

# Policy Disparities in Fighting COVID-19 Among Japan, Italy, Singapore and China

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## Research

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# Abstract

**Objective** This study systematically summarizes the COVID-19 prevention and control policies of Japan, Italy, China and Singapore in order to provide policy basis for other countries currently coping with the COVID-19 pandemic.

**Methods** This study summarizes the epidemic prevention and control policies in Japan, Italy, China, and Singapore, and analyzes the effects of policies in the four countries using official statistics.

**Results** As of May 27, 2020, the growth trend of new cases in Japan, Italy, China and Singapore has all stabilized. However, the cumulative number of confirmed cases (231139) and case-fatality rate (14.3%) in Italy far exceeded those in the other three countries, and the effect of epidemic control was inferior. Singapore began to experience a domestic resurgence after April 5, with a cumulative number of confirmed cases reaching 32876, but the case-fatality rate remained extremely low (0.1%). The growth of cumulative confirmed cases in China (84547) is almost stagnant, and the case-fatality rate is low (5.5%). The growth of cumulative confirmed cases in Japan (16661) increased slowly, and the case-fatality rate (4.8%) was slightly lower than that in China.

**Conclusion** This study divides the epidemic prevention and control policies of the four countries into two categories: the blocking measures taken by China and Singapore, and the mitigation measures taken by Japan and Italy. According to the results of epidemic control in the four countries, we can conclude that the blocking measures are more effective. Pay attention to the admission of mild patients and cases tracking as the core strategy of blocking measures, which can be considered in countries all over the world.

## 1 Introduction

As of 27 May 2020, a total of 5,660,180 cases persons in global were reported to be infected by SARS-CoV-2, which causes coronavirus disease 2019 (COVID-19), a disease that had led to more than 350,000 deaths.<sup>1</sup> COVID-19 has spread rapidly around the world, affecting every country on the economy, politics and cultural industries. On 11 March 2020, the World Health Organization (WHO) announced that COVID-19 should be characterized as pandemic.<sup>2</sup> Different interventions have been put in place by various countries to slow the spread of COVID-19 according to their national conditions. In this study, four representative countries, Japan, Italy, China and Singapore, were selected to summarize the key epidemic control measures adopted by each country. Combined with the epidemic data of the four countries, the epidemic control effect was analyzed. This study explores the core of the epidemic control measures in various countries in order to provide policy basis for other countries currently coping with the COVID-19 pandemic.

## 2 Approaches Of Epidemic Control In Various Countries

### 2.1 Japan's Approach

As shown in table 1, this study summarizes Japan's COVID-19 epidemic prevention and control policies into six items. The overall epidemic response in Japan is mainly divided into three phase. Phase 1 of Japan's response was to prevent cases from being imported into Japan at an early stage when the virus had not yet spread in the country. Japanese authorities focused on border control measures and issued outbreak risk warnings to the public. Phase 2 was marked by the "Basic Policy on COVID-19 Countermeasures" issued on 26 February 2020. The basic policy also reflected Japan's overall epidemic precautionary ideas.<sup>3</sup> On the domestic confirmed case, Japan implemented a strategy of admitting severe cases and asking mild cases to stay in isolation at home. Japan also planned to raise SARS-CoV-2 RT-PCR testing standards and reduce health observations of close contacts. Phase 3 focused on practicing social distancing. The Prime Minister issued an emergency declaration on April 7, requiring citizens to avoid unnecessary non-urgent outings, and all regions could expropriate pharmaceuticals. But the declaration is a request, not a mandatory one. It mainly depended on the consciousness and self-discipline of the Japanese nationals. Japan has entered a new stage of national epidemic prevention.

## **2.2 Italy's Approach**

As shown in table 2, this study summarizes Italy's COVID-19 epidemic prevention and control policies into four items. The overall epidemic response in Italy is mainly divided into three phase. Phase 1 focused on border control prevention. Italy cut off all flights with China as early as 31 January 2020, becoming the first European country to implement the precautionary measure, and set up a special agency at the national level to promote epidemic response. At the same time, the Italian government established the COVID-19 case surveillance system, attaching importance to SARS-CoV-2 RT-PCR testing of suspected cases.

On 20 February 2020, a severe case of COVID-19 was diagnosed in northern Italy's Lombardy region in a man (patient 1) in his 30s who had no history of possible exposure abroad. During the next 24 hours, 36 additional cases were confirmed, without links to patient 1 or previously identified positive cases already in the country.<sup>4</sup> Phase 2 was to take radical lockdown measures with the advent of patient 1. Italy divided the country into different levels and takes different precautions according to different levels to prevent the spread of the epidemic. On March 10, Italy imposed a lockdown with prohibiting all public gatherings and suspending all sports events in the whole country. But whether it is a key epidemic area or other areas, Italy attached great importance to treat severe cases. The authorities required that patients who are asymptomatic and mild symptoms would be asked to stay in isolation at home. The Italian Ministry of Health also issued more stringent testing policies on 25 February 2020. Testing was limited for asymptomatic people or those who had limited mild symptoms.<sup>5</sup> Phase 3 gradually relaxed precautionary measures after May 3, and entered ongoing epidemic prevention and control phase.

## **2.3 China's Approach**

In late December 2019, COVID-19 outbreak in Wuhan, Hubei Province, China. As the first country hit by COVID-19, China had initiated extraordinary community containment effort in history. Table 3 shows the

key epidemic prevention and control policies adopted by China. Marked by locking down Wuhan on 23 January 2020, China launched an unprecedented large-scale public health measures. It is a unique feature of the Chinese political system to establish a wartime working mechanism led by the central government and mobilize the whole country to fight the epidemic. China's core measures are to strictly observe the principle of early cases detection, reporting, quarantine and treatment, and put four categories of people – confirmed cases, suspected cases, febrile patients who might be carriers, and close contacts – under classified management in designated facilities. These two measures effectively isolate the source of infection and cut off the route of transmission while preventing cross-infection. China had made every effort to track down, isolate, and treat COVID-19 patients to curb the spread of the epidemic in nationwide. On April 7, 2020, Wuhan lifted lockdown, and nationwide epidemic prevention and control was being conducted on an ongoing basis.

