The 14th New Buds Salon

Health Systems of Various Countries from the Perspective of Public Health: The United States

May 26, 2020

The COVID-19 outbreak that has raged through the world since the start of 2020 has brought catastrophic damage to all countries. The unexpected public health emergency severely tested China's emergency response system, to which it has posed serious challenges and of which it has exposed numerous problems. In response to public health emergencies, many countries in the world have developed relatively comprehensive early warning and response systems through years of practice and established corresponding crisis management mechanisms. In operation, these systems and mechanisms have played an invaluable role in calming the public's panic, restoring order, and reducing loss of life and property.

In order to better understand the public health system and emergency response systems of typical countries, Peking University's Institute of Area Studies (PKUIAS) initiated a "Health Systems of Various Countries from the Perspective of Public Health" webinar series in cooperation with the PKU's School of Public Health and Institute of Global Health. The salon invited Prof. Fang Hai from PKU's China Center for Health Development Studies to talk about the public health system and health emergency response system of the US and shed light on issues such as the state of the global public health system in the context of globalization and the cooperation between China and the US in the field of public health.

Prof. Fang Hai pointed out that due to economic and societal

developments, medical care has improved tremendously and the impact of public health on people's productivity and life has been diminished. In the world a century ago, epidemics of smallpox, poliomyelitis, and respiratory infectious diseases such as bacterial pneumonia and influenza were the main causes of public health deterioration or death — no matter whether it was in developing countries, such as China, or developed countries, such as the US. Thanks to the ever-developing economy and the rapid progress of medicine, infectious diseases are no longer as frightening as they used to be in developed countries such as the US, the UK, Spain, and Italy. Moreover, advances in technology have enabled researchers to develop vaccines that effectively prevent and control epidemics. Chronic diseases of the elderly have become one of the major diseases in developed countries. During the COVID-19 pandemic, the virus has hit the elderly harder, and those among them with weak resistance have had a higher mortality rate after contracting the pneumonia.

The spread of COVID-19 across the world has had serious impacts on various aspects of the world, such as international politics, economy and culture, and has resulted in an unprecedented level of attention to public health. Therefore, countries may take the prevention and control of major infectious diseases as a routine matter after this outbreak is contained. The Chinese public had only had a very vague idea of public health before the pandemic outbreak, and, due to insufficient attention, China's public health system suffered from shortcomings. In view of this, a review of the US healthcare system could contribute to the improvement of China's healthcare system to avoid repeating the problems that have occurred under the US

system.

An overview of US politics and its healthcare system

The political system of the US has profoundly influenced role of the country's healthcare system in epidemic prevention and control. Stretching from the Pacific Ocean to the Atlantic Ocean, the US extends over a vast territory that holds rich and human resources. It is economically developed, with a GDP that ranks at the top in the world, and, culturally speaking, it is relatively open and inclusive. The US is organized on a federal basis in which states have greater autonomy and can establish their own laws and regulations so long as they do not violate the Constitution; politically, the power is separated into three branches, among which the legislative branch enjoys the highest level of independence. Under the principle of checks and balances, the US federal government allocates power to state governments. The healthcare system is handled in the same way: the federal government does not introduce health plans that restrict local governments. This system has its pros and cons: states can carry out more precise predictions and analyses based on their own conditions to better respond to them. At the same time, the federal government lacks control over resources as as the ability to redeploy them, and so faces difficulties in allocating resources to critical departments. In contrast, the Chinese government rapidly reallocated supplies and redeployed medical personnel from provinces across the country to aid Wuhan after the COVID-19 outbreak in that city, bringing into full play the superiority of the socialist system and manifesting capabilities unimaginable in the US context—the federal government has no authority to reallocate supplies from one

to another since resources belong to the states themselves.

Compared with other Western developed countries, the healthcare system in the US possesses less power and plays a smaller role, but the US has invested enormous amount of resources into this system. By collecting tax revenue or medical insurance paid by residents, countries such as Germany, the UK, France, and Italy are able to mobilize large amounts of funds and resources to purchase or provide medical services. In comparison, although the US has put in considerable amount of money into its healthcare system, most of the funds come from private payments rather than taxes paid by US citizens. The per capita expenditure on healthcare of American citizens ranks the highest in the world and exceeds that of Norwegian citizens, which ranks second, by 53 percent. As a result of the large amount of resources invested to maintain the operation of the healthcare system, the US possesses relatively good medical conditions, a high level of doctor competency, and rich experience in the treatment of certain diseases, as can be seen from the high survival rate of cancer patients.

In 2017, the US spent about 18 percent of its GDP on healthcare, and the number is likely to exceed 20 percent in the next two years. Such a percentage is far higher than that of the UK, France, or Canada, which has been stable at the level of 10 percent, whereas China’s healthcare expenditure only takes up about 6 percent of its GDP, equivalent to the level of the US in the second half of the last century. This difference arises from the difference in the aging of population in different societies. Expenditure on health is mostly used to treat the elderly afflicted with serious diseases, from which young people rarely suffer.

