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Crisis management of the coronavirus COVID-19 pandemic in Bangkok

Dr. Watcharawin Kamkiew
Faculty of Public Administration, Dhurakij Pundit University, Thailand
Corresponding author email: watcharawin.kam@dpu.ac.th
ORCID ID: 0000-0003-3245-8705

***Abstract*---**This research article aims to study the crisis management of the COVID-19 epidemic situation in Bangkok, to study the problems, and to suggest crisis management of the COVID-19 in Bangkok which is qualitative research. Crisis management problems found that the government has been sluggish to prevent the spread, procurement of the COVID-19 vaccines and medicines, The Prime Minister and the Minister of Public Health lack leadership in this crisis management, government officials are less stringent with illegal immigrant workers and allow activities to be held, the communication between the Thai government and the Governor of Bangkok was inconsistent effect causing the people to be confused, some politicians also were hoarding masks and smuggling them to export to other countries, the administration of the COVID-19 vaccine is ineffective with lack of transparency, equality, and Thai people are not confident efficiency in government-provided vaccines. Therefore, the solution to this crisis is for the Thai government should deal with a rapid crisis, the Prime Minister and the Minister of Public Health should demonstrate leadership in risk management of the COVID-19 pandemic and take measures to prevent the spread, there are penalties for government officials who neglected the foreign workers smuggling into Thailand, and hoarding masks and exporting them to foreign countries, should plan to prevent the COVID-19 super spreader or other epidemics in the future. Lastly, there is a remedy to restore the physical and mental health of people affected by this crisis quickly.

***Keywords*---**Crisis management, COVID-19, Pandemic, Bangkok

Introduction

The COVID-19 outbreak was first seen in Wuhan city, China and the first outpatients from China were found in Thailand, which were Chinese tourists

traveling to Bangkok. For Thailand reported that the first Thai patient infected with COVID-19 was a taxi driver in Bangkok, who had never traveled abroad. On the other hand, he has a history of driving taxis serving Chinese patients in Bangkok (Communicable Disease Academic Development Group. 2021). Assuredly, the World Health Organization (WHO) also informed that COVID-19 can be spread from person to person through coughing, sneezing, and direct contact with secretions such as snot and saliva of infected people who have had symptoms since infection without symptoms or have similar to the common cold moderate symptoms are pneumonia and were severe that it could be fatal (Ministry of Public Health 2020). The first pandemic (during the first year of 2020), in which the Thai government has emphasized the measures "stay at home, stop germs, for the nation" and the individual level measures "distancing, washing hands, wearing masks", thus enabling control, foreign transmission and control of the outbreak within the country. In addition, it also emphasizes the Bubble & Seal approach, promoting the decentralization of the Provincial Communicable Disease Control Committee to consider additional measures in their area, proactively detect infection and disease investigation, including setting up a field hospital for patients to enter the treatment system asap. As a result, the outbreak also can be effectively controlled (General Prayut Chan-ocha. 2021a). Consistent with the study of the Thailand Development Research Institute (2019) also reported that Thailand could control the spread of COVID-19. The first outbreak was quite good, however, the Thai government was wrong decisions and policy actions in the period after that have caused a new outbreak to super spread to the COVID-19 crisis. The second pandemic was from a group of foreign workers at the shrimp market in Samut Sakhon province and could not prevent foreign workers from smuggling across the border of Thailand. The government also was unprepared when the third wave of outbreaks started in Bangkok from the Thonglor-Ekamai entertainments cluster. Even at that time, Bangkok was exactly still under a state of emergency declaration. This outbreak spread throughout Bangkok, the perimeters, and other provinces in Thailand again. Nevertheless, the Thai government has not been adequately prepared to deal with the new outbreak in Bangkok the most vulnerable area, reflecting a lack of infrastructure and systems to deal with the major pandemic. This is one of the reasons why Bangkok has become the epicenter of the current pandemic. In addition, there is a reason for the emergence of new virus strains with higher transmission rates. Therefore, the new cases and new recoveries in Thailand as show in figure 1 below