## **2.4 Singapore's Approach**

As shown in table 4, this study summarizes Singapore's COVID-19 epidemic prevention and control policies into seven items. The overall epidemic response in Singapore is mainly divided into three phase. (Table 4) Phase 1 focused on border control prevention to prevent inbound cases. Singaporean government attached importance to the isolation of early-detected cases and close contacts, and identified Wuhan-related personnel by the primary health care self-government system. With the advent of local human-to-human cases in Singapore on 4 February 2020, the number of confirmed cases in Singapore was gradually increasing. Phase 2 focused on ongoing community and social measures, relative normalcy of day-to-day life had been maintained in Singapore. The Singapore government established a strict case surveillance system, and SARS-CoV-2 RT-PCR laboratory testing was scaled up rapidly to all public hospitals.<sup>6</sup> Accompanied by the mature primary care setting, the Singaporean government implemented hierarchical diagnosis in the country to ensure the treatment of mild and severe patients while preventing cross-infection. Phase 3 was to prevent domestic resurgence in infections as the number of foreign labor dormitory cases had increased significantly.<sup>7</sup> The Singapore government has tightened a series of epidemic prevention and control measures since April 7, implementing school closures and other major social-distancing measures to contain resurgence.

## **3 Results Of Epidemic Prevention And Control In The Four Countries**

Figure 1 shows the trend of cumulative confirmed cases in the four countries of Japan, Italy, China, and Singapore from 23 January 2020 to 27 May 2020. Since mid-February, the cumulative number of COVID-19 cases has been declining in China and maintained a stable trend for a long time. China has been successful at containing the outbreak. In Japan, the cumulative number of confirmed cases increased slowly in the early stage of phase1 and phase 2 and increased rapidly between late-April and early-May, 2020. Since late-May, the cumulative growth rate of confirmed cases slowed down, and the epidemic situation gradually entered a stable situation. Before April 1, the cumulative number of confirmed cases in Singapore did not exceed 1000, and the epidemic situation was well controlled. Since April 5, it has experienced domestic resurgence in infections, the number of confirmed cases has increased rapidly, and

the cumulative number of confirmed cases has gradually exceeded that of Japan. Although the epidemic in Italy emerged relatively late, the number of confirmed cases continued to grow rapidly, until after April 30, the growth rate of confirmed cases slowed down and the epidemic showed a trend of alleviation.

Figure 2, Figure 3, Figure 4, and Figure 5 respectively show the trend of daily new cases and new deaths since the emergence of COVID-19 in the four countries, and the epidemic prevention and control phases in the four countries. The number of new deaths in Japan from Phase 1 to Phase 3 remained at a relatively low level. The curve of daily new cases reflected an upward trend with fluctuations, but the number of new cases dropped significantly in the late period of phase 3. The overall trend of new deaths in Italy was similar to that of daily new cases. The curve rose rapidly in the early period of phase 2, slowed down gradually in the later period, and entered a steady trend in phase 3. Compared with other countries, Italy has a larger number of deaths and confirmed cases. China is fast in controlling the epidemic, keeping the number of new cases and deaths at a low level and maintaining a steady trend for a long time in the early period of nationwide prevention and control. In phase 1 and phase 2, the number of newly confirmed cases in Singapore was relatively small, the growth rate is slow. The number of newly confirmed cases increased rapidly in the early period of phase 3, but also showed a downward trend in the late phase 3. The number of new deaths had always remained extremely low from phase 1 to phase 3.

Figure 6 shows the case-fatality rate (deaths/confirmed cases) of Japan, Italy, China and Singapore as of May 27, 2020. The overall case-fatality rate in Italy (14.3%) is substantially higher than in Japan, China, and Singapore. The case-fatality rate in Japan (4.5%) is slightly lower than that in China (5.5%). The case-fatality rate in Singapore is extremely low at 0.1%.

## 4 Discussion

There are differences in the epidemic situation, medical system, precautionary principles, and cultural customs in the four countries of Japan, Italy, China and Singapore—the prevention and control policies adopted for the COVID-19 epidemic are also different. Depending on the nature of the intervention, this study divides the epidemic prevention and control policies of the four countries into two categories: the blocking measures taken by China and Singapore, and the mitigation measures taken by Japan and Italy.

### 4.1 Blocking measures

China, which had adopted blocking measures, attached more importance to the implementation of more aggressive closed management measures. After the outbreak, the Chinese government decisively locked down Wuhan city to prevent the spread of infectious to areas outside Wuhan and reduce the spread of the virus. Subsequently, China implemented large-scale precautions nationwide, including school lockdown, work suspension, and production suspension, and community closed management to restrict national activities. These measures also quickly stopped the spread of the virus and protected vulnerable populations.<sup>8</sup>

These radical closed management measures have promoted the core measures to better exert control effects. The core of the blocking measures is to treat mild patients and track cases. The Chinese government conducted nationwide screening of confirmed patients, suspected patients, febrile patients and close contacts, performed cases admission and isolation, and strived to ensure that all COVID-19 patients were admitted and all relevant personnel were screened. In this way, the source of infection is effectively isolated and the transmission route is cut off.

Although Singapore's aggressive closed management measures were only taken after the resurgence in infections, the government attached great importance to extensive testing and case tracking in Phases 1 and 2. The government established a strict case surveillance system, and the laboratory enhanced the SARS-CoV-2 RT-PCR testing capabilities. The primary health care system also cooperated with the implementation of case monitoring. The government had issued a law on home quarantine, which ensured that the relevant personnel can strictly stay at home. In terms of case admission, Singapore has a mature primary public health system, implementing a hierarchical diagnosis during the outbreak, decentralized treatment for mild and severe cases, and alleviating medical runs.