The independence of the local authorities from the federal government & the intersection of public and private systems

The healthcare system of each US state is independent from the federal system. The states dominate the prevention and control of the COVID-19 pandemic, while the Health Department of the US federal government is responsible for managing the healthcare system, developing medicine, and paying health insurance. The power of the US healthcare and service system is allocated to the federal states and local governments, which are entitled to manage their own public health system and must pay large sums for medical expenses. The states are also responsible for making policies and providing aid to people in low income groups who are not able to pay for health insurance. The department of health in each state and affiliated agencies are also in charge of managing public health, which covers a number of factors in this context, such as air quality, wastewater treatment, infectious diseases prevention and first aid, food waste, firearms, funerals and cemeteries, and of which disease control is only a part. There are both advantages and disadvantages to this circumstance in which the states are independent from each other in controlling the pandemic; the advantage is that each state can formulate measures based on the specific situation it is in, while the disadvantage lies in the lack of effective cooperation between the states, which is not conducive to forming joint forces for pandemic control.

Due to the decentralization of authority, the federal government faces difficulties in covering all aspects of

pandemic control. At the height of the pandemic in Hubei Province, the Chinese central government rapidly deployed resources from across the provinces to aid Hubei with the shortage of ventilators. This was not the case in the US: states scrambled for ventilators, and those who bid higher often got hold of them. As a result, the price of ventilators soared due to high demand, and many states could not acquire any. Despite this, none of the states sought help from the federal government because, under the decentralized system, partial authority has already been devolved from the federal government to the state governments. With the federal government and the state governments each tending to their own affairs, the federal government does not make budgets for the states and therefore, does not have the capacity for providing the states with aid.

In addition to public medical institutions and departments, there are also numerous social and professional organizations that effectively monitor the operation of health institutions. Among them, the American Medical Association organizes and supervises its members; other professional medical academic organizations also monitor, evaluate and rate their members; and unofficial rating agencies in the US society carry out examination and evaluation of each hospital's rating, comprehensiveness, and conformity to standards.

The US healthcare system relies largely on private medical insurance. A considerable proportion of US medical insurance is paid by individuals, meaning that a person would pay for part of their medical insurance and their employer would pay the rest of their insurance. After receiving the money, the federal government as well as the state governments purchase some

public health and medical services and invest in vaccine development and other fields of scientific research. Unlike China, in which the healthcare system is public and government-dominated, in the US, paid private medical services are provided by some hospitals or independent practitioners alongside public medical insurance institutions. Approximately 48 percent of public medical institution funding in the US comes from state appropriation or tax revenue, about 40 percent comes from individual medical insurance payments, and the remaining 12 percent is out-of-pocket expenses, meaning that public institution funding sources are quite evenly distributed between the public and private sectors.

Primary healthcare, specialists, hospitals and medicine in the US

Primary healthcare in the US is relatively developed, with more than one third of all practicing doctors in the US working in primary medical service. Most doctors engaged in primary healthcare are freelancers, who provide medical services to residents in need with a charge that is covered by the medical insurance these residents have paid for. Doctors who work in primary healthcare must hold a professional qualification, and most posts also require a degree, with the highest requirement being an MD. Compared to countries such as the UK, France, and Italy, in which patients are not free to choose any doctor but must choose a designated one, in the US, patients have the right to choose their doctor in most cases.

While some specialists in the US work in large hospitals, there are also specialists that work in primary healthcare services. Most of the specialists in China, in comparison, work

in large hospitals; if people go to community healthcare service centers to see a doctor, there are few departments to choose from, and they are usually too generic, such as internal medicine, surgery, and Traditional Chinese Medicine. However, types of medical service in US primary healthcare are much more diverse. In the US, specialists earn more than doctors working in primary healthcare service, but they also work in harder jobs. Their work is mostly performing operations or treating inpatients. Specialists spend more time on seriously ill patients and are likely to charge them more.

Most hospitals in the US are non-profit organizations having the purpose of serving society rather than maximizing profits, and they are equipped with a full range of facilities and possess excellent treatment capacity. Although the scale of US hospitals is not as large as that of Chinese ones, bed shortages are rare. Statistics show that, in the US, expenses for medicine take up a relatively small proportion — 10 percent — of medical service expenses, while payment to doctors exceeds 15 percent, and expenses due to hospitalization make up around 33 percent. The healthcare system in China is based on a mechanism in which doctors' salaries are subsidized by the profit made from the sale of medicines. However, this is not the case in the US since the US government invests plenty of money into the healthcare system to ensure that doctors get a handsome income without having to be subsidized by medicine profits. The income of doctors in the US ranks among the top in the world; a specialist holding a doctor's degree in medicine can usually earn 150,000 to 200,000 dollars per year, and this income rises steadily as the doctor becomes more senior. Outstanding

specialists, such as cancer doctors, anesthesiologists and surgeons, earn an even more sizeable salary. Medicines in the US are not cheap because US pharmaceutical companies must take R&D cost recovery into consideration. Canada, in comparison, is in a different situation. The Canadian government purchases medicine in bulk at a discounted price and then sells them at relatively low prices. However, the US government does not encourage purchasing and selling medicine in such planned economic way; instead, it hands these processes to hospitals and medical insurance companies to prevent the government from becoming excessively powerful. As a result, the same medicines are often sold at a lower price in Canada than in the US.

