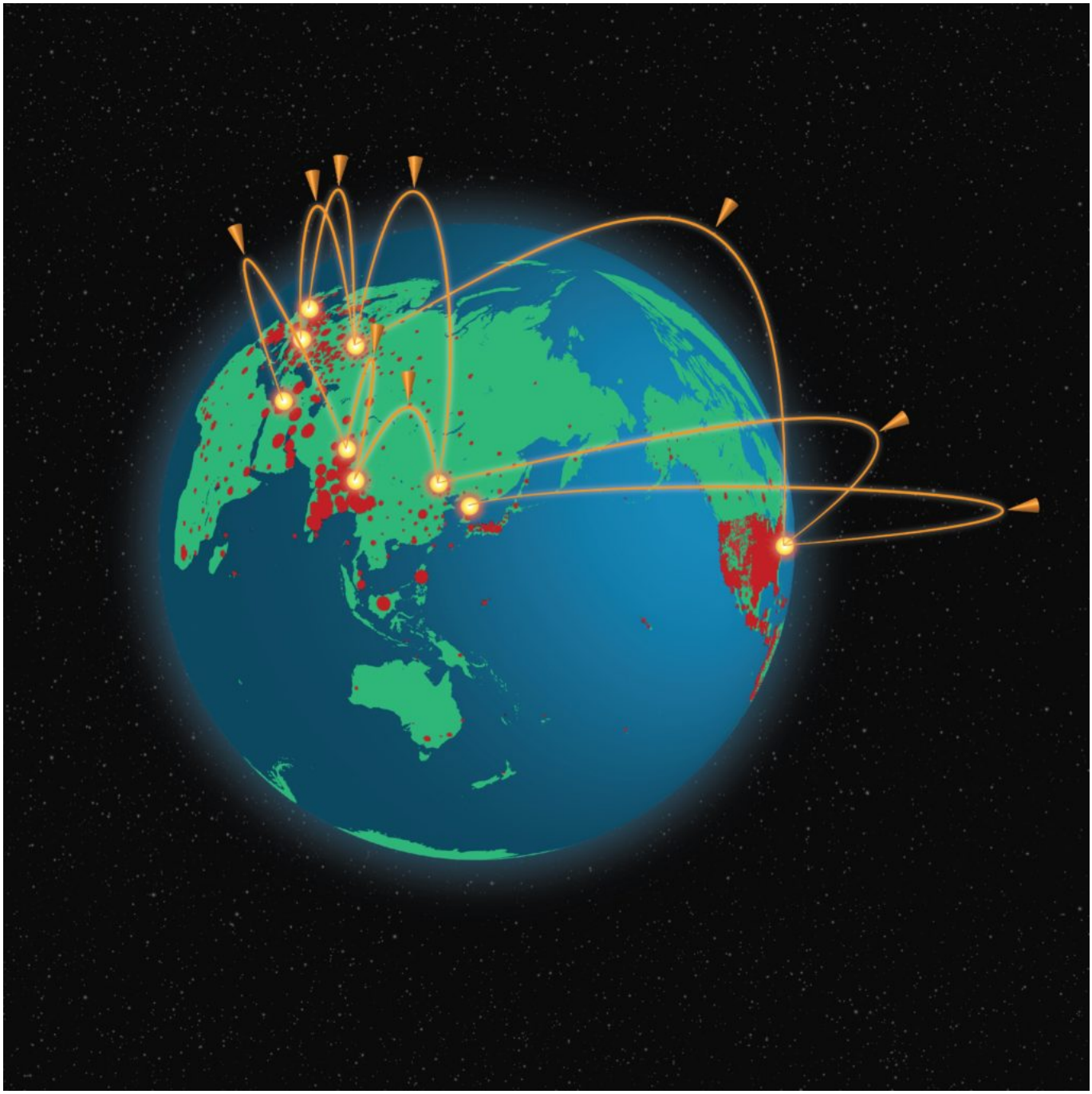
NAUTILUS INSTITUTE
FOR SECURITY AND SUSTAINABILITY

THE ROLE OF CITIES AS FIRST RESPONDERS TO PANDEMICS: FOCUSING ON THE CASE OF THE SEOUL METROPOLITAN GOVERNMENT'S RESPONSE TO COVID-19



Recommended Citation

Changwoo Shon, "THE ROLE OF CITIES AS FIRST RESPONDERS TO PANDEMICS: FOCUSING ON THE CASE OF THE SEOUL METROPOLITAN GOVERNMENT'S RESPONSE TO COVID-19", NAPSNet Special Reports, October 28, 2020, https://nautilus.org/napsnet/napsnet-specia-reports/the-role-of-cities-as-first-responders-to-pandemics-focusing-on-the-c-se-of-the-seoul-metropolitan-governments-response-to-covid-19/

CHANGWOO SHON

OCTOBER 29 2020

I. INTRODUCTION

In this essay, Changwoo Shon envisions the role of urban governments in the future, including intercity network construction, by reviewing cases of responding to COVID-19 in Seoul amid changes in the international situation caused by COVID-19.