Judged from the effects of epidemic prevention and control in China and Singapore, the implementation of blocking measures has been effective. Through large-scale screening, COVID-19 cases can be fully discovered, early isolated, and mild and severe patients can be comprehensive treated, the case-fatality rate of COVID-19 can be effectively controlled, and the spread of new coronavirus can be finally reducing.

## **4.2 Mitigation measures**

The mitigation measures are taken to slow down the spread of COVID-19 so that it can spread slowly in a controlled state, with focus on the treatment of severe cases. At the same time, in order to avoid medical runs, social-distancing are also taken when necessary. However, it does not pay enough attention to the early detection of all cases and the investigation of close contacts, nor the treatment of mild patients.

The countermeasure implemented in Japan that admitted severe cases and asked mild cases to stay at home is an important feature of the mitigation measures. Japan had also raised testing standards and reduced the health observations of close contacts. The goal is to slow the spread of the epidemic as much as possible, to suppress the peak of the incidence curves, to ensure that the health care system will not collapse due to excessive shocks, and to control domestic health losses to a minimum.<sup>3</sup> The goal requires the efforts of all residents. Most of the policies issued by the Japanese government for COVID-19 are requests and have no legal enforcement. However, thanks to the self-discipline and health literacy of Japanese residents, the outbreak has also entered a relatively stable trend after April in Japan, and the case-fatality rate (4.8%) is relatively low.

Although Italy quickly imposed lockdown measure similar to China after the surge in domestic infectious, it did not attach importance to the treatment of mild patients and advocated the isolation of mild patients at home. The Italian Ministry of Health issued more stringent testing policies, and only detects high-risk groups with symptoms. The essence of Italian precautionary policies is to take mitigation measures.<sup>9</sup> As

of May 27, the case-fatality rate in Italy was 14.3%, and the cumulative number of confirmed cases even exceeded China, where the outbreak was the earliest. As the total number of infectious increased, there was a medical runs in Italy. In 2019, approximately 23% of the Italian population was aged 65 years or older. Medical runs and aging population may also be influencing factors for the uncontrollable Italian epidemic.

## **5 Conclusion**

The study found that China and Singapore, which implemented blocking measures, had better control effects, and Japan, which implemented mitigation measures, had achieved better control effects by virtue of national self-discipline and good health literacy. However, Italy, which implemented mitigation measures, did not attach importance to the admission of mild patients and case tracking, and coupled with the aging population, the number of confirmed cases and case-fatality remained high, and the epidemic control effect was inferior. We can conclude that the blocking measures are more effective. The core strategy of blocking measures are admission of mild patients and cases tracking, which can be considered in countries all over the world.

## **Declarations**

### **Ethics of Approval and Consent to Participate**

This study did not involve ethical issues.

### **Consent for Publication**

Not applicable.

### **Availability of data and material**

No additional data are available.

### **Competing Interests**

The authors have no conflicts of interest to declare.

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### **Author's Contributions**

Xiaohan Wang and Gang Sun conceived the paper. Xiaohan Wang, Yuyao Zhang and Haiqian Chen collected the data. Xiaohan Wang drafted the manuscript. Leiyu Shi, Yuyao Zhang and Haiqian Chen revised the manuscript. GS contributed to the critical revision of the manuscript for important intellectual

content and approved the final version of the manuscript. All authors have read and approved the final manuscript. Xiaohan Wang and Gang Sun are the study guarantors.

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## Tables

**Table 1 Japan's COVID-19 epidemic prevention and control policies**

Stage	Policy	The Key elements
Stage 1	Issue risk warnings to the public	<p>In response to changes in the epidemic situation of COVID-19 in Wuhan, Japanese Ministry of Foreign Affairs gradually raised the risk alert for the epidemic level.</p> <p>(1) On January 21, 2020, risk warning of infectious disease level 1 was issued throughout China.</p> <p>(2) On January 23, risk warning of infectious disease level 2 was issued against Wuhan, China.</p> <p>(3) On January 24, risk warning of infectious disease level 3 was issued for the whole of Hubei Province, including Wuhan, and recommended that travel in Hubei Province of China be suspended.</p> <p>(4) On March 18, risk warning of infectious disease level 1 was issued against globally.</p>
	Border control measures	<p>(1) On January 28, the Japanese Cabinet Meeting decided to designate COVID-19 as “designated infectious diseases” based on the “Infectious Disease Law”. Infected persons are prohibited from entering Japan. On February 1, the decree was implemented ahead of time. Relevant departments may require suspected patients to undergo examinations and be admitted to the hospital, prohibiting travelers from China’s Hubei and Zhejiang provinces from entering China.</p> <p>(2) Since then, the border control measures have been continuously upgraded. As of April 3, Japan has imposed entry restrictions on visitors from 73 countries and regions. Returning residents and long-term pass holders with travel history to these affected regions are subject to 14-day quarantine.</p>
Stage 2	The ministry of health released the “Basic Policy on COVID-19 Countermeasures”	<p>(1) The policy recommends that the public avoid gatherings, wash hands frequently, and observe cough etiquette. It is recommended that enterprises staggered commute and suspend school.</p> <p>(2) Unless the elderly and patients with underlying diseases, mild patients should in principle rest at home. If patients’ symptoms progress, then contact a medical institution for consultation.</p> <p>(3) Planning to change the standard of nucleic acid testing: at present, the testing standard is that doctors in various medical institutions judge whether to carry out testing. If patient’s number continues to increase in the future, it will be changed to test pneumonia patients who need to be admitted to hospital.</p> <p>(4) Planning to reduce the observation of close contacts: at present, Japan conducts an epidemiological survey of close contacts of confirmed patients. However, if patient’s number continues to increase in the future, it will be changed to “reduce the health observation of close contacts”.</p>