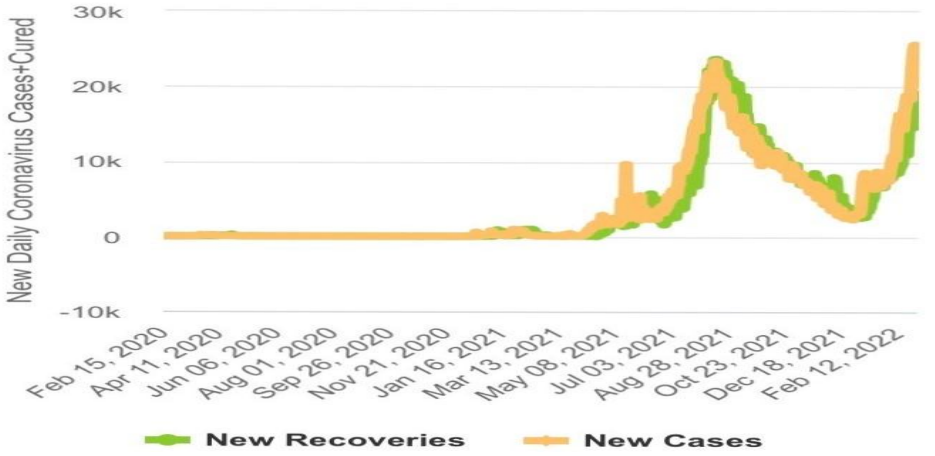

Figure1: Number of newly infected, number of recovered and discharged patients each day
Source: Worldometer (2022a)

The procurement of mRNA vaccines also allows the private sectors to import vaccines while political parties were not monitoring and coordinating. Accordingly, this made private hospitals and private organizations unable to import mRNA vaccines to Thailand during the first pandemic. The allocation of vaccines is also a problem with equal access for people. As a result, several elderly people, pregnant women, and people with chronic diseases who are at risk are still not vaccinated, which is probably one of the causes of serious illness and death among people at risk. This can be seen in the excess mortality as well as critically ill patients in the hospitals.

Literature review
Crisis management

Thailand similarly to several other countries was suffering from the COVID-19 epidemic, which has affected the daily life of the people, health, economics, and conflict in society as well. Surely, Thailand is one of them that has been affected by this outbreak for 2 years. Hence, it also established the Center for the Administration of the Situation due to the Outbreak of the Communicable Disease Coronavirus (COVID-19) (2022) has the powers and duties as 1. follow the orders from the Center for Epidemic Situation Management infected with the coronavirus 2019 2. to order and coordinate the governor of the provinces and the governor of Bangkok 3. directing and coordinating with government agencies, and state enterprises under the Ministry of Interior, and provinces surveillance and preventing the spread of COVID-19 infectious disease within the scope and duties under the laws. 4. supervise, control, and monitor the operations of government agencies, state enterprises under the Ministry of Interior, and provinces to monitor and prevent the spread of COVID-19. 5. integrate information and manage reported information under the responsibility of the Ministry of Interior. 6. perform any other duties as assigned by the Minister of Interior. Related the research of Marome and Shaw (2021) studied the COVID-19 response in Thailand and its implications on future preparedness found that Thailand's success in

