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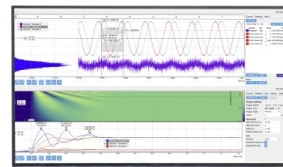
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Possibility Outbreak of Covid-19 Malaysia In Cases of Opening National Border: A Systematic Review Approach

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Abstract. Current coronavirus disease 2019 (COVID-19) pandemic pneumonia caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is spreading worldwide at an accelerated rate, with estimate reproductive number of 2–2.5, indicating that two or three individuals may be infected with index patient cases. It is totally risky for vulnerable groups and communities where there are insufficient healthcare facilities to treat the infection, causing severe public health emergency. This study further highlights the review of COVID-19 in reopening Malaysia's borders and bringing together the latest options about drafting to reopen the country. Malaysia's border controls have been tightened to deter imported cases, mitigate locally transmitted cases, and increase the capacity of Malaysian health care facilities. There is not a sample size of this study. The purpose of this writing is to examine the possible outbreak of COVID-19 Malaysia in the event of reopening the national border and the safety and security issue related to COVID-19. The literature search was conducted via google scholar in order to find out the suitable articles for reference. The aim of the study is to express an opinion that can be viewed by tertiary maternity units capable of treating those affected by the pandemic while ensuring the protection of the people at its core.

INTRODUCTION

Coronavirus disease (COVID-19) can be categorised as an infectious illness that originated from a new virus called Coronavirus. People that have strong immunisation, infected by COVID-19 will survive with moderate respiratory diseases. Only older people and people who are having a chronic disease, such as cardiovascular disease, diabetes, chronic respiratory diseases, and cancer will have a serious impact caused by the diseases [17]. The virus, which has started an outbreak in Wuhan, then entire of China, has spread quickly nationwide and globally as well [11]. In addition, a high rate of mortality could be associated with the outbreak of epidermis or flu as it could be categories as a disaster, as mentioned by Dasaklis, T. K., Pappis, C. P., & Rachaniotis, N. P[5]. This shows that COVID-19 is categorised as a disaster worldwide. Therefore, the WHO has declared a global emergency due to the outbreak of COVID-19.

Malaysia has been experiencing the increase cases of COVID-19 since March 2020, and the government has implemented some policy in order to deal with this outbreak of a pandemic. According to The Star [18], the movement control order (MCO) was imposed in Malaysia since the 18th of March 2020, to control and break down the infected chain of this epidemic. There have been an increasing trend in cases and death rate since March 2020, followed by the outbreak of epidermis, which has become more serious since April 2020. The principal objective of this study is to justify a timeline associated with the COVID-19 outbreak in Malaysia that may have contributed to the crisis. The study also sought an explanation to identify the possibility of COVID-19 outbreak in cases of opening national borders. Recommendation against pandemic crises for the future is also focused in this study. The Malaysian authorities need to respond to this case and strictly attempt to deal with mitigation policy. Through this scheme, Malaysia is taking coronavirus response measures and actions to reduce its impact on economic growth and ongoing outbreak.

Furthermore, this virus typically causes a large number of people of confirmed infection and failing death, especially in the urban population area. A timeline of COVID-19 pandemic to have reached Malaysia was confirmed in January 2020, when travellers arriving via Singapore from China were identified on the 25th of January, members of the public have been following the update on the infection closely. The latest information about COVID-19 attacking the world started to emerge at the end of 2019. This has led countries to slowly close their borders to avoid the existence of new clusters and prevent the spread of the virus. The Malaysian government has made every attempt to stop the spread of the COVID-19. The Ministry of Health believes that the transmission of the virus can take place more rapidly if we do not follow the policy, especially regarding the large scale gathering. As a result, a lack of social isolation and self-care, meeting, or being in a public place will increase the spread of this virus. In order to achieve a successful implementation of the movement control order, the Malaysian government has temporarily ordered all educational institutions, companies, and activities to halt for a while. It will reduce the chances of being infected or spreading, and with this closure, the government will be able to enforce the movement control order to the general public.

In addition, to ensure the successful implementation of the movement control order, Malaysia also has established the restriction to travel across the states or abroad and imposed restrictions on each state boundary to prevent movements. If any civilian violates this movement control order, they will be charged, and if found guilty, they could be sentenced to several days in jail and also get a fine. With this harsh and severe warning, Malaysia has successfully reduced the spread of the COVID-19 virus. Moreover, COVID-19 has had a negative impact on all the countries in the world, causing the government to close all international borders in the country. Action and advice from the Malaysian government will determine the motivation of the public during the outbreak. The prime minister has advised the Malaysian citizen to stay in their place to avoid COVID-19 diseases. This is because by staying at home, they can keep their family and themselves safe from the virus. Lastly, to prevent the risk of being infected with COVID-19, the government has advised the public to wear the mask and use hand sanitiser when going out. This action is very important to reduce the infection from COVID-19 as the virus will perish when it is being imposed to hand sanitiser or soap. In conclusion, to avoid being infected and getting the negative impact of COVID-19, people should take and follow government advice stay at home as a motivation for them to fight against COVID-19.

LITERATURE REVIEW

COVID-19 refers to one disease caused by SARS-CoV-2 (novel coronavirus). The first recorded cases are emerging in the city of Wuhan in Hubei province. When a patient is symptomatic, respiratory viruses typically become most contagious. It will affect the lower respiratory tract and present as pneumonia in peoples. There is an increasing body of evidence indicating that human-to-human transmission can occur during the COVID-19 asymptomatic incubation cycle, which estimated to be between 2 to 10 days, as mentioned by Prevention and Control of Diseases Centres (2020) and Rothe C. et al. [3]. This section of the research paper will discuss the timeline for the outbreak of COVID-19 globally. In late December 2019, the first incident has been reported in Wuhan City, China, which had infected at least 5.1 million people and killed approximately 330,000 people. At least 185 states have now approved and expanded in just five months, mentioned by the Holly Secon, Aylin Woodward & Dave Mosher [8]. The Municipal Health Commission of China had announced a cluster of pneumonia cases in Wuhan, Hubei Province on the 31st of December 2019 and finally identified a novel coronavirus, highlighted by the World Health Organization (WHO). After that, China managed to detect a new Coronavirus on the 7th of January 2020, as a source of the outbreak. This virus is known as a large family of viruses that have caused erratic stages of the disease, from common colds to severe fatal illnesses. Frequently found in animals, it can infect and transmit between humans. Sara Jerving [16] points out that SARS and MERS are caused by Coronavirus.

According to the Johns Hopkins university tracker, global cases position is at 5,102,573 cases with deaths cases to be reported at 332,924 as of the 21st of May 2020. On the 22nd of May 2020, Malaysia has 78 new cases, bringing the number of total cases to 7,137. One thousand one hundred sixty-three was recorded as active cases, nine people were treated in intensive care, and five in need of support from the ventilator, and also 63 cases have recovered, which bring the total number of recoveries to arrive at 5,859 cases. Malaysia is well aware of the new cases of death and took the cases of death to 115. New Zealand has stated one new case, passing the total number of plausible and confirmed cases to 1,504 cases while three people had recovered, which brings the total number of recoveries to 1,455 cases, and there are 28 active cases with one in hospital. Furthermore, Singapore has conveyed 614 new cases, which brings the total of cases to 30,426. Ukraine has reported 442 new cases and nine new deaths cases, conveying the overall numbers to 20,148 cases and 588 cases correspondingly, and a total of 6,585 patients have recovered. According to the timeline, we can see that the outbreak of COVID-19 has spread fast globally.