	<p>The Prime Minister called on the public to “self-restraint”</p>	<p>On February 26th, the Japanese Prime Minister called for large-scale cultural and sports activities to “self-restraint” for two weeks. Therefore, concerts and stage plays across the country were suspended or postponed. Tokyo Disneyland and Universal Studios also announced temporary closures. March 10 Japan has added the requirement of “self-restraint for 10 Days”.</p>
	<p>The Prime Minister called on school closures</p>	<p>The prime minister called on primary and secondary schools across the country to suspend classes from March 2 until spring break.</p>
<p>Stage 3</p>	<p>Declaring a state of emergency</p>	<p>The prime minister declared a state of emergency on 7 April 2020, encouraging people to avoid unnecessary outings and to observe social distancing. On May 25, Japan lifted the declaration of emergency.</p>

**Table 2 Italy’s COVID-19 epidemic prevention and control policies**

Stage	Policy	The Key elements
Stage 1	Set up a special agency to promote the epidemic response	<p>On 22 January, 2020, the Working Group on Response to COVID-19, led by the Italian Minister of Health, was established to discuss the progress of the epidemic and propose measures to prevent and control the epidemic.</p>
	Border control measures	<p>(1) On January 31, the Italian Prime Minister announced that the country had entered a state of emergency for 6 months, cutting off all flights to and from China.</p> <p>(2) On February 3, the Ministry of Foreign Affairs sent military aircraft to bring Italian citizens in Wuhan back home, and conducted 14-day quarantine.</p> <p>(3) On February 22, the Prime Minister announced that all passengers who had traveled to China 14 days prior to entry must accept isolation at home or hotel. Close contacts must be forced to isolate for 14 days.</p> <p>(4) From March 13 to March 16, several terminals were closed, and many civil flights at major airports and international flights from Milan were grounded.</p>
Stage 2	Public health response	<p>(1) On February 22, Italy imposed a lockdown with shutdown of businesses, schools and public places plus physical distancing in Milan and Venice.</p> <p>(2) On March 1, the whole country of Italy was divided into red zone, yellow zone and safe zone. In addition to the “isolated quarantine” of the red zone, yellow zone suspended social and sports activities and closed Schools, clubs, theaters and cinemas.</p> <p>(3) The precautionary measures continue to be upgraded. On March 10, Italy imposed a lockdown with prohibiting all public gatherings and suspending all sports events in the whole country.</p> <p>(4) On March 11, Italy required all commercial activities to be stopped except for pharmacies and supermarkets that supply essential necessities throughout the country.</p> <p>(5) On March 20, the Italian government added restrictions on public travel and commercial activities.</p> <p>The next day, all non-essential production activities were stopped nationwide. Remote office should be implemented in non-essential situations. The Prime Minister announced the implementation of this series of prevention and control measures until May 3, and entered ongoing epidemic prevention and control phase.</p>
	More stringent testing policies	<p>(1) On February 25, the Italian Ministry of Health issued more stringent testing policy. This recommendation prioritized testing for patients with more severe clinical symptoms.</p> <p>(2) On February 27, the Italian Ministry of Health announced that it would revise the current method of accounting for confirmed cases in accordance with the standards of WHO and the European Center for Disease Control: Asymptomatic positive patients and people who have not undergone secondary tests will not be included in the confirmed data.</p>

**Table 3 China's COVID-19 epidemic prevention and control policies**

SN	Policy	The Key elements
1	Lockdown Wuhan	On January 23, the government put the city under lockdown by shutting services at the airport, railway stations, ferry ports and long-distance bus stations. On April 8, Wuhan lifted lockdown.
2	Establishing a Leading Group to combat COVID-19	(1) The central government established a leading group for epidemic response work. (2) The central government dispatched guidance groups to Hubei and other epidemic-stricken areas to uniformly guide local epidemic control.
3	The principle of early cases detection, reporting, quarantine and treatment	(1) On February 3, President Xi required that epidemic control measures be improved and strengthened and that the principle of early detection, reporting, quarantine and treatment be strictly observed. (2) He called for saving lives by raising admission and cure rates and lowering infection and fatality rates.
4	Classified management of "four categories of personnel"	(1) Wuhan began to adopt measures to put four categories of people – confirmed cases, suspected cases, febrile patients who might be carriers, and close contacts – under classified management in designated facilities. The policy of ensuring that all those in need are tested, isolated, hospitalized or treated was implemented.  (2) Actions were taken to conduct mass screenings to identify people with infections, hospitalize them, and collect accurate data on case numbers in the whole country.
5	Counterpart assistance	(1) Mobilizing national medical resources to fully support medical treatment in Hubei Province and Wuhan City. From January 24 to March 8, a total of 346 national medical teams, 42,600 medical personnel and more than 900 public health workers were mobilized to assist Hubei.  (2) Establishing an inter-provincial counterpart support mechanism for COVID-19 medical treatment in cities other than Wuhan in Hubei Province.  (3) Mobilizing 40,000 builders and thousands of mechanical equipment from all over the country, built the Huoshen Shan Hospital with 1,000 beds in only 10 days, and built the Leishenshan Hospital with 1,600 beds in only 12 days. In just over 10 days, 16 mobile cabin hospitals were built, with a total of more than 14,000 beds.  (4) The central government cooperated with local governments and enterprises to supply living materials in Hubei Province and Wuhan City to ensure the normal operation of the society.
6	Nationwide	

public health  
measures

(1) Temperature screening is set up in various places across the country.

(2) Taking effective measures to avoid personnel gathering and cross-infection: extend the Spring Festival holiday, cancel or postpone gathering activities, lock down various schools; close entertainment venues; public service places that need to be opened must take body temperature and wear Masks; encourage employees to telecommute.