The essay may be downloaded in PDF format **here**

Changwoo Shon received a Ph.D. in Health Science from Seoul National University and currently works for the Seoul Institute. The main research areas are urban health, healthy cities, and community health. Currently, he is conducting research on establishing a system for new infectious disease management, agenda-setting in the Post-corona era.

This essay is a working paper prepared for *The 75th Anniversary Nagasaki Nuclear-Pandemic Nexus Scenario Project*, October 31-November 1, and November 14-15, 2020, co-sponsored by Research Center for Nuclear Weapons Abolition, Nagasaki University (RECNA), the Nautilus Institute, Asia Pacific Leadership Network for Nuclear Non-proliferation and Disarmament.

The views expressed in this report do not necessarily reflect the official policy or position of the Nautilus Institute. Readers should note that Nautilus seeks a diversity of views and opinions on significant topics in order to identify common ground.

This report is published under a 4.0 International Creative Commons License the terms of which are found here.

Banner image: Sophia Mauro for Nautilus Institute. This graphic shows the pandemic distribution from COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) on September 25, 2020; and the nuclear threat relationships between nuclear armed states**.**

II. NAPSNET SPECIAL REPORT BY CHANGWOO SHON
THE ROLE OF CITIES AS FIRST RESPONDERS TO PANDEMICS: FOCUSING ON THE CASE OF THE SEOUL METROPOLITAN GOVERNMENT'S RESPONSE TO COVID-19
OCTOBER 29 2020

Summary

This study was conducted to discuss the role of urban governments in the future, including intercity network construction, by reviewing cases of responding to COVID-19 in Seoul amid changes in the international situation caused by COVID-19. This paper is organized into four sections. First, this paper described the outbreak of COVID-19 in Seoul from January to August 2020 and the Seoul city's response over time. Second, the background of Alliance for Multilateralism and inter-city cooperation in accordance with the changes in the international situation due to COVID-19 was explained. Third, the response of the Seoul Metropolitan Government to the pandemic was reviewed based on the following four characteristics: (i) Social distancing; (ii) Enhanced contact tracing; (iii)

Widespread testing; and, (iv) Early preparation. Finally, this paper reviewed how Seoul city cooperated with overseas cities in order to overcome the pandemic crisis, as well as the cases in which 25 autonomous districts of Seoul shared their policies using the Healthy Cities Network.

Introduction

As of 2018, 55% of the world's population lives in cities, and about 68% of the population is expected to live in cities by 2050 (United Nations, 2019). In Korea, the proportion of the urban population, which was only 39.2% as of 1960, has undergone industrialization and urbanization, and as of 2019, most of the population is living in cities at 91.8% (Ministry of Land, Infrastructure, and Transport, 2020). In other words, the health of the city can be said to be the health of modern humans, and the health of people is directly or indirectly affected by the urban environment (Shon, 2020a). In general, urban residents are known to have better health levels than rural residents based on high income and education level, access to health and medical services, clean sanitary environment, and convenience of movement (Weaver, Geiger, Lu & Case, 2013). However, high population density, uneven distribution of resources, AIDS (HIV/AIDS) and drug abuse, alcohol addiction, family breakup, and violence impacted by rapid urbanization pose a major threat to the health of urban residents. Besides, the poor infrastructure of cities is a good condition for bacteria and viruses to thrive, and in this respect, infectious diseases can be said to be a major health problem of cities (Shon, 2016).

The first COVID-19 confirmed case in South Korea was a person of Chinese nationality who entered the country on January 20, 2020, from Wuhan, China. As of September 24, there were 23,342 confirmed cases and 393 deaths in Korea (Central Disaster and Safety Countermeasures Headquarters, 2020). On March 11, 2020, when approximately 118,000 confirmed cases and 4,291 deaths were reported in 114 countries, the World Health Organization (WHO) has declared COVID-19 a global pandemic. Approximately 32.4 million people infected with COVID-19 and about 100 million people died from COVID-19 as of September 20, 2020. The country with the largest number of confirmed cases was the United States, accounting for 22.2% of all patients, followed by India 17.8%, Brazil 14.4%, and Russia 3.5%. The infection spread mainly in East-Asian and European countries at the beginning of the outbreak, but the spread in recent stage has continued mainly in the United States and South America (Worldometers, 2020). Through the COVID-19 epidemic, it has been confirmed that infectious diseases, which have been thought to be a problem only for low-income countries or low-income people with poor hygiene, are in fact a threat regardless of people's income, education, or socioeconomic status.