controlling the COVID-19 was in part due to the public health system and the village health volunteers who were in collaboration with the local community leaders, civil society, and community networks with the concept of build back better, planning readiness and respond to health emergencies with The Health Emergency Disaster Risk Management (HEDRM) in the future. Egede, Walker, Dawson, Zosel, Bhandari, Nagavally, Martin, and Frank (2022) also studied the short-term impact of COVID-19 on quality of life perceived stress, and serious psychological distress in an adult population in the mid-west United States found that the short-term effects would be a problem with ailments which physicians should consider evaluating long-term outcomes especially for the vulnerable population, the quality of life was lower and the psychological distress was higher among females. People with health insurance are individuals with several underlying medical conditions who are hospitalized or in the Intensive Care Unit or ICU. Nunes, Bento, and Carvalho (2021) studied the health-related quality of life in post-COVID-19 patients: a systematic review found that COVID-19 causes significant changes in the quality of life and health of patients depending on the severity of the disease complications caused by the COVID-19 length of time the patient was hospitalized after recovery, it still affects the quality of life of patients, resulting in deterioration of physical and mental health. Consistent with a study by Yen, Yen, Chen, Lee, Huang, Chan, Tung, Hsu, Chiu, Hsueh, and King (2021) studied learning from the past: Taiwan's responses to the COVID-19 versus SARS, Taiwan experienced success in managing the epidemic COVID-19 which was driven by government leadership health care provider risk communication and public cooperation quick relief from the spread of COVID-19 in Taiwan before the inject the COVID-19 vaccination for people as well. Galvin, Li, Malwade, and Syed-Abdul (2020) conducted a study of COVID-19 preventive measures showing an unintended decline in infectious diseases in Taiwan found that preventive measures by social distancing to prevent the spread of COVID-19. The public interest response has greatly contributed to the reduction of COVID-19 or other infectious disease outbreaks. Consistent with the concept of the United Nations (2022) reports that the COVID-19 pandemic is more than a health crisis but an economic, humanitarian, security, and human rights crisis. The crisis has highlighted vulnerabilities and inequalities both within the country and between countries. To get out of this crisis, both social and social approaches are required. Driven by sympathy and solidarity, governments and people around the world are working together to cut through this crisis, and the United Nations (UN) is raising funds through key plans to help countries: 1. Strategic preparedness and making plans to meet urgent health needs. 2. Humanitarian response to the world to mitigate impacts in the 50 most vulnerable countries 3. UN Framework for rapid socio-economic response to achieve rapid recovery.

Objectives

1. To study crisis management in the epidemic situation of COVID-19 in the Bangkok area.
2. To study the crisis management problems of COVID-19 in the Bangkok area.
3. To suggest guidelines for the Covid-19 crisis management in the Bangkok area in the present year and the future.

Research Methodology

This research uses qualitative research methodology by documentary research and in-depth interviews with the key informants who live in Bangkok as 1. Central Bangkok group 10 people 2. South Bangkok group 10 people 3. North Bangkok group 10 people 4. Eastern Bangkok group 10 people 5. North Krungthon group 10 people 6. South Krungthon group 10 people, total amount 60 people and focus groups of 6 groups, each group just 8 people were randomly selected by purposive sampling technic. The researcher also examined the data with triangulation by Denzin (1970); Miles and Huberman (1994a) have namely persons, times, and spaces whether the data that the researcher received from the key informants were similar or different. Afterward, for data analysis of this research utilized the concept of Miles and Huberman (1994b) defined data analysis for a qualitative research study which consisted of three steps: 1 Data reduction obtained from an in-depth interview, focus groups, and documentary research. 2 Data display where data is still fragmented was grouped into three categories based on the main objectives of this study. 3 Conclusion drawing and verification of the crisis management of the coronavirus COVID-19 pandemic in Bangkok.

Research Results

Schedule	Bangkok	Thailand
1 The COVID-19 patient	447,082 people	2,456,551 people
2 The COVID-19 treatment	462,052 people	2,351,250 people
3People died	6,928 people	22,207 people
4 Currently being treated in a hospital affiliated with Bangkok.	1,842 people	-
5Currently being treated in a hospital outside of Bangkok.	2,695 people	-
6 Currently being treated in a field hospital.	4,064 people	42,298 people
7 Patients are being treated in the hospital nationwide	-	42,115 people
8Home/community isolation	-	10,333 people
9 The first dose of the COVID-19 vaccination	9,400,576 doses	52,357,334 doses
10 The second dose of the COVID-19 vaccination	8,691,107 doses	48,685,999 doses
11The third dose of the COVID-19 vaccination	3,467,752 doses	14,487,931 doses
12The fourth dose of the COVID-19 vaccination	317,640 doses	-
13Total COVID-19 vaccinations of Thailand	21,882,075 doses	115,631,164 doses

Source: Bangkok Public Relations Office (2022); Department of Disease Control (2022); Worldometer (2022b).