(3) Implementing community closed management nationwide. Residents in and out of the community register and check their body temperature.

(4) Carrying out extensive public education in community.

Residents consciously implement public health requirements such as home isolation and 14 days after cross-regional travel, strictly implement health living habits such as wearing masks, observing social distance, reducing gathering.

**Table 4 Singapore's COVID-19 epidemic prevention and control policies**

SN	Policy	The Key elements
Stage 1	Setting up a Multi-Ministry Task Force	The preliminary plan of the Multi-Ministry Task Force, drawn up after the 2003 SARS outbreak, was launched on 22 January 2020 to coordinate among departments and provide strategic and political guidance during the public health crisis.
	Early isolation and early screening	<p>(1) On January 23, Singapore set up a special team with the help of the information-based public health system to thoroughly investigate the personnel related to Wuhan.</p> <p>(2) Isolation of early cases: On January 26, Singapore confirmed four cases of COVID-19. The Singapore government expropriated some student dormitories as isolation facilities.</p> <p>(3) The government had issued a law on home quarantine: from February 18, Singapore tightened the isolation regulations related to COVID-19 and issued a legally binding “stay at home notice”. Those who receive the notice shall not go out during home quarantine, otherwise they may face heavy penalty.</p>
	Border control measures	<p>(1) Temperature and health screening of incoming travellers from Wuhan since January 3, and extended to all travellers since January 29, is in place at all ports of entry. Travellers who meet the suspect case definition are conveyed directly to hospital.</p> <p>(2) Singapore imposed entry restrictions on visitors from countries in outbreaks such as China, ROK, Northern Italy and Iran.</p> <p>(3) From March 5, all inbound passengers who have symptoms such as fever and cough will be required to undergo a throat swab sample test.</p> <p>(4) From March 23, short-term visitors and cruise ships are prohibited from docking.</p>
Stage 2	Surveillance measures	<p>(1) According to the time and distance of contact with the confirmed cases, the contacts are divided into two categories, and tracking are carried out separately. Close contacts will be forced to be isolated for 14 days, and low-risk contacts will be actively detected.</p> <p>(2) On March 21, the government launched the “Trace Together” APP for tracking close contacts of confirmed cases.</p>
	Community and social measures	<p>(1) The government only encouraged ill persons to wear masks to prevent them from infecting other. On February 1, the government distributed masks free of charge to residents across the country, with four masks per family. (2) On February 4, employees were encouraged to monitor their temperature and health regularly in workplace. (3) The school remains open, but implemented preventive measures, such as reducing group meetings and staggering meal times. (4) With the escalation of the epidemic situation, the taxi service will be stopped on February 9 and all activities with more than 50 people will be cancelled. Necessary activities must be recorded and turn away ill individuals.</p>
	Mature primary care setting	

(1) Majority of cases were isolated and treated at the National Centre for Infectious Diseases (NCID), a 330-bed purpose built infectious diseases management facility. NCID can accommodate nearly 500 beds during an outbreak, enhancing Singapore's infectious disease prevention capabilities.

(2) A network of >800 Public Health Preparedness Clinics (PHPCs) was activated to enhance management of respiratory infections in the primary care setting, with subsidies extended to Singapore residents to incentivize them to seek care at these PHPCs. If it is highly suspected to be COVID-19, refer to the general hospital.

Stage 3  
Strict community-wide measures

- (1) Since April 5, the Singapore government has distributed reusable masks to every household. At the same time, regardless of whether they wear masks, the government recommended that everyone wash their hands and observe social distance.
- (2) From April 7, all workplaces and shops providing non-essential services will be closed;
- (3) From April 8, schools and pre-school education institutions will be closed and changed to home study;
- (4) The public should stay at home as much as possible and not go out as much as possible. The gathering is limited to family members living together.
- (5) Enterprise employees must work at home.

