

Dialogue, Debate, and Discussion

Is China's Emergency Management System Resilient Against the COVID-19 Pandemic?

Qiurong Cai and Jihong Ye

Soochow University, China

CHARACTERISTICS OF EMERGENCY MANAGEMENT RESILIENCE

Resilience is considered key to the sustainable development of an emergency management system. Currently, the COVID-19 pandemic is testing the resilience of China's emergency management system. As a complex adaptive system (Uusikylä, Tommila, & Uusikylä, 2020), emergency management resilience should have the following characteristics (Arjen & Michel, 2013; Grandori, 2020; Li, 2020): (1) Diversity, which means the emergency management system has many parts with different functions that can help it resist risks. (2) Redundancy, which mainly refers to a certain degree of function overlap for the purpose of diversifying and mitigating risks. (3) Buffering, which means that when the uncertainty risk is realistic, the emergency management system has a certain buffering capacity for personal psychology and behavior. (4) Dynamic balance, which means that various parts of the emergency management system have strong connections and feedback. (5) Modularization, which shows that the emergency management system has sufficient material reserve capacity. (6) Flexibility, which means that the emergency management organization system is flat. (7) Network, which means the emergency management system is a loosely coupled structure that includes multiple subjects and is decentralized. (8) Synergy, which requires the emergency management system to involve various social forces by establishing multiple channels and creating opportunities. (9) Bidirectionality, which refers to the information flow between the internal organization and the external public. (10) Reflexivity, which is the ability of the emergency management system to draw lessons from experience and continue to learn.

Furthermore, based on the revised classical emergency management phase theory (Wise, 2010), as well as China's practical experience (Lu & Xue, 2016),

the resilience of China's emergency management system during COVID-19 can be examined sequentially across the typical four phases of emergency management: 'prevention and mitigation', 'preparedness', 'response', and 'recovery'. The sections that follow will discuss the resilience of China's COVID-19 emergency management system based on its characteristics during those four phases.

PREVENTION AND MITIGATION PHASE

In the prevention and mitigation phase, the emergency management of COVID-19 revealed deficiencies in terms of diversity and redundancy. First, long-term attention has not been paid to the importance of risk prevention and control of public health. After the SARS epidemic in 2003, China's government paid significant attention to disease prevention and control, as well as responses to public health emergencies. The state successively promulgated various laws and regulations, including *Regulations on Responses to Public Health Emergencies* and the *Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases*, among others. Over time, however, the importance of public health risk prevention and control was gradually neglected. For example, in the new round of medical reforms, the 'three-level medical and health service network' replaced the 'three-tier medical and preventive network', the prevention and health care functions of the disease prevention and control institutions were diluted.

Second, the executive power and publicity of disease prevention and control institutions are 'double missing'. Around 2000, the introduction of policies such as *Opinions on the Reform of the Health Surveillance System* and *Guidance Opinions on the Reform of the Disease Prevention and Control System* prompted counties and municipalities to begin forming disease prevention and control centers and health supervision offices (bureaus). Disease prevention and control institutions became public welfare institutions and no longer assumed the administrative functions of supervision and law enforcement. The lack of administrative power and independent decision-making power in disease prevention and control institutions could easily lead to missing the 'golden window' for public health risk prevention and control. This was an important reason for the lag in issuing early warning information about COVID-19 (Zhou, 2020). Meanwhile, disease prevention and control institutions can provide paid services to the public, which means they tend to place more emphasis on medicine than on prevention – or on profit rather than public service. The provision of public services has become a 'burden' that affects an organization's revenue, and the lack of publicity greatly weakens the 'prevention and control' function of disease prevention and control institutions.

Third, public health resources are being decentralized. In 2009, the promulgation of *Opinions of the CPC Central Committee and the State Council on Deepening the Health Care System Reform* marked the establishment of the basic institutional framework of the public health system. However, public health resources are scattered in public health supervision departments, professional public health institutions, various

medical service institutions, and other departments. It is difficult, therefore, to effectively integrate and coordinate them to deal with public health emergencies.

PREPAREDNESS PHASE

In the preparedness phase, COVID-19 emergency management had problems with buffering, dynamic balance, and inadequate modularization. First, there are conflicts between some public health laws and regulations. This was seen, for example, in the release of early warning information. The *Act on Tackling Emergency Affairs* invests local governments at and above the county level with the authority to issue alerts. Moreover, according to the *Law of the People's Republic of China on the Prevention and Control of Infectious Diseases*, the health administrative departments of local governments can only publish information on infectious diseases with authorization from the health administrative department of the State Council. This also led to widespread public doubt about the timeliness of the disclosure of COVID-19 information by the government of Wuhan.

Second, public health information systems are independent of each other. After the SARS epidemic, the state promoted the construction of public health information systems. In April 2004, a direct online reporting system for infectious diseases was launched; in 2005, a surveillance system for special and priority diseases was put into operation; and in 2008, an automatic information system was established for early warnings about infectious diseases based on direct online reporting. However, not only are those information systems unable to intercommunicate between different subsystems but it is also difficult to achieve information sharing among different regions, even if the same subsystem is used. This lack of information connectivity and low degree of sharing have, to some extent, reduced the sensitivity of the COVID-19 early warning information system.

