



The COVID-19 Pandemic: What We Have Learned from Thai Experiences

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Abstract: This article summarizes and shares experiences of how Thailand has managed and controlled the coronavirus disease 2019 (COVID-19) outbreaks. COVID-19, an emerging severe respiratory infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has posed an unprecedented, serious health threat to humankind. Advancements in health science enables us to recognize the syndrome and its etiology rapidly. The ability to transmit the virus before the development of symptoms makes control efforts a difficult task. However, primary preventive practices, i.e., physical/social distancing, wearing masks, hand hygiene, early detection of disease and isolation of patients, can slow down the epidemic in many countries, including Thailand.

Delaying interventions could worsen the situation, but this is not the case with Thailand. It has actively deployed necessary preventive measures since the early phase of the pandemic with government leadership; the healthcare system's infrastructure has had strong public engagement and collaboration of all sectors in the country. Although there have been worrisome outbreaks, Thailand finally succeeded in controlling the epidemic within a few months using simple science-based recommendations. Shutting down economic and social activities placed a financial burden on all sectors. Yet, formal and informal supports for those with financial constraints, donations to the healthcare sectors, and innovation of safety devices emerged everywhere. In the time of crisis, there are hopes and innovations. Science, collaboration, united policies, and standard practice are universal measures for humankind to survive the challenges of threats that continuously emerge. Finally, we should always be alert and ready to deploy intensive preventive measures against new waves of epidemic promptly because it is likely that this pandemic will not end soon.

Pacific Rim Int J Nurs Res 2020; 24(4) 431-435

Keywords: COVID-19, Pandemic, Preventive measures, Public engagement, Thailand

Received 21 July 2020; Revised 4 August 2020;
Accepted 4 August 2020

The COVID-19 pandemic caused by the virus SARS-CoV-2 goes beyond what we can imagine in this era. We have become the witness of the pandemic from continent to continent and country to country. It is widely known that the COVID-19 emerged in China towards the end of 2019. Thailand

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is located in Southeast Asia not far from China, so it is the most popular destination for Chinese tourists. As such, it is not unexpected that Thailand is among

countries outside China to have COVID-19 cases. The first case of SARS-CoV-2 infection reported on January 12, 2020, in Thailand was an older Chinese tourist, and the first case of Thai transmission was to a taxi driver reported on January 31, 2020. In the early phase, most cases with COVID-19 were related to tourists, such as taxi drivers, bus drivers, and people working in shopping malls. The number of cases gradually increased until mid-March 2020, when a big Thai boxing event caused a massive outbreak in the Bangkok area simultaneously with another cluster of pub-related cases. These two groups spread the disease further to their families, friends, and various kinds of social contacts.

It was speculated that without strong intervention, Thailand cases might climb up to 100,000 by the end of April, which could lead to significant disruption of the healthcare system as well as economic and social integrity. The government, therefore, decided to implement robust strategies to control the outbreak. We saw a gradual decline in daily new cases since mid-April, and finally, we have seen no domestic cases for at least two months in a row. At the time of writing (July 2020), all cases diagnosed in Thailand include Thais and foreigners who came from outside the country. They were placed in quarantine, where around 0.5% of them were found to have COVID-19. On the other hand, the number of cases is still rising continuously in many countries, and we cannot forecast when this pandemic will be over.

COVID-19 is an unprecedented phenomenon, which poses major challenges to humankind in all aspects, including health, science, economy, culture, and social belief and social norms, as it encompasses a large number of unknown issues. Although the biological characteristic of SARS-CoV-2 was known soon after its emergence, the transmission dynamic was made more explicit a month later.¹ We now know that SAR-CoV-2 shares common characteristics with other respiratory viruses; that is, a primary mode of spread is droplet transmission. However, in certain circumstances, transmission via aerosols or airborne transmission

may occur, which is equivalent to “opportunistic airborne transmission” seen in SARS-CoV identified in 2003.² Furthermore, the epidemiological analysis revealed that SARS-CoV-2 can spread two days before symptom onset and peak approximately 0.7 days before symptom onset. Propagation of virus in cell culture after day 10 of symptom onset usually fails. This notion is consistent with epidemiologic data indicating that people who have been in close contact with patients with COVID-19 after day 5 or 6 after symptom onset are less likely to contract the disease than those who are in contact during the early phase of the disease.³ Therefore, in addition to being a new pathogen unrecognized by the immune system, pre-symptomatic transmission is one of significant factors contributing to the rapid spread of SARS-CoV-2 worldwide.

