

# **Prevention and Control of COVID-19 in Taiwan**

## **I. Operational Structure**

1. On January 2, 2020, the Response Team was set up to respond to the mystery pneumonia epidemic in Wuhan, China.
2. On January 20, 2020, level 3 of the Central Epidemic Command Center (CECC) was established to integrate resources of the administration, the academic, medical, and private sectors to fight against the 2019 novel coronavirus (COVID-19). Dr. Jih-Haw Chou, the Director-General of Taiwan Centers for Disease Control served as the commander.
3. On January 23, 2020, level 2 of the CECC was established due to the fact that the first case of COVID-19 was confirmed on January 21, 2020. Dr. Shih-Chung Chen, the Minister of Health and Welfare served as the commander to coordinate and mobilize resources from a cross-ministry perspective, including the ministries of interior, transportation, foreign affairs, economics, labor, education, environment, etc. as well as private stakeholders to fight against COVID-19.
4. On February 27, 2020, level 3 of the CECC was established due to the global epidemic situation getting worse. Dr. Shih-Chung Chen, the Minister of Health and Welfare was designated by the Premier as the commander to coordinate and mobilize resources from across ministries and private stakeholders to fight against COVID-19.

## **II. Legislation**

According to the Communicable Disease Control Act, Taiwan CDC classified COVID-19 as a Type-5 notifiable communicable disease on January 15, 2020 to strengthen surveillance and containment of COVID-19. It helped urge the public and medical facilities to take notice of the disease and take necessary precautionary measures to decrease risk of transmission.

In addition, a Special Act for Prevention, Relief and Revitalization Measures for Severe Pneumonia with Novel Pathogens was adopted on February 25, 2020 to respond to the coming crisis.

## **III. Prevention Strategies**

On December 31, 2019 when we were notified of mystery pneumonia cases in Wuhan, China, we began to implement relevant prevention strategies, including boarder control, home isolation and quarantine to avoid community transmission, surveillance and laboratory diagnosis, nosocomial control, preparing for stockpile of masks and other PPEs, health education and

disinformation management.

#### 1. Boarder Control:

- (1) Since 2003, standard operating procedures have been implemented at Taiwan's airports including reinforcing fever screening of arriving passengers, screening suspected cases through inquiring about their history of travel, occupation, contact, cluster and conducting health assessments.
- (2) From December 31, 2019 to January 23, 2020, Taiwan implemented onboard quarantine inspection of direct flights from Wuhan, China, and promoted related prevention measures among other travelers.
- (3) Since February 7, arriving passengers from China, Hong Kong and Macau (including those transiting through these areas) have been required to fill out a "Novel Coronavirus Health Declaration and Home Quarantine Notice" and be under home quarantine for 14 days. Since February 11, arriving passengers have been required to fill out a "Novel Coronavirus Health Declaration Card". Who should be placed in home quarantine is subject to change based on the epidemic situations in other countries. Starting from March 19, home quarantine measures have been expanded to arriving passengers from all countries in response to global epidemic developments. In order to stop the spread of COVID-19 through air transport, the transit of airline passengers through Taiwan have been suspended from March 24 until April 7, to decrease the cross-border movement of people and to reduce the risk of disease transmission.
- (4) Since February 16, 2020, travelers with mobile phone numbers provided by telecom operators in Taiwan have been able to use the Entry Quarantine System by scanning the QR Code while waiting at the check-in counter. Travelers can complete the health declaration form online while waiting for their flights or upon entry. The health declaration pass will be sent to travelers' mobile phone via SMS upon arrival in Taiwan. After that, travelers will get faster immigration clearance by showing the health declaration pass. Therefore, travelers can complete health declaration and get faster immigration clearance with 4 simple steps: scan the QR Code, fill out the form, get a health declaration pass via SMS, and show the pass on their mobile phones.

#### 2. Control of Community Transmission:

- (1) All travelers are required to be under home quarantine for 14 days after entering Taiwan. Travelers are required to stay at home or a specific location. If they develop symptom, their medical care will be arranged.
- (2) People who had contact with confirmed cases will be isolated at home for 14 days. Local health agencies will contact people in home isolation to check their health twice a day. If they develop symptoms, health agencies

will place them in the hospital in isolation.

- (3) In collaboration with telecom companies, we track the location of people subject to home quarantine or isolation by using GPS on their mobile phones. If a person leaves a designated quarantine site, the person and the civil affair bureau worker responsible for the person will receive a notification via SMS. The responsible worker and the police will check the person's location immediately. Violators not following the regulations will be fined or forcibly detained to prevent possible spread of disease.
- (4) During the 14-day period of home quarantine or home isolation measures, individuals may not go outside. Therefore, on March 1, central and local governments worked closely to implement plans for providing services for home quarantined/isolated individuals. Each local government has set up centers for COVID-19 consultation and support services, the measure of daily follow-up calls as well as standard procedures for related services and assistance to people for transport arrangements, medical care arrangements and household services, including settlement planning for people without a residence, meal delivery, garbage collection and consultation.
- (5) Due to the increased number of individuals under home quarantine, the Tourism Bureau has implemented a subsidy plan for hotels which collaborated with the government to provide rooms for people subject to home quarantine. Each hotel offering rooms for those subject to home quarantine can receive a subsidy of NT\$1,000 per room per day from April 1 to June 30.
- (6) In order to protect students from COVID-19 infection, the Ministry of Education has announced rules for the suspension of classes, prepared and allocated medical supplies to the schools. In addition, schools are required to monitor students' health conditions, maintain environmental disinfection, and follow up on the activities which teachers and students have participated in.
- (7) Social distancing measures were announced on April 1 to encourage the general public, in phases, to maintain social etiquette and observe social distancing and thereby reduce the risk of community transmission of COVID-19, which continues to spread across the globe. Other related guidelines and recommendations, including those for mass transportation, enterprises, large-scale public gatherings, large commercial sites, community management, and establishment and management of quarantine hotels, were also issued.