Tasks and responsibilities of the Centers for Disease Control and Prevention (CDC)

As an agency, the CDC has two main tasks: protecting people's health and safeguarding national security. The CDC are operated under a 24/7 working schedule to protect the people of the US in aspects such as health, security, and personal safety. The CDC fights diseases, no matter whether they originate domestically or abroad or are chronic or acute, in both the phases of treatment and prevention in order to keep residents healthy and communities safe. They also conduct scientific research, publish quality articles in the field of medicine, and provide information on medical treatment and health. For example, the CDC website gives plenty of information on the coronavirus pandemic as well as that on various vaccines. The CDC hopes to protect people from health risks and defend the country against major disease threats by giving the public

disease and vaccination information.

As an important part of pandemic prevention and control in the US, the CDC ought to play a leading role. However, for various reasons, it has made multiple mistakes in controlling the coronavirus pandemic. The CDC comprises government agencies whose work is under the jurisdiction of the federal government. Because the CDC did not pay enough attention to the pneumonia caused by the coronavirus and did not adequately control some of the cases, and because President Trump did not listen to the advice of some of the experts in disease control due to political considerations, many mistakes in pandemic prevention and control were made. It is important to note that since one of the CDC's responsibilities is to detect and control emerging diseases, it should have been prepared for the coronavirus pandemic when it broke out in other countries in January 2020. However, it failed to respond appropriately when the pandemic spread to the US, and deaths due to the coronavirus rocketed up.

In addition to the detection and prevention of emerging diseases, the CDC is also responsible for dealing with the threat of major deadly diseases, researching and developing technologies, training technical personnel, and monitoring diseases. As of May 26, 2020, the coronavirus had claimed more than 100,000 lives in the US and the number was still skyrocketing. The CDC has a responsibility to manage and control major diseases like this. Moreover, as a scientific research institution, the CDC regularly carries out technological research and development, such as advancing the development of virus detection kits and making better diagnosis and treatment

programs as well as training a great number of public health professionals with specialized knowledge and skills. It also promotes healthy lifestyles among the public and pushes for the abandoning of debilitating habits, such as smoking and drinking.

Why is the Coronavirus spreading so widely in the US?

When the coronavirus broke out in other countries in the world, the US had sufficient time to respond and prevent its spread. However, due to the characteristics of its healthcare system and for ideological reasons, the US made one mistake after another. The government did not give enough attention to the pandemic and did not advise the public — or even medical workers — to wear a face mask; later on, the government dramatically advised the public to wear a scarf or cover their noses and mouths with a handkerchief, which was a clear sign of its having taken the pandemic lightly due to the failure to recognize the danger posed by the coronavirus.

There are several reasons for the rapid spread of coronavirus in the US. First, the borders were not closed in time, and thus imported cases of the coronavirus increased sharply. Andrew Cuomo, governor of the State of New York, remarked at a press conference that the US had suspended flights from China from early February onward, and almost no Chinese people entered the US from then on; what was not expected, however, was that most coronavirus patients entered the US from Europe. The US is a crucial aviation country and an important air transit country in the world, and US tourists frequently travel abroad by air. Despite the spread of the pandemic, the US government did nothing to control the flow of people entering and leaving the country and continued to allow massive movements of

population, which resulted in the soaring number of imported cases from abroad, most of which were from Europe.

Second, the US did not promptly limit large scale gatherings. The pandemic had already hit countries around the world in February and March, and some countries had taken corresponding measures to tackle the problem of cluster infection. China, for example, implemented policies to seal off communities and cities and banned gatherings with the aim of strictly limiting large scale movement of the population and preventing close contact between people, which effectively reduced the risk of large-scale infection. The US federal government, however, did not restrict mass gatherings. Numerous people who had contracted the virus without knowing it still attended large gatherings while the participants lacked awareness of the need to protect themselves and did not wear face masks, which accelerated the infection rate.

Third, the US government's controls on high-risk work zones and densely populated areas were ill-conceived. As the coronavirus outbreak in China coincided with the Spring Festival holiday, the Chinese government decided to extend the holiday and postpone the resumption of work and production to prevent the spread of the disease. Specifically, the Chinese government explicitly ordered all localities to postpone the opening of schools and move teaching online; it also called for reducing meetings where numerous people gathered and holding online meetings instead. In places that had resumed working and production, individual serving during mealtimes was implemented, and staff were required to wear face masks whenever they were in close contact with others. The series of

measures undertaken by government have effectively contained the spread of the virus in China. The federal government of the US, however, did not implement a lockdown policy due to the cultural tradition that emphasizes the freedom of individuals. As for daily life and work, the government also failed to consider the risk of the virus spreading widely as a result of close contact between people, and was unprepared to take the necessary prevention and control measures. As hundreds of thousands of people worked in environments or dined in restaurants that lacked essential preventive precautions against the spread of the virus, the coronavirus spread faster and was more deadly in densely populated areas.

