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ARTICLE

State-building and the establishment of the modern healthcare system in China

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ABSTRACT

The establishment of a modern health system in China can be divided into three stages. Stage One covers the periods between late nineteenth century and 1927, during which the Qing government and the Beiyang government established a rudimentary health system in a couple of Chinese cities. Stage Two, covering the period from 1928 to 1949, witnessed the efforts of the Nationalist government in managing nationwide public health by relying on medical professionals with modern Western training. In Stage Three, which spans the period between 1949 and 1966, a modern heath system was established in China. Not only was a national network of health institutions put into place, but also the state-imposed direct management of the newly-established healthcare system. Health institutions at different levels were reorganized as public institutions and pharmaceutical companies were nationalized. Overall, the evolution of China's modern healthcare system experienced a shift from administration of public health and private medical care providers to a set of nationwide public institutions to serve the people.

KEYWORDS

Modern healthcare system; state-building; health administration; public institutions

I. Introduction

Because they are important functions of modern states, medical and health services[1] have taken in a wide range of fields, including medical education, scientific research, management of hospitals, medicine production, and public health. They are related to a set of institutions in the political, economic, legal, cultural, and educational realms. Depending on their own history and domestic situations, countries across the globe established quite different healthcare systems. As far as modern China is concerned, the establishment of a modern healthcare system was a spinoff of conscientious state-building efforts. Thus, it was a protracted process, involving a number of regimes in modern Chinese history. A modern healthcare system, no matter as a notion or as a set of organizations, was basically exogenous to China. While previous studies tended to focus on the rupture and changes generated by this exogeny,[2] this article focuses on the relationship between state-building and modern healthcare systems and

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[1]Although a common phrase, "medical and health services (*yiliao weisheng*)" has not been clearly and properly defined. In this article, the author defines it as the following: medical service and health service, with the former referring to issues related to medical treatment and the latter regarding issues about public health.

[2]Established studies of the history of modern China's health systems are basically chronological; few researchers have offered macro-historical narratives. See Yu Xinzhong, *Qingdai weisheng fangyi jizhi*; Zhang Taishan, *Minguo shiqi de chuanranbing*; Wu Yuqin, *Gonggong weisheng shiyexia de guojia*; Hu Kefu, "Xin Zhongguo shehui zhuyi"; Yip, *Health and National Reconstruction*; Rogaski, *Hygienic Modernity*; and Leung and Furth, *Health and Hygiene in Chinese East Asia*.

examines the establishment of a modern healthcare system in China from a holistic perspective. It aims to explore the roles played by different modern Chinese regimes and describe the state-building logic behind it.[3]

At the beginning of the modern era, the Chinese state had to respond to national crisis and pressures by building new political, economic, cultural, and social institutions. A modern healthcare system gradually took shape in China against this backdrop, and in this process, the Chinese state played an important role.[4] The process of establishing the modern healthcare system in China can be demarcated into three stages. The first stage saw the Chinese state building a separate healthcare administration system outside of commercial health services. The new system was established first in the late Qing period; and the Beijing government in the early Republican period basically inherited the administrative system of the Qing. In the second stage, the Nationalist government further developed this system nationwide by relying on the new, internationally created medical professions. In the third stage, the People's Republic of China incorporated medical service organizations into the system of public institutions.

This paper pays equal attention to both the continuity and changes of institutions and attempts to unravel the relationship between state-building and the development of China's modern healthcare system by depicting the organizational and human resources of healthcare facilities as well as the government's financial support of those entities during different periods. As far as the organizational dimension is concerned, the type and quantity of healthcare organizations are indicative of how many medical resources are under the state's control and to which extent the state's power is effective. As for human resources, doctors with professional training are the bricks and mortar of a modern healthcare system. The quantity and distribution of qualified doctors can mirror the overall quality of a modern healthcare system while the self-identity and social status of doctors are indicative of their relationship vis-à-vis the state, on the one hand, and whether a health system is functioning well, on the other. Funding is also an essential issue. The state's financial contribution to medical and health services is an important indicator of the condition of a healthcare system. Different Chinese regimes injected different levels of financial resources into medical and health services, mirroring their different governing capacities and governing philosophies in various stages.