Because SARS-CoV-2 can spread pre-symptomatically, it may be too late to start preventive measures by tracking symptomatic patients then isolating them. Experience with communicable diseases contagious before developing symptoms such as measles suggests that vaccines may be a significant armamentarium against COVID-19. Hundreds of pharmaceutical and research agencies are employing a variety of vaccine technology. However, the effective vaccine may not be available until the end of 2020 at the earliest. Even though the vaccine has been identified, the production capability may not accommodate the enormous demands from all countries. For treatment, currently, there are no known effective antiviral agents for the treatment of COVID-19. Remdesivir seems to be a promising agent, according to studies in the United States of America.⁴ Favipiravir, which is commonly used in China, Thailand, and other countries in Asia, is also reported to produce a good outcome.⁵ However, data from published studies are controversial; therefore, randomized controlled trials are needed before any definite recommendations can be made.

With limitations in treatment options and vaccine development, we can still perform some preventive practices to curb the pandemic down. Effective measures

accepted in the field are disease surveillance and isolation or quarantine, social/physical distancing, routine wearing masks in public, and frequent hand washing. The earlier and stronger deploying of these measures, the better control can be obtained. It has been estimated that earlier interventions of 1 to 2 weeks could result in approximately 60% reduction of cases and 55% reduction in mortality.⁶ Countries, such as China, Thailand, South Korea, New Zealand, Australia, among others, have demonstrated strong commitment by the government and public in deploying such measures intensively, even with the total lockdown of cities for quite a long period.

In Thailand, all people who enter the country must be quarantined for 14 days in the place that the government provided, e.g., the state quarantine, and local quarantine. This measure should be effective to prevent the outbreak. According to daily reports by the Center of COVID-19 Situation Administration, established by the Thai Government, since May 2020, all cases have been found positive only in those traveling from other countries, while consecutively no new cases in the country were found, confirming a lack of community transmission. All confirmed cases were admitted to the hospital to ensure adequate care and isolation. Patient care areas in some of these hospitals were modified to accommodate the need for airborne transmission precautions. Furthermore, infection control nurses contribute to safety of healthcare personnel, while nurses in the intensive care unit (ICU) and general wards were specially trained and they were able to perform best care for the patients. With all of this preparedness, the mortality of COVID-19 in Thailand was low and only a small number of nosocomial cases occurred.

Conventional surveillance constitutes professionalism in public health authorities. However, the capacity of the system may not accommodate a great demand incurring in a massive epidemic. In this aspect, Thailand committed primary health care in 1981, and it has about one million village health volunteers (VHV) in the community countrywide. These volunteers play significant roles in screening, quarantine, and primary

care in their villages, which resulted in rapid detection and increased awareness of people regarding COVID-19. Wearing masks is widely accepted by Thai people because they have practiced infection control measures in confronting SARS, avian influenza, H1N1 2009 influenza, and lately, the PM2.5 air pollutants. When the shortage of surgical masks occurred, people made cloth face masks by themselves. Also, extensive campaigning of hand washing has occurred to battle multidrug-resistant organisms. Although physical distancing is a relatively new measure, people tend to follow recommendations of the Ministry of Public Health. Therefore, it is not difficult to ask everyone to comply with basic practices, such as wearing masks, hand hygiene, and physical distancing. And so the “new normal” preparations are the transitional phase for people to live and learn under the epidemic.

Limiting social events, including the closure of public services, withholding religious ceremonies, splitting long holidays, and working from home strategies to prevent large groups gathering, is effective but not without cost. It has placed a huge burden on those with financial constraints as well as business firms. Many people depend solely on daily income, so each day without work means a lot to them. Many business enterprises must decrease the size of, or even shut down their companies. However, the Thai Government has had measures to alleviate the direct and indirect effects of the COVID-19 on the Thai economy, including remedies for employees and entrepreneurs. Furthermore, in Thai society, helping hands will emerge from every corner whenever there is a crisis. Laypersons created many charity boxes or “*Pun Sook*” boxes in each community where we can put food or other essential items, and then whoever is in need can pick them up without paying any cost. Other forms of social support, including temporary tents for giving out food for people, are seen around the country. It is truly the time of reconciliation when all people are united so that we will pass through this challenging time altogether, and we did. Besides helping underserved people, remarkable support and

donations are given to healthcare facilities in the form of money, food, medical supplies, innovation, and spiritual support. The campaign by the health sector, “*We stay in the hospital for you; you stay home for us,*” received an impressive positive response.

Leadership is one of the major factors leading to successful early intervention. The Thai Government has expressed its concern over the health threat since the beginning of the pandemic. Health screening at the airport was started in early January 2020, along with the Emergency Operation Center within the Ministry of Public Health. On March 12, 2020, the Center for COVID-19 Situation Administration led by the Prime Minister was established. Initially, the Thai Government invited medical leaders, experts from the Ministry of Public Health and medical schools, and the administrative body from other parts of the government, to design strategies to combat the outbreak. Also, infection control nurses were also invited to establish the guidelines for personal protective equipment (PPE) to use around the country. Faculty members of some nursing schools initiated to work collaboratively with the nursing service department to provide educational service and serve as counselors for people concerned with the COVID-19 through the Hotline or the online system. With these components, we can ensure that public health interventions will be scientific-based, comprehensive, prompt, and uniform.

