

The Effectiveness of COVID-19 Countermeasure Policy Implementation in Seven ASEAN Countries

* Wahyu Sulistiadi, ** Sri Rahayu

**Faculty of Public Health, Universitas Indonesia*

*** Program Master of Public Health, Universitas Muhammadiyah Prof DR Hamka*

Email : ayuhamka66@gmail.com

Abstract. COVID-19, which has spread to almost all countries in the world, force country's leaders to issue COVID-19 countermeasures policy that is the most effective and suitable for their country. The various ways to implement the policy depend on the COVID-19 impact that arises in the country. This study describes the implications of national policies related to COVID-19 case fatality rates up to 29 April 2020 in 7 ASEAN countries. We use analytical descriptive method on COVID-19 data that has been published in online media. The achievement on the implementation of national policy in overcoming COVID-19 in some countries provide new perspectives for all other countries in maintaining and improving relations between the government and its citizens to implement the most effective way in reducing mortality (Case Fatality Rate).

Keywords: Policy implementation, Case Fatality Rate, ASEAN countries

INTRODUCTION

Countries, that already have many COVID-19 cases, have made many efforts to overcome this pandemic condition by issuing various prevention and mitigation policies to break the chain of transmission. While COVID-19 continues to spread, the government needs to take more policies in preventing further transmission, reducing the impact of outbreaks and supporting control measures.

COVID-19, which has spread to 210 countries, will undoubtedly be a public problem in economic, social, security, and political context. All ASEAN countries were quickly affected by this virus, but each country has a different response depending on their situation and condition. Some countries could quickly report the first case to WHO, but some were slow to report it. Delayed or slow case detection is a global concern because later it would be more difficult to analyze and overcome the high risk and impact of the infectious disease. According to John Matthews 2020, Indonesia is considered slow in handling COVID-19 cases. (1) The Indonesian government announced the first case of COVID-19 on March 2, 2020, but on March 3, 2020, the President still asked the citizen to remain calm and allowed the citizen to do the daily activity as usual when the worldwide victims had reached 93,016, and reported deaths were 3,202 (<https://www.worldometers.info/coronavirus/>). (2) on March 5-8, 2020 in Indonesia, Gaikindo Commercial Vehicle event was still held despite the pandemic situation, which resulted in three death tolls from the staff of Ministry of Industry and Trade and a senior

automatic journalist. A high-rank official from Ministry of Transportation was also tested positive with COVID-19 from this event (<https://www.worldometers.info/coronavirus/>). (2) One of the leading causes of the high mortality rate in patients with COVID-19 besides morbidity and age is also due to the late handling of the cases (Giovani Dio Inscription, 2020). (3) Therefore the prevention of infectious diseases should be done quickly, systematically, and well-planned. Information about the disease is needed and precisely based on regular data collection. Informations about clinical symptoms, how to diagnose, and incubation periods are also needed to maximize the disease tracing.

Paragraph IV of the Preamble of the 1945 Constitution states that the Government of the Republic of Indonesia must protect all Indonesians, promotes public welfare, and enhances the life of the nation. In this case, educating does not mean only about education, but instead protecting the health of the community both directly and indirectly. Health is one of the main sectors that affect the level of intelligence, the quality of people's lives, and the capability to fight against diseases. (4)

Issued policies in times of public health disasters with various official statements must not be confusing and inconsistent at central and regional levels. Making policy during an outbreak is indeed not easy because of economic, political, actor, target, and target interests, so that policy implementation is vulnerable to become ineffective. Policies issued by a country should focus on the objectives of the interests of the community; as

Nugroho (2012) argues that public policy is a response to problems that arise in the life of the citizen and as a factual form of a government capability to manage the nation. (5)

The effectiveness in the implementation of the COVID-19 countermeasure policy in this study will be assessed by the daily number of new COVID-19 patients, the cure rate of patients who were infected, and the case fatality rate. In this study, we focus on the Case Fatality Rate reported from the 7 ASEAN countries as it is more difficult to overcome the death rate of COVID-19 patients (CFR). All the implementation of policies in reducing the spread of infectious diseases will be seen on how the country responds and detect the disease, provides health services, reports to the public, and the international world.

