



Thailand's Response against Coronavirus Disease 2019: Challenges and Lessons Learned

Chawetsan Namwat¹, Rapeepong Suphanchaimat^{1,2}, Natthaprang Nittayasoot¹, Sophon Iamsirithaworn³

1 Division of Epidemiology, Department of Disease Control, Ministry of Public Health, Thailand

2 International Health Policy Programme, Ministry of Public Health, Thailand

3 Division of Communicable Diseases, Department of Disease Control, Ministry of Public Health, Thailand

*Corresponding author, email address: chawetsan@gmail.com

Abstract

Since early January 2020, Thailand has been facing a rise in the number of patients infected with Coronavirus Disease 2019 (COVID-19), starting with imported cases from China then propagating to the Thai populations. The Thai Ministry of Public Health (MOPH) took a prompt response towards COVID-19 after the notification of the first case. Numerous strategic and operation plans were introduced. The plans comprise five key issues: (i) surveillance system, (ii) case management and hospital infection and control, (iii) laboratory testing, (iv) preparedness of healthcare staff and medical supply, and (v) risk communication. These plans are operated through the Emergency Operation Centre (EOC). A COVID-19 surveillance system at the airports and the hospitals was established. Criteria for identifying a patient under investigation (PUI) were set up. All confirmed COVID-19 cases are obliged to be isolated. Healthcare workers are recommended to wear appropriate personal protective equipment when taking specimens and providing care for the patients. Regarding laboratory testing, the Department of Medical Sciences (DMS) is the core unit in collaboration with other laboratory networks nationwide to ensure quality and standards of tests. The EOC operates all days and nights. Policy makers and high-level officers are obliged to meet together on a daily basis to provide strategic directions for the whole team. However several challenges remain. Fake news and stigmatization are amongst the most important concerns during the time of crisis. To tackle this, concerted effort needs be harnessed, from not only the health sector, but also all parts of the society including media and the Thai populations as a whole.

Keywords: COVID-19, SARS-CoV-2, Coronavirus, Thailand

Introduction

Thailand is one of the top tourist destination countries in the world. It is estimated that the country faces approximately three million international tourists in each month.¹ Tourism industry plays a critical role in driving the Thai economy, accounting for about 18.4% of the gross domestic product (GDP) in 2019.² The majority of the tourism revenue was from the Chinese mainland visitors, constituting about 27.5 % of the total international travelers. Therefore any health problems that originated from the Chinese tourists are likely to visit health of the Thai populations.

On 31 Dec 2019, a cluster of pneumonia cases caused by unknown pathogen were reported in Wuhan city, China.³ The suspected linkage of cases was a seafood wholesale market in the city; however its original source was yet to be known. Soon after, the Chinese authorities declared the new emerging disease, which is currently known as Coronavirus Disease 2019 (COVID-19), and the causative pathogen was named as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).⁴ As of 15 Mar 2020, the COVID-19 infected toll over the world expanded beyond 150,000 with over 5,700 deaths; and it seemed that the situation has not reached the acme.⁵

