Participatory health crisis management for pandemics

1. Pandemic situation

Most pandemics are emerging infectious diseases (EIDs) that spread worldwide with a tendency to increase in frequency and severity as shown in Figure 1.

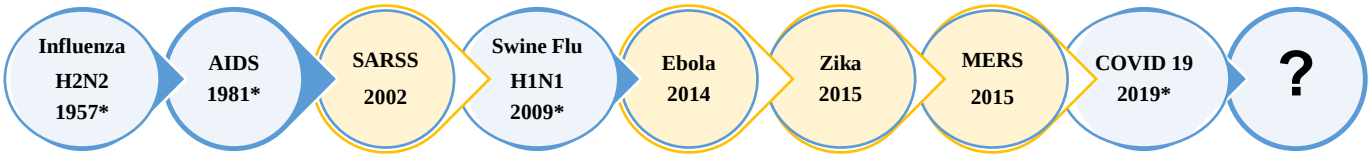

Figure 1 Pandemics and major EIDs during 1957-present
Note: *Blue represents pandemics

The most recent pandemic is coronavirus 2019 or COVID-19. This is a respiratory tract infection, with the first confirmed case identified in December 2019. The World Health Organization declared the coronavirus outbreak a public health emergency of international concern (PHEIC) on 30 January 2020. On 11 March 2020 it was declared a worldwide pandemic due to the rapidly increasing number of patients and death rates that spread to 215 countries (2) in every region of the world, with 34.5 million confirmed cases and 1.03 million reported deaths, representing a death rate of over 3 percent. In Thailand there were 3,575 confirmed cases and 59 reported deaths (as of 2 October 2020), with approximately 1.7 percent death rate (3). The severity of the disease, including symptoms, vary from no symptoms to common cold symptoms, shortness of breath and breathing difficulty, to pneumonia and complications in the case of patients with a weakened immune system or chronic health conditions. Patients with chronic diseases and older adults are the groups that are at risk of more severe symptoms than most people (4).

Reports on projected figures of deaths caused by suicide also suggest a tendency towards a rising number of suicidal deaths worldwide due to the “COVID-19” pandemic crisis. In Thailand, the suicide mortality rate increased from 6.32 deaths in 1999 to 6.64 deaths per 100,000 population (5).

Thailand is likely to see other pandemics in the future but it cannot be clearly predicted when they will happen and when the current COVID-19 pandemic will come to an end.

2. Impact of the pandemic

During the coronavirus outbreak, Thailand faced the problem of limitations of 'Covid-19' testing kits, which were said to be "rapid testing with slow results". In March 2020, during the early stage of the outbreak in Thailand, rapid testing took 5 to 10 days after getting infected before antibodies can be detected. Therefore, early testing right after the risk of exposure could produce false "negative" results. During that period, there were two main types of laboratory tests: (1) Tests that directly detect the virus. At present, the fastest are the "reverse transcription polymerase chain reaction (RT-PCR) tests that detect the virus genetic material. This is currently the main diagnostic method recommended by the World Health Organization. These tests yield the fastest results and the virus can be detected in the early stage of symptom appearance. At that time testing kits had to be ordered from China; and (2) Testing by using Rapid Test kits, which caused considerable public concern. To put it simply, these are quick tests taking only 5-15 minutes to administer. These rapid test kits are used to look for antibodies. That is, the body's immune system will make antibodies to fight infections caused by the virus. This will take 5-7 days after a person is infected with the virus. Using this method, the tests will yield positive or negative results only when they are taken 5-10 days after the person is infected; and it takes over 10 days to confirm the results. More importantly, if tested on the 1st or 3rd day after the risk of exposure, even when the result is negative, it still cannot be confirmed whether the person is infected or not. Therefore, to use these test kits, timing is important. The testing procedure is fast, taking only 5 minutes, but the test results are slow. Therefore, rapid tests are said to be "rapid testing with slow results" (6). During the same period, with the initial widespread outbreak, Thailand was also having problems regarding Personal Protection Equipment (PPE) needed by healthcare workers on duty for protection from potential harm due to the nature of their work, working conditions, and working environment at work place. There was also shortage of personal protection equipment to protect organs of healthcare professionals. This gave rise to the question regarding the government's lack of management efficiency despite its past experience in responding to epidemics, especially when there was already an epidemic operation plan in place. Therefore, if the government reviews its role as the intermediary that coordinates with areas where the pandemic has not spread to and make requests for resource sharing between areas with and without epidemic outbreaks; the personnel and PPE shortage gaps can be closed. Or, the government should coordinate with the private sector, especially with technology companies, to provide medical devices. This is what the governments of Taiwan and Singapore have been using. Using this approach, the leaders of these countries have successfully played a role in coordinating with various sectors to control the number of people infected with COVID-19. Otherwise, the delay in the country's response to the pandemic may further prolong the outbreaks (7). For this reason, action taken with respect to the test kits and the PPE needs cooperation from the private sector. Nevertheless, Thailand still lacks the capacity in innovation research and development in the private sector that can produce hundreds of thousands sets of PPE or RT-PCR test kits per day (8).