METHODS

This study uses COVID-19 countries' reports to WHO and news from the official website and media at the end of April 2020 as the data source. We also followed the COVID-19 conditions in several ASEAN countries that have been published from the beginning of the pandemic and then used it as learning lessons for implementation COVID-19 countermeasure policy in Indonesia. The method of this study is analytical descriptive by dissecting the aspects of policy implementation that have been published through trusted online media. A quantitative approach is used to determine whether the application of large-scale social restrictions, lockdowns, or other policy will be effective in suppressing the number of new cases of COVID-19 based on secondary data from the official government website. This research assessed the effectiveness of policy implementation from 7 countries in ASEAN; Vietnam, Brunei, Malaysia, Philippines, Singapore, Thailand, and Indonesia.

RESULTS AND DISSCUSION

Results

All countries must report their first COVID-19 case, which then will be traced to break the chain of transmission. If the country is unsuccessful in tracing the patients, it will cause difficulties in conducting the examination tests for the right population. Another danger sign for a country is the high positivity rate, that is depending on the availability of test kits, technology, materials, and other resources. High and low positivity rates depict the government and society's response and readiness, but these numbers have many weaknesses in assessing the effectiveness of the policy

implementation. To further investigating the condition, the case fatality rate should also be assessed.

Table.1. Various COVID-19 countermeasure policies in 7 ASEAN countries, CFR in each country and policy issued dates.

Country	National Policy	Case Fatality Rate per April 29, 2020 (%)	First Case announced date	Policy issued dates	Duration from the first case to national policy (days)
Vietnam	Lockdown	0	23 January 2020	21 March 2020	58
Brunei	Strict Restriction	0.72	9 March 2020	14 March 2020	5
Malaysia	Lockdown	1.71	25 January 2020	18 March 2020	52
Filipina	Community Quarantine	6.66	30 January 2020	16 March 2020	46
Singapura	circuit breaker (semi Lockdown)	0.09	23 January 2020	7 April 2020	75
Thailand	Lockdown	1.84	13 January 2020	26 March 2020	73
Indonesia	Large Scale Social Restriction	8.13	2 March 2020	14 April 2020	44
Asia w/o China		3.23			

Source : Ourworld in Data 2020 (6)

Out of the seven countries in ASEAN, the first country to report was Thailand on January 13, 2020. Thailand is known for its large number of tourists from foreign countries, so the first case point date is significant for this country to start responding by issuing policies recommended by WHO or from that country itself. In general, it needs a long period to create national policies related to the spread of COVID-19 since the first case was confirmed, even it took 75 days in Singapore as a developed country. This condition shows a cautious attitude toward the consequences that will arise within economic, social, security, and other critical issues condition. Only Brunei dare to issue a national policy creating strict restrictions within a short period of 5 days from the first case, and followed by proper compliance from its citizens. However, it does not matter how long or fasts the government creating public policies and standards such as physical distancing, mask-wearing, and staying at home as long as their citizens are willing to obey the policies.

Vietnam

Vietnam is close to China and reported its first case on January 23, 2020, that were 2 Chinese citizens in Ho Chi Minh City. On February 1, 2020, after a week, the Vietnamese government declared the spread of coronavirus as an epidemic. WHO appreciated the government's efforts to respond quickly from the beginning to determine the status of this disease as an essential step. The country activated its response system at the right time at the start of the outbreak, by intensifying supervision, optimizing laboratory testing, ensuring prevention and control of infection, and managing cases in health facilities (7).

Vietnam announced a national lockdown for 15 days to protect the country from the coronavirus, on March 31,

2020. The citizen must be stayed at home and were allowed to go out only for essential needs such as logistics shopping or getting health services. A gathering with more than two people was prohibited. Ministry of Transportation and local authorities postponed flights and other public transportation, restricted out-of-town trips, and prohibited trips to the red zone. The ministry of defense also expanded the quarantine area, and the Ministry of Trade and the local government maintained the staples for citizen's needs during quarantine (8).