Finally, testing reagents were not widely distributed at the onset of the pandemic outbreak. The lack of testing equipment restricted the research and management of the coronavirus pandemic in the US. As the US federal government did not authorize laboratories in public health institutions or hospitals to conduct testing, testing was only conducted by the CDC. Meanwhile, due to the shortage of testing kits, testing personnel considered the age and the severity of symptoms of the patients suspected of having contracted the virus when deciding whether to test them or not. As a result, the scope of testing in the US was initially very small. Other problems also occurred in relation to testing. For example, the testing technology needed to be improved, while both citizens and insurance companies wanted the other party to cover the cost of the test. China, on the other hand, improved testing efficiency and ensured higher accuracy of test results by modifying the testing method: tests were first carried out in multi-person batches, a negative result

proved the health and safety of multiple people, whereas a positive result lead to further individual tests.

There was also a lack of planning for follow-up measures that would have complemented the tests. After receiving the test results, some patients chose to stay home and self-isolate. However, the effect of self-isolation in the US was far from ideal due to the following two factors. The government lacked the ability to plan community control measures; for example, it had no access to a "health code" app that could utilize big data to monitor the residents' real time health status, with the result that the range of activities for those who were in less-than-ideal health conditions could not be restricted. Meanwhile, the US public adhered to their pursuit of individual freedom, continued to visit beaches and other crowded public places, believing that the government had no right to restrict their freedom of movement. At the same time, a considerable proportion of infected patients needed to be hospitalized to receive treatment, but the US government had no contingency plans for mass hospitalization. In contrast, China established makeshift hospitals in large stadiums after learning the lesson of not having enough hospital beds in the very beginning of the pandemic, and thus ensured that every patient could be hospitalized or adequately quarantined, and that every single suspected case was covered by the surveillance and management system.

Obama's Healthcare Reform

The US has not achieved full coverage of health insurance over its population, and more than 15 percent of its citizens have no health insurance. Among these people, some are rich enough

to pay out of their own pocket for medical treatment and therefore do not need medical insurance, while others are poor people without wage income and therefore cannot pay for their healthcare. During his presidency, Barack Obama pushed forward healthcare reform, called the Affordable Care Act (ACA), toward the goal of universal coverage, for which Democratic presidents — himself and former president Bill Clinton, to name a few — had always advocated. However, numerous obstacles lie on the way to universal healthcare coverage in the US.

These obstacles mainly manifest themselves in the clashes between the platforms of the Democratic and the Republican parties. For example, the Republican party wishes to maintain a "small government" that only acts as the watchman of national economic development and does not interfere in issues related to the freedom of the people. The Democratic party, on the other hand, pays more attention to ensuring the people's welfare. Barack Obama added a clause to the ACA that mandates US citizens to purchase healthcare or else they would face a fine. This mandate was opposed by many states and social groups, which maintained that the mandate infringes on civil liberties. However, the US Supreme Court ultimately ruled that the ACA mandate was constitutional. After taking office, Donald Trump vowed to abolish the ACA entirely, but, so far (as of May 26, 2020), he has not been successful.

Medical insurance can guarantee that American citizens can fully enjoy high-quality medical and health services, but, currently, medical insurance in the US, which still has not achieved universal coverage, is facing a difficult situation. US

medical doctors are generally highly competent and have received quality medical training, and US hospitals rank among the best in the world in terms of their scientific research capabilities and the medical services they provide. In the US, whether you are going to a primary-level doctor for medical treatment or going to a hospital for medical treatment, medical insurance is the primary payment method. Therefore, American citizens who have not paid for medical insurance or are not willing to spend money on medical treatment due to financial constraints will not be able to enjoy high-quality medical services. But at the same time, some American citizens who did not pay for medical insurance and chose to pay for medical treatment out of their own pockets said that the actual cost is much higher than the amount paid by medical insurance, and they are paying more without getting better service; this situation leads to much resentment.

The COVID-19 pandemic has exposed a series of problems in public health, the system of elder care, and the economy in the US

The crowded conditions and a lack of strict isolation measures in nursing homes have led to a rapid spread of COVID-19, which is unlikely to be halted soon. The elderly in the US usually sell their houses after retirement and move into assisted living or nursing homes, where special care givers are hired to look after those who are not able to take care of themselves. Assisted living or nursing homes in the US are mostly private, with few public ones. Unlike hospitals, which are specialized institutions, assisted living and nursing homes lack specialized isolation wards and medical staff. As the

immunity of the elderly against infectious diseases is relatively weak, once a resident gets infected in a nursing home or assisted living institution, a widespread crowd infection is likely to happen. With a severe COVID-19 pandemic situation in the country, the US government has not been able to allocate attention toward the problem of crowd infection in such facilities. Reports suggest that a large proportion of elderly people did not receive tests for the virus before they passed away due to a shortage of testing kits. The eldercare system in the US has faced dire challenges during the COVID-19 pandemic: on the one hand, the elderly in institutions cannot be easily moved to a different place because they have sold their houses and their children are not able to take care of them, and therefore they could only live in a care facility; on the other hand, isolation and testing resources are lacking, and, even if they were available, private institutions are not able to allocate them in a centralized fashion as the government is capable of doing.