To prevent the outbreak transmission of COVID-19, the Chinese government is adopting direct guideline, which is a closed national border. The estimated median number of travel-free infections for mainland China, except Wuhan, was 7474 cases on the 22nd of January 2020. The overwhelming majority of infections have occurred in Wuhan. In order to examine the impact of the Wuhan travel ban, China authorities were facing pressure over this case and had imposed long-period travel restrictions, which starts on the 23rd of January. Besides, the entire airport is restricted not to allow open business. They have imposed a limit to the mobility of residents within mainland China via a data set that consists of the local population movement data within the Chinese provinces. As there has to be a reduction on COVID-19 in mainland China, except Wuhan city, that recorded nearly 10% at the end of January 2020, with a relative reduce infections or reduction the cases ranging from 1% to 58% across specific sites. In other words, relevant studies have shown clearly that within 4 to 5 days, the reduction degree is correlated with a mild delay of 1 to 6 days in the epidemic trajectory in mainland China. These findings have agreed with predictions from the combination of epidemiologic and individual mobility evidence to overcome the pandemic crisis issues. The possible outbreak of COVID-19 will happen with the opening of the Chinese border again. The country might experience a major outbreak if they have decided to reduce its border controls as China was seriously impacted by COVID-19. Therefore, they must prepare the domestic economic development strategy to boost the spending by residents of the community. Deegan [6] highlighted that the significant guiding power in the global economy since the 1950s is international tourism.

Pandemic is a crisis that has been experienced by human beings since many centuries ago. This section will be discussing on the previous solution to overcome and prevent the relevant pandemic crisis. First, this section will be discussing the solution to overcome the previous pandemic crisis. Tracking is one of the ways of monitoring the outbreak of a pandemic. A study by Vinay Kumar Jaina & Shishir Kumar [14] mentioned that tracking in social media such as Twitter has its potential opportunity in monitoring and observing the health of the public. The study shows the significance of social media in providing related information regarding the H1N1 pandemic, such as prevention technique. This shows that the accessibility of information via social media is a significant way to enhance awareness for preventing the outbreak of pandemic effectively. In addition, a crisis response plan requires to be addressed in order to prevent the outbreak of a pandemic. According to Br J Surg. [2], the pandemic response plan needs to be carried out by the government, especially by implementing a specific handling plan on hospitalised patients. The finding of the study shows a pandemic response plan for medical service that should be developed in advanced in order to handle the increasing trend of the pandemic. The plan should also carry the provision of staff training. It is because there will be an increasing demand for medical staff during the outbreak of a pandemic. It includes the staff in handling the transfer of patient, managing, and recognising patient that gets an infection on pandemic as well as other purposes. The response should also establish a team-based approach in managing the emergency medical service, recognition, and treatment on patients who demand emergency medical surgery requirements.

Lastly, post-pandemic preparedness is another way to solving the pandemic in the future. According to Martin Holmberg & Britta Lundgren [8] a post-pandemic plan should be carried out in terms of risk management on the pandemic, the vulnerability of pandemic, pandemic phases, and analysis the uncertain things faced during an outbreak of a pandemic. The preparedness of the plan could serve as a reference and helps the country to face a future pandemic.

METHODOLOGY

This study is using systematic qualitative research in data collection, as it is suitable for using and initially addressing the medical issues. According to Transfield et al. [5], systematic research is commonly used in research related to medical issues as this research serves as reducing bias and communicates between literature in a clear view.

According to Denyer & Neely [6], systematic research serves as a method that communicates literature or research paper between different scholars. Narrowing research on journals and reports could result in better transparency of outcome measures in the study as it helps in eliminating the error and unrelated information or data in the study. This study did a narrow scope of the manageable numbers of articles and reports. The following journal related to the study was selected, which includes the orthopaedic journal, journal of travel medicine, report that related to the COVID-19 positive case such as WHO and the medical journal New England. In order to narrow the scope of literature, some criteria had been applied in selecting the relevant journal article based on the different objectives of the study. The selection of these articles and journals shows the trends of COVID-19 in Malaysia in obtaining the relevant information to achieve the first study objective of COVID-19. Generally, there are four journals, and data had been selected in order to complete and achieve the first objective of the study. The narrowing scope of literature in selection helps reduce bias result in a study. The data or information related to the timelines of COVID-19 in Malaysia is interpreted by providing a relevant reason.

Besides, there have also been some criteria for the second objective of the study in order to make a point by narrowing the scope of literature in journals and articles of reducing the outbreak of COVID-19. Generally, there are six journal articles selected in order to complete the objective. This study also lays down the study scope to recommend against pandemic issues for the future. This section will select the journal or article showing the possible solution or plan that have succeeded in overcoming or reducing the infection of COVID-19. There are seventeen journal articles selected in order to achieve the accurate result of the third study objective. The study has also limited the date of publication of related literature by narrowing the scope of literature. Due to the nature of COVID-19 which started at the end of 2019, the related literature is found to have been published from 2019, and for 2020 the reporting will have portrayed a much worsen stories as it has become a global crisis. The date of publication is being narrowed as one of the strategies in the previous systematic research. According to Adhikari, S. P. et al. [1], the scoping date of published literature can help to select the relevant literature and therefore improving the validity of a study. Lastly, a qualitative description is a method that is commonly used in describing health care research. According to Robert Elliott and Ladislav Timulak [11], this analysis method is suitable in descriptive health care and nursing research. Therefore, this study utilises the analysis of data or information collected by a systematic review, which has been discussed in the previous chapter.

ANALYSIS FINDING

Generally, Fig. 1 illustrates the timeline of current Malaysia COVID-19 statistics. Based on Fig. 1, it indicates that Malaysia's Covid-19 cases have increased exponentially on the 15th of March 2020. The government has analysed the data until the 3rd of April 2020 from the view of the growth rate of confirmed cases. The growth rate average is recorded at 1.16.

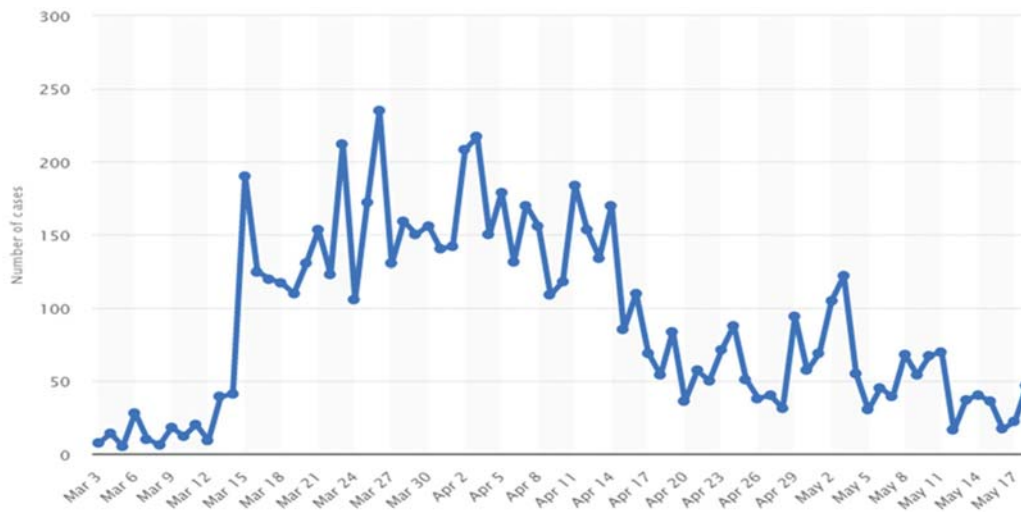


FIGURE 1. The growth rate in Malaysia of confirmed cases

On the other hand, it also clearly indicates that only a few days before MCO was enforced, the confirmed cases have drastically increased, which is rising to 80% and fell in growth rate but remained relatively high within the MCO periods. It also means that the MCO is an effective way to decrease sudden growth in confirmed cases of COVID-19. A further simulation analysis is done in order to provide more insight into the current phenomenon and pay further attention to it during the active cases deteriorating time.