Bangkok is the capital city of Thailand with a population of approximately 5,527,994 residents that does not include the passive population of both Thais and foreigners (National Statistical Office. 2021). In fact, a total is more than 10 million people who live in the Bangkok area were making it the largest city in Thailand and Southeast Asia. It is also the center of government administration, economics, investment, tourism, transportation center, education, and the biggest hospitals in Thailand. But at the same time, Bangkok also has several problems are slum communities, people cannot access the health systems easily, air, noise, and water pollution can find in this area, traffic congestion, drugs, crime, social inequality, and so on. Therefore, when there has been an epidemic of influenza H5N1 in the past 18 years ago or the current COVID-19 pandemic affected the government, public organizations, business sectors, and the people who live in Bangkok are diverse and unknown to each other even within the same community. As a result, the number of infected patients overwhelmed hospitals, and several deaths, particularly among the elderly, pregnant women, and critically ill patients in Thailand and Bangkok as show in table 1 illustrates that the number of confirmed cases of COVID-19 since the beginning of the outbreak in Thailand and Bangkok until February 2nd, 2022.

Despite efforts by the Thai government, the Ministry of Public Health and public organizations always solve these problems all the time. In contrast, people actually have lost confidence in the government administration. Nevertheless, it has tried to the Sendai Framework implement for crisis recovery rather than the problems that arise in crisis management continuously. Consequently, the researcher studied the crisis management of the COVID-19 epidemic in the Bangkok area, which is in the restricted area (red zone) of Thailand all the time found that.

Problems of the crisis management of the COVID-19 epidemic in the Bangkok area

1. Crisis management that has been delayed in both the planning and procurement of the COVID-19 Vaccine firstly as well as drugs to treat COVID-19 patients, such as Favipiravir, which the bureaucracy has made the process of drug procurement the cumbersome also delayed, crippling vaccines and medical supplies lack, the Prime Minister of Thailand was not confident when he lived show on the television broadcast with face and gloomy eyes due to inexperience in dealing with disasters, which further aggravates the people and lack of confidence to get through this crisis well.
2. The government relies on AstraZeneca's COVID-19 Vaccine that was produced by the Siam Bioscience Limited in Thailand until there was a problem of delayed delivery of the COVID-19 Vaccine, and the large amount of government-ordered Sinovac Vaccine produced in China also was unable to prevent infection with Delta, Alpha, and Omicron strains effectively. Thus, the doctors and Ministry of Public Health always have mixed inject vaccination types are widespread in Thailand such as the Sinovac Vaccine two doses plus booster dose with AstraZeneca, or Sinovac Vaccine one doses, the second doses are AstraZeneca and a booster dose is also AstraZeneca so that causing widespread public concern approximately the impact on their health in the future. Thus, some people are reluctant to be Sinovac vaccinated and wait for mRNA vaccines.