In this paper, it is discussed that what kind of response the Seoul Metropolitan Government initially made to respond to COVID-19, and what role the city government can play in managing infectious diseases in the future to make a city safe from infectious diseases. Also, how the international situation has changed due to COVID-19, and to propose the attempts and future directions of the inter-cities network.

The Seoul Metropolitan Government’s Main Responses to COVID-19

Starting with the first confirmed person entering the country on January 24, 2020, from Wuhan, China, a total of 1,592 confirmed cases and 11 deaths occurred as of July 30 (Seoul Metropolitan Government, 2020). The major routes of transmission of Seoul city were infections from overseas contacts in 21%, the Richway's door-to-door sales 8%, Itaewon club 9%, and Guro-gu call center infections 6% in order. Large companies and people are concentrated in Seoul, and there is a large floating population. These cultural and economic characteristics of Seoul were reflected in infectious diseases. Seoul's high-income level and cultural diversity were reflected in the path of infection. Overseas contact infections were from 40.6% of the US and Canada, 27.8% from Europe, 26.6%

from Asia, and about 5% from South America, Oceania, the Middle East, and African countries. Meanwhile, the death rate of COVID-19 in Seoul was about 0.7%, and the proportion of confirmed cases between men and women was similar, but the fatality rate was somewhat higher for men. In particular, the fatality rate of over 70 years old was confirmed to be about 4%, and the fatality rate over 80 years old was confirmed to be over 12%, and COVID-19 was fatal to the elderly (SHF & SCDC, 2020).

Looking at the major times and paths of infection, on March 2, 2020, when the number of confirmed patients in Seoul was 98, the Seoul Metropolitan Government launched a social distancing campaign called “Pause”. Seoul's social distancing campaign started relatively quickly, but its effectiveness was limited as the central government's campaign did not proceed together (Shon, 2020b). In the case of infection caused by foreign contact, confirmed cases occurred in the so-called Gangnam 3 districts (Gangnam-gu, Seocho-gu, Songpa-gu), which are autonomous districts with the highest income level in Seoul. On the other hand, it can be said that the local community infection started in earnest in Seoul when the spread to residents of high-end residential and commercial apartments in Seongdong-gu, management office employees, their families, and co-workers was confirmed. From February 19 to March 4 A total of 13 people were infected. Afterward, 28 people were infected from March 3 to March 18 in a church and PC room in Dongdaemun-gu, which was also the time when the Guro-gu call center infection, which had the most patients in Seoul at the beginning of the COVID-19 epidemic, occurred. In the call center, a total of 98 people was infected by March 20 after the first confirmed case occurred on March 8. In particular, in the case of call center infection, about 43% of employees working on the same floor were confirmed to be infected, making it a representative case confirming how vulnerable the office environment with a high population density is to COVID-19 infection (Park et al, 2020). As 'intensive social distancing' began on March 22, meetings, eating out, and events were canceled, and personal and social quarantine such as refusal to go to work, etc., was emphasized in the case of respiratory symptoms such as fever. In early April, the number of confirmed cases in Seoul decreased significantly, and after mid-April, the Mayor of Seoul held a video seminar with global leaders and shared the pandemic and East Asian tasks through the WEA (Watching East Asia) conference. However, on May 8, just after the end of the “intensive social distancing”, 13 confirmed cases occurred at the Itaewon club, followed by group infections of 139 people until June 5th. In particular, as the Itaewon Club became known as a club mainly used by gay people, it was difficult to identify contacts, but the inspection policy based on the principle of confidentiality of personal information was established, and contact verification and inspection were quickly performed. This was because Korea has a Confucian culture, and its acceptance of gay and lesbian cultures is relatively low, so club users are afraid of the stigma. This test method is similar to the AIDS positive test method and can be conducted when it is determined that it is more important to suppress the spread of infection and provide treatment opportunities through an initial test (You, Ki, & Kim, 2019). Meanwhile, about a month after the infection at the Itaewon Club, a group infection centered on Richway, a door-to-door sales company, occurred. From this point on, community infection was considered a constant, not a variable. In the case of Richway company-related infections, a total of 122 people was infected from June 2 to June 29, when the first confirmed case occurred. Subsequently, on July 19, a group infection centered on the elderly nursing facility in Gangseo-gu occurred, and 26 confirmed cases have been confirmed so far. Many cases of infection have occurred through various routes including nursing facility residents, guardians, and their neighbors. Concerns grew in that most of them were elderly people with very high fatality rates during infection. Accordingly, the city of Seoul immediately established and delivered a policy to strengthen infection control in daycare centers and elderly care facilities, and conducted intensive monitoring (figure 1). On the other hand, since the beginning of August, the number of confirmed cases is increasing again at the community level such as churches, hospitals, kindergartens, and daycare centers, raising concerns.