TABLE 1. Cases COVID-19 in Malaysia from February to May 2020

Date	Confirmed COVID-19 cases	Recovered COVID-19 cases	Total Deaths
27 February	24	22	0
28 February	25	22	0
29 February	29	22	0
1 March	29	22	0
2 March	33	22	0
3 March	36	22	0
4 March	50	22	0
5 March	55	22	0
6 March	83	23	0
7 March	93	23	0
8 March	99	24	0
9 March	117	24	0
10 March	129	25	0
11 March	149	26	0
12 March	158	32	0
13 March	197	33	0
14 March	238	35	0
15 March	428	42	0
16 March	553	42	0
17 March	673	49	2
18 March	790	60	2
19 March	900	75	2
20 March	1,030	87	3
21 March	1,183	114	8
22 March	1,306	139	10
23 March	1,518	159	14
24 March	1,624	183	16
25 March	1,796	199	20
26 March	2,031	215	23
27 March	2,161	259	26
28 March	2,320	320	27
29 March	2,470	388	35
30 March	2,676	479	37
31 March	2,766	537	43
1 April	2,908	645	45
2 April	3,116	767	50
3 April	3,333	827	53
4 April	3,483	915	57
5 April	3,662	1,005	61
6 April	3,793	1,241	62
7 April	3,963	1,321	63
8 April	4,119	1,487	65
9 April	4,228	1,608	67
10 April	4,346	1,830	70
11 April	4,530	1,995	73
12 April	4,683	2,108	76
13 April	4,817	2,276	77
14 April	4,987	2,478	82
15 April	5,072	2,647	83

TABLE 1. Cases COVID-19 in Malaysia from February to May 2020 (Continued...).

Date	Confirmed COVID-19 cases	Recovered COVID-19 cases	Total Deaths
16 April	5,182	2,766	84
17 April	5,251	2,967	86
18 April	5,305	3,102	88
19 April	5,389	3,197	89
20 April	5,425	3,295	89
21 April	5,482	3,349	92
22 April	5,532	3,452	93
23 April	5,603	3,542	95
24 April	5,691	3,663	96
25 April	5,742	3,762	98
26 April	5,780	3,862	98
27 April	5,820	3,957	99
28 April	5,851	4,032	100
29 April	5,945	4,087	100
30 April	6,002	4,171	102
1 May	6,071	4,210	103
2 May	6,176	4,326	103
3 May	6,298	4,413	105
4 May	6,353	4,484	105
5 May	6,383	4,567	106
6 May	6,428	4,702	107
7 May	6,467	4,776	107
8 May	6,535	4,864	107
9 May	6,589	4,929	108
10 May	6,656	5,025	108
11 May	6,726	5,113	109
12 May	6,742	5,223	109
13 May	6,779	5,281	111
14 May	6,819	5,351	112
15 May	6,855	5,439	112
16 May	6,872	5,512	113
17 May	6,894	5,571	113
18 May	6,941	5,615	113
19 May	6,978	5,646	5,646
20 May	7,009	5,706	5,706
21 May	7,059	5,796	5,796
22 May	7,137	5,859	5,859
23 May	7,185	5,912	5,912

Table 1 indicates the daily case trends from the COVID-19 outbreak as of February until May. Confirmed cases were reported as new cases every day. There is a quantity growing every period. From Table 1, Malaysia COVID-19 has two deaths cases on the 17th of March.

Figure 2 clearly shows that the positive cases confirmed was higher than the recovery cases as of the 16th of April throughout the MCO period. There are 5,182 confirmed cases of COVID-19 and 84 cases deaths, while 2,766 cases had recovered. The positive cases confirmed has increased sharply and became 6,002 cases on the 30th of April, compared to 5182 positive cases confirmed on the 16th of April, and further to 6819 cases on the 14th of May. In fact, there are more than 7000 confirmed COVID-19 cases and 115 associated deaths, as of the 23rd of May 2020.

Although the government has restricted public movements, the range of symptoms of COVID-19 diseases have spread around, and transmission of the virus from a person to another person has significantly occurred. By reducing travelling activities, the public can also stop the virus from transmitting around. It can be highlighted that government policy plays an influential role in reducing the outbreak by taking some precautions for the public. The citizens of Malaysia can actively participate in the different aspects of preparation or prevention way, such as making sure that they have good respiratory hygiene, thoroughly clean their hands with hand sanitiser and others. COVID-19 cross border outbreaks are believed to be influenced by international travellers. This indicates that they have become a vector of Coronavirus regardless of the positive or negative outcomes after being examined by professionals in medical

or public health institution. Preventing COVID-19 transmission are often subject to strict localisation requirements and cross-border surveillance.

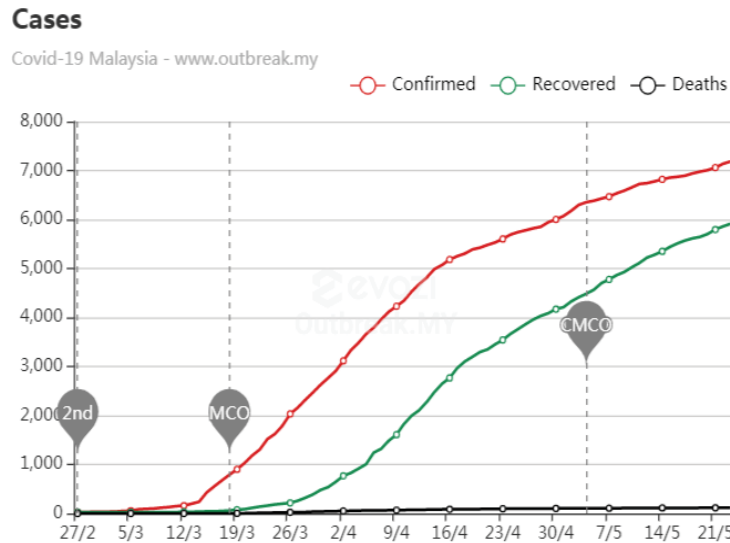


FIGURE 2. Cases COVID-19 in Malaysia [11]

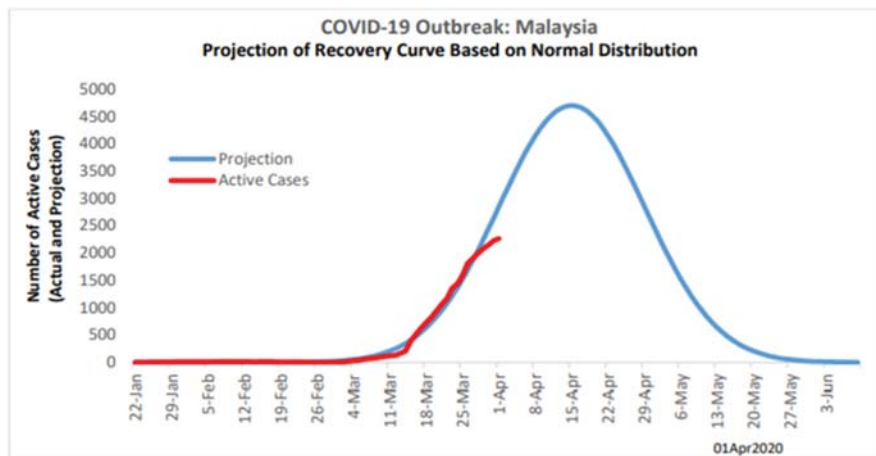


FIGURE 3. Recovery of active cases expected for Malaysia [16]

Figure 3 illustrates the predicted result of the recovery. Active cases are expected to reach a peak by mid-April. The current cases may be terminated before the end of May, subject to full MCO conformity. This is the simple solution that the $C(x)$ curve of symmetry before and after the peak. Nevertheless, this can be true at all the time, particularly in the case of uncertainties. Healthcare network flexibility, social isolation and MCO compliance are some uncertainties that may likely arise.