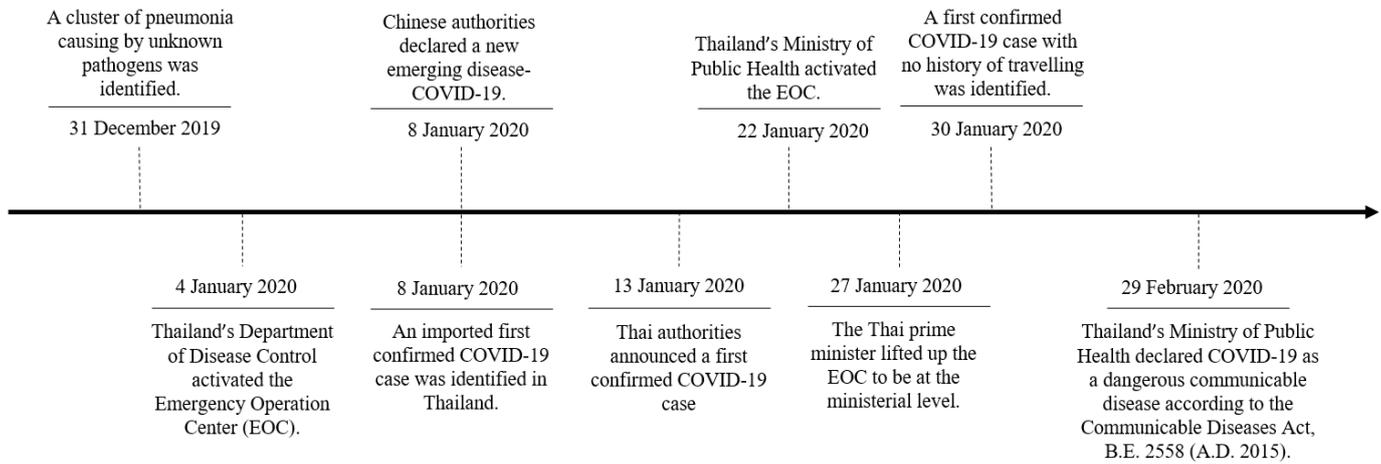


Figure 1 Mapping of chronological evolution of the Thai EOC and important events associated with COVID-19

Responses of the Thai Ministry of Public Health against COVID-19

The Thai Ministry of Public Health (MOPH) takes prompt response towards COVID-19 after the notification of the cases in China. Several strategic and operation plans were introduced with an aim to mitigate the impact of the disease. The plans comprise five key issues: (i) surveillance system, (ii) case management and hospital infection and control, (iii) laboratory testing, (iv) preparedness of healthcare staff, health facilities, and medical supply, and (v) risk communication. These plans are operated through the Emergency Operation Centre (EOC), which has been activated since 4 Jan 2020, just 4 days after the emergence of cases in China. Figure 1 provides a mapping of chronological evolution of EOC with important events related to COVID-19 in Thailand. (Figure 1)

Functions of the Emerging Operation Centre

The EOC is a central command and control facility responsible for carrying out emergency preparedness and emergency/disaster management at a strategic level during an emergency situation. This is to ensure the continuity of operation and synchronism of functions across organizations.⁶ The Thai EOC consists of several teams/functions as follows.

- Scientific response team is designed to map and integrate needed resources, develop standards and health guideline to encounter COVID-19, and support scientific knowledge for all organizations under the EOC.
- Strategic response team is responsible for producing applicable operational guidelines for a timely response to COVID-19, based on the state of the arts of knowledge, taking into account the strategic directions of the incident commander.
- Planning team accounts for the development of numerous key action plans, including, hazard specific plan, incident action plan, and business continuity plan, and disseminated these plans to all relevant agencies.
- Situation awareness team serves as a situation monitoring system. Its main function is to monitor, follow, evaluate characteristics and severity of the outbreak, and report such information to the incident commander. The situation report is produced on a daily basis.
- Operation team acts as forefront officers to take prompt action against the outbreak. The team is divided into two sections: outbreak investigation section and data management section. Its concrete actions include field investigation, active case finding, tracing of contacts and providing appropriate measures on the scene. The data management section will then gather information from the outbreak investigation section, and will submit the summarized data to the situation awareness team and incident commander to ensure coherence of information.
- Risk communication team helps to identify, determine and evaluate social response towards the disease. Additionally, the team is responsible for providing press release and talking points, and disseminating of the disease information to the wider public via various means (such as websites, newspaper and social media) in an accurate and timely manner.
- Law support and enforcement team is responsible for reviewing and gathering related laws and regulations that are needed to support the EOC's operation. The team may also propose an amendment of laws/regulations if necessary should such change

be expected to facilitate the entire functions of the EOC.

- Logistics and stockpiling team is purposively set up to review and analyse the risk of medicine and medical supplies shortage and develop plan for supplies distribution. Also, this team will take necessary actions to ensure effective delivery of medical supplies.
- Point of entry team is designed to minimize disease burden and influx of patients. The team's major role is to develop procedures to screen and detect suspected cases in accordance to the 2005 International Health Regulation (IHR).
- Liaison team acts as a secretariat unit to support the entire EOC, and coordinate amongst units, either inside or outside the EOC.

Examples of Preventive and Control Measures

Here are some exemplified measures against COVID-19, exercised by the EOC. As the World Health Organization (WHO) declared that COVID-19 is Public Health Emergency of International Concern (PHEIC), COVID-19 surveillance system at the points of entry and hospitals was established. The criteria for identifying a patient under investigation (PUI) were set up. It should be noted that the criteria are not cast in stone as they are subject to change conditional upon the update of situation and knowledge on the disease.

In terms of case management and hospital infection prevention and control, all confirmed COVID-19 cases are obliged to be isolated in a negative pressure room in the designated facilities. Healthcare workers are recommended to wear appropriate personal protective equipment (N95 mask, goggle, and full coverage of torso and shoulders, for instance) when taking specimens and providing care for patients and the PUIs.