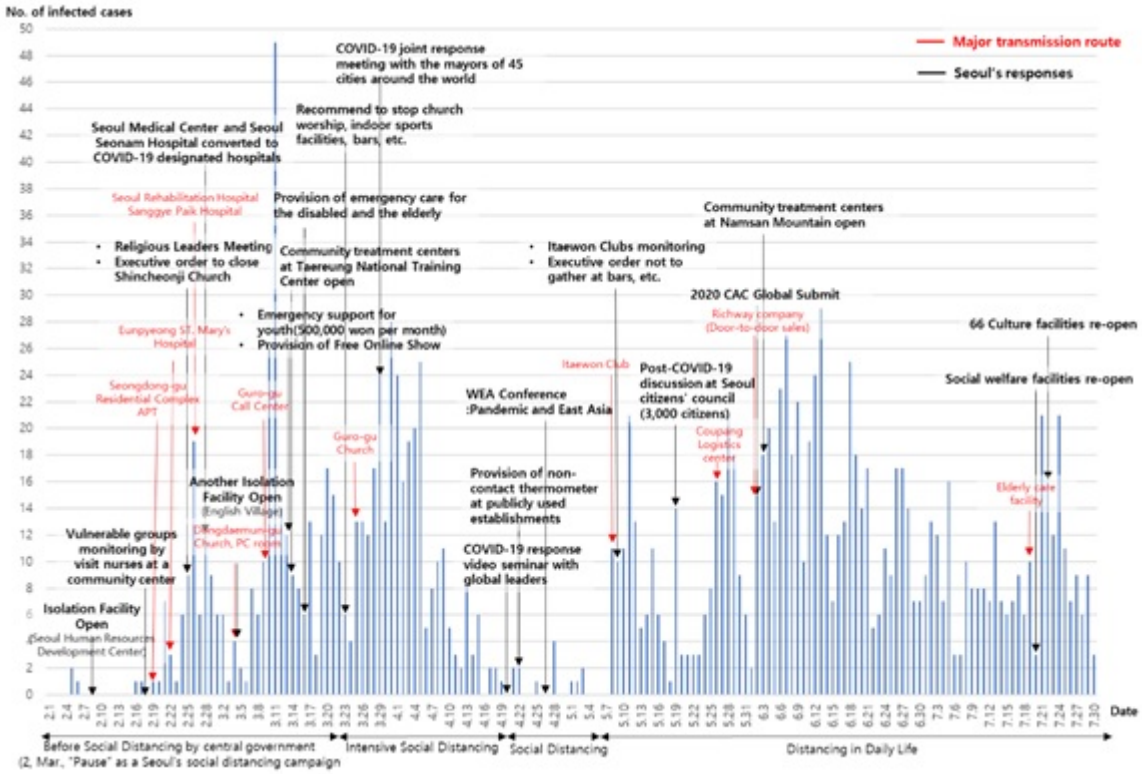


Figure 1. Major transmission routes of COVID-19 and Seoul's response, Ref. Shon (2020a) modified.

Table 1. Major COVID-19 Infections in Seoul and Responses of the Seoul Metropolitan Government from February to August 2020

Date	Total cases	Major outbreaks		Main Responses of the Seoul Metropolitan Government
		Transmission route	Confirmed cases	
28 Feb	77			Seoul municipal hospitals converted to COVID-19 designated hospitals
19 Feb - 4 Mar	103	High-end residential and commercial apartments	13	Enhanced contact tracing
13 Mar	231			Community treatment centers open
3 Mar - 18 Mar	270	Church and PC room	28	Enhanced contact tracing, Active case finding
8 Mar - 20 Mar	299	Call center	98	Enhanced contact tracing, Active case finding
4 Mar - 21 Mar	314			Social distancing campaign
29 Mar	413			COVID-19 joint response meeting with the mayors of 45 cities around the world
22 Mar - 18 Apr	623			Intensive social distancing campaign period
27 Apr	629			The Mayor of Seoul held a video seminar with global leaders (WEA conference)
19 Apr - 5 May	637			Social distancing campaign

Table 1. Major COVID-19 Infections in Seoul and Responses of the Seoul Metropolitan Government from February to August 2020

Changes in the International Situation Due to COVID-19

The international order in the past has been formed based on globalization centered on democracy, liberalism, and Pax Americana. However, due to the global pandemic of COVID-19, a crisis of

international order based on globalization and liberalism was brought about, and the tendency of anti-globalization, nationalism, and nationalism was much stronger than before. Authoritarianism has threatened democracy, government control and intervention has threatened liberalism, and the growing influence of China has threatened Pax Americana. The world has definitely achieved huge economic growth due to globalization, but the global financial crisis and the resulting threats of globalization such as economic inequality, the refugee problem, and climate change persisted, and the COVID-19 amplified those threats.

To prevent the COVID-19 epidemic, countries around the world are closing their borders and emphasizing "my country first". In addition, the control and power of the government and state agencies have increased, and the government's intervention is being justified rather than the protection of personal information.