Thailand is now in the process of developing a vaccine to prevent the COVID -19 pandemic. Normally vaccine development takes several years, or in some cases, several decades.

Now over 150 companies around the world are attempting to produce COVID -19 vaccines. Some have made satisfactory progress as the developed vaccines cause the immune system to respond by producing antibodies without serious side effects. When the regulators approve the vaccines, billions of doses will be produced. Still, there may be other headaches, i.e., global shipments and management that call for cooperation among concerned parties to ascertain that the poor will not miss the opportunities to access the vaccines. Healthcare professionals are expected to be the first group to be vaccinated. Yet questions have been raised as to who or which group will be the next target group for vaccinations (9). Hence, universal and timely access to vaccines is another matter that should be considered significant. The World Health Organization has anticipated that COVID -19 may cause as many as 2 million deaths around the world. The figures may be higher before vaccines became universally available.

Regarding drugs for treatment of COVID-19, the Government Pharmaceutical Organization has been conducting research and development of Favipiravia, since mid-March, 2020. Favipiravia, is one of the drugs that have effective results in treatment of COVID-19. It is imperative that Thailand must have a sufficient quantity available for usage because this pandemic could last for another year or two. At present Thailand is reviewing prototypes imported from Japan and China. Raw materials have been procured to be used for development and production of Favipiravia tablets locally. Sources of raw materials of acceptable standards have been selected from China. With regard to research, development and synthesis of Favipiravia, the Government Pharmaceutical Organization has collaborated with the National Science and Technology Development Agency (NSTDA) to carry out the raw material synthesis process at the laboratory level. This process is expected to be completed within 3-6 months. Then the Government Pharmaceutical Organization will increase the synthesis to the semi-industrial level (10).

With limitations of our knowledge about the COVID-19 pandemic, which is an emerging disease, and the lack of clarity regarding the nature of the incidents of disease; there is an urgent need to develop new knowledge for prevention and treatment. For example, initially the World Health Organization recommended that there was no need for everyone to wear masks; only infected people needed to wear them. However, later on people were advised to protect themselves from getting infected by wearing masks, and that screening kits for rapid testing with a high specificity for the disease should be developed, so that the services will be equitably and fairly accessible to the public. In order to develop vaccines that are effective, at present several agencies have been willing to accept research proposals or provided more funding for research related to pandemics, including the following: (1) the Ministry of Higher Education, Science, Research and Innovation (MHESI) has made an announcement to accept proposals for grants to carry out research and innovation to solve the problems of coronavirus 2019, or COVID-19 outbreaks; (2) the National Research Council of Thailand (NRCT) has offered grants for research and innovation on COVID-19, aiming for the development of health innovation for disease prevention and control, on the condition that there must be concrete product and output goals towards four important issues: research and development of N95 face masks for medical use; PPE for health professionals; respirators; systems for negative pressure rooms, negative pressure air conditioning and field hospitals; and (3) the Foreign Affairs Division of the NRCT has offered opportunities for researchers to develop research cooperation networks with counter parts in other countries, aiming towards prevention and alleviation of COVID-19 impact in Southeast Asia; and

(4) Office of National Higher Education Science Research and Innovation Policy Council (NXPO) has provided support for advanced knowledge in humanity, social science, and fine arts, by learning and reviewing the phenomena emerging from the coronavirus outbreaks.