As of December 2019, the Chinese Office of the World Health Organization (WHO) has received the first reported cases in Wuhan with a population of more than 11 million. The virus that causes viral pneumonia in affected people and COVID-19 is recently identified as the viral coronavirus disease. This new pandemic began as an epidemic that outbreaks in China, but it is now a global crisis. The infection was probably originated from the seafood market, Wuhan, where dangerous animals include marmots, birds, rabbits, and other wild animals were illegally sold. Meanwhile, the transmission of this new Coronavirus could happen from animal to human, and the researcher believed that they were the sources of this new pandemic. A community mainly made up of seafood stallholders had acquired it through contact with animals. There are now more than 5,014,943 confirmed cases and 328,462 deaths, mentioned by John Hopkins University COVID-19 dashboard, which gathers information from national and international health

authorities. The infection has been detected in more than 200 countries and regions. The United States, Russia, and the United Kingdom are undergoing the most widely spread outbreaks, followed by Brazil, Spain, and Italy.

WHO has made the declaration for this new pandemic on the beginning of March. "WHO" is concerned on analysing the spread and frequency of this pandemic that has become a global crisis, said Tedros Adhanom Ghebreyesus, the Director-General. Even though WHO classifies Covid-19 as a "Public Health Emergency of International Concern" (PHEIC) on the 30th of January, it was hesitant to call it a pandemic. It is a term of identification that, if misapplied, can lead undue groundless recognition that the struggle is over and result in increased death rate, highlighted by Director-General of WHO. WHO announced that the official name of this pandemic as COVID-19 on the 22nd of February. This virus can result in the infection called Severe Acute Respiratory Syndrome Coronavirus 2 or Sars-CoV-2 in the short duration.

Lastly, coronaviruses are classified as a virus that could infect animals and humans as Covid-19 could result in diseases that is related to respiratory ranging from common flu to far more severe contaminations. The outbreak was of Extreme Acute Respiratory Syndrome (SARS) considerate as a well-known coronavirus outbreak, which was identified in China earlier. The virus continued to infect nearly 26 countries and resulted in a decrease in its incidence of Coronavirus. Infected countries have acted domestically and internationally in relation to the transmission and outbreak of the novel virus epidemic. They analyse the special effects of the Wuhan travel ban instituted and the global border controls policy adopted by several countries at the beginning of February 2020 (Fig. 4). The approximate average positive cases of contagions without the implementation of a travel restriction for mainland China on the 22nd of January 2020 was 7474, excluding Wuhan. The vast majority of confirmed cases have been 117,584 cases which occurred in Wuhan. In order to examine the impact of the Wuhan travel ban, the authority imposed travel restrictions in term of long-range travel, which started from the 23rd of January with the shutdown of the airport. Apart from that, the previous researchers have simulated policies and decisions in mainland China using data on consolidated and identified the local population movements on the city in China for February 2020.

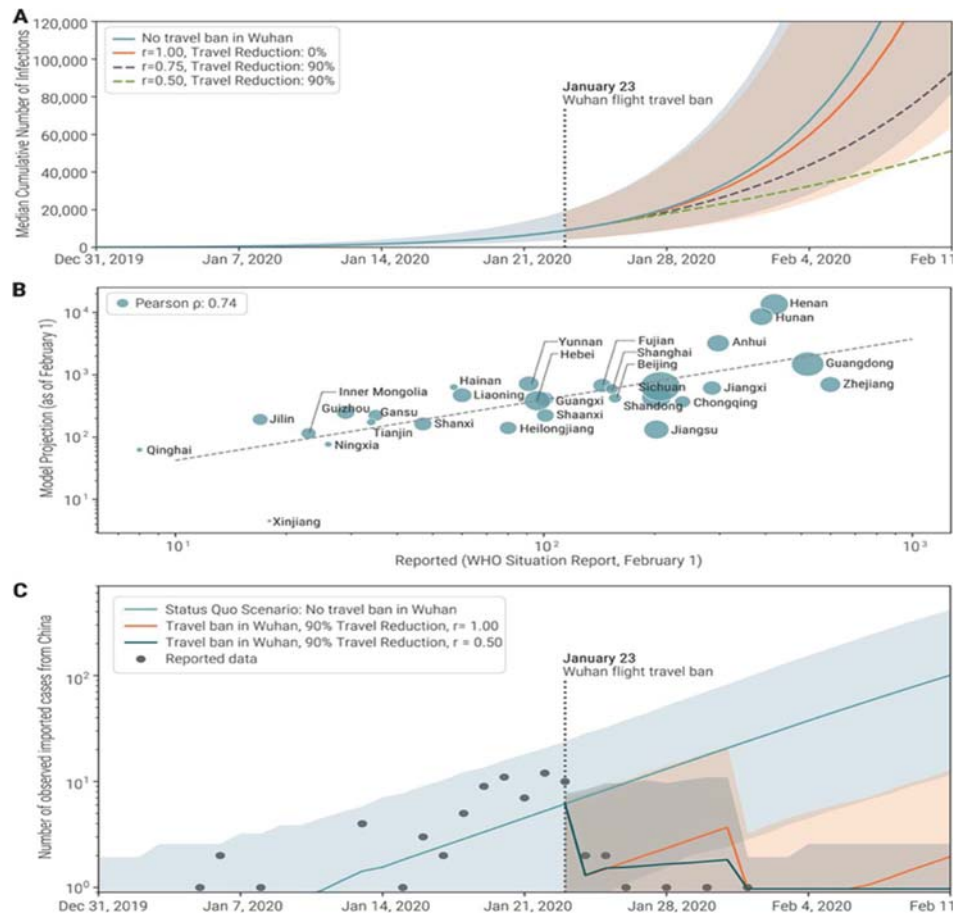


FIGURE 4. Impact of the Wuhan travel ban on COVID-19 epidemic [17]

Part A describes the growth path of this pandemic in a Chinese city that excludes Wuhan under the travel restriction from Wuhan city at the end of January 2020. The oscillations are also plotted for situations of concomitant decrease of acceleration r and global travel restrictions. In comparison, part (B) illustrates the correlation between some positive cases reported from the different region by WHO situation report and model estimates as of the 1st of February 2020. From part B, there are no regions that have reported zero positive cases by the date given. The circle size is proportional to the size of the population in each province. In addition, part (C) clearly estimates the daily imports of foreign cases observed for various modelling scenarios. Shaded areas comprise 99 per cent of the comparison ranges. The study has recorded the experimental results on imported cases with a travel history from China, categorised by date of arrival. The study also has presented simulations for the reduction of relative acceleration r . Economic indicators were being used for out-of-sample validation and were not used for numerical simulation after the 23rd of January 2020.