COVID-19 can be viewed as the worst disastrous event to humankind. On the other hand, it brings about a significant advancement in health science, engineering, and communication technology. It also uncovers

unlimited social engagement where people from all sectors are united in such a fantastic climate that we all have never seen before. It is a real challenge for us to survive in the pandemic, despite the lack of definitive antiviral agents and effective vaccine. Finally, this event could up-level all aspects of our civilization to better respond to the next epidemic, which is more likely to occur.

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การระบาดใหญ่ทั่วโลกของโควิด-19: สิ่งที่ได้เรียนรู้จากประสบการณ์ของประเทศไทย

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บทคัดย่อ: บทความนี้มีวัตถุประสงค์เพื่อสรุปและแลกเปลี่ยนประสบการณ์ของประเทศไทยในการจัดการและควบคุมการระบาดของโรคติดเชื้อโคโรนาไวรัส 2019 หรือโควิด-19 (COVID-19) โควิด-19 เป็นโรคอุบัติใหม่ของการติดเชื้อทางเดินหายใจรุนแรงที่เกิดขึ้นจากเชื้อ SARS-CoV-2 ซึ่งเป็นภาวะคุกคามต่อสุขภาพที่ร้ายแรงและไม่เคยเกิดขึ้นมาก่อนในมนุษย์ ความก้าวหน้าด้านวิทยาศาสตร์สุขภาพช่วยให้เราสามารถจำแนกกลุ่มอาการและสาเหตุของโรคได้อย่างรวดเร็ว แต่ความสามารถในการแพร่เชื้อของโรคก่อนที่จะมีการทำให้การควบคุมโรคเป็นสิ่งที่ยากลำบาก อย่างไรก็ตาม หลักปฏิบัติเชิงป้องกัน ได้แก่ การเว้นระยะห่างทางกายหรือทางสังคม การสวมหน้ากากอนามัย การล้างมือ การตรวจหาโรคและการแยกผู้ติดเชื้อจากผู้อื่นแต่เนิ่น ๆ สามารถชะลอการแพร่ระบาดของโรคในหลายประเทศ ซึ่งรวมถึงประเทศไทยด้วย

การจัดการดูแลที่ล่าช้าอาจทำให้สถานการณ์แย่ลง อย่างไรก็ตาม ประเทศไทยมีการใช้มาตรการป้องกันที่จำเป็นอย่างแข็งขันตั้งแต่ช่วงต้นของการระบาดของโรคโดยการนำของรัฐบาล มีโครงสร้างพื้นฐานของระบบการดูแลสุขภาพโดยการมีส่วนร่วมของประชาชนที่แข็งแกร่ง และความร่วมมือของทุกภาคส่วนในประเทศ ถึงแม้ว่าการแพร่ระบาดของโรคจะเป็นที่น่าวิตก แต่ในที่สุด ประเทศไทยก็ประสบความสำเร็จในระดับหนึ่งในการควบคุมการแพร่ระบาดของโรคภายในไม่กี่เดือนโดยปฏิบัติตามคำแนะนำที่ไม่ยุ่งยากและมีเหตุผลตามหลักทางวิทยาศาสตร์ การปิดหรือการห้ามกิจกรรมทางเศรษฐกิจและสังคมทำให้เกิดภาระทางการเงินในทุกภาคส่วน อย่างไรก็ตาม สิ่งที่พบเห็นอยู่ทั่วไปในสังคมคือ การสนับสนุน ช่วยเหลือกัน ทั้งอย่างเป็นทางการและไม่เป็นทางการสำหรับผู้ที่มีข้อจำกัดด้านเศรษฐกิจ การบริจาคให้กับภาคการดูแลสุขภาพ และการพัฒนานวัตกรรมของอุปกรณ์ความปลอดภัย ในช่วงเวลาวิกฤต พบว่าคนในสังคมยังมีความหวังและมีการสร้างสรรค์สิ่งใหม่ ๆ มาตรการสากลสำหรับมนุษย์เพื่อความอยู่รอดในสถานการณ์ความท้าทายของภัยคุกคามที่เกิดขึ้นอย่างต่อเนื่องนั้น ต้องการความรู้เชิงวิทยาศาสตร์ การทำงานร่วมกัน การมีนโยบายที่เป็นเอกภาพ และการปฏิบัติตามมาตรฐาน ท้ายที่สุดเราควรตื่นตัวและพร้อมที่จะใช้มาตรการป้องกันอย่างเข้มข้นเพื่อรับมือกับคลื่นลูกใหม่ของการแพร่ระบาดของโรคอย่างรวดเร็วเพราะมีแนวโน้มว่าการระบาดใหญ่ครั้งนี้จะไม่สิ้นสุดเร็วนัก

Pacific Rim Int J Nurs Res 2020; 24(4) 431-435

คำสำคัญ: โควิด 19 โรคระบาดใหญ่ทั่วโลก มาตรการป้องกัน การมีส่วนร่วมของสาธารณะ ประเทศไทย

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