Amid the health crisis caused by the pandemic came the impact of infodemic outbreaks. Fake news or false information has been rapidly mushrooming, causing an outburst of false, inaccurate, and distorted information on the COVID-19 pandemic. Such information ranged from knowledge about the disease to the nature of its outbreaks. Questions were raised whether the virus could spread through air borne transmission, and whether cleaning specific areas or risky areas could cause diffusion of particulates in the air. Wrong interpretation could lead to panics, and distorted or incorrect information could cause social destabilization. People became confused and did not know how behave, resulting in questions being raised and lack of confidence in the information received. Moreover, receiving incorrect information combined with worries has led to hoarding of food and consumer products, resulting in shortage and higher prices of some kinds of consumer goods. At the same time, policy makers need to have correct information in order to set policies and implement measures for effective management of the pandemic.

Besides the cooperation between the public and the private sectors, another thing that can help combatting the COVID-19 pandemic is “Big Data”. During the period of over 4 months of extensive outbreaks faced by countries all over the world, normal ways of life of millions of people were disrupted. The “loophole” of the public health systems that were not prepared to cope with the pandemic was exposed. Taiwan was the country where “Big Data” was introduced to be well prepared for and increase efficiency in dealing with the pandemic. The context of Taiwan’s public health system is conducive to efficient response to pandemic outbreaks, through its “single-payer healthcare system” whereby payment is made from a single fund, under the “National Health Insurance (NHI) Program”. The system offers medical coverage to 99.9 percent of the population, with the government being the main payer. The advantage of the single-payer system is that all demographic data are stored in a data warehouse and can be connected to data from other agencies such as the National Immigration Agency, allowing hospital staff to see the patients’ timelines. In addition, data on exposures to the disease of in-patients at hospitals or clinics nationwide are also connected to the system. The normal process requires that people seeking medical service from the hospital be registered in their computer systems first, to allow doctors to see the patients’ medical history before they come for treatment at the hospital. At the same time, the National Police Headquarters was using the tracking system via mobile phones to check whether the persons required to be quarantined have stayed at the designated quarantine facilities throughout the required period. If not, the quarantine system will notify the government authorities concerned. Thus, Taiwan is an example of utilization of information technology systems for pandemic prevention and situation control (11). At any rate, Thailand still lacks systematic data connectivity that can be put for good use for pandemic management.

Limited medical and public health resources have impact on service accessibility and equality of the “vulnerable group” such as the disabled, old people, and ethnic groups who are Thai nationals waiting for documents of rights from the Thai government. Also affected are migrant workers who do not have access to assistance from government agencies or local government organizations

because they have no personal status and no ID cards. Moreover, it affects another group of people i.e., patients with chronic diseases who can no longer access treatment they used to get at healthcare establishments and, therefore, are unable to control flare-ups that happen rapidly. Homebound and bed-ridden patients also receive health care with less efficiency than the way it should be.