For example, there was a great deal of conflict between countries to secure personal protective equipment such as masks, and in this process, there was a growing demand to produce materials in their own country for the protection of their own citizens rather than exchange materials between countries. In particular, as the argument that it should break away from the China-centered industrial supply chain was raised, the importance of reshoring, supply chain diversification, and cooperation between cities emerged. In the Post-corona era or the New Normal era, cooperation will eventually become an important keyword again.

European countries already have formed the Alliance for Multilateralism and are seeking a European model for the response of the COVID-19. In May, the EU hosted a videoconference to pledge the international pledge to respond to COVID-19 globally. 40 countries and international organizations, including Korea, participated in the conference, which raised about 8 billion dollars. The purpose of the event was to deliver universal and affordable access to medication to fight the COVID-19. In addition, in June, the 2020 Global Vaccine Summit was held, emphasizing the importance of vaccines as an international public good. As such, in recent years, the need to maintain vaccine nationalism has emerged as a hot topic in the international community, and the World Health Organization also called vaccines a global public good. Previously, it was said that the trend of globalization is under threat, but the efficiency of the division of labor due to globalization will be difficult to ignore. Of course, in addition to economic efficiency, we will try to increase the proportion of self-sufficiency rather than before, and all countries and cities will strive to find a balance point among them.

Pandemic Management Functions of the Seoul Metropolitan Government

In this section, we will discuss the city's pandemic management functions through the characteristics of Seoul's COVID-19 response. Especially, the city of Seoul, which experienced the MERS outbreak in 2015, learned that more proactive and preemptive measures are important to manage infectious diseases effectively. In this context, the prevention of COVID-19 in Seoul can be summarized into four characteristics such as *social distancing, enhanced contact tracing, widespread testing, and early preparation.*

Social Distancing

Seoul's social distancing campaign started on March 2, 2020, when 4,212 confirmed cases in Korea and 91 confirmed cases in Seoul came out, and two weeks later, the intensive social distancing campaign of the central government started. The city of Seoul, which had relatively few confirmed cases, preemptively launched a social distancing campaign and requested the central government to distance it nationwide. According to the previous study, the most effective personal protective measure is wearing a mask. The citizens of Seoul made it a common practice to wear masks both indoors and outdoors, and they also wore masks when using public transportation and multi-use

facilities. In fact, the rate of the practice of wearing masks when going out by Seoul citizens was very high, about 95% (SeTTA, 2020). It is believed that this was due to the fact that knowledge about infectious diseases increased due to H1N1 influenza in 2009 and the MERS outbreak in 2015, and wearing a mask routinely to avoid fine dust and yellow dust. However, the practice rate of '3-4 days off when sick', 'restriction of using public transportation', and 'two meters distance between people' did not exceed 50%. But, compliance with guidelines may vary depending on the characteristics and environment of citizens. In fact, as a result of a study of citizens of Seoul, citizens who were unable to work from home were more likely to fail to follow the guidelines of '3-4 days off when sick' and 'restriction of using public transportation' (SeTTA, 2020). In this context, the Seoul Metropolitan Government tried to provide benefits such as tax reductions to companies and ask the central government to introduce the Sickness Benefit program for citizens who are difficult to protect due to job characteristics and work environment, such as delivery workers and call center employees. The sickness Benefit program had a concept that expanded the existing Seoul's injury allowance program. Meanwhile, the social distancing stage in Korea consists of a total of three stages. Stage 1 is when the number of confirmed cases per day is less than 50, and stage 2 is when there are 50 or more and less than 100, and Stage 3 is when the number of confirmed cases per day is more than 100. However, since the guideline of each stage is complicated and can confuse whether or not the facility is applicable, Seoul provided a mobile application that shows the quarantine guidelines.

Enhanced Contact Tracing

The Seoul Metropolitan Government and 25 autonomous districts updated twice a day through the website and mobile application and disclosed in detail the transmission route, confirmation date, place of residence, whether or not to wear a mask. Through such active information provision, citizens' anxiety was minimized and they were able to participate in quarantine. In particular, in the process of epidemiological investigation, Seoul used big data to more effectively track contacts. When conducting an epidemiological investigation, the most important thing is the statement of the confirmed person. However, when memory is distorted or additional verification is required, the city of Seoul has used all available data to identify contacts. They used CCTV, credit card usage history, public transportation card usage history, smartphone GPS coordinates, and QR code access list to identify the contact person. In Korea, when using facilities such as restaurants and cafes, people must identify individuals through QR codes. For using these data, the city of Seoul has cooperated organically with the police agency, credit card companies, public transportation companies, and telecommunications companies, and explained to citizens the justification of the government's intervention. In addition, virus testing was conducted before self-isolation was released, and patients with mild or no symptoms of COVID-19 were identified. This was effective in that there were about 10% of asymptomatic cases of COVID-19(Song et al, 2020). Meanwhile, there are a total of nine municipal hospitals in Seoul. Physicians at the municipal hospital were appointed as epidemiological investigators to increase clinical expertise in the investigation process, and use the Seoul Special Judicial Police to conduct on-site investigations on outbreaks of the high likelihood of group infection such as bars, clubs, and hospitals.