Regarding laboratory testing, the Department of Medical Sciences (DMS) is the core unit in collaboration with other laboratory networks nationwide to ensure quality and standards of tests. Nasopharyngeal and throat swabs of PUI cases or high-risk contacts are required to assess the likelihood of COVID-19 infection. A confirmation of COVID-19 infection necessitates the detection of SARS-CoV-2 genetic materials by Polymerase chain reaction conducted by two reference laboratory centres (DMS and Center for Emerging Infectious Diseases, Faculty of Medicine, Chulalongkorn University).

The EOC operates all days and nights. Policy makers and high-level officers are obliged to meet together to provide strategic directions for, not only the MOPH, but also the whole country, towards proper response to the outbreak.

Countermeasures of Non-health Sectors towards COVID-19

The emergence of COVID-19 in Thailand poses a critical challenge to not only the health sector, but also the whole society, in terms of both threats and opportunities.⁷ The threats are obvious as evidenced by the continuing rise of infected cases and the nationwide economic downturn. Nonetheless it is of equal importance to mention how the COVID-19 pandemic brings about the concerted effort from all societal sectors.

One of the apparent instances is the reaction of the Ministry of Commerce put the brakes on face mask exports to ensure sufficient domestic supply. In February 2020, the Cabinet approved a proposal to put face masks and alcohol-based hand sanitizer on the state price control list as part of the attempts to deal with the deadly virus outbreak.⁸

Another example is the collaborative effort of the public media and the Ministry of Digital Economy and Society to respond to the widespread 'fake' news that comes into the public attention off and on.⁹ The Thai Government has created an 'Anti Fake News Centre' to work with the police in tracking down and arresting individuals who release false information about the COVID-19 outbreak on social media and other online outlets. The maximum punishment is 100,000-Baht fine and/or five-year imprisonment, according to Section 14 (2) of Computer-related Crime Act BE 2560.

The military also plays pivotal role in the outbreak control. Its obvious engagement was the provision of naval base camp in Chon Buri, for 137 Thai evacuees from Wuhan, in February 2020; and this happened again, in March 2020, when a large number of Thai migrants from South Korea returned home and they were obliged to be quarantine in designated areas, for 14 days.¹⁰

The involvement of private sector and civic groups cannot be overlooked. Many retail shops and numerous department stores have installed alcohol-based sanitizer to the customers. Some mobile private companies have launched innovative smart-phone applications for public health volunteers to take care of community members.¹¹

Remaining Challenges

Healthcare Related Challenges

The Thai health system is significantly galvanized by the advent of COVID-19. The impact of COVID-19 on the health system is more substantial than the consequences of SARS, MERS-CoV, and influenza A(H1N1) pdm09 (despite the fact that the toll of COVID-19 confirmed cases was far smaller than the cases found with influenza A(H1N1) pdm09). It also marks the first cornerstone of the entire health sector when the Communicable Disease Act BE 2558 comes into force. The Act offers authoritative power to 'Communicable Disease Control Officers' to implement necessary measures to topple down the outbreak, including inflicting quarantine measures on people at risk (such as the returnees from high-risk countries, or high-risk close contact of confirmed cases) or isolating the patients in institution-based care.

In addition, this event is probably the first time in the history that the EOC is fully activated at all levels. This means numerous institutes in the MOPH, apart from the Department of Disease Control, are not familiar with the EOC function (which requires unity of command), and this led to some 'hiccups' in intersectoral cooperation and incoherence of the information disseminated to the wider public. However, these problems were later addressed once the EOC was uplifted to the ministerial level, these problems were substantially alleviated. Another key challenge is the lack of protective equipment, particularly surgical face masks. This problem is ubiquitous, not only in the health facilities in the backdrop of skyrocketing demand of face masks. Despite the Government designating face masks as a controlled product with a fixed price of 2.5 Baht a piece, fewer people are finding them sold at that price range. In fact, most people pay 15-30 Baht for each mask.

Societal Challenges

Era of digitalization and social media

Computers, the Internet and social media enable all members in a society to be a publisher, communicating true or false information promptly and globally. This is a double-edged sword, where both truths and deceptions are omnipresent. Fake news affects science and social information and the two have become highly interactive and interweaved with each other.¹² Such a phenomenon undermines trust in science and the capacity of individuals and society to make evidence-informed choices. During the COVID-

19 outbreak, the volume of fake news is on the rise. Such news is related to a wider of topics, such as false belief about disease characteristics and the announcement of suspected cases who are yet to be verified by the authority. The latter is more severe as it causes panic and anxiety in the affected communities. To overcome these challenges, the MOPH needs to have a strategic move including disseminating the correct health message to the 'in-trend' communication means, such as Facebook, Twitter, Podcast and Line; rather than being solely relying on the conventional dissemination methods (like official press release).