## Figures

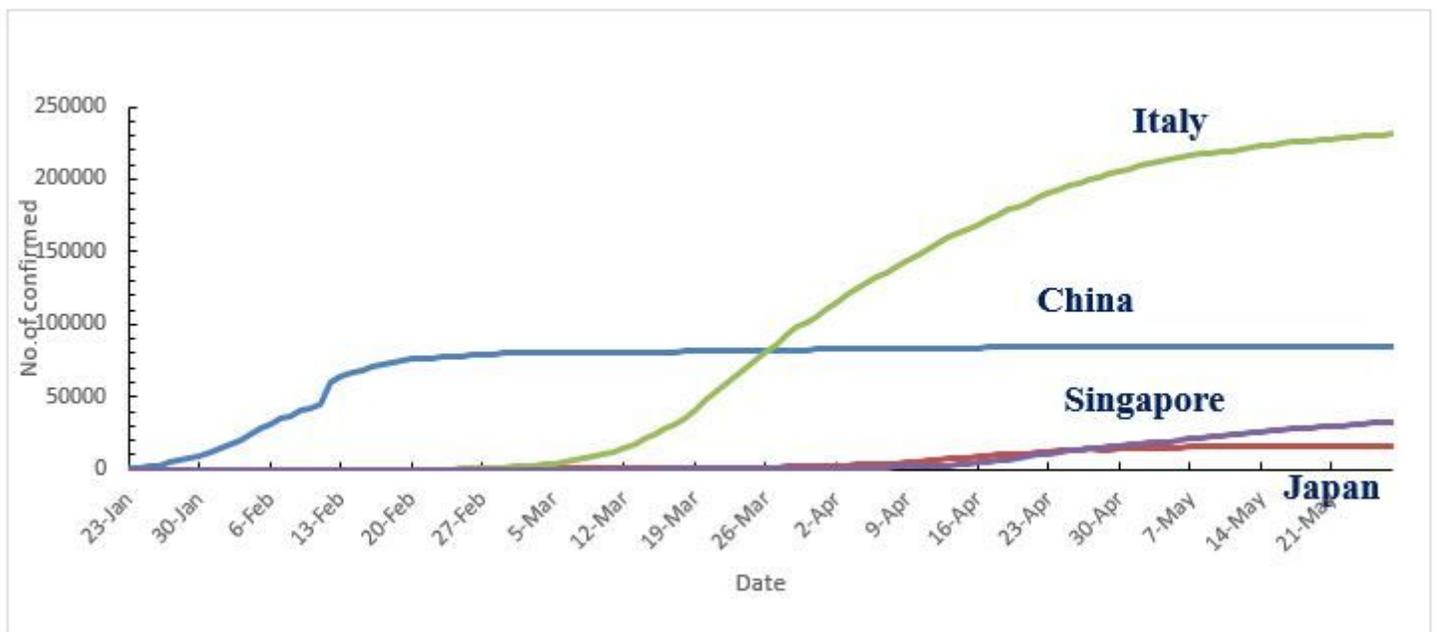


Figure 1

## Cumulative confirmed case trends in four countries

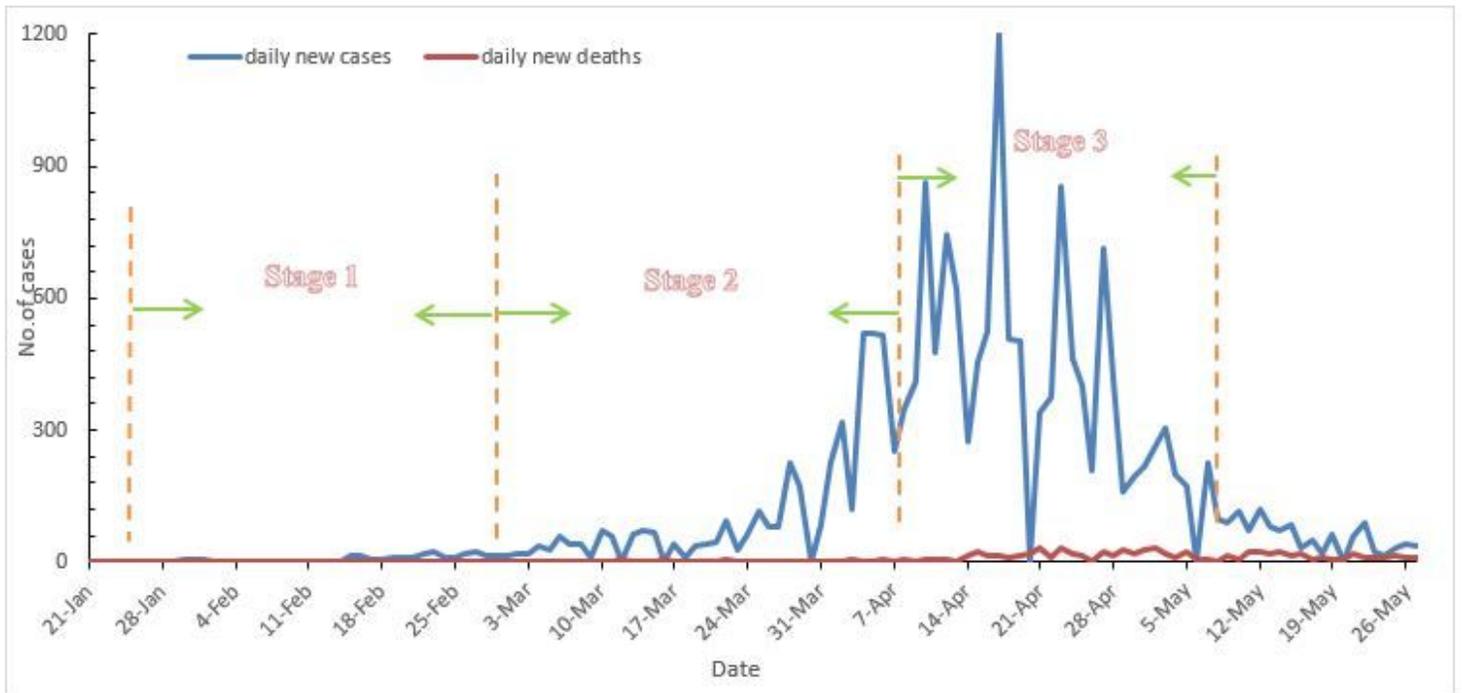


Figure 2

## Trends of daily new cases and new deaths in