3. The Minister of Public Health leadership also had previously informed in an interview that COVID-19 was small and just a normal virus only because he did not know and study this virus in the past. Moreover, Thailand did not participate in the COVAX vaccine from the World Health Organization. Therefore, it did not receive the COVAX vaccine. On the other hand, other countries in Southeast Asia participated in this program. The Ministry of Public Health and the Thai government also were not in a hurry to order mRNA vaccines such as Pfizer and Moderna. It is not similar to developed countries that have several mRNA vaccines for the citizens. Although all Thai people are demanded to protect themselves all the time. For this reason, the Prime Minister of Thailand and the Public health minister were ignorant and ordered mRNA vaccines immediately last year. Because they did not have the abilities, knowledge, skills, and experiences in medicines or managing hospitals previous due to both graduated from the Chulachomklao Royal Military Academy and got a degree in engineering that could not make public health policies preparation for the problems in the early epidemics.
4. The government officials somewhat did not have strict measures to prevent the COVID-19 infection. Even though the Thai government had letters for cooperation in organizing groups must not have all activities with several people participating, however, some organizations had events in Bangkok as well. Hence, resulting in this problem had a super spreader such as cluster Lumpinee Boxing Stadium and Thonglor pubs was caused the third outbreak in Thailand, especially in Bangkok exactly affect to spread to other provinces as well.
5. The communication between the Thai government and Bangkok was inconsistent during the epidemic making people confused about information between both of them. Of course, this factor causes people to lose confidence in the administration of the Prayut Chan-o-cha government, the Bangkok Metropolitan Administration mechanism, as well as the Center for the Administration of the Situation due to the Outbreak of the Communicable Disease Coronavirus 2019 (COVID-19) which is not solely on the governor of Bangkok only, but this pandemic also depends on the Thai government, the Center for the Administration of the Situation due to the Outbreak of the Communicable Disease Coronavirus 2019 (COVID-19) and the Ministry of Public Health is the majority plan, control and decision of vaccine administration, medicines, and health care systems for the patients.
6. People have no confidence in government administration with the COVID-19 outbreak. When especially the elderly chronic disease patients, pregnant women, and obese people in Bangkok who got this virus had to die in large numbers because the medical teams could not rescue them rapidly because of the COVID-19 patient's many cases every day. Hence, the crematorium at the temples also exactly exploded because of a lot of corpses. Moreover, the phone number 1669 of emergency was not answered to them because a lot of patients call this number all the time. On the other hand, the staff is limited to helping the patients when they need rescue at home. The beds in the hospitals also were not enough for the patients at all. The ambulance car had picked the patients up at home always was delayed until somewhat people had the skills to help themselves and their family members by relying on Thai herbs. For example, Phlox paniculata, lemongrass, and kaffir lime leaves are for use in the treatment and against COVID-19 at home. The medical teams visited the area to screen for infected people with Antigen Test Kit (ATK) was delayed to isolate the infected people and make them

are accessible ATK to the people difficult from the government mechanism. It was too expensive to buy in the pharmacy shops where some people did not have enough money and they waited for the Thai government to give ATK free for them longer with several processes and quite a lot of conditions to receive ATK free from the Thai government.

7. Masks are in short supply, alcohol is 70 percent, and alcohol gel is actually too expensive. In contrast, some politicians hoard and smuggling of them export to foreign countries as embargoes that the government or the Ministry of Commerce must not allow them to export. This problem was not solved quickly in the early stages of the COVID-19 outbreak in Bangkok seriously, and personal protective equipment (PPE) was insufficient for rescuers, undertakers, and medical teams to protect themselves as well.

8. Illegal immigration of migrant workers through natural channels with the assistance of some government officials and somewhat groups of Thai people facilitating especially along with the border provinces of Tak, Chiang Rai, Sa Kaeo, and Kanchanaburi provinces always come to work in Bangkok and its vicinities were the cause of the COVID-19 epidemic in Bangkok.

9. Arrangement of vaccinations for people by gathering to vaccinate offer several people at Bang Sue Central Station, which causes congestion and easily causes the outbreak, which shows that the crisis management actually was still ineffective by the Thai government and the Ministry of Public Health planning truly. Even though several places in Bangkok can be vaccinating sites such as temples, schools, universities, and department stores as well. 10. The Sinovac and Sinopharm are vaccines that cannot efficient against this virus because it mutates. Moreover, several countries did not allow people who have been vaccinated with both vaccines to arrive in those countries such as in the European Union. Thus, the students or people who need to travel, study and do business difficulties. Some Thai people absolutely believe that the Thai government did not transparent in the provision of vaccines, particularly the Sinovac Vaccine which was hidden agenda of the Thai government and the Sinovac Company in China as well.