Vietnam's readiness paid off; after the end of the 15-day lockdown, until April 15, no patients died from 257 infected patients. During the lockdown period, the government ordered restrictions on domestic flights and adopted national social distances to prevent the spread of the coronavirus. After the lockdown period ending, domestic flights reopened as in Bamboo Airways statement, quoted from Reuters, April 11, 2020 "The Hanoi-Ho Chi Minh City route will resume from April 16, while other routes will resume operations from April 20" (9).

Brunei

The neighboring country on the island of Borneo announced its first patient, a 53-year-old man who had just traveled from Malaysia on March 3, 2020. The first case of COVID-19 originated from the Ijtima Jamaah Tabligh event in Malaysia on February 28-March 1, 2020. This first patient felt the symptoms on March 7 and then was taken to the Quarantine Center (National Isolation Center) and tested positive based on laboratory tests on March 9, 2020. 90 Brunei residents participated in the event (10).

Even though the Brunei government was avoiding lockdowns policy, the Ministry of Health gave travel warnings to Tiongkok, Italy, Iran, and South Korea. The government also issued some policy for the citizen to stay at home; to report if there any COVID-19 symptoms, not to report hoaxes and get fines if violating the COVID-19 test. In this country, the government did the state functions with its monopoly right to protect its citizens by implementing a prevention policy. On March 14, 2020, the government quickly enforced restrictions on the border area with Malaysia. Since the first case, the government dismissed all schools and Friday prayer a week after. This dismissal also applies to the tourism area, sports center, and restaurants. Grocery stores are still open with social distancing rules, and Brunei citizens were banned from traveling abroad. This country also reminds the religious community to pray to Allah to reach the common target that is to be free from COVID-19 (11).

Malaysia

Malaysia reported the first three cases of coronavirus on January 25, 2020, who were Chinese citizens who had previously been in contact with a 66-year-old man who had been infected in Singapore. The patients were a 65-year-old woman, who get the virus from her husband in Singapore, and their two grandchildren, aged 11 and 2 years. The three were treated at Sungai Buloh hospital in Kuala Lumpur and were considered to be in stable condition.

The Malaysian government increased its preparedness after the first case. Therefore, the Ministry of Internal Affairs imposed a travel ban on Wuhan. Malaysia's airport had screened all passengers and crew arriving from China at all arrivals gates across the country to minimize the potential spread of the virus. Also, personal protective equipment was provided for the infected. (12).

The government issued a radical social restriction in the form of national lockdown from March 18, 2020, until March 31, 2020. The policy was made 52 days after the first case. The length of time for the state to take this significant policy is critical in slowing down the transmission. This decision is an indicator of the readiness and priority of the state in making policies on infectious diseases whose dangers can paralyze all nation sectors. The Prime Minister of Malaysia considered that the first lockdown period has not been sufficient, so it is necessary to extend the second lockdown period to April 14 and continue the third lockdown until May 2020. The government only allows its citizens to leave the house to get basic needs, foods, medicine, or go to the hospital for treatment. Police and military officers were also ordered to guard and secure the citizen.

Philippine

The first patient who was positive with the coronavirus was reported and confirmed by the Philippine government on January 30, 2020, was a Chinese woman who had just arrived from Wuhan on January 21, 2020. She is a 38 years old woman who then immediately quarantined at a government hospital (13).

Rodrigo Duterte, the President of the Philippines, announced a national policy in preventing and breaking the transmission chain by implementing a lockdown for one month on Luzon Island, known as Community Quarantine (CQ) from March 16 to April 12, 2020. This policy strictly requires quarantine at home, travel ban, and all other activities. The citizen could go out of their house to get daily needs but had to do the social distancing (14). Luzon Island has 107 million population or half of the Philippines ' total population. Luzon is the largest island in the Philippines and is one

of the largest three islands in the country, besides Visayas and Mindanao. Luzon is also essential for the economic and political aspects of the country because there is the national capital, Manila, and the most populous city, Quezon City, on this island.