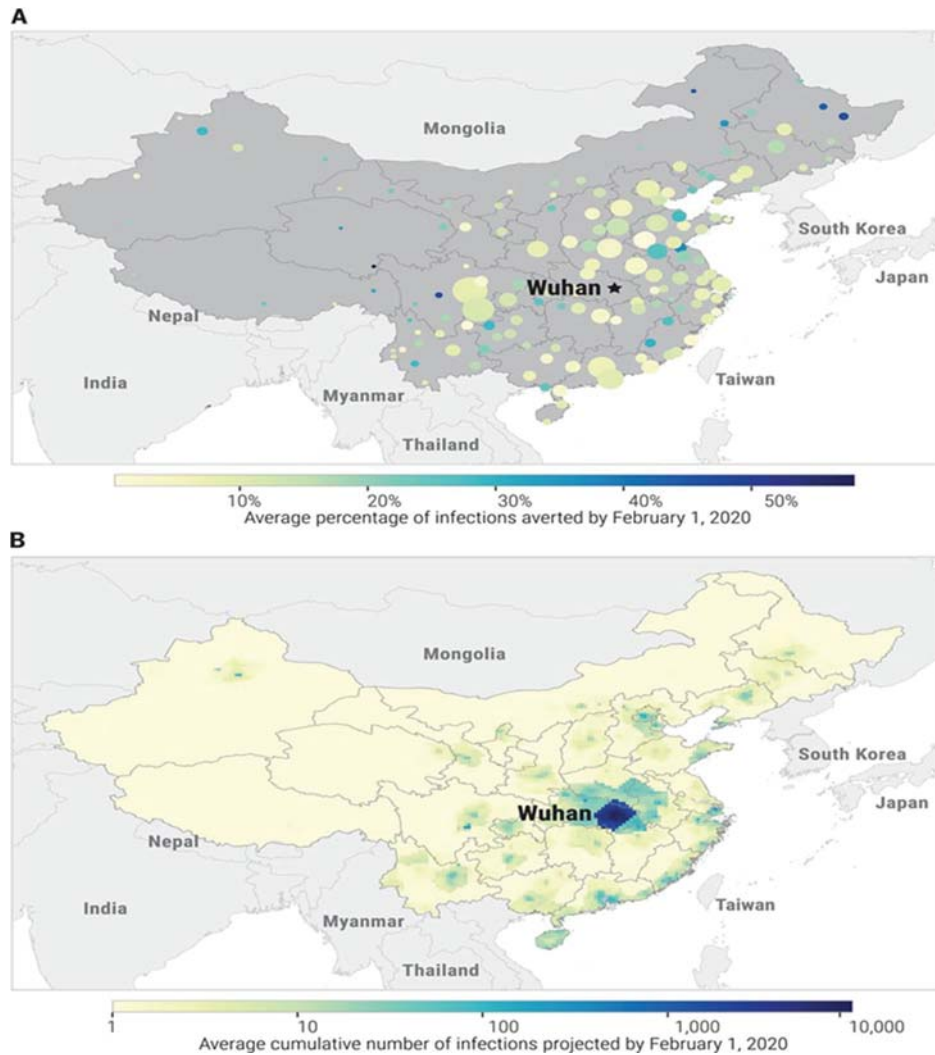


FIGURE 5. Impact of the travel ban by Wuhan on the incidents of COVID-19 in mainland China [17]

Part (A) in Fig. 5, highlights the comparative deterioration of mortality rate as of the 1st of February 2020. Circle colour indicates a comparable decline in the number of infections, while the size of the circular pattern corresponds to the population. On the other hand, part B clearly proposed the total positive cases on the same date, despite the implementation of travel bans in Wuhan. A scale of 0.25° by 0.25° geographical structure has been used in this model.

Case Importations

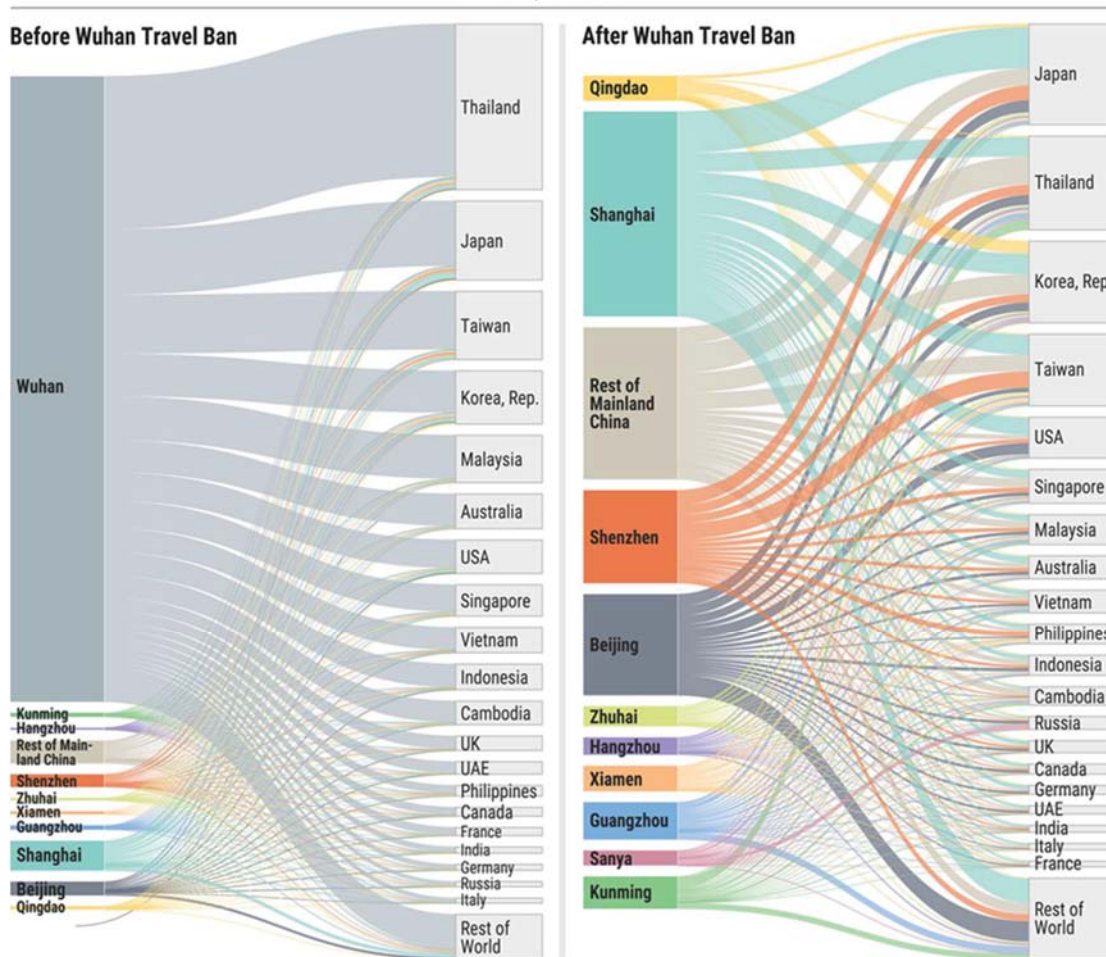


FIGURE 6. Effect of the way import case [17]

Figure 6 highlights the 20 countries with the greatest risk of imported cases. The left part is a concession to the confidence interval of import from 10 cities in China with the highest positive case of COVID-19 (plus the rest of mainland China) on January 2020. While the right part illustrates the cases of COVID-19 after the implementation of Wuhan travel ban from the end of January to the beginning of March 2020.