Guidelines for solving the Covid-19 crisis the in Bangkok area

1. The Thai government should have measures to deal with this crisis promptly. There is a plan to procure the COVID-19 vaccines, medicines, and medical supplies, prepare ICU rooms for critical patients, proactive testing to find patients rather than responding to situations to prevent problems from spreading to people. But at the same time, the government has promoted the development of the COVID-19 vaccines within the country to reduce dependence on foreign countries.

2. New Public Management (NPM) principles should be applied to the government regulations for flexibility, quick to procure medicines, the COVID-19 vaccines, and medical supplies of the public and private hospitals. In addition, the government should take the concepts of the New Public Service (NPS) must look at people as citizens to have equal, fair access to the health care systems, and get vaccines quality. There also is networks administration both domestically and internationally similar to the principle of New Public Governance (NPG) to solve this disaster together so that people can live their life more easily.

3. The Prime Minister of Thailand must demonstrate his leadership by showing the knowledge, competencies, and skills that always make the people the confidence to get through this crisis and survive immediately.
4. The government should order the COVID-19 vaccines to several companies to prevent vaccines delays. The shortage and efficacy of the COVID-19 vaccine, which the Sinovac vaccine does not protect against COVID-19 infection mutated or less effective than mRNA vaccines.
5. The Minister of Public Health should also show his leadership in this crisis rapidly. Thailand should join the COVAX project and listen to people's need for Pfizer and Moderna vaccines as alternative vaccines to people and not prescribe Sinovac again because of its low efficiency in preventing infection nowadays.
6. The government should have measures to punish some government officials in organizing activities, must not allow migrant workers to illegally enter the country as a super spreader, and the contributing factor to the COVID-19 epidemic in Thailand, especially in Bangkok.
7. Communication between the Thai Government, Coronavirus Disease 2019 Epidemic Administrative Center, Ministry of Public Health, and Bangkok is not effective, before the measures are announced, they should have a meeting firstly a press conference to prevent the issue of confusion people between the government and Bangkok information as well.
8. The Thai government and related ministries should have measures to prevent the spread of COVID-19. Particularly, in the elderly, young children, pregnant women, bedridden patients, and chronic disease patients. Moreover, the government, the Ministry of Public Health, the Ministry of Interior, and the Ministry of Social Development and Human Security should prioritize healthcare professionals. Measures for admission of patients to the hospital field include supervising and accelerating vaccination for workers in the industrial and service sectors with an emphasis on the group of 7 at-risk diseases (chronic respiratory disease, heart and blood vessels, chronic renal failure, cerebrovascular all types of cancer, diabetes, and obesity
9. The government and the Ministry of Commerce should have measures to prevent the shortage of masks, alcohol gels, and alcohol 70 percent of which are expensive. Hence, the politicians should be punished to export them. Certainly, political parties or shops that have smuggled their exports to foreign countries as controlled products prohibit exports with severe penalties. 10. Vaccination allocated to people should not gather massive for vaccination only at Bang Sue Central Station, which should be distributed to public organizations, state enterprises, and private sectors in Bangkok or its vicinities, which in the later period the government has managed better than in the early stages. 11. The government should review public policies, and management in the past COVID-19 situation that are points that need to be improved based on the concept of Plan, Do, Check, Action (P-D-C-D) or Deming cycle and people's needs primarily. 12. The government should prepare a plan to manage the COVID-19 disaster or other epidemics that may occur in the future including remedial measures for patients who have recovered from the COVID-19 and those who have died from this virus. As well as assisting the families of the deceased such as fathers and mothers who are elderly, and young children who lack foster care. Furthermore, they should take care of their physical condition. The mind and incomes of the COVID-19 patients in Bangkok have been greatly affected by this epidemic. Because they do

not have their jobs and spend a lot of money for treatment the COVID-19 posture in the hospital as well.