The following is the establishment of a cooperation system between Korea Disease Control and Prevention Agency (KDCA) and the metropolitan area. Seoul is one of the most densely populated cities in the world, with a population of 10 million and a population density of 16,500 per square kilometer. Also, since it is the capital of Korea, global companies, companies, and cultural facilities are concentrated. Therefore, Seoul's quarantine cannot only target Seoul citizens, and measures must be established with neighboring cities of Gyeonggi-do and Incheon city. The KDCA, Seoul City, Gyeonggi-do, and Incheon City have prepared countermeasures by holding a meeting on major cases every evening at 8 pm every day from the beginning of the Corona 19 epidemic. In addition, when a group infection occurs in Seoul, the KDCA has a cooperation system that provides immediate

support from epidemiological investigators (Shon, 2020b).

Widespread Testing

Seoul has operated about 90 virus screening clinics in Seoul to minimize exposure to viruses and to quickly perform tests anywhere. In particular, the drive-thru screening test was effective in collecting samples in about 10 minutes and was effective in testing for families with children and for those who are reluctant to be exposed to the outside. In addition, an active case finding was conducted based on the Seoul Metropolitan Government's decision when a group infection was suspected. As an aggressive method, it is assumed that there is at least one infected person in the group, so we examine both contacts and non-contacts. It has been effective in places where there is a concern for localized infection due to the environmental characteristics of the patient's location, such as churches, call centers, and hospitals (Shon, 2020c). For an active case finding, a group infection rapid response team was operated, consisting of a general part (6 people), an epidemiological investigation part (22 people), a monitoring and contact management part (28 people), and a data analysis part (4 people).

Early Preparation

Many countries, including the United States and Europe, were infected with COVID-19, but there was a medical surge that could not receive treatment due to insufficient hospital capacity. So, the Seoul Metropolitan Government operated a hospital dedicated to COVID-19, which is dedicated only to the treatment of COVID-19 patients, using the Seoul Metropolitan Hospitals. In the process of converting the function of hospitals, the existing inpatients were quickly transferred to other hospitals in the community (Shon, 2020). In addition, there were normally 383 negative pressure beds in both private and public hospitals. As the spread of COVID-19 continued, additional negative pressure beds were built in the hospitals in Seoul up to 900 negative pressure beds. In addition, the Seoul Metropolitan Government operated community treatment centers for mild or asymptomatic patients. If they were infected with COVID-19, but the symptoms were mild, they were treated by a community treatment center instead of a hospital, and a total of four centers, 721 beds were operated in Seoul. These efforts enabled the infectious disease treatment delivery system could work well without medical surges. In particular, medical personnel from Seoul municipal hospitals were dispatched to establish a system that enables medical treatment including remote medical care, consultation, examination, medication, and monitoring. Meanwhile, one of the core competencies in controlling new infectious diseases is the virus testing capability, and Seoul has the Seoul Institute of Health & Environment for that. With the high testing capability, test results were derived in six hours using the RT-PCR method. Although the number of test subjects increased over time, the specimens were accurately analyzed within the time period to suppress the spread of local communities.

Finally, as the number of infections increased, mainly in elderly care facilities, the Seoul Metropolitan Government immediately gave an administrative order including furnishing non-fac--to-face thermometers, restriction of singing and laughter therapy, rearranging meal tables and methods of disinfection. For public transportation, subways and buses' chairs, handrails, and other places that people often touch with a lot of people are sterilized every day from the early stage of the pandemic, and the operation hours of the subway are shortened by an hour to ensure the safety of citizens.

Networking Between Overseas Cities to Overcome COVID-19

The cores to overcome the global pandemic are network and solidarity. The tendency of anti-globalization and nationalism has become stronger due to COVID-19, and many countries have