Singapore

The Singapore government reported its first case of coronavirus infection on January 23, 2020, a 66-year-old man from China who came to Singapore General Hospital on January 22, 2020, who was immediately isolated and diagnosed with pneumonia. This male patient was confirmed to have coronavirus at 18:00 that night. There was a fast process in obtaining the results of the tests (15).

The Singapore government tried to break the chain of coronavirus transmission by issuing a national policy on April 7, 2020. The policy regulated a semi lockdown for a month or also can be called a Circuit Breaker. The citizens were asked to continue their activities at home, where work offices were closed, and schools were canceled. Exceptions applied only to essential services such as markets, hospitals, clinics, transportation, and banks. This policy immediately changed the atmosphere of the business centers (16) (17).

Thailand

On January 13, 2020, the Thai Ministry of Health reported the first case of coronavirus, a 61-year-old female tourist from Wuhan, China. The patient came to Thailand with her family and had experienced symptoms of sore throat, fever, and headaches since her departure to Thailand on January 8, 2020. Four days after treatment, she was diagnosed with coronavirus (18).

The Prime Minister of Thailand announced a national lockdown for a month from March 26, 2020, to prevent the spread of the coronavirus. The Government gives more authority to local officials to establish more checkpoints in the city border to reduce human movement. The establishment of these checkpoints could limit the spread of the coronavirus while prohibiting foreigners from coming to Thailand (19).

Indonesia

Indonesia, with the largest population in Southeast Asia, found its first case of the coronavirus (COVID-19) on March 2, 2020. President Joko Widodo directly announced this case at the Presidential Palace while simultaneously asserting the citizen that the Indonesian Government was ready to face the infectious virus (20).

To anticipate the spread of the coronavirus, Indonesia issued several policies to deal with the COVID-19 outbreak, which caused public health and economic problems. Unlike other countries, the economic aspects of this pandemic are often the main focus of

government policies. Some policies regarding COVID-19 include (21):

1. Electricity cost relief. The Government is freeing electricity costs for PLN consumers with 450 VA power over the next three months, and users who subscribe to 900 kWh of power receive a 50% subsidy.
2. Large-scale social restrictions (PSBB). This policy is created to expand social distancing and physical distancing policies further. Local governments should request approval from the Ministry of Health first to be able to implement this policy in their region.

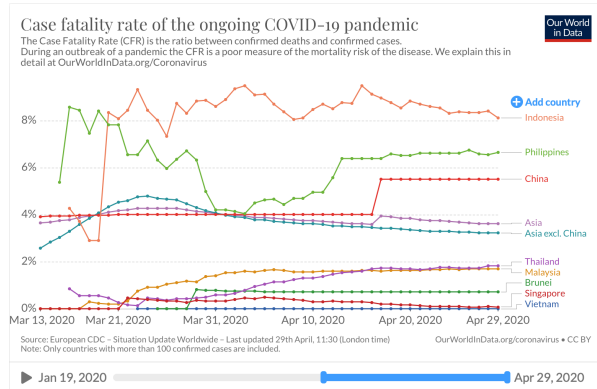
DKI Jakarta began its first period of PSBB from April 10, 2020, to April 23, 2020, which was finally extended for 28 days to May 28, 2020.
3. Prohibition of exodus during Ramadhan and Eid Al-Fitr to prevent transmission to the area, but in an interview, the President said that he still allowed the citizen to return their hometown.
4. The provision of credit relief for some temporary workers who are vulnerable to economic difficulties.
5. Rp. 405.1 Trillion budget allocation from the State Budget (APBN) in 2020 for managing COVID-19.