Fear and stigmatization

Ren et al pointed out in the 'World Journal of Clinical Cases' in February 2020 that 'fear can be more harmful than the SARS-Cov-2'.¹³ This statement has been proven right in the current situation, not only in Thailand but all over the world; and it is more aggravated by the widespread of news through social media. The infected case is heavily criticized if they are found to be against the recommendations of the MOPH. The criticism now expands to all contacts of a case. Sometimes the fear is intensified more than what it should be. The closure of business sites or public spaces (for example, banks and restaurants), where the COVID-19 case visited, for at least 14 days, can be seen now and then—though such a visit happens in a short period of time and no high-risk exposure occurs. Some residents of a village in the province which is set to be a quarantining site of returnees from South Korea blocked prevented officials from operation.¹⁴

Conclusion

Thailand has taken several necessary measures to counteract the COVID-19 pandemic. However, the quest towards outbreak cessation is not yet finished. With more and more challenges coming in, there are lessons to be learned every day. This requires intellectual integrity and collective spirit amongst all units in the society; not merely the officials but also all people on the Thai soils. With all of these efforts, the day without COVID-19 will not be long.

Suggested Citation

Namwat C, Suphanchaimat R, Nittayasoot N, Iamsirithaworn S. Thailand's response against Coronavirus Disease 2019: challenges and lessons learned. OSIR. 2020 Sep;13(1):33-37.

References

1. Economic Tourism and Sports Division AM,

2020. Bank of Thailand (Statistical Data): Tourism indicators [Internet]. 2020 [cited 6 Mar 2020]. <https://www.bot.or.th/App/BTWS_STAT/statistics/ReportPage.aspx?reportID=875&language=eng>
2. Thailand Tourism Statistics. Tourist Arrivals from 2000 till 2019 [Internet]. 2020 [cited 17 Mar 2020]. <<https://www.thaiwebsites.com/tourism.asp>>
3. Wu YC, Chen CS, Chan YJ. The outbreak of COVID-19: An overview. *J Chin Med Assoc.* Mar 2020;83(3):217-220.
4. Khan S, Siddique R, Shereen MA, et al. The emergence of a novel coronavirus (SARS-CoV-2), their biology and therapeutic options. *J Clin Microbiol.* Mar 11, 2020.
5. World Health Organization. Situation Report – 55 [Internet]. 2020 [cited 16 Mar 2020]. <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200315-sitrep-55-covid-19.pdf?sfvrsn=33daa5cb_6.>
6. World Health Organization. Framework for a public health Emergency Operations Center [Internet]. 2015 [cited 18 Mar 2020]. <[http://apps.who.int/iris/bitstream/10665/196135/1/9789241565134_eng.pdf.](http://apps.who.int/iris/bitstream/10665/196135/1/9789241565134_eng.pdf)>
7. Gates B. Responding to Covid-19 — A Once-in-a-Century Pandemic? *New England Journal of Medicine.* 2020.
8. Arunmas P. Commerce Ministry halts mask exports [Internet]. 2020 [cited 9 Mar 2020]. <<https://www.bangkokpost.com/business/1856344/commerce-ministry-halts-mask-exports>>
9. The Nation. Govt to crack down on dissemination of fake news about coronavirus [Internet]. 2020 [cited 9 Mar 2020]. <<https://www.nationthailand.com/news/30381677>>
10. Thai PBS World. 137 Thai Wuhan evacuees leave for home [Internet]. 2020 [cited 10 Mar 2020]. <<https://www.thaipbsworld.com/137-thai-wuhan-evacuees-leave-for-home/>>
11. Praphornkul P. Public health volunteers help monitor COVID-19 situation [Internet]. 2020 [cited 11 Mar 2020]. <<http://thainews.prd.go.th/en/news/detail/TCATG200214095029332>>
12. Hopf H, Krief A, Mehta G, Matlin SA. Fake science and the knowledge crisis: ignorance can be fatal. *R Soc Open Sci.* 2019;6(5):190161-190161.
13. Ren S-Y, Gao R-D, Chen Y-L. Fear can be more harmful than the severe acute respiratory syndrome coronavirus 2 in controlling the corona virus disease 2019 epidemic. *World J Clin Cases.* 2020;8(4):652-657.
14. The Nation. Mukdahan village residents block illegal workers from entering university over virus fears [Internet]. 2020 [cited 12 Mar 2020]. <<https://www.nationthailand.com/news/30383798>>