This section will highlight the significant impact of COVID-19 cases in Mainland China towards 20 countries that had recorded the highest imported cases before and after the travel ban was imposed on local authority of Wuhan. There are top 10 locations ranged from less to relatively high risk. It includes Shanghai (28.1%), Beijing (14%), Thailand (22.8% before the-ban, 13% post-ban), Republic of Korea (7.4% before the-ban, 11.3% post-ban), Taiwan (9.5% before the-ban, 10% post-ban), the United States (4.7% before the-ban, 5.7% post-ban) and Shenzhen (12.8%) – accounted for at least 80% of globally isolates collected. Japan (11 per cent pre-ban, 13.9 per cent post-ban) are the countries precisely of a high risk of importation after the implementation travel ban in Wuhan.

There were 59 airline companies that have cancelled their flights to mainland China and some countries such as the United States, Russia, Italy and other since early of February 2020. It is challenging for those countries with the implementation of travel restrictions to quantify precisely the degree of traffic lessening executed by these steps. For this purpose, we have studied two foremost situations in which international travel restrictions result in a 40-and 90-per cent expected decline in traffic to and from mainland China. A comparative decline in transmitting could be accomplished through early isolation and identification of cases, depressive symptoms, and knowledge and understanding of the disease in the population.

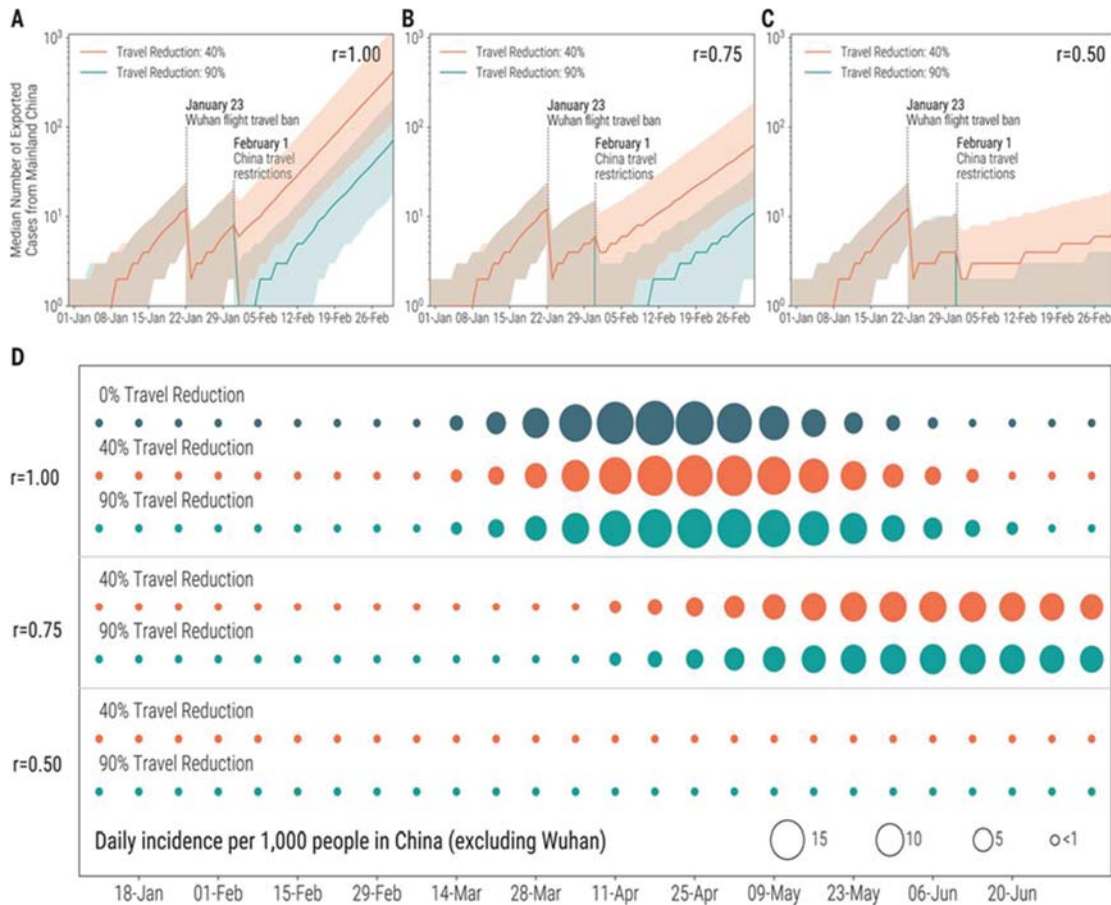


FIGURE 7. Deterioration of international travel restrictions and transferability [17]

The overall average number of foreign-made infections from Mainland China with no decrease in transmutability with a travel deterioration of 40 and 90 per cent as presented in Fig. 7. (A) A similar as (B) for the mild reduction scenario ($r = 0.75$). (C) is also similar to (A), for a compelling decrease scenario ($r = 0.5$). Shaded areas represent 90% of the C.I.s. (D) describes the infection rate of disease in mainland China, except Wuhan, for the scenarios set out in (A) to (C). In conclusion, previous research on the outbreak of COVID-19 and the forecasting evaluation of travel restriction can help in supporting the local and international public health response planning agencies. On the 23rd of January 2020, this pandemic has spread to other cities in China.

The travel quarantine imposed in Wuhan has reduced the spread of this pandemic to other regions of Mainland China. This finding is compatible with the conclusions of separate studies on SARS-CoV-2 diffusion in mainland China. The Wuhan travel ban was initially effective in decreasing imported cases. In contrast, the number of isolate cases collected outside of mainland China will begin to increase within 2 to 3 weeks. In addition, the prediction study shows that additional travel restrictions (up to 90% of traffic) have only an unassertive consequence unless they are coupled with public health involvements and behavioural alterations that can reduce the significant risk of transmission of diseases. Our findings provide the data with potential uses for defining optimised quarantine schemes and survivability policies, including the local and international dimensions of the COVID-19 epidemic.