Discussion

Every country in the world has different characteristics, with different abilities in responding to COVID-19 virus transmission. All ASEAN countries have tried to overcome this pandemic on their own, and no coordination was made among countries in overcoming it. This condition can be seen in Table 1, which shows a variety of policies with varying results. A policy is considered effective if it produces optimal performance. The result of government efforts in breaking the chain of transmission of COVID-19 can be seen in the decrease of the Case Fatality Rate (CFR). The case number does not necessarily reflect the severity or success of a country in overcoming COVID-19 because the number depends on the testing capability. Thus, Vietnam's national policy is considered as the most successful because of its 0% CFR.

However, the Case Fatality Rate Cohort of COVID-19 cannot yet fully describing the effectiveness of policy implementation in a country because of the ever-changing numbers. Nevertheless, it can reflect the readiness of a country's response over time in the implementation of the COVID-19 countermeasure policy.

The number of infected cases can show the spread of the virus and its transmission in a country, but a country's capability to make an effective policy will be more precisely seen in its CFR travel cohort. Chart 1 shows that most of CFR in 7 ASEAN countries are still under the Asian CFR without China, meaning that the national policies adopted have a positive impact on its CFR. Among ASEAN countries, only the Philippine and Indonesia, whose CFR is far above Asia, which implies that the implemented national policies have not been effective.



Source : [https://ourworldindata.org/coronavirus\(6\)](https://ourworldindata.org/coronavirus(6))

Figure 1. the CFR of seven ASEAN countries and China until April 29, 2020

COVID-19 is a highly contagious viral disease, which has a very rapid, silent pattern of spread and a long duration of incubation that is in a race against the patient, community, and country immunity in overcoming it. Here are some things that need to be adjusted if the Case Fatality Rate is still above the average of Asian countries and WHO:

1. Policymakers must prioritize the epidemiology-based policy with the public health approach.
2. Stop all of the movement flow in entering and exiting the country or region when implementing national policy with a strict restriction (lockdown, semi lockdown, Strict Limitation, Large-scale social restrictions). Any detection devices, personal protective equipment, medical devices, pharmaceutical drugs, economic and social assistance will be useless if the source of transmission is still open.
3. Choosing a slow-paced and gradual national policy will produce a long recovery after the pandemic, thus using a radical method will produce faster and more optimal results, such as zero death (CFR = 0%)
4. Policymakers who dare to make radical decisions will reap overall and quick results. This kind of policy model is suitable for breaking the chain of transmission of COVID-19.

5. Fast and accurate decision making in breaking the chain of transmission results in effective national policies.
6. Build community awareness on the dangers and effects of the disease is necessary.
7. The COVID 19 virus knows no boundaries, thus creating strict boundaries from other countries and areas is very crucial.
8. Choosing the right time in the fastest way to create a policy is crucial since the virus will continue to spread as the clock is still ticking.

From the CFR reports up to April 29, 2020, 7 countries can be categorized into three levels of policy effectiveness. The benchmark of this categorization was the average CFR of Asian countries without China (3.23% on April 29, 2020) and CFR data from WHO (around 3%)(6):

- a. Countries that have effectively succeeded, which have CFR 0-3.23%. It is still possible that some deaths are likely to be the first cases of the virus. Vietnam, Singapore, Brunei, Malaysia, and Thailand are among the countries that are effective in implementing country policies in overcoming COVID-19
- b. Countries that have almost succeeded, with CFR > 3.23-5.52%. The CFR number is referring to the CFR of China, which is now showing a flat curve of COVID-19 cases. None of the 7 ASEAN countries is in this category.
- c. Countries that have not yet succeeded, with CFR > 5.52%. The Philippines and Indonesia need to improve its policy implementation strategy to reduce COVID-19 immediately.