doubts about the credibility and role of the WHO, which has focused mainly on major countries such as China and the United States. As a result, solidarity between cities has become more important than in the past to overcome COVID-19. These connections started and strengthened as part of globalization. In other words, if the authority of city governments is strengthened with horizontal authority, the current crisis can be an opportunity, and cooperation and leadership between cities and cities are essential. In this context, there have been various attempts in Seoul to establish networks with overseas cities. Representative examples are 'The COVID-19 Video Conferencing in 45 cities around the world' and' 2020 Cities Against COVID-19 (CAC) Global Submit'. 'The COVID-19 Video Conferencing in 45 cities around the world' was held on March 27, and the quarantine experiences of each country were shared with the mayors of 45 cities in 31 countries including Los Angeles, London, Milan, Rome, Madrid, and etc. This was held at the request of the Mayor of Los Angeles, the chair city of C40 (Cities-Climate Leadership Group), to share the experiences of Seoul, the vice-chairman city, with each country. They emphasized solidarity and cooperation among foreign cities, and the need for follow-up measures such as establishing an information-sharing platform for this (SMG, 2020a). Meanwhile, CAC Global Summit was held for 5 days from June 1st, with mayors from 42 cities participating in the World Mayors Summit. Through the meeting, the mayors of each city emphasized the need for inter-city cooperation organizations around the world to confront the global pandemic and strengthen the city's capacity to respond to infectious diseases. London Mayor, Sadiq Khan, for example, insisted that cities should be reborn as stronger cities through international cooperation in the process of responding to Corona 19. In particular, since the pandemic situation crosses national boundaries, the international cities' solidarity and cooperation are needed. Furthermore, he proposed creating trails and bicycle paths for planning a resilient city. Governor of Maryland, Larry Hogan, also emphasized that cooperation between cities is important for overcoming COVID-19. He insisted on the importance of cooperation not only between international cities but also between cities in the United States. The 55 governors of the United States gathered two days a week for a cooperative response. In addition, he emphasized that in the process of responding to COVID-19, qualified persons from prestigious universities such as Johns Hopkins University in Maryland were involved in the policy-making process to make the best decisions.

Besides, topic presentations and discussions were held in the field of city quarantine, city sharing, climate and environment, smart city, education, culture, welfare, sports, public transportation, and citizen participation. In addition, 156 domestic and foreign experts participated in a total of 15 sessions, including a session of Global Talk on Response in the Post-Corona Era with Jared Diamond, a world-renowned cultural anthropologist and author of 'Guns, Germs, and Steel' (SMG. 2020b). This session has been recorded more than 5.15 million YouTube views so far, so it was a good opportunity to overcome the crisis caused by COVID-19 through a non-face-to-face method and to share information with more cities. Meanwhile, the 'Seoul Declaration' was finally announced through the World Mayors Summit, and the core content was the establishment of the Cities Alliance Against Pandemic (CAAP) to respond to global pandemics. The CAAP mainly aimed to share information on infectious diseases, response policies, and cooperation on goods and facilities. The details of the specific declaration are as follows. 1) We cooperate to recognize infectious diseases early and take preemptive responses. 2) We share information on infectious diseases with city governments and strive for joint practice. 3) In the event of a crisis caused by infectious diseases, we endeavor to promptly support necessary human and material resources between cities. 4) We cooperate in human exchanges between cities in order to foster experts in responding to infectious diseases. 5) In order to overcome the social and economic crisis caused by infectious diseases, we support free movement and economic activities between cities.

Meanwhile, there are 103 WHO Healthy Cities in Korea, including Seoul City and 25 autonomous districts, and these cities are joining the WHO Alliance for Healthy Cities and Korea Healthy Cities

Partnership to share healthy city projects with each other. Since WHO Healthy Cities are usually operated at the municipality level, in the process of responding to COVID-19, healthy cities in Seoul tried to support and cooperate with healthy cities across the country as well as within Seoul. For instance, focusing on the chair city of the Korea Healthy Cities Partnership, Jongno-gu, in September, most cities shared their experiences of overcoming COVID-19. In addition, experts and each healthy city participated and evaluated the COVID-19 response and produce a Post COVID-19 era report.

Conclusion

Nine months have already passed since COVID-19 began to spread. About 6.8 million people were infected with COVID-19, and more than 200,000 people died. The number of infections has increased significantly in India, Brazil, and countries in South America in the last month. Infectious diseases such as COVID-19 tend to become prevalent in cities based on high population density, mobility, and vulnerable environments. COVID-19 also started in Wuhan city, China, but it spread rapidly, mainly in other cities with high population density and mobility. Under the circumstances of a global pandemic, countries all over the world are closing their borders and emphasizing "my country first" to protect their citizens. National priority has emerged, and international order is wavering. In order to effectively respond to infectious diseases, we should look beyond borders and politics. In the respect, solidarity and cooperation of city governments can be a new alternative to overcoming the global pandemic.

It is difficult to predict when COVID-19 will end. But what is certain is that, as the history of infectious diseases has shown, mankind will someday overcome this infectious disease again. Throughout the 18th-century industrial revolution era, the urban population exploded, and there was an era of environmental pollution and infectious diseases. Throughout the 19th century, it began to take shape as it is now through modern urban planning, and in the 20th century, environmental problems including climate change were encountered. If COVID-19 ends, humanity will soon be threatened by another infectious disease. Infectious diseases now have become a new type of security threat, not a traditional security threat. Currently, we are experiencing the crisis of the global pandemic of COVID-19 but, fortunately, a way of life using intercity solidarity, informatization, big data utilization, and non-face-to-face methods is in place.