The lack of medical supplies in the US in this COVID-19 pandemic has not only revealed deficiencies in the public health sector in the country but also reflected economic problems. The US does not produce medical supplies and equipment such as masks or ventilators, and therefore must rely on imports. Since mask production is a labor-intensive industry, if the US were to produce masks with its own workers, the wage that would have to be paid would be much higher than the cost of importing masks from China or other countries. However, without the necessary medical supplies in sufficient quantities, the US faces an extremely challenging situation in dealing with COVID-19.

The epidemic will have a great impact on the future economic division of labor in the US. After the spread of the epidemic is controlled, the US may adjust its industrial chain layout and transfer the production of some important medical and epidemic prevention materials and daily necessities back to the homeland. However, the degree to which we will see the return of such domestic production remains to be seen as it will be affected by factors such as labor productivity.

The political and cultural conceptions of the US society have profoundly influenced the effectiveness of the US's pandemic control measures. In Asian countries such as China, Korea, Japan, and Singapore, the public is more willing to follow the government's guidance and are more obedient to the government's decisions. Most of the public in these countries wear masks, stay at home for isolation, and avoid going out, which are all conducive to containing the wider spread of COVID-19. In countries like the US, UK, Italy, and Spain, however, the government has been able to play only a limited role, and the measures taken to thwart the spread of the pandemic have not been able to take into account all aspects. In the meantime, the public in these countries tends to lay much heavier value on individual liberty and hold the cultural conception that wearing a mask means you are ill; therefore, it is more resistant to mask wearing. Other than that, the lack of attention paid to keeping physical distance while socializing and the less-than-ideal effect of home isolation also contributed to the wide spreading of the virus.

After the speech, Prof. Fang Hai discussed the trend of global pandemic development, the relationship between the US

and the WHO, the impact of political factors on the US public health system, and other topics with the students and teachers who attended the event. Prof. Qian Chengdan, director of PKUIAS, remarked in his concluding words to the salon that the outbreak of COVID-19 had not only hugely impacted the ecology of the whole society as well as the world pattern, but also brought about profound changes in people's everyday life and habits, although we have yet to see the full effects of such changes. On the other hand, COVID-19 has also provided an opportunity for us to reflect on some long-held conceptions and ideas that are now severely challenged, and require people to rethink certain issues, such as the size of the government, the role of society and so on. It is safe to say that the COVID-19 pandemic will prove to be a major turning point in the course of human history.

The 15th New Buds Salon

Health Systems of Various Countries from the Perspective of Public Health: Germany

June 3, 2020

In order to better understand the public health system and emergency response systems of typical countries, Peking University's Institute of Area Studies (PKUIAS) initiated a "Health Systems of Various Countries from the Perspective of Public Health" webinar series in cooperation with the University's School of Public Health and Institute of Global Health. Prof. Ole Döring, director of the Institute for Global Health, Berlin, was invited to give a talk at the salon. He introduced the German public health system and discussed the improvement of international public health systems under globalization as well as the status of public health cooperation between China and Germany, among other topics. The salon was hosted by Prof. Zheng Zhijie, director of the Department of Global Health in the School of Public Health.

Prof. Ole Döring first introduced how Germany dealt with this epidemic. He expressed his opinion that Germany did relatively well up to the present and successfully passed the most severe period. Germany is the leading economy in Europe, and some basic features such as diversified elements support each other, with families, individuals, community, and professional groups and associations all participating in management. And, in so doing, they have become cornerstones of the German social economy. Health care is deeply rooted in the social economic structure; therefore, these terminal and

middle structures are very important. In contrast, France has a centralized system. French medical standards are very high, but the method of information communication is different from Germany's. A diverse society functions the same way, and we put it under the umbrella of the overall legal system, where all kinds of elements could interact well. Germany might be the only country in Europe to possess this feature. Our technology, culture, creative ideas, and people are very diverse, which means our system may not apply to other countries, Prof. Döring said.

Information diversity in Germany is also an advantage; it can gather different standards, which allow the final outcomes to better face all sorts of challenges. There are three levels of information supervision and collection. The federal level is the first one; information supervision and collection organizations in Berlin are directly connected with the Ministry of Health. They not only collect relative data but also further combine data from different states, while, of course, all the states and cities do their own data collection. As for the community level, there is no unified data collection method in Germany, and reporting methods and data quality differ. At present, we believe that the entire regulatory system still needs to be unified or standardized, but insufficient funding is a very significant problem at the community level, Prof. Döring said.