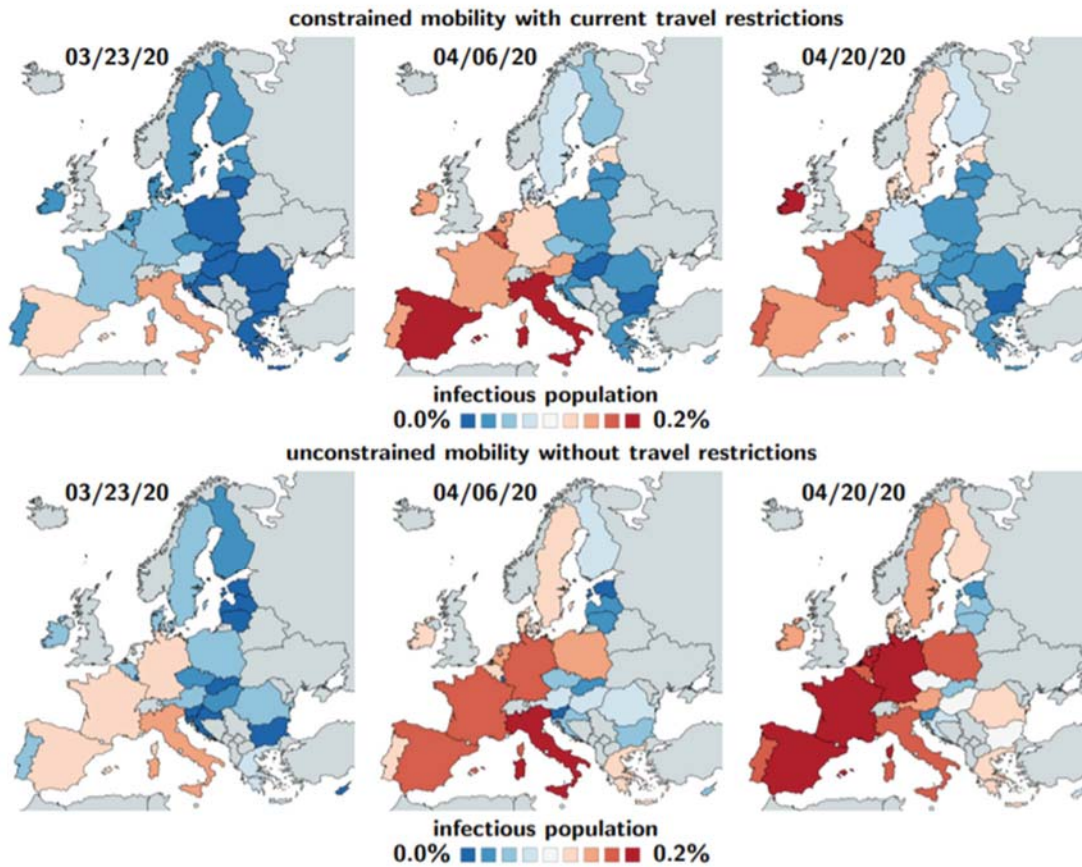


FIGURE 8. The effect of travel restriction on the mobility of people across Europe [17]

Figure 8 shows the simulation by scholars in Europe regarding the spreading of COVID-19 across Europe. The top 3 diagrams indicate the spreading of COVID-19 across Europe from March with travel restriction within Europe. At the same time, the 3-bottom diagrams show the outbreak of COVID-19 without the travel restriction between the country in Europe. As a result of the top 3 diagram stimulation, it shows the less spreading of this pandemic among European countries that have not restricted travel among the country. On the other hand, the 3-bottom diagram shows the significant of COVID-19 in the spread of this pandemic among the community in Europe without travel restriction. In a nutshell, there is significant in controlling the mobility of people in order to reduce the infection among European countries.

This section of the research paper will discuss the effect of travel restriction on the spread of COVID-19 to Malaysia. According to Fig. 8, it shows signs of travel restriction in control the spreading of COVID-19 among Europe country. Based on the existing situation nowadays, the situation of COVID -19 outbreak in the world is still in a worse condition. To reduce the risk of the COVID-19 outbreak, China has implemented a travel restriction for its citizen. The action by China has brought both positive and negative impact on their country. Each country can take China as an example before implementing its travel restriction since this action brings many impacts to the country in different ways.

First, China has implemented a long-range travel restriction (airport shutdown). However, the travel restrictions are only for Wuhan, and no travel restrictions are implemented in mainland China. Due to the action taken by China, COVID-19 cases may well increase again in mainland China. After analysing the cases in China, Malaysia should not do the same thing because this will increase the risk of COVID-19 in Malaysia. If Malaysia has taken the same action done by China, Malaysia will face the same situation as China. In order to ensure the safety and health of Malaysia's citizens, Malaysia should implement the travel restrictions to all states in Malaysia and should not open the border. In cases of European countries, they have implemented the travel restriction. As the stimulation result in Fig. 6 shows

the significance of travel restriction in spreading this pandemic. As the simulation also shows the infection resulting from the origin of the pandemic from Italy to other countries in Europe.

Moreover, the relative risk of import case has been reduced from mainland China to other countries because of the travel ban in Wuhan. However, after a few weeks, the number of cases began to increase because of the international importation. Malaysia should not open the border and close both domestic and international travel, as this will bring benefit to Malaysia. In cases of Europe country, the travel ban could control the spread of the pandemic to another country which is less connected with this pandemic such as Estonia, Slovakia and other. Consequently, Malaysia will reduce both domestic and international case importation. This is because if Malaysia only implements one travel ban, the case of importation of COVID-19 will increase. To reduce the risk of increasing the case of both domestic and national case importation, Malaysia should implement both domestic and international travel ban. By doing this, Malaysia can keep the country and its citizens safe.

Lastly, after facing to grow up in the case of importation of COVID-19, China finally has implemented Government-issued travel restrictions. These travel restrictions are for the international flight. After imposing the travel ban, the transmissibility reduction can be achieved. Taking China as an example, Malaysia should not issue the international travel ban later because this will bring a negative impact on the country. If Malaysia has taken the same action as China, this will cause an increase in cases in the transmissibility of COVID-19 since the international case of COVID-19 will begin to rise faster day by day. In turn, it will cause an increase in the case of COVID-19 in all the countries in Malaysia. To avoid the case of COVID-19 from spreading so fast, Malaysia should take a measurable action so that this pandemic can be controlled.

TABLE 2. Summary to accompany the author's present recommendation against the future pandemic crisis

Author of journal	Description of recommendation to overcome the pandemic crisis on future
Bashshur, R. et al. (2020) Ohannessian, R. et al. (2020) Prasad, A. et.al (2020)	Telemedicine approach in dealing with non-pandemic diseases
Emanuel.et.al (2020) White D.B. et al. (2020)	Fair allocation in relative medicine equipment
Organisation W.H (2020) Vernon J Lee. (2020)	Crisis respond plan in dealing with spreading of the pandemic among the community.

This section will be discussing the recommendation against the pandemic crisis for the future. Generally, there are three recommendations that have been suggested based on a review on a related journal article which includes telemedicine approach in dealing with non-pandemic disease, fair allocation on medical equipment and crisis resonant in dealing with spreading of the pandemic among the community (Table 2). Bashshur, R. et al. [2] mentioned that telemedicine is a measure that can help in dealing with the outbreak of pandemic in the future. Telemedicine could help in dealing with the current shortage or dilemma of health care system globally. The application of this method could enhance safety social distance between the doctor and patient who got affected by COVID-19. During the consultancy section via telemedicine service, the clinician must abide by the current medical system and ensure the quality of consultancy as well.

Besides, this study also addresses the organised health care system that should avoid developing a new structure for telemedicine, excluding some necessary centralised function, includes the training, maintenance, and support. Indeed, telemedicine should be decentralised in order to allow doctors or medical consultants to give instruction and consultant to patients in a safe distance. Ohanesian. R. et al. [13] highlighted a new telemedicine framework that has been carried out in dealing with the pandemic outbreak as telemedicine consultant service would be given to those who are asymptomatic but did have contact with patients who got infected with COVID-19 as well as those who cannot seek medical consultant service in a hospital. As this has been applied by a lot of countries in the world including China, the United States of America, and the United Kingdom. The study of Prasad et al. [15], has mentioned that telemedicine could be applied in consultancy on a patient and head cancer. The physicians and patients could involve in consultancy and physical exams on the oral cavity, salivary glands, and oropharynx in order to identify the patient cancer level.