A sustainable and resilient city is needed that maintains city functions even in disasters such as infectious diseases. We are currently experiencing an unprecedented pandemic of infectious diseases, but disasters including infectious diseases do not occur frequently, and it is highly likely that the same disaster will not occur repeatedly in the near future. Therefore, even if infectious diseases or other disasters other than COVID-19 occur in the future, it is necessary to prepare risk management plans, facilities, equipment, manpower based on efficient cooperation between multi-sectors to effectively overcome them. Such a crisis response can be more effective in cooperation with cities with similar urban characteristics and functions. Also, even in a public health crisis, such as an infectious disease epidemic, the provision of other public health services should not be interrupted. Furthermore, even in the outbreak of infectious diseases, solidarity between cities must be strengthened, and digital social network services for the elderly living alone, the disabled, and nursing homes must be strengthened. Finally, for a resilient city, we have to try to recover from the wounds, stigma, and discrimination of COVID-19. Along with the need for intercity solidarity, digital social networks for the elderly living alone, the disabled, and the elderly in care facilities must be strengthened. For a resilient city, we need to be recovered from the wounds, stigma, and discrimination from COVID-19. Finally, as the COVID-19 epidemic has prolonged, it became important for medical professionals to recover their physical and mental health, and to overcome social stigma and fears experienced by citizens.

References

Central Disaster and Safety Countermeasures Headquarters. (2020, August 8). COVID-19 Outbreak Status. Retrieved from http://ncov.mohw.go.kr/bdBoardList_Real.do

Ministry of Land, Infrastructure and Transport. (2020, July 20). 2019 Statistics of Urban Planning. Press release. Ministry of Land, Infrastructure and Transport.

Park, S. Y., Kim, Y. M., Yi, S., Lee, H., Lee, J., Gwack, S. S.,. . . Jeong, E. K. (2020). Coronavirus Disease Outbreak in Call Center, South Korea. Emerging Infectious Diseases, 26(8):1666-1670.

Seoul Health Foundation & Seoul Center for Infectious Disease and Prevention (SHF&SCDC). (2020, July 30) The Daily News Review No.110. Seoul Health Foundation.

Seoul Metropolitan Government (SMG). (2020a, March 29). Mayor Park shares Seoul's know-how through 'COVID-19 video conference' with the mayors of 45 cities around the world. Press release. Seoul Metropolitan Government.

Seoul Metropolitan Government (SMG). (2020b, May 28). Seoul hosts online international conferences, cooperates with cities around the world to prepare for the Post-COVID-19 era. Press release. Seoul Metropolitan Government.

Seoul Think Tank Alliance (SeTTA). (2020). A study on establishing a response system for emerging infectious diseases. Seoul: The Seoul Institute.

Shon, C. (2016). A Study of Urban Health Indicators in Seoul. Seoul: The Seoul Institute.

Shon, C. (2020a). The direction of Healthy Cities through the COVID-19 pandemic experience of Seoul, South Korea. Korean J Health Educ Promot, 37(4): 1-17.

Shon, C. (2020b). The present and future policy of management of emerging infectious diseases in Seoul through response to COVID-19. Policy Papers No.299. Seoul: The Seoul Institute.

Shon, C. (2020c). The Response of the Seoul Municipal Hospitals against COVID-19 and Its Implications for Public Hospitals. 25(3): 38-52.

Song, J. Y., Yun, J. G., Noh, J. Y., Cheong, H. J., & Kim, W. J. (2020). Covid-19 in South Korea—challenges of subclinical manifestations. New England Journal of Medicine, 382(19), 1858-1859.

United Nations. (2019). World Urbanization Prospects: The 2018 Revision (ST/ESA/SER.A/420). New York: United Nations

Weaver, K. E., Geiger, A. M., Lu, L., & Case, L. D. (2013). Rural-urban disparities in health status among US cancer survivors. Cancer, 119(5), 1050-1057.

Worldometers. (2020). Coronavirus Worldwide Graphs. Retrieved from https://www.worldometers.info/coronavirus/worldwide-graphs/

You, M., Ki, M.. & Kim, K.. (2019). State Public Relations Policy for AIDS Prevention in South Korea. Weekly Health and disease, 12(48), 2152-2168.

III. NAUTILUS INVITES YOUR RESPONSE

The Nautilus Asia Peace and Security Network invites your responses to this report. Please send responses to: nautilus@nautilus.org. Responses will be considered for redistribution to the network only if they include the author's name, affiliation, and explicit consent.

View this online at: https://nautilus.org/napsnet/napsnet-special-reports/the-role-of-cities-a--first-responders-to-pandemics-focusing-on-the-case-of-the-seoul-metropolita--governments-response-to-covid-19/

Nautilus Institute
608 San Miguel Ave., Berkeley, CA 94707-1535 | Phone: (510) 423-0372 | Email: nautilus@nautilus.org