Free movement within the EU has also affected Germany's epidemic prevention and control. Prof. Döring stated that, so far, it is not clear if setting borders between certain countries could be helpful for controlling the epidemic, because the movement of populations has not been monitored in the past. There are

many senior citizens in Italy, and since borders weren't set up before, after arriving in Italy, many infected people caused large-scale local infections. In fact, it is more reasonable to consider controlling the epidemic from a community perspective rather than from a border perspective, he said.

Prof. Döring next introduced the German health system as an aid to understanding the German response to and its performance in the epidemic. The German health system makes up a section of the German social security system; it was established and developed in the 19th century and has been improved through multiple reforms.

Similar to the policy making system of the EU, the German social security system exhibits the following characteristics. First of all, it is rooted in the management of diversity and contains the concept of subsidiarity. Due to the country's high diversity in its ethnic composition, political system, religious culture and so on, a more comprehensive management system is needed to guarantee peace, prevent wars, and achieve stable economic and social development. Although a top-down approach is usually adopted in policy formation, each state usually has a certain degree of autonomy. At the same time, it is believed that policy should be formulated by professionals. The second characteristic is sustainability, and its main goal is to guarantee social production and welfare. During the 19th century, there were frequent civil wars. When formulating a policy system, we hoped to further promote the country's sustainable development. In addition to producing wealth, it also requires consideration of the more long-term development of mankind, Prof. Döring said.

The third characteristic is solidarity, which is to design a social security system based on the interconnection between society and the economy. It not only pays attention to the concerns of family members and the groups one belongs to, but also requires consideration of the whole community and society, with the hope of achieving unity among different religions and cultures and within the country. The fourth characteristic is the interaction of enlightenment and entrepreneuring. When formulating its master plan, Germany attached great importance to innovation and entrepreneuring. At the same time, it paid attention to the natural sciences and their close connection with social and economic development, which also affects the medical field. The fifth characteristic is professionalism.For a long time, the medical and health fields have been firmly in the hands of doctors and medical professionals. They are the top experts in the field. They need to manage each patient well and represent people's health interests. The sixth characteristic is to follow the basic principles of rational legislation and governance that originated during Prussian period and, later on, developed into a complete system in Germany. In addition, the German social security system was also affected by industrialization and social and cultural reforms. In the 19th century, industrialization triggered various ideological innovations and new discussions on the social order and value systems. The original policy system was challenged in the new era, and it was not able to solve large-scale poverty, injustice, social instability, and other problems. People's multiple unmet needs — for social security, and in light of increasing family disintegration and the inefficiency of the broken labor unions — to some extent also

promoted the reconstruction of the social security system, he said.

In regard to the historical and cultural background of the German social security system, Prof. Döring said that, at the end of 19th century in the German Empire, health services were private activities, and, at that time, non-private health services were financially supported by churches or included in the municipal services of big cities. Big cities were densely populated, and epidemics more easily broke out there, so civic committees urged government to offer more health services. Germany's legislation separated treatment and medication early on, and, in 1710, the first university hospital was founded. In 1794, Prussia brought all hospitals under state control and established a new hospital system. In 1803, it was decreed that churches would no longer be allowed to provide medical treatment. All doctors were required to possess a license, and healthcare services were provided by the state in this period. Later on, reform of the healthcare system accelerated, and relatively important measures, such as paying attention to occupational health and execution safety measures, were taken because of the great number of major accidents at workplaces, which lacked sufficient safety measures. This could be indicative of the Prussian rational mindset.

With the establishment one after the other of the statutory Health Fund, Accident Fund, and Pension Fund, the German social security system constantly improved, and the Health Fund covered 18 percent of the population. At the beginning, the funds collected a certain percentage of salary which laborers paid monthly, and, later on, the funds came from money which

was paid by laborers and employers together to make sure the long-term viability of the funds. The development of industrialization caused many health-related problems in cities, such as the impoverishment of families, poor living conditions, and vulnerability to disease. Due to the concern that the entire society might be affected, the healthcare security system gradually started to cover these poor people. In addition, because birth control was not practiced, families tended to have many children. However, parents had too limited an income to support a big family, so some children died young and some were sent abroad to survive. Based on a consideration of the people's wellbeing and their labor, needed for industrialization, Germany founded the charity and care association, a parity-based welfare association, and others to provide social aid for food provision, maternal and child health and impoverished population, with the purpose of improving social security policy.