The pandemic has impact on loss of income in vulnerable groups. Income of several families is below the poverty line. The economy is at risk, and economic activities have been disrupted. Less income and reduced working hours are common and workers in some professions have lost their jobs. There have been problems in food production and distribution. People's health is affected and health professionals are very likely to be at risk of exposures. The responses and capacity of the healthcare system have dropped. Schools/educational institutions were ordered closed, and distance learning may have decreased learning efficiency. Moreover, online learning is not accessible to some students. Interpersonal coordination and certain kinds of work cannot be achieved by working from home. There have been delays in work performance because initially gatherings and meetings were suspended. For different people, there are differences in terms of availability and capacity of information and technology equipment for working online. Inconvenient access to clean and adequate restrooms are barriers to accessibility to hand washing facilities while hand washing is one of the most important COVID-19 prevention measures. There are problems of unavailability of energy and manpower. People living in urban slums are more at risk of getting infected than those residing in other areas because these are highly populated areas with sanitation problems. Conflicts also cause inefficiency of measures to combat COVID-19. People living in conflict affected areas have the highest risk of losses caused by the disease. The pandemic also aggravates the negative perspectives toward globalization - the outcome of the development in communications, transportation, and information technology that signifies the growth derived from economic, political, technological and cultural relationships, which represent connectivity of individuals, communities, business units, and governments all over the world. Yet, it also highlights the importance of international cooperation in public health. Furthermore, the impact is reflected in the extra costs of living incurred from complying with pandemic outbreak control and prevention measures. The communication costs are also rising with the need to procure electronic devices to accommodate working online, both at work place and individual levels.

The social impact of the pandemic comes in the form of social stigmas. The three key factors include the following: 1) COVID-19 is an emerging disease with several issues that cannot be explained by academic knowledge; 2) Men tend to fear the unknown; and 3) It is easy to show the fear of "other people". These factors proliferate stereotyping that is even more dangerous. Social stigmas result in destruction of solidarity in society and social isolation of some groups of people.

Nevertheless, there have been positive consequences from the pandemic. Lessons learned from the COVID-19 pandemic have changed the way we live, especially during the early stage of the outbreak when some people had to be quarantined at state facilities or in their own homes. These crises become stimuli that allow us to recognize the importance of digital technology to a

greater extent. With the advent of COVID-19, several countries around the world have introduced the use of digital technology for disease prevention and control. For example, China, the origin country of the COVID-19 outbreaks, has a large population, but digital technology has been employed to solve the problems comprehensively in nearly all aspects. The Alipay application of Alibaba, an E-Commerce Giant, launched its QR Code system using colors to identify the levels of risks based on the individuals' travel history and contact records. Also used is the application Ping an Good Doctor, which is a telemedicine system that allows people who are quarantined at home to contact their doctors and pharmacies online. The system also supports "non-touch" deliveries of food and medical devices to high-risk hospitals and areas, by using self-driving vans. All this has contributed to China' s quick recovery. In Singapore, strictest measures have been used for screening patients who meet and do not meet the case screening criteria. Accurate information is quickly disseminated to the public with the use of AI for language translation. This application features a position tracking system that reports the locations of people under surveillance to check whether they actually stay at home. This is achieved by SMS messages randomly sent to those requiring daily observations. The system will then automatically report their current locations in real time. There is alco a Chat-bot system for the public to make queries directly to the parties concerned in order to acquire accurate information. As for Thailand, 'Save Doctors' telemedicine robots produced by Chulalongkorn University Alumni Association together with the Faculty of Engineering have been delivered to hospitals nationwide to increase performance efficiency and reduce the risks of healthcare professionals caused by exposures and close contacts with infected persons. These robots were used for the first time in Thailand to care for CO-19 patients and to follow up on people put under surveillance. Online consultation is also enabled via the telemedicine system. Another application is the Self D-care Heat map. This is a position tracking system used with people who are at risk of getting infected. The system can provide timelines of the past 14 days, and is capable of keeping treatment and physical examination records to be used by doctors for surveillance and treatment follow-ups. The Klai Mor (Within Reach of Doctors) application from the Thai Health Promotion Foundation can check early symptoms without the need to actually travel to the hospital. The Tankoon application serves as an information center of medical services provided by health professionals that are available to old people quarantined at home. Other platforms have been created and developed, includes the COVID Tracker platform that provides real-time information on the website covidtracker.5lab.co. This website gathers important information on COVID-19 for people to follow and update the pandemic situation anywhere and at any time. Thai Chana is a platform for organizing the density of service users at shops in order to follow up and control the spread of COVID-19 (12). The National Health Security Office has been cooperating with Thailand Post to deliver medications to patients with chronic diseases nationwide in order to reduce congestion in hospitals and the risk of COVID 19 spreading.