Japan

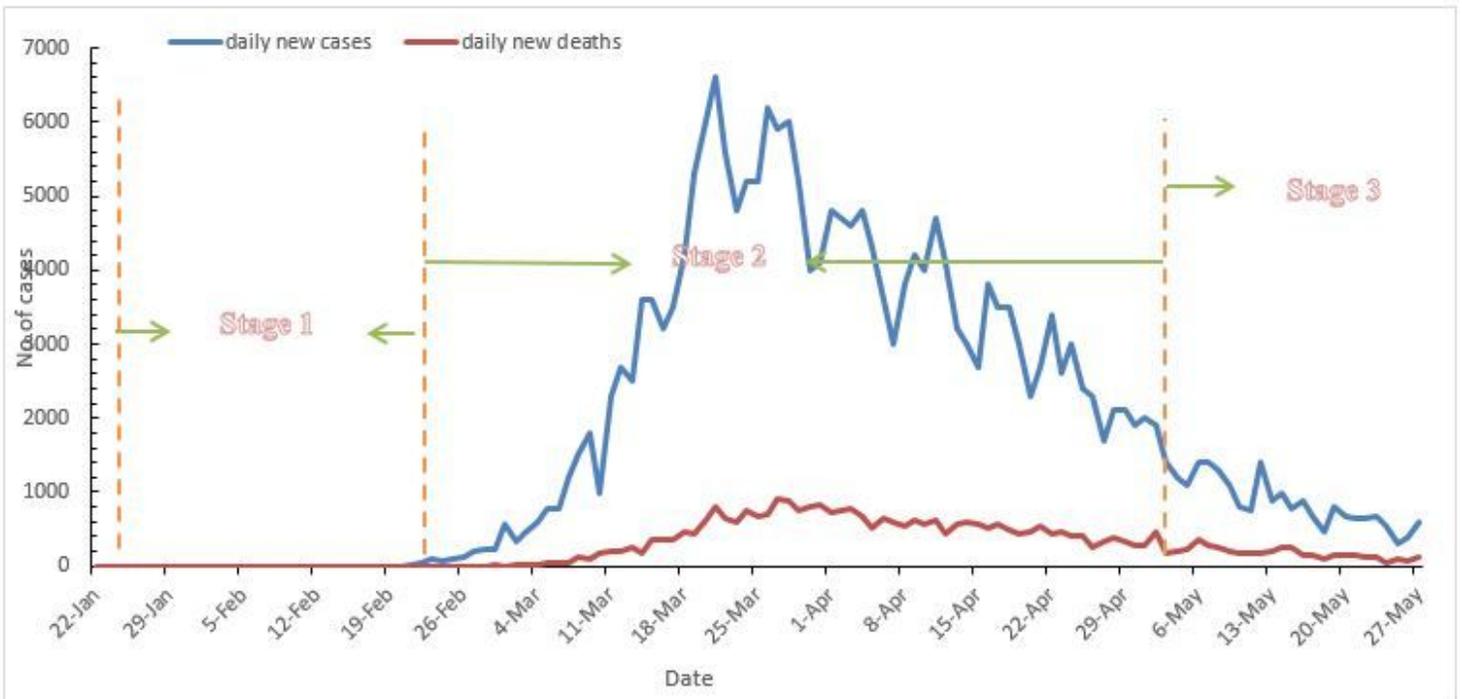


Figure 3

## Trends of daily new cases and new deaths in Italy

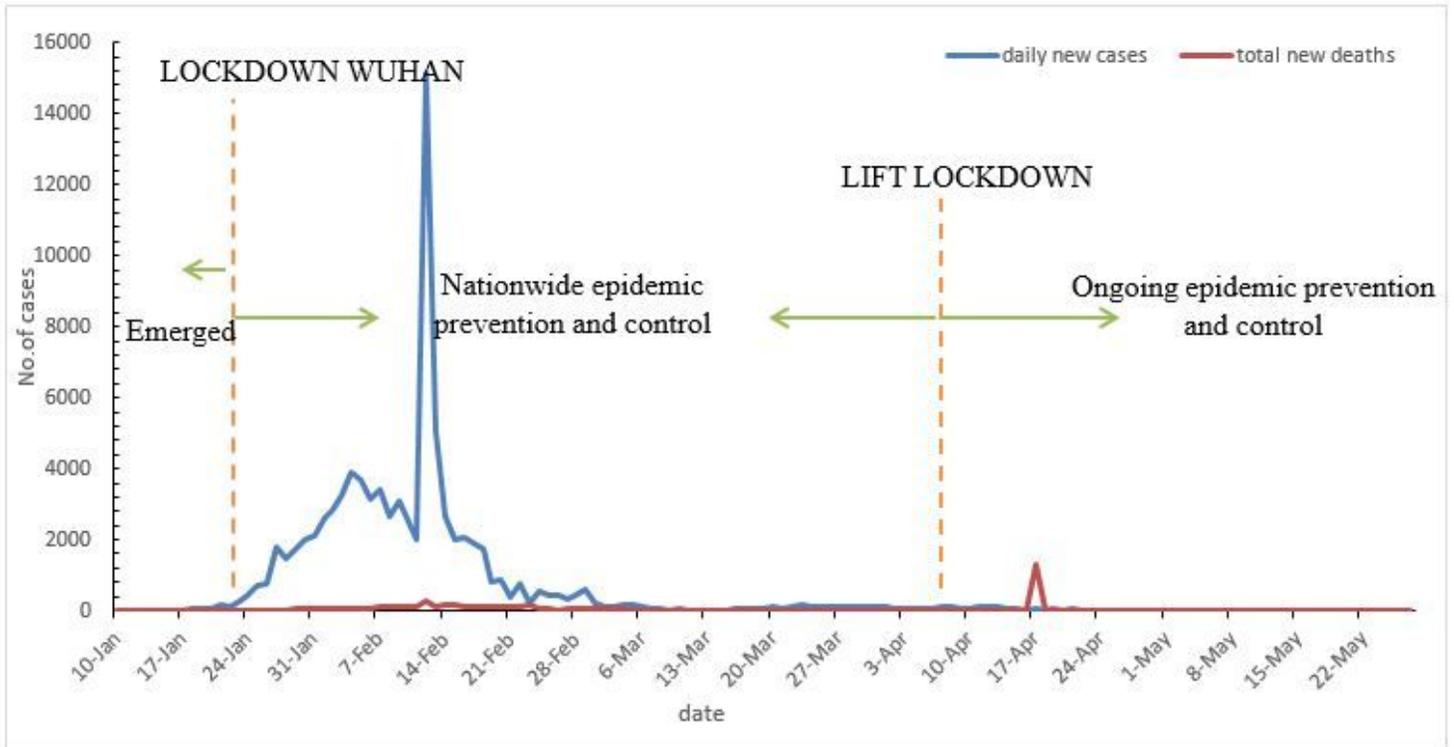


Figure 4

Trends of daily new cases and new deaths in China