Next, fair allocation in health care equipment is another method that we can learn from the outbreak of the COVID-19. Fair allocation in medical equipment follows the ethical values in dealing with the COVID-19 pandemic. There are some ethical values and guiding principles to guide in the usage of uncommon health care properties in the COVID-19 pandemic, which include maximising the benefit of resources, treat people similarly, sponsor and reward influential

value and give more attention to heavy cases. According to Emanuel et al [7], maximising the benefit of health care resources can save more lives by receiving the highest priority of patients. This can be applied as a measurement in selecting the patient who suffers more in dealing with COVID-19. Apart from that, the priority of usage scarce health care resources is given to researcher and frontline worker or other to promote the most effective usage of scarce health care resources. Treating people fairly is not applied and not suggested in handling the health care resources in order to give priority to suspect patients. It could help in preventing the spreading of COVID-19 pandemic. According to White et al., multiple criteria have been applied to a single tool in dealing with scarce health care resources. It includes giving priority to those who have a high opportunity to be discharged.

Lastly, an effective crisis response plan needs to be carried out in managing the outbreak of a pandemic. According to the organisation W.H [17], the crisis action that has been done by WHO has identified the critical preparedness, action in dealing with this crisis since March 2020. The WHO declares some immediate action to slow and stop the transmission, prevent the spreading rates as well as providing optimal care for those infected seriously. WHO has classified the country into four categories based on the reported COVID-19 cases, which includes the country with no case, sporadic cases, countries that experience common explore, and the countries that are facing the transmission among the community. A lot of countries have done a crisis response plan immediately, and it is successful in controlling the outbreak of a pandemic. Vernon J Lee. [18] point out that Singapore has in place a crisis response plan, which involves surveillance and containment measures in order to identify the many potential causes.

Singapore government is also involved in controlling the national border and controlling the community and social approach. As a result, the measure to interrupt the transmission of COVID-19 very effectively. Therefore, a crisis response plan should be carried out immediately in dealing with the pandemic crisis. On the other hand, the ineffective crisis plan that runs by the China government in the initial outbreak of COVID-19. The failure of the Chinese government in response crisis immediately and handling the human mobility between the cities of China in an earlier outbreak of COVID-19, such as at Wuhan. This situation is getting worst in which the COVID-19 was initially an outbreak on Chinese Lunar New Year, and there is a growing trend travelling o between cities during the period.

DISCUSSION AND CONCLUSION

Malaysia is a country that is suffering from an outbreak of COVID-19 since February 2020. The evidence shows the epidemic has been spreading from one state to another in Malaysia. Based on Fig. 1, as of May, the cases per day were decreasing significantly from 142 cases on the 2nd of April 2020, to 47 cases per day. It should be the significance of movement control order (MCO) and CMCO in preventing the outbreak of COVID-19 among the community and imported cases as well. Based on Fig. 3, Salim et al. [16] had predicted this pandemic would reach a peak in the middle of April. As these policies have been allowed, Malaysia is likely to control the number of COVID-19 cases, which projected a peak in mid-April despite Malaysia had restricted travel and quarantine in order to postpone disease transmission to other areas of Malaysia. This finding is reliable with the results of dissimilar research on the dissemination of COVID-19.

In a nutshell, the Malaysia government needs to implement a great effort in term of controlling the spreading of COVID-19 from March until May. The travel restrictions to COVID-19-affected areas will have unassertive effects, and transmission control measures will have the highest advantage to mitigate the disease. The results provide data with possible use and application for identifying efficient restraint outlines and mitigation strategies, including local and international COVID-19 dimensions. Based on Fig. 2, Malaysia is facing the continuously increasing COVID-19 cases from March until May. The cases have been increasing from 55 positive cases to 7059 cases, while the total number of patients who have recovered from the virus is 5,796 cases on the 21st of May 2020. It shows the ability to address a crisis objectively in spreading among the community in Malaysia. Figure 2 also shows the effectiveness of MCO and CMCO in preventing the spread of COVID-19 in Malaysia. MCO and CMCO have been flattening the confirmed cases and successfully increased the daily recovery patient. It supports the decreasing cases per daily, which showed in Fig. 1, especially from April to May.

Malaysia is suffering from the outbreak of COVID-19 since the end of March 2020. According to Fig. 5, Malaysia is facing the continuously increasing cases from March until May. The cases have been increasing from 55 positive cases to 7,059 on the 21st of March 2020. It shows the ability of this pandemic is spreading among the community in Malaysia. Figure 5 also shows the effectiveness of MCO and CMCO in preventing the COVID-19 spreading in Malaysia as MCO and CMCO had been flattening the confirmed COVID-19 cases and increasing the daily recovery patient. It supports the decreasing cases daily, which showed in Fig. 4 from April to May. Based on Fig. 4, the cases per day in May were decreasing significantly from 142 cases on the 2nd of April 2020, to 47 C cases per day. It shows

the significant of MCO and CMCO in preventing the outbreak of COVID-19 among the community and imported cases as well. According to Fig. 6, Salim et al. (2020) had predicted this pandemic would reach a peak in the middle of April. These policies had been allowing Malaysia effectively to control the COVID-19 cases, which projected a peak in the middle of April. Malaysia government made a great effort in terms of controlling the spreading of COVID-19 among March until May.

The travel ban has been issued by the European country and China government after this pandemic became seriously. In cases of China government, the travel restriction serves as a significant point in breaking the spreading chain of COVID-19. Taking the lessons of China and European country, Malaysia should not issue the travel ban policy in the future to avoid the negative impact on the country. However, the Malaysia government need to control the imported cases from abroad for control the international transmission of this pandemic that suffering by Europe country. After facing this pandemic, there have some recommendation suggested in order to face future pandemic crisis includes telemedicine to apply a safety social distance in order to reduce the possibility of an infected pandemic. Apart from that, a fair allocation is also suggested in order to give priority to those who riskier or seriously as well as frontlines workers for preventing the future spreading of the pandemic among the community. The last recommendation is an immediate crisis response plan should be carried out in an earlier stage of the pandemic as it could break the possibility of remission of the pandemic among the community.

COVID-19 in Malaysia has been a heated discussion and of deep social concern to everyone where this pandemic is impacting the mental health of people worldwide, giving lessons to the public in strikingly different forms and at varying levels of severity. Specifically, the pandemic directly poses questions of vulnerability, as this pandemic will unreasonably much more impact those people with a lower salary. COVID-19 also affects the behavioural demand reactions of resident's short term and longer-term, especially business travel. This study suggests exploring the possibility of reopening the country's borders from COVID-19 for the people assessed at lower risk with the safeguard of community transmission. The key of this study is to give an opinion and guides the public health response to reopening the Malaysia border with an efficient system to help detect and manage the COVID-19 issues in a way to help them find out people to take responsibility for their actions.

Besides, COVID-19 also gives the Malaysian policymakers and researchers with compelling lessons regarding the consequences of global changes. The challenge now lies in collectively learning from this global tragedy to accelerate the sustainable country transformation. In this study, all data were obtained to investigate this problem. The data obtained from this crisis has become a source of investigation. Moreover, the potential of a closed border can enhance safety and security issues. Safety and security issues are important and need to be addressed in avoiding the issues and give more awareness to some parties. The changing of result COVID-19 is hard to forecast, and it affects daily activities. This study has a few limitations. The sources that were collected for this study came from the secondary data; hence the results of the data in research findings have been confirmed, and that may not be generalisable within specific industries to minister. Therefore, we could do more future research on a strategy to address the effects of stigma on people in measuring the COVID-19 response. This will help to prevent the COVID-19 and track its presence more efficiently by examining the outlines and trends of the cases.

Last but not least, there is a crucial requirement not to return to business-as-usual in reopening the border when the pandemic over with the scale of the COVID-19 pandemic. This is because restricted control command is important to help reduce the overall number of people infected with COVID-19 and to safeguard the people's health facilities.

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