### 3. Surveillance and Laboratory Diagnosis:

- (1) We began to identify people who developed fever, cough or other acute respiratory symptoms and who had a past 14-day travel history or close

contact with the above mentioned people. They are all required to report to the health authorities and provide a lab specimen for further laboratory diagnosis.

- (2) When a person seeks medical attention using his or her National Health Insurance (NHI) card, the person's travel history to areas affected by COVID-19 will display on the system because immigration data is linked to the National Health Insurance Administration. This system helps remind a physician to pay attention to past 14-day travel history and inquire and examine the person accordingly. This can effectively prevent failing to detect a potential case.
- (3) Since February 16, 2020, we have enhanced COVID-19 case finding by proactively seeking out patients with severe respiratory symptoms who had tested negative for influenza and retested them for COVID-19. In addition, patients who are highly suspected as COVID-19 infection by the physicians as well as medical staff with pneumonia or cluster are also subject to provide specimens for further laboratory diagnosis.
- (4) In order to have specimens tested quickly, we have improved our laboratory diagnosis capacities from 12 laboratories for 520 cases per day to 34 laboratories for 3,200 cases per day.

#### 4. Medical System Response and Preparedness:

- (1) 52 regional hospitals or medical centers have been designated for treatment of confirmed severe cases while 165 medical facilities are designated for taking specimens and for treatment of confirmed mild cases.
- (2) According to the nosocomial control guideline, hospitals are subject to identify two separate entries for emergency and hospitalized patients. Medical staff are required to take care patients by a separate area and group. COVID-19 patients have been settled on the specific ward or area to avoid nosocomial infection.

#### 5. Stockpile and Allocation of PPE:

- (1) Lesson learned from SARS, we had accumulated a pre-stockpile of Personal Protective Equipment (PPE) for medical and public health personals in response to the emergency crisis according to the Communicable Disease Control Act.
- (2) In order to provide enough surgical masks for medical workers working on the frontlines to protect themselves, the government has accumulated a stockpile of surgical masks, and implemented a ban on the export of surgical masks from January 24 to April 30, 2020. In addition, government funds and military personnel have been used to increase mask production as well as to assist manufacturers in acquiring equipment to boost capacity.

- (3) In addition to increasing the mask production, the government has also helped allocate a mask to every citizen through purchase at pharmacies by using National Health Insurance cards. Furthermore, an online ordering mechanism for a name-based rationing system has been set up for people who are unable to buy from the pharmacies. They can order online, pay by credit card/ATM and get the masks from 7-11 or Family convenient stores.
- (4) Supply the public with 75 percent alcohol and arrange for the alcohol to be sold at National Health Insurance (NHI)-contracted pharmacies, convenience stores, supermarkets, and hypermarkets.
- (5) Continue to prepare the stockpile of PPE, including isolation/protective gowns and N95 respirators, for medical and public health personnel to protect them from COVID-19 infection.

#### 6. Health Education and Fighting Disinformation:

- (1) The CECC has conducted daily press briefings chaired by the commander to release COVID-19 related information to the public. Mass media such as Television, leaflets, posters and radio as well as social media such as Facebook, Line and Twitter have also been extensively used for public education. These announcements included when and where to wear a mask, the importance of hand-washing and the danger of hoarding masks, to prevent them from becoming unavailable to frontline health workers.
- (2) Taiwan CDC has also collaborated with the National Police Agency, the National Communication Commission and the Bureau of Investigation to fight disinformation which might interrupt or affect our response measures to COVID-19.

### **IV. International Collaboration**

Although Taiwan is not a member of WHO, as a responsible member of the international community, Taiwan CDC has reported confirmed cases of COVID-19 to the WHO, as well as shared information on the epidemic situation, contact tracing, travel history, border control measures with Japan, South Korea, Singapore, Malaysia, USA, UK, ECDC and EU countries including Italy, France, Netherland, Switzerland, Germany, Belgium and Spain through the IHR mechanism.

As globalization spurs the speed and frequency of the spread of infectious diseases more than ever before, a crisis anywhere may easily and soon become a problem everywhere. Taiwan will continue to collaborate with other countries in fighting against COVID-19. However, we have only been participating in a few activities organized by the WHO, such as attending the Global Research and Innovation Forum online and several clinical and infectious control teleconferences. At these kinds of events, we were unable to fully elaborate on how we have responded to the COVID-19 epidemic with

the international experts in person. We will be able to contribute more and share our experience with WHO members and international professionals if Taiwan could participate in the WHA and WHO related COVID-19 technical meetings.