Other positive impact from the pandemic can also be seen in the environment of the seas and forests as it gives natural resources time to recover. Traffic congestions, accidents and crimes have declined while there has been exponential development in information technology and communication, as well as in medicine and public health technology. The business sector

has adapted to the new situation and new businesses have emerged. There have been more channels for learning and more research has been carried out in different dimensions and from different perspectives. The public became more aware of the disease breakouts and took better care of themselves. More synergy and sharing activities were happening in communities. In educational institutions, new learning systems have been developed, with changes in learning models. The learning process has been faster and more comprehensive. Technology has been integrated in the teaching and learning process, and the learning outlook has shifted from classroom learning to learning in any settings. From the community perspective, synergy and sharing have become more common, leading to a more flexible management system in the community, as community members help, share with, and take care of one another. Agreements have been made for joint actions, giving rise to a new way of living known as New Normal.

3. Participatory health crisis management for pandemics

Having healthy life and wellbeing is one of the seventeen Sustainable Development Goals that every country must recognize (13).

"Health Crisis" means health conditions in physical, psychological, social, and intellectual dimensions that are not normal due to a natural or unnatural cause. These are incidents found in critical conditions that may have overall health, economic, social or environmental effects, that call for policy or decision making to solve the problems within a limited time[1].

"**Participatory management**" means management that provides opportunities for parties from all sectors who are involved in management of pandemic-induced health crises to participate in decision making, planning, collaborating, making commitments; and jointly agree to play a role in the administration of the country, communities or society to achieve the Sustainable Development Goals to ensure that "everyone in Thailand has good health and wellbeing"

"Pandemic" means outbreaks of diseases that spread worldwide or occur in wide areas crossing international borders that, mostly, are not normally found in humans. A pandemic such as the COVID-19 can be transmitted from person to person, but there is still no evidence of the origin of the disease (14). There have been scientific evidences that pandemics tend to originate from animals. For example, MERS originated from infections from a coronavirus in civet cats that was transmitted to camels before being transmitted to humans (15). SARS was caused by infections from coronavirus in bats that was transmitted to humans through intermediary animals such as civets (16).

Health crisis management for pandemics

With regard to health crisis management during the early stage of pandemics in Thailand, the Communicable Disease Act 2015 was enforced to monitor and control the outbreaks of communicable disease. The "National Communicable Disease Committee" chaired by the Minister of Public Health was established. The Committee has decentralized management authority to provincial areas through Provincial Communicable Disease Committees chaired by the Provincial Governors. However, the COVID-19 situations were, globally and locally, still in a critical stage. It became imperative that preventive law be enforced in various circumstances, e.g., to control entry into and departure from the Kingdom, prepare tracking systems, and enforce

[1] Read the explanation on the development process of the policy recommendations in the National Health Assembly and the source of discussions in the attached additional documents.