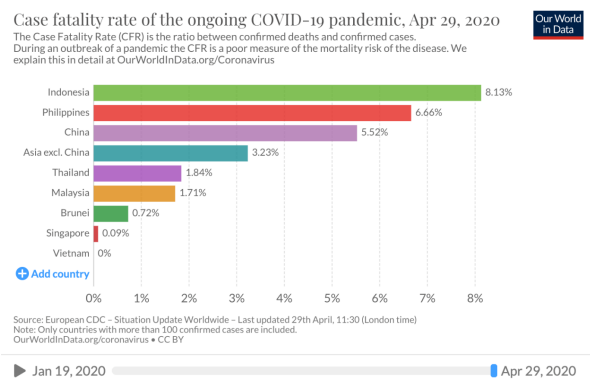


Figure 2. The CFR of seven ASEAN countries and Asia without China

Based on the experience of 7 ASEAN countries in implementing national policies and its Case Fatality Cohort number, all of the policies can be effective if there is a synergy between the government and its citizens. Cautious governments will quickly respond and learn from China's experience to protect its citizens by providing a policy to overcome COVID-19. Automatically, citizens who respect their leaders will be cooperative and obedient to any issued policies, because they believe in the government. Thus keys of success to implement any form of quarantine or area isolation are care, compliance, and trust among the citizen.

CONCLUSIONS

The COVID-19 pandemic provides significant lessons for the country and its citizens to unite and cooperate. The government's quick response after the first case will determine on how and how long the country works to stop the spread of COVID-19 disease. The number of positive cases does not necessarily lead to the failure of the COVID-19 countermeasure policy implementation from the government, but Case Fatality Rate will determine the success of such policies. The main goal in this pandemic is to reduce the mortality rate, with various forms of national policies in breaking the chain of COVID-19 transmission.

ACKNOWLEDGMENT

This work is supported by Administration and Health Policy Department, Faculty of Public Health, Universitas Indonesia and Graduate School of Public Health, Universitas Muhammadiyah Prof DR Hamka.

REFERENCES

1. Australia A. Pandemi Corona: Indonesia Dinilai Terlambat Tutup Perbatasan [Internet]. vivanews.com. 2020. Available from: <https://www.vivanews.com/berita/nasional/43590-pandemi-corona-indonesia-dinilai-terlambat-tutup-perbatasan?medium=autonext>
2. <https://www.worldometers.info/coronavirus/> [Internet]. worldometers. 2020. Available from: <https://www.worldometers.info/coronavirus/>
3. Prasasti GD. Penanganan Terlambat, Salah Satu Penyebab Tingginya Kematian Akibat COVID-19 di Indonesia [Internet]. liputan6.com. 2020. Available from: <https://www.liputan6.com/health/read/4212827/penanganan-terlambat-salah-satu-penyebab-tingginya-kematian-akibat-COVID-19-di-indonesia>
4. Undang Undang Dasar 45 [Internet]. 2020. Available from: <https://www.kompasiana.com/isardasukitasim/582f2fb8d09273e91ca1c3e5/memaknai-mencerdaskan-kehidupan-bangsa-uud-1945?page=all>
5. Nugroho, 2012. *Public Policy*. 2012. Edisi ke 4 Jakarta PT Elex Media Komputindo
6. European CDC SUW. Case fatality rate of the ongoing COVID-19 pandemic, Apr 30, 2020 [Internet]. OurWorldinData.org. 2020. Available from: <https://ourworldindata.org/grapher/coronavirus-cfr?time=2020-04-30>
7. Sidik S. Kejayaan Tercoreng, Kasus Corona di Vietnam Melonjak [Internet]. CNBC Indonesia. 2020. Available from: <https://www.cnbcindonesia.com/news/20200308203805-4-143296/kejayaan-tercoreng-kasus-corona-di-vietnam-melonjak>
8. Kusumawardhani A. Vietnam Berlakukan Lockdown Selama 15 Hari [Internet]. kabar24bisnis.com. 2020. Available from: <https://kabar24.bisnis.com/read/20200331/19/1220410/vietnam-berlakukan-lockdown-selama-15-hari>
9. Saputra EY. Maskapai Vietnam Akan Buka Penerbangan Usai Lockdown Dicabut [Internet]. Tempo.co. 2020. Available from: <https://dunia.tempo.co/read/1330429/maskapai-vietnam-akan-buka-penerbangan-usai-lockdown-dicabut/full&view=ok>
10. Com T detik. Brunei Laporkan Kasus Pertama Positif Corona [Internet]. news.detik.com. 2020. Available from: <https://news.detik.com/berita/d-4933814/brunei-laporkan-kasus-pertama-positif-corona>
11. Maliki M. Brunei: Negeri Islam Terhindar Wabah COVID-19 [Internet]. geotimes.co.id. 2020. Available from: <https://geotimes.co.id/kolom/brunei-negeri-islam-terhindar-wabah-COVID-19/>
12. Saputra EY. Malaysia Laporkan Kasus Pertama Virus Corona [Internet]. Tempo.co.