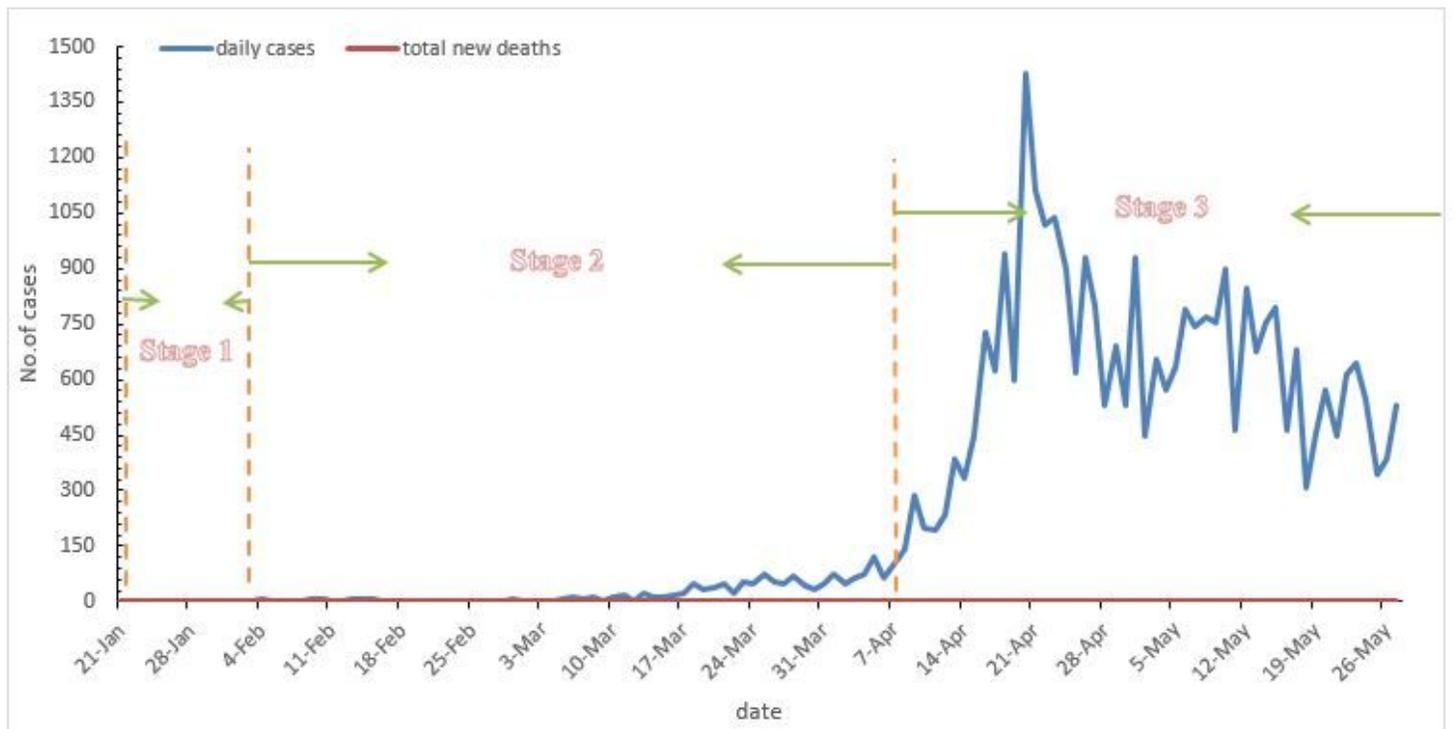
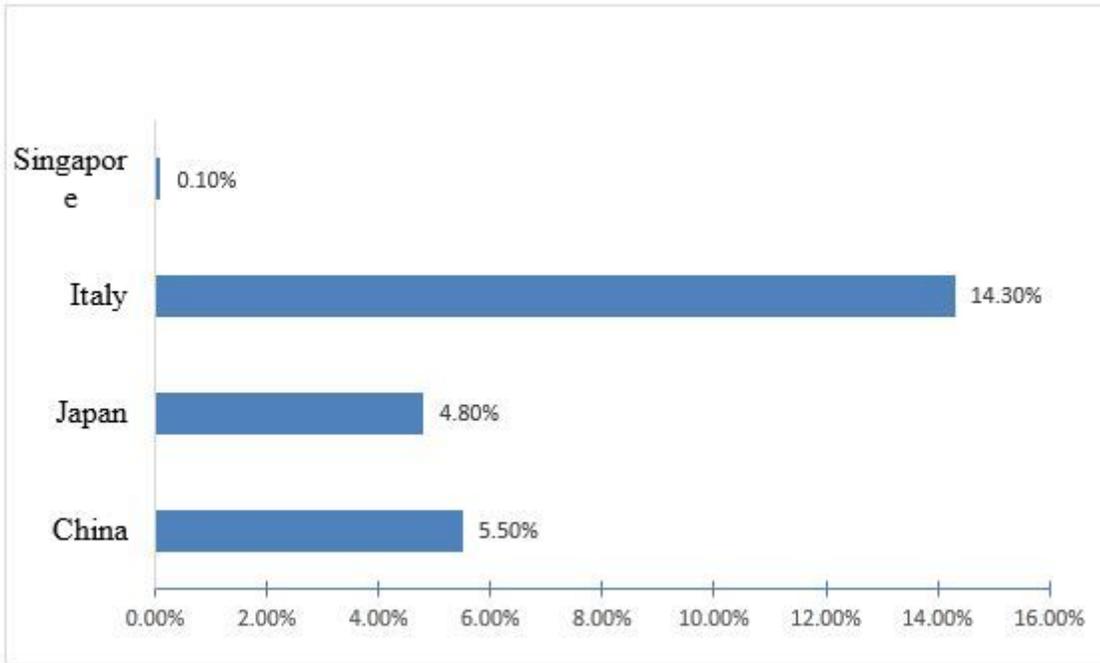


Figure 5

Trends of daily new cases and new deaths in Singapore



**Figure 6**

Comparison of case-fatality rates (as of May 27) in four countries