disease control measures that apply to all businesses and activities. Therefore, the government declared a state of emergency under the Emergency Decree on Public Administration in Emergency Situation and established the Center for Coronavirus 2019 (COVID-19) Situation Administration, or CCSA with the Prime Minister being the Director of the Center. The structure of the organization was set to be appropriate for the performance of its duties and in order to remedy the emergency situation in an appropriate and effective manner, with details as follow: (1) Office of the Secretariat, with the Deputy Secretary-General to the Prime Minister for Political Affairs, assigned by the Prime Minister as Head of the Office; (2) Central Coordination Office, with the Secretary-General of the National Security Council as Head of the Office; (3) Emergency Operation Center for Medical and Public Health Issues Relating to the Communicable Disease COVID-19, with the Permanent Secretary of the Ministry of Public Health as Head of the Center; (4) Operation Center for Measures on the Protection and Assistance of the Public, with the Permanent Secretary of the Ministry of Interior as Head of the Center; (5) Operation Center for the Distribution of Masks and Medical Supplies to the Public, with the Permanent Secretary of the Ministry of Interior as Head of the Center; (6) Operation Center for the Control of Goods, with the Permanent Secretary of the Ministry of Commerce as Head of the Center; (7) Operation Center for Measures on the Entry into and Departure from the Kingdom, and the Protection of Thai Nationals Abroad, with the Permanent Secretary of the Ministry of Foreign Affairs as Head of the Center; (8) Operation Center for Telecommunications and Online Social Media, with the Permanent Secretary of the Ministry of Digital Economy and Society as Head of the Center; (9) Operation Center for Remedying the Emergency Situation on Security, with the Supreme Commander as Head of the Center; and (10) Operation Center for Information on Measures to Remedy the Communicable Disease COVID-19 Situation with the Permanent Secretary of the Office of the Prime Minister as Head of the Center. All the 10 centers are required to report to the Prime Minister in his capacity as the Director of the Center. CCSA has been giving daily COVID-19 situation reports to encourage the public to cooperate in prevention and control of the outbreaks as well as to reduce people's anxiety and provide explanations about the measures implemented by the government.

Besides public agencies, over one million village health volunteers (VHVs) and monk health volunteers (MHVs) have been playing an important role in assisting the public sector to combat the COVID-19 pandemic. Their participation portrays the cooperation between the public sector and civil society in many aspects, e.g., people playing a role in public policies at the community level, and the way people care for one another. This is an important opportunity for the government and the people to work together and set up social measures to cope with the epidemic, and an opportunity for parties involved with pandemics to review the issues of health and inequality, including urban planning, to deal with health crises from pandemics in the future.

The COVID-19 pandemic enables us to see management at the national, organizational and community levels. Measures from health crisis management have both positive and negative impacts on people in the country. Lockdowns and suspensions of travels, business operations, and social activities have resulted in losses of income for a large number of people and disruption of food distribution. There was also social and economic impact caused by the global pandemic, such as losses of sources of income from tourism and disruption of international trade. Various measures defined and implemented at international, national, and local levels can be summarized as follows:

(1) Measures to provide daily COVID-19 Situation Reports to give information on the situation of confirmed infected cases and deaths, for the purpose of monitoring and control of the outbreaks. The World Health Organization has asked countries to provide "open and transparent" reports on the situation of confirmed cases and deaths caused by COVID-19. As of now, there were no fewer than 28 million confirmed cases and 915,000 deaths globally. In Thailand, there have been daily COVID-19 situation reports and as of 11 September 2020 [17] there were 3,461 confirmed cases and 58 deaths.

(2) Lockdown measures have been imposed at the national level and for specific areas. Because of this, a large number of people had to be confined to their houses. With this emerged a new normal way of life, with people working online from home and not being able to go to public places or congested, crowded areas. Social distancing has been imposed.

(3) Risk communication measures that are timely, keeping abreast of the situation, systematic, and consistent with the situation have been implemented. This is evident in the daily situation reports and other related information to respond to the needs of the target groups, in order to reduce their misunderstanding, anxiety and panic, and also to reinforce people's behavior regarding appropriate prevention and control of the disease. In addition, this has raised people's awareness and understanding, reducing their anxiety, and promoting safe behavior to prevent and control of the spread of the pandemic and health hazards. Consideration has been given to health, social, religious, cultural, and economic impact on the people and the country as a whole, and also to the views of those affected by the impact. In an emergency, people are entitled to know how to protect themselves from risks to their health and lives and must have access to information to be used for decision making so that they can take action to protect themselves, their loved ones, and other people around them from illnesses and losses caused by risks. Risk communication efficiency does not only save lives and reduce sickness, but also reduce social, economic, and policy security during such state of emergency. Moreover, it is necessary to communicate with the public to create people's awareness by conveying information that is easy to understand and to put into practice in order to reduce anxiety.