Third, the manner of building emergency materials reserve is overly simple. In the early phase of COVID-19, there was a huge gap in anti-epidemic materials (e.g., masks, protective clothing, disinfectants), which caused a shortage of necessary materials for frontline medical personnel. This situation exposed the shortcomings of the emergency medical supply reserve in terms of preparedness for major public health emergencies. Fundamentally, there had been too much reliance on physical reserve, limited utilization of contract reserve, and production reserve modes. Moreover, there is a lack of diversity in the way emergency materials are stored, making it difficult to produce, deploy, or develop emergency medical materials in a short time after the occurrence of public health emergencies.

RESPONSE PHASE

In the response phase, the emergency management of COVID-19 showed some degree of flexibility and adaptability, but there were still problems of insufficient coordination. After the COVID-19 outbreak, the National Health Commission sent both working and expert teams to Wuhan to carry out on-site investigations

on December 31, 2019. On January 20, the National Health Commission set up a working mechanism to perform functions such as medical treatment, scientific research, and frontline work. On January 25, the Central Party leadership set up a leading group for the COVID-19 prevention and control under the Standing Committee of the Political Bureau, given the urgent need to control the crisis at the national level. Thus, a joint prevention and control mechanism was formed with vertical leadership characterized by a dual responsibility system comprising local party and government top leader. Moreover, a mechanism was established to organize pairing assistance from other provinces to Hubei's cities other than Wuhan for treatment of the infected. Assistance from 19 provinces was rendered to 16 cities in Hubei. Such initiatives have given full play to 'socialism with Chinese characteristics', involving 'concentrating resources to accomplish large undertakings'.

Although the COVID-19 response mechanism has mobilized and operationalized the emergency resources of Chinese society at large to a great extent, there are still problems with unbalanced cross-regional coordination development. The cross-regional coordination and joint prevention and control work in the Yangtze River Delta cover the command and dispatch of pandemic prevention and control, risk research, information sharing, mutual material assistance, joint scientific research, cross-regional traffic management, and assistance to enterprises to resume work and production. This shows the advantages of acute emergency response and meticulous work deployment. As the 'capital economic circle', the Beijing–Tianjin–Hebei region set up a joint prevention and control mechanism including five aspects: guidance on the flow of people, prevention of pandemic diseases through temporary traffic controls, material support for pandemic prevention, material support for daily life, and the resumption of work and production of enterprises. Joint prevention and control measures have been adopted, such as the mutual recognition of health codes and entry and exit management in key cross-border areas. Still, the arrangement of joint prevention and control work at the specific operational level is lagging and inadequate. Hubei Province, as a severely hit area in the pandemic, has lagged behind in its interregional joint prevention and control of the emergency response. Further, a lack of experience has manifested in dealing with the situation as well as innovative joint prevention and control measures.

RECOVERY PHASE

In the recovery phase, an emergency management system with high resilience will take advantage of the opportunity for system reconstruction through innovative changes, experiential learning, and so on. It will then enter the phase of system resource development again to realize an adaptive cycle of emergency management. However, an emergency management system with low resilience – due, perhaps, to a lack of necessary resources and support ability reserve – gives rise

to 'management failure'. With the 'lockdown easing' of Wuhan at midnight on April 8, the COVID-19 pandemic temporarily entered the short-term recovery phase of restoring the transportation system, resuming work and production, and returning to school. The emergency management system could thus seize the opportunity to reshape the emergency management concept or rebuild the social health security system, which depends on whether the emergency management system will adopt crisis learning and make innovative changes during the subsequent long-term recovery. This, in turn, can improve the system's resilience as it learns from the entire process of emergency management during the COVID-19 pandemic.

Overall, the resilience of China's emergency management of COVID-19 was mainly reflected in flexibility in the response phase, and there were significant gaps in the resilience of emergency management at the other three phases. However, resilience is a process of acquiring capabilities, including mitigation, absorption, learning, and adaptation, among others (Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017). In the future, attention should be paid to balancing the entire process of emergency management to cultivate resilience throughout all phases of prevention and mitigation, preparedness, response, and recovery.

REFERENCES

- Arjen, B., & van Eeten, M. 2013. The resilient organization. *Public Management Review*, 15(3): 429–445.
- Grandori, A. 2020. Black swans and generative resilience. *Management and Organization Review*, 16(3): 495–501
- Li, P. P. 2020. Organizational resilience for a new normal: Balancing the paradox of global interdependence. *Management and Organization Review*, 16(3): 503–509.
- Lu, X., & Xue, L. 2016. Managing the unexpected: Sense-making in the Chinese emergency management system. *Public Administration*, 94(2): 414–429.
- Uusikylä, P., Tommila, P., & Uusikylä, I. 2020. Disaster management as a complex system: Building resilience with new systemic tools of analysis. In H. Lehtimäki, P. Uusikylä, & A. Smedlund (Eds.), *Society as an interaction space*: 161–190. Singapore: Springer Nature Singapore Pte Ltd.
- Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. 2017. Organizational response to adversity: Fusing crisis management and resilience research streams. *Academy of Management Annals*, 11(2): 733–769.
- Wise, C. R. 2010. Organizing for homeland security after Katrina: Is adaptive management what's missing? *Public Administration Review*, 66(3): 302–318.
- Zhou, X. 2020. Organizational response to COVID-19 Crisis: Reflections on the Chinese bureaucracy and its resilience. *Management and Organization Review*, 16(3): 473–484.

Accepted by: Deputy Editor Peter Ping Li