Discussion and Conclusion

The disaster of the COVID-19 epidemic in Thailand has affected people's health physically, mentally, economically, socially, and nationally. Especially, in the Bangkok area, which is affected by this crisis more than any other province in Thailand as long as considering the number of infected people. The morbidity and mortality rate as the epicenter of the epidemic, the Thai government's administration of this crisis is a mistake, Bangkok, the Ministry of Public Health, and related public organizations are not well planned and ineffective in this situation. Despite Thailand being regarded as having one of the best health care systems in the world by the World Health Organization. However, the problems of this crisis management are mainly caused by the Thai government's mechanisms plan to prevent the spread of this epidemic delayed. The leadership of the Prime Minister of Thailand and the Minister of Public Health also had difficulties in communicating with the people in the early stages of purchasing the COVID-19 vaccines are ineffective that causing the Thai people to lose confidence in the government-provided vaccines, as well as the process of purchasing medicines to treat this coronavirus also is a difficult process similar to bureaucracy model. Fortunately, these problems of the COVID-19 vaccines can improve with the research by Chulalongkorn University (2021) has completed a research progress report on ChulaCov19 is the mRNA-based COVID-19 vaccine, which has completed in human trials with approval from the Food and Drug Administration for preparation to Phase 3 on human testing. Continually, the Thai government and Bangkok have inconsistent measures, making the people more confused and insecure approximately how to survive through this crisis. Foreign workers come easily smuggle into Thailand illegally including some government agencies to allow various activities that make super spreader. These factors cause the outbreak in Bangkok and vicinities as well. Some politicians also have exploited the people's misery by hoarding masks and exporting them to foreign countries as prohibited goods. Therefore, the government mechanisms are a major problem in the internal epidemic of Thailand and Bangkok for the COVID-19 pandemic.

The solution to modify the problems is that the Prime Minister and the Minister of Public Health must demonstrate their leadership in disaster management in terms of providing highly effective COVID-19 vaccines and rapid epidemic prevention for the future crisis. There are measures to punish government officials for neglecting the illegal immigration of foreign workers, including smuggling and hoarding masks and exporting to foreign countries. There should plan to support the spread of this virus or other epidemics in the future. The government must have a review the past government public policies and remedial measures, to restore the physical and mental health of people affected by this crisis as well as the COVID-19 super spreader, control measures in Thailand by building cooperation with all sectors to prevent the spread and reduce the number of people infected with the COVID-19 as soon as possible, as well as campaigning for people to strictly adhere to control measures, especially the epidemic of the Omicron strain nowadays. The latest mutation is spreading heavily in Bangkok and its vicinities. Therefore, to get through this crisis requires