2020. Available from: <https://dunia.tempo.co/read/1299515/malaysia-laporkan-kasus-pertama-virus-corona/full&view=ok>
13. Christiastuti N. Pertama di Filipina, Seorang Wanita Asal Wuhan Positif Virus Corona [Internet]. detikNews. 2020. Available from: <https://news.detik.com/internasional/d-4879475/pertama-di-filipina-seorang-wanita-asal-wuhan-positif-virus-corona>
 14. Kurnia T. Filipina Lockdown Total Sebulan, Bagaimana Kondisinya? [Internet]. liputan6.com. 2020. Available from: <https://www.liputan6.com/global/read/4203607/filipina-lockdown-total-sebulan-bagaimana-kondisinya#>
 15. Damarjati D. Singapura Nyatakan Terima Kasus Pertama Virus Corona [Internet]. detikNews. 2020. Available from: https://news.detik.com/internasional/d-4871289/singapura-nyatakan-terima-kasus-pertama-virus-corona?tag_from=news_mostpop
 16. Arbar TF. Semi Lockdown Resmi Berlaku, Singapura bak Kota Mati [Internet]. CNBC Indonesia. 2020. Available from: <https://www.cnbcindonesia.com/news/20200407142751-4-150325/semi-lockdown-resmi-berlaku-singapura-bak-kota-mati>
 17. International K tv. Singapura Lakukan Semi Lockdown Akibat Corona [Internet]. kompas tv. 2020. Available from: <https://www.kompas.tv/article/74517/singapura-lakukan-semi-lockdown-akibat-corona>
 18. the Ministry of Public Health (MoPH) T. Novel Coronavirus – Thailand (ex-China) [Internet]. webarchive.org. 2020. Available from: <https://web.archive.org/web/20200120164750/https://www.who.int/csr/don/14-january-2020-novel-coronavirus-thailand-ex-china/en/>
 19. Ekonomi TW. Thailand Berlakukan Lockdown Nasional Selama Satu Bulan [Internet]. warta ekonomi.co.id. 2020. Available from: <https://www.wartaekonomi.co.id/read278151/thailand-berlakukan-lockdown-nasional-selama-satu-bulan>
 20. Ihsanuddin. Fakta Lengkap Kasus Pertama Virus Corona di Indonesia [Internet]. Kompas.com. 2020. Available from: <https://nasional.kompas.com/read/2020/03/03/06314981/fakta-lengkap-kasus-pertama-virus-corona-di-indonesia?page=all%0A%0A>
 21. Azanella LA. 5 Kebijakan Jokowi Tangani COVID-19, Gratisan Tarif Listrik hingga Keringanan Kredit [Internet]. Kompas.com. 2020. Available from: <https://www.kompas.com/tren/read/2020/04/01/160000765/5-kebijakan-jokowi-tangani-covid-19-gratisan-tarif-listrik-hingga?page=all>
 22. Ikhsania AA. Serupa Tapi Tak Sama, Ini Perbedaan Gejala Coronavirus dan Flu Biasa [Internet]. sehatq.com. 2020. Available from: <https://www.sehatq.com/artikel/ketahui-perbedaan-gejala-flu-biasa-dan-infeksi-corona-covid-19%0A%0A>