In terms of cultural background, the unity of Germany in the 19th century was more embodied as a unity of thought, emotion and common experience, idealistic, and transcending specific social dimensions. The German social security system was also based on this shared linguistic, historical and cultural foundation, which recognized the idea that, as members of the same race, we are a unity. Germany's post-World War II constitution established most basic human rights. The idea of this constitution was actually the enlightenment of human thinking, including the spirit of responsibility, equity and solidarity. Relative commitments based on the constitution gave people a sense of belonging and also gave birth to patriotic sentiments, so that society could develop better In 1871, the

German empire managed diversity through narratives, taking into account the aspects of nationalism, scientism and people-centeredness to give people a sense of shared belonging and ability to form abstractions among different classes. German scientists also made significant contributions. As Robert Koch, a German doctor and bacteriologist, once pointed out that, we have to understand human beings — human beings are a social entity; we must understand society — society is the natural environment of mankind. This also reminds us to adopt an integrated and holistic principle to promote the further development of science. During the Nazi era, the social security system was ideological and instrumentalized. Due to this period of history, concepts such as ecology, solidarity, patriotism and authority were discredited for generations to come. Later, when the country came up with a plan for how to keep healthy, people were very resistant. For example, many German people actively oppose vaccination, considering it to be a method of national control, Prof. Döring said.

Prof. Döring pointed out that some people believe there are many similarities between the British healthcare system and the German system; this is a consequence of neoliberal reforms. In reality, neoliberalism destroyed the social immune system. Neoliberal reforms had a greater impact on the UK, because the UK has a state-based, top-down welfare state health system.Germany was a latecomer in organizing its own health system. The advantage of a latecomer is that the starting point is relatively high. We had mastered the existing knowledge and so were able to put more emphasis on diversity, Döring said. Society is like a huge laboratory where you can compare

different experiences. In general, Germany still has a relatively robust regulatory system. However, there has been an urgent shortage of community health providers and administrative staff in Germany. Due to insufficient funds resulting from privatization measures, there has been no way to provide services according to their own purposes. German society is still resilient, and the neoliberal reform has been carried out for almost 30 years. In fact, it has not completely destroyed the good system of the past. There are still many social forces at play which have been able to adjust the system and fight against the neoliberal reforms. There is no direct comparison between Germany and Britain. The infection rate and mortality rate of COVID-19 are very different, and politics plays different roles in each country. Chancellor Merkel's response to the epidemic has been based more on scientific and rational concepts, which is very different from the approach taken by the British prime minister. It may be very difficult to compare the response methods of these two countries. At present, it is not possible to collect all the data. From a policy perspective, cultural differences must be considered.

Germany currently has sixteen states, and there are smaller administrative divisions under the states, all of which hold jurisdiction, including health. Except for systematic public health issues, other health affairs are managed by each state itself. This actually comes back to the idea of separation of powers or devolution that was mentioned in the opening paragraph. This diversified comprehensive management approach covers the whole country like an umbrella. There was a period of time when the German health system was constantly

being revised, and different interest groups wanted to promote certain decisions. Among the groups, politicians, to satisfy their own interests, supported certain changes, which in fact provided a new driving force for new medical technology or service benefits to patients. When new situations arise, some people would advocate for new legislation, which sometimes was a good thing but sometimes was not; both legislation and decision-making requires full understanding of the reasons behind it. In 1990, Germany was reunified, and health systems of the two regions were very different. East Germany was a socialist country with the medical service system provided by the state, and in certain public health fields it was very successful. However, the successful past practices of the two Germanys, faded after reunification. The West German system was introduced into East Germany, and the good practices of East Germany were completely abandoned. After German reunification, the German health system had three main driving forces: first, the need to manage competition, because medical system was diversified; second, to improve efficiency, for example, to be innovative; third, to guarantee the quality of products and services.

Prof. Döring went on to explain the basic characteristics and main principles of the present social security system in Germany.

The first is decentralization, which means that the authority of management is devolved from top to bottom. This means self-management, and some professional groups and associations can exert influence on government decision-making and health governance issues to a large extent. They are

independent of the country, and can be organized and operated in accordance with the procedures of a certain state. The purpose of decentralization is to delegate management and decision-making power, as much as possible, to professionals and grassroots organizations. The second characteristic is unity. In general, the German system has a high success rate, and mortality and morbidity rates have greatly reduced, compared with the previous ones. Life expectancy in 2020 is around 80 years old, and the coverage rate of that sickness fund has reached 90 percent and the medical insurance contribution rate, 15 percent. Germany has established its insurance policy and medical system based on the concept of solidarity, and most citizens are compulsory insurance buyers. The country automatically and compulsorily deducts insurance fees from wages, and employees and employers both pay together. Interestingly, when someone purchases insurance, all of his or her family members will automatically be covered. The third characteristic is strong legislation.

In terms of specific governance, the federal government and state governments respectively have health administrations responsible for public health. Among them, the main executive agency of the Federal Ministry of Health is the Robert Koch Institute, which is equivalent to the CDC in Germany. It mainly manages the prevention and control of infectious diseases and is currently responsible for the management of COVID-19 prevention and control. The Federal Joint Commission is a very important organization. Professional, private, social, and state health-related entities can participate in this commission to make suggestions for cooperation or introduce policies. This is

also an example of German decentralization. At the same time, scientific research organizations in some states or even some private companies also provide quality control assurance services. Germany has more than 800 disease funds, each with related entities responsible for operation, and the overall payment situation is also different. The Central Federal Association of Disease Funds coordinates overall the different disease funds or insurance.