(4) Measures to screen, separate, isolate, quarantine, or place under observation travelers arriving from areas or ports outside the Kingdom have been imposed for the purposes of monitoring, prevention and control of the disease. Also implemented are measures to keep people suspected of getting infected and travelers from other countries under strict quarantine for COVID-19 monitoring, prevention and control for a period of at least 14 days, in compliance with the government's criteria and guidelines, e.g., home quarantine, local quarantine, state quarantine, and alternative state quarantine. Alternative state quarantine facilities used to quarantine Thai and foreign travelers entering the Kingdom via all channels are hotels or other establishments approved by the government. People who voluntarily accept this option agree to pay for all expenses incurred for using the facilities.

(5) Environmental health measures have been implemented, such as environmental health measures related to public transportation, condominiums and residential buildings, and

places of worship (temples, churches, mosques, shrines and other places where religious rites are performed); sanitation/hygiene measures for restaurants and fresh markets; environmental health measures for public buildings, private offices and business establishments, department stores or shopping malls, prisons, and entertainment establishments; as well as measures for management of waste from used masks[18.]

(6) Self-protection measures against getting infected, with emphasis on personal hygiene, to prevent and reduce the spread of COVID-19 by using the three principles: Reduce, Avoid, and Care. This goes from measures to reduce touching, such as campaigns to wear masks and washing hands thoroughly with soap and water or alcohol gel; avoid risky places, and social distancing; and take care of personal and social health such as not sharing utensils and using serving spoons to reduce viral spread and getting infected [(18)]. The National Health Security Office and the Social Security Office have provided support for corona virus infection testing in groups at risk and for treatment of patients. At the same time the Center for Coronavirus 2019 (COVID-19) Situation Administration has been playing a role in management of medical resources and shortage of drugs and medical supplies such as masks and personal protective equipment.

(7) Measures for mental healthcare have been implemented by the Department of Health. The Combat 4thWave of Covid-19 Plan 2063-2064 has been developed, aiming to reduce impact on mental health of health professionals and the public, and to boost mental health capacity of individuals, families and communities so that they will have psychological immunity[(19).]

(8) Legal measures have been enforced, such as the Communicable Disease Act 2015 and the Emergency Decree on Public Administration in Emergency Situation 2015. In the COVID-19 situation, the latter has played an active role in regulating or issuing orders nationwide, because the Communicable Disease Act does not contain all provisions to prevent or control the widespread of COVID-19. In addition, the Emergency Decree on Public Administration in Emergency Situation has been enforced for a long time.

(9) Central mechanisms for management of the pandemic have been established. The cabinet has passed a resolution to assign the Office of the Secretariat of the Prime Minister to establish the Center for Coronavirus 2019 (COVID-19) Situation Administration, or CCSA, chaired by the Prime Ministry to have the duties to set policies and emergency measures to manage the situation. The National Executive Committee on Preparedness and Response to Emerging Infectious Diseases and the Operation Center for Information on Measures to Remedy the Communicable Disease COVID-19 Situation and the Operation Center for Information on Measures to Remedy the Communicable Disease have been assigned to perform their duties under the CCSA.

(10) An emergency response guideline has been developed. The Guideline is divided according to the 6-dimension strategies of Department of Disease Control, Ministry of Public Health: 1) Screening and surveillance of patients at ports of entry and in medical facilities and communities; 2) Care and treatment of patients and infection prevention; 3) Contact tracing and control of outbreaks in communities: 4) Risk

Communication; 5) Use of social and legal measures and 6) Coordination and data management

5. Issue for consideration of the National Health Assembly

The National Health Assembly is requested to consider the 13th National Health Assembly Document/Draft Resolution 2, Participatory health crisis management for pandemics.

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