s health officials have been, the island has also benefited from sheer good luck, said C. Jason Wang, an associate professor at Stanford University School of Medicine.

With the case count surging globally and a more contagious variant of the virus circulating in many places, greater numbers of infected people are bound to arrive at Taiwan’s borders, Dr. Wang said. Which means it is only a matter of time before more positive cases slip past the government’s defenses.

Taiwan on Wednesday confirmed its first case involving the new variant, in a person who had entered from Britain, tested positive and been hospitalized. In response, the government further tightened its entry bans and quarantine rules.

“It’s remarkable that Taiwan has held the line for so long,” Dr. Wang said. But even if the island vaccinates its population by the middle of 2021, “then you’ve still got six months to go,” he said. “It’s really difficult to keep this up for another six months.”

In a recent opinion poll, Mr. Chen, a dentist by training, received a higher approval rating than any other top official, including his boss, President Tsai Ing-wen. He is being talked about as a potential candidate for mayor of Taipei, the island’s capital. His cool, unflappable mien at the government’s epidemic news briefings has won him an odd kind of celebrity. It is not every middle-aged health minister who is photographed clad in Gucci for the local edition of GQ.

Yet in Mr. Chen’s telling, his decisions since the outbreak started have upset certain people at almost every turn. Like when he barred medical workers from leaving the island in February. Or when he announced in March that the island was forbidding entry by nearly all nonresidents.

Many of the Taiwanese government’s ideas about dealing with the virus came from “feeling around in the dark,” Mr. Chen said.

For instance, when a cluster of infections appeared on the Diamond Princess cruise liner in February, officials in Japan, where the boat had docked, allowed many passengers who tested negative to walk free. Some of them later tested positive. Taiwan took note.

“By then it became very clear to us,” Mr. Chen said. “After you test, you have to quarantine both the positives and the negatives.”

Taiwan’s emphasis on strict quarantines has helped contain infections without overwhelming its hospital system or incurring huge costs for testing. But some experts are now urging the



government to test more widely, particularly at the border, to catch more cases that do not show symptoms.

Taiwan's leaders were watching when Japanese officials allowed passengers from the quarantined Diamond Princess cruise ship to leave after testing negative. Some were later found to be positive. Above, ship passengers on a bus leaving the port in Yokohama.

"We came up with many of our policies when there were a few million infections around the world," said Chan Chang-chuan, a professor at the College of Public Health at National Taiwan University. "But now there are tens of millions, and we're heading toward a hundred million. It's a whole different stage."

Mr. Chan said he believed Taiwan should begin testing everyone at the border, not just quarantining them. It has already started doing this for people arriving from Britain, where the more transmissible variant of the coronavirus has been found to be circulating.

Taiwan's position has been that carriers of the virus who are asymptomatic after 14 days of isolation are not likely to be very infectious. Mr. Chen said he had no doubt that there had been some asymptomatic cases that never made it onto the government's radar.

"But if those infections are not causing problems, then should I spend a lot of energy trying to find those people?" he said. "Or should I focus my efforts on infections that are already causing problems?"

It is unclear how much of a gamble this approach has involved. A study published in The Lancet in October found that out of 14,765 people whose blood was sampled at a Taipei hospital, a lower share tested positive for coronavirus antibodies than in other countries. Yet the share could still imply a much higher number of asymptomatic or mildly symptomatic infections than is reflected in Taiwan's official case numbers, the study's authors wrote.

"Basically, it's a trade-off between how much money you want to spend and how much risk you want to take," said Dr. Wang, the Stanford professor. As the global case count swells and more infections are likely to leak into Taiwan, "then it's a matter of how much leakage you want in your house."

Dale Fisher, a professor in infectious diseases at the National University of Singapore, contrasted Taiwan's tight border policies with Singapore's more "nimble" approach. The city-state recently lifted restrictions on travelers from Taiwan, but Taiwan did not reciprocate.

"We think that even if a traveler brought it in, we think there's a good chance it wouldn't spread anyway," Dr. Fisher said. "If you've got no faith in your system, then that would make you keep the borders harder."

The real test for Taiwan, he said, is if the vaccines do not end up offering long-lasting immunity and the world needs to live with Covid for longer. How well would Taiwan's people bear being sealed off from the wider world for another year? Another five years?

"This is why we'd say close your borders if you just want to buy time to get yourself organized," Dr. Fisher said. "But don't think of it as a strategy."

<https://www.nytimes.com/2021/01/02/world/asia/taiwan-coronavirus-health-minister.html>

## **FEBRUARY 2021**

### **COVID-19 confirmed case, death and recovery trend in Taiwan 2020-2021**

Published by Lai Lin Thomala, Feb 22, 2021

As of February 22, 2021, there were 40 active coronavirus COVID-19 cases and a total of nine deaths registered in Taiwan. There has been a gradual increase in new infections since late November. Despite the island's proximity to the mainland China, Taiwan has managed to contain the virus with an effective disease control system developed from the experience in the SARS epidemic.

<https://www.statista.com/statistics/1108537/taiwan-novel-coronavirus-covid19-confirmed-death-recovered-trend/>

### **Taiwan unveils new priority list for COVID vaccine**



TAIPEI (Taiwan News) — The Taiwan Centers for Disease Control (CDC) has divided members of the public into 10 priority groups for receiving COVID-19 vaccines, according to information posted on its website.

The priority list for the government-funded vaccine drive released on Feb. 26 was an updated version of its predecessor set by the CDC last year. Approximately 65 percent of the domestic population is included in the 10 priority groups, while self-paid vaccines will likely become available one or two months after the mass vaccination drive.

Healthcare personnel and epidemic prevention workers will be the first two groups to get vaccinated, followed by people who have higher risks of potential coronavirus exposure due to their occupations. These include pilots, flight attendants, drivers of epidemic prevention taxis, and staff at quarantine hotels.

The fourth to seventh priority groups include Taiwanese envoys and athletes who need to travel abroad, military and civilian police, residents of long-term care facilities, and members of Taiwan's armed forces. People aged 65 and over are next in line to receive the shots, and they will be followed by high-risk groups in the age bracket from 19 to 64, people with rare diseases or severe illnesses, and adults aged 50-64.

The CDC cautioned that all coronavirus vaccines require two shots, a priming dose and a booster shot, and that the recommended intervals between doses are three to four weeks. It also emphasized that vaccines from different manufacturers should not be mixed together.

<https://www.taiwannews.com.tw/en/news/4059792>