German social health insurance has the following structural principles. The first is solidarity assistance, as mentioned earlier. The second is social welfare. Patients can receive treatment directly and do not have to pay upfront, and the overall cost will be calculated after treatment. The third is joint contribution from employers and employees. In addition, German social insurance is mainly self-managed, featuring diversified characteristics. Germany's statutory medical insurance system is more embodied as a fund rather than an insurance.

There are also regional differences in medical resources in Germany. There is a relative lack of medical institutions in parts of the north and northwest. More medical schools are currently being established, and there are about 3,000 medical graduates each year. The demand for nurses in Germany is very large, and there is still a large gap. Germany hopes to seek capable nurses from all over the world to engage in medical services in the country. At present, many Chinese nurses have come to Germany for employment, but it may take a long time to completely solve this problem. In terms of the training structure for doctors, many doctors have received about ten years of study or training. After four to six years of basic study and training,

one will learn more professionally in a certain specialization. Some doctors are in private practice and have their own clinics. How patients seek medical services is also changing further. Germany is trying to introduce an electronic medical card to collect data on different patients seeking medical treatment. However, people also have some concerns, mainly worrying about the security of personal information data.

One of the characteristics of the German health system is that it pays much attention to the labor group, not only about its safety but also the overall health of the labor force, such as the time management of workers. The concept of physical function has also changed. In the past, people were concerned about the functioning of the body itself, but now they are also concerned with issues such as mental health and adopt a more integrated and comprehensive perspective to view health issues. In terms of diversification, because different subjects have different ideas, Germany needs to determine its own standards and future direction to further explore the issue of health borders.

As for what kind of social security system Germany should build in the future, Prof. Döring believes that professionalization is a very clear concept which directly shapes the German health system. In the 19th century, the traditional medical system was established on basis of a doctor as a self-employed, independent and ethically committed professional, and similar systems that support public supervision and doctor-patient relations have become deeply rooted in society, helping to build universal trust and a higher level of health. Recent policy models have introduced state-led medical enterprises, forming a model in which public and private medical services compete for

consumer market share and resources. However, because it is more economical to manage diseases instead of safeguarding health, there is only investment in preventive medical care or health investment, but no profit to be made.

Prof. Döring indicated that there are still some problems in the German social security system. The first is systemic inconsistencies. Although Germany has compulsory private and common health insurances, in fact, the 10 percent of the richest people do not invest common health insurance. The government is currently facing greater economic pressure, and the money in the fund pool is getting less and less, but the common health insurance still has to invest in public diagnosis and treatment. Public diagnosis and treatment involve the participation of shareholders, and shareholders can finally share profits. This shows that there is a lack of consistency in health insurance, and it will actually cause citizens to lose trust in the healthcare system. In addition, there are problems such as the lack of infrastructure, insufficient nursing staff, poor information organization and flow, and low logistics efficiency. Germany lacks clear public health standards and measures to encourage healthy behaviors. Germany is the only country in the EU that allows tobacco advertisements in public places. Many tobacco advertisements are widely spread in society and promoted irresponsibly. Although Germany has passionate grassroots activities in terms of charity, welfare, and churches, the federal government has not given any support, and the community's health care funds and human resources are insufficient.

In addition, Germany needs to further increase its strength in the application of new technologies. There are different

cultural distinctions within Germany, and younger and older Germans have different views on these issues. Young Germans are open-minded and are mostly positive about using advanced technology. However, there are still many people in Germany who have reservations about cutting-edge technologies.

They are very conservative, questioning who controls these technologies, who ultimately holds the information, and who protects personal data privacy. In general, Germany has a variety of new technologies, which are advanced in technical fields such as genetic screening, but they have not been promoted on a large scale. Because of the differences in conceptual cognition in different cultures, it is difficult for Germany to explain this to the market. These technologies certainly have their uses, but many people hold a conservative view of them and believe that there are hidden risks.

At the end of his talk, Prof. Döring pointed out that China and Germany, these two powerful countries, could have a beneficial way to promote health cooperation on a global scale. For example, the United Nations Sustainable Development Goals has the principle of integrating health into all policies. China and Germany could cooperate in preventive treatment, hygiene and health care according to the overall definitions of the World Health Organization. At the same time, they could pay attention to the integrity of information, mental health, child protection, and other issues.

After his talk, Prof. Döring exchanged ideas with the teachers and students participating in the salon on the development trend of the epidemic in Europe and the development of the German family doctor system as well as

other questions. After he concluded, Prof. Zheng Zhijie thanked Prof. Döring for his excellent lecture. He pointed out that internet technology has facilitated academic exchanges during the epidemic. He further expressed his hope that more foreign scholars would conduct teaching and other academic exchanges in this way in the future, and welcomed Prof. Döring to come to China for face-to-face dialogue.