II Efforts to establish a healthcare administration before 1927

During the Ming and Qing dynasties, the government was not directly involved in providing medical and health services to the people, and the society was largely left on its own to meet medical and public health needs. The idea of a state healthcare administration was totally foreign to these governments at the time. The state's involvement in providing medical and health services only came later, as a spinoff of the Industrial Revolution, which began in the UK toward the end of the eighteenth century. With the development of preventive medicines, the state gradually became involved in providing medical and health services to its nationals. In Western countries, governments started to promote healthcare

[3]Some researchers believe that the state-dominated such fields as science, philanthropy, and cadre management after the founding of the People's Republic of China. See Wang Dahai and Tang Delong, "Xin Zhongguo cishan shiye de zhidu jiegou yu lujing yilai"; Zhang Li, "Kexue de guojiahua"; and Yu Yang, "Cong jingying guojiahua dao guojia jingyinghua."

[4]Some writers have noticed the important role the state plays in enabling social development; they advocate "bringing the state back in." See Feng Shizheng, "Guojia zhengquan jianshe yu xin Zhongguo."

administration in earnest. Forced to open its door to the outside world after the Opium War, the Qing government, in its interaction with Western countries, was pressured to establish healthcare administrative agencies to carry out epidemic prevention and various healthcare functions. This was a slow and passive process.

Sir Robert Hart established the first specifically defined healthcare administrative agency in China. During his time as the Inspector General of the Maritime Customs Service of the Qing government, Hart not only insisted to follow the global disinfection rules for ports but also established a healthcare administrator system at Chinese ports. Thailand and Malaya were stricken by a cholera outbreak in 1862, and foreign consuls in China urged the Qing government to adopt inspection and quarantine measures at port cities. Thus, Hart's Maritime Customs Service drafted the Inspection and Quarantine Regulation, which stipulated that the Service should hire a medical professional in charge of inspection and quarantine-related issues. Under Hart's auspices, the Qing government established the Customs Medical Service in 1863, which was authorized to appoint a healthcare administrator to each port, responsible for taking care of the health of foreign residents and shipmen and for monitoring overall hygiene in port areas.[5] By delegating inspection and quarantine functions to the Customs Medical Service, the Qing avoided possible disputes with foreign countries regarding inspection and quarantine requirements and thus minimized the opportunities that foreign countries could use to meddle in Chinese domestic issues. The Maritime Customs Service hired healthcare administrators to be specifically responsible for inspection and quarantine-related issues at Chinese ports, a need that local governments could not handle.

Soon, the Western countries trading in China established a handful of healthcare centers in their concessions and treaty-ports to serve the foreigners living there. It was not until the end of the Boxer Uprising in 1901 that the Qing government started to establish local healthcare administrative agencies. The Eight-Powers Allied Force had taken over Tianjin on July 14, 1900. Six days later, they established the Tianjin Interim Government, which included a newly-established Health Bureau, with the Frenchman Dr. Depasse as its chief. Under the auspices of this Tianjin bureau, a list of undertakings was initiated, including cleaning the streets, disposing of garbage, establishing animal-waste processing facilities, vaccination, preventing cholera and making soda, among other things.[6] On August 15, 1902, Tianjin was taken over by Yuan Shikai, a Qing higher official. Yuan decided to keep the Health Bureau, which was mandated to clean roads, take care of the poor, provide medical service and carry out inspection and quarantine, and so forth.[7]

During the Qing's New Policy Reform in the first decade of the twentieth century, the central government established a new administrative organ in charge of the national healthcare, and this organ remained intact even in the early Republican Period. In October 1905, the Qing issued an edict to establish the Ministry of Police (Xunjing bu), which had a healthcare division in charge of building medical schools, evaluating the professional credential of doctors, cleaning the roads, planning inspection and quarantine-related work, and approving other healthcare-related issues.[8] Soon after the 1911 Revolution overthrew the Qing rule, the Republican central government issued *Official Titles and Ranks of the Ministry of Interior* (Neiwubu guanzhi) and *Chapter of the*

[5]Hart, "Inspector General's Circular NO. 19 OF 1870," 1.
[6]See "Fulu yi," 813, 814, 818, 832, 835, 836.
[7]"Tianjin weisheng zongju xianxing."
[8]"Niding xunjingbu ji neiwaicheng," and "Tuigeng tang zhengshu," 139.