cooperation from several sectors (networks) as the governments, public organizations, the private sectors, and people in this country and abroad for planning together to prevent this epidemic, the economic recovery so that people can live with a new normal as well. According to the concept of New Public Governance has networks and look at the people as a citizen furthermore utilizing the principle of New Public Service also is service people as a citizen and equality of the government services, and the Thai government also should consider using the strengths of the New Public Management concepts for reducing the roles and laws easily and rapidly to solve this crisis. This corresponds to the Thailand Development Research Institute (2021) informed that Thailand was facing the third wave of the COVID-19 crisis with the following measures: 1. Limit the spread of COVID-19 fully in Bangkok and its vicinities. 2. Measures for the procurement and distribution of the COVID-19 vaccines both in the medium and long term. 3. Measures to control entertainment establishments in the medium and long term to avoid causing major outbreaks 4. Developing an integrated management system including decentralizing decision-making powers to provincial and local authorities. Also consistent with the pronouncement of General Prayut Chan-o-cha (2021b) mentioned that 1. The government has adjusted public health strategies to deal with the Delta strain according to the situation, emphasizing measures "stay at home, stop germs, for the nation" measures at the individual level as distancing, washing hands, wearing a mask, and emphasizing the Bubble & Seal guidelines. 2. Adjust the strategy to deal with the outbreak of the Delta. For the utility of speed and efficiency, cross-type vaccination formulas and booster dose injections have been developed for medical personnel and frontline personnel, including at-risk groups. 3. Factory Sandbox measures that focus on preventing epidemics in the factories. 4. Availability of adequate vaccines according to WHO-approved COVID-19 vaccine 5. Join COVAX due to Thailand being in self-financing participants 6. The government continues to use the Sinovac Vaccines as WHO insists that the COVID-19 vaccine can be effective against sickness, death proof, and few effects. 7. The government is concerned about cooperation to be careful of the impairment of vaccines. Because it may affect international relations. 8. Dealing with Delta in the past, the overall number of recovered patients has increased more than the number of new cases. Related to the statement of the Parliament (2021) reported that the number of new cases and patients receiving treatment tends to increase steadily in Bangkok and its vicinities. Hence, the Parliament of Thailand considered the Royal Decree on the power of the Ministry of Finance. Additional loans were offered by the Thai government to tackle the COVID-19 pandemic. This is also consistent with the United Nations (2015) informed that Sendai Framework for disaster risk reduction priority1: Understanding disaster risk priority2: Strengthening disaster risk governance to manage disaster risk priority3: Investing in disaster risk reduction for resilience priority4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation, and reconstruction. This corresponds to the research of Biomed, Yunianto, and Yanti (2022) studies the utilization of the Healthy Indonesia Program with a Family Approach (HIPFA) Data During the COVID-19 Pandemic found that the Public Health Center operates Healthy Indonesia with a Family Approach project has family and personal data that efforts to intercept the COVID-19 transmission chain in Indonesia. Hence, the HIPFA data is also useful in preventing the COVID-19 spreaders of family transmission, handling COVID-19 cases and regions in Indonesia as well. Also

consistent with the research of Marzo, and et al. (2022) studies the hesitancy in COVID-19 vaccine uptake and its associated factors among the general adult population: a cross-sectional study in six Southeast Asian countries found that people are optimistic views on the efficacy of the COVID-19 vaccines and willingness to vaccinate as well. However, approximately half of the participants still show hesitation in vaccination as socioeconomic vary in each country. Lastly, related to the research of Marome and Shaw (2021) studied the COVID-19 response in Thailand and its implications on future preparedness found that Thailand's success in controlling COVID-19 was in past due to the public health system and the village health volunteers who were in collaboration with the local community leaders, civil society, and community networks with the concept of build back better, planning readiness and respond to health emergencies with the Health Emergency Disaster Risk Management (HEDRM) in the future as well.

Thus, this research results will prepare for planning the crisis management of the COVID-19 pandemic, COVID-19 vaccines, COVID-19 Vaccine Nasal Sprays, medicines, long COVID symptoms, and other disaster management for the Thai government, the Ministry of Public Health, Bangkok, and public organizations respond to calamity promptly. In addition, the Thai government must listen to the Thai people who are citizens' who need rescue from the government. Correspond with the study of Marzo, and et al. (2022) is perceived COVID-19 vaccine effectiveness, acceptance, and drivers of vaccination decision-making among the general adult population: A global survey of 20 countries found that most of the participants believed that vaccination would be able to effectively control and prevent the COVID-19 and they are vaccinated. The national campaign for the COVID-19 vaccine to increase immunization in the population. However, more than half of the respondents were still expressing their reluctance to get vaccinated. These research results are also useful for appropriate government sometimes interventions to increase the COVID-19 vaccine for people.

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