Organizational Structure of the Ministry of Interior (Neiwubu tingsi fenke zhangcheng) in August 1912. According to the two documents, the Healthcare Bureau (Weisheng si) was affiliated with the Ministry of Interior, responsible for healthcare-related issues throughout the country. With an organizational framework in place notwithstanding, the Healthcare Bureau could hardly function as envisioned by the institutional plan. The entire healthcare administrative system existed only on paper in the chaotic years of the early Republican era.

At the time, healthcare facilities were very rare across China. In particular, the number of state-affiliated professional healthcare facilities was extremely limited. Moreover, the vast majority of regions did not have local healthcare administrative agencies. China had only two professional epidemic prevention research centers in the early days of Republican China. One was the Northeast Epidemic Prevention Center (NEPC, Dongsansheng fangyi-chu), which was established during the outbreak of the Northeast Great Plague. Under the auspices of Wu Liande, NEPC focused on the study of epidemics, separating the pathogens in order to create an immunological serum. The other was the Central Epidemic Prevention Service (Zhongyang fangyichu), which was established during the Shanxi and Suiyuan plague in 1917. Healthcare administrative agencies were only present in Beijing, Shanghai, Tianjin and Qingdao. In other places, they were largely absent, "with only the police in charge of cleaning roads, registering doctors, and setting up a couple of clinics."[9]

Apart from the underdevelopment of healthcare organizations, another acute problem was the chaotic division of healthcare functions. For example, the Ministries of the Navy and Army supervised military surgeons, the Ministry of Agriculture and Commerce took charge of health-related issues of workers, and the Ministry of Education was responsible for health issues in schools. More importantly, the healthcare administration that fell under the scope of the police was confined to local sanitation-related issues and had no interest in or capability of implementing preventive medicine, which was the major responsibility of modern public health systems. As some public health experts at the time lamented, "Issues like cleaning the roads, covering chamber pots, and prohibiting public urination are within the purview of municipal administration, instead of public health."[10]

There was a dearth of medical professionals in China at the time. Those who were devoted to public health were even scarcer. Before 1927, most healthcare administrators had no expertise in public health, nor did they receive any medical training. Although the Healthcare Bureau of Ministry of Interior seemed to have a wide range of functions and a complex organizational structure, promulgated many healthcare-related regulations, and drafted a list of action plans, all these action plans and regulations were barely implemented, because the Healthcare Bureau had neither competent leaders with necessary medical expertise nor functional healthcare administrative agencies at the local level.

A government with limited financial resources cannot budget sufficiently for health care. Lack of resources was the severest problem faced by healthcare administrative agencies during the period in late Qing and the early Republican period. Take Beijing as an example. In 1906, during the New Policy Reform, the Qing government established the Police Bureau, which was under the jurisdiction of the Ministry of Internal Affairs (renamed Ministry of Interior during the Republican era). The budget for the Bureau was allocated by the Ministry of Expenditure (renamed Ministry of Finance during the Republican era). The

[9]Lu Runzhi, "Zhongguo zhi weisheng xingzheng," 124–126.
[10]Yang Jishi, "Jianshe shidai zhi gongzhong weisheng," 279–281.

Bureau could largely secure its budget in its early years, with the relatively sufficient financial support from the central government. In 1914, the actual budget of the Municipal Police Bureau of Beijing stood at 2,704,821 yuan, in which 1,975,551 yuan (or 73.04%) were allocated by the Ministry of Interior.[11] With dwindling financial resources from the central government, the Municipal Police Bureau of Beijing faced extraordinary budget cuts. Its monthly budget shrank from 360,000 yuan to 200,000 yuan in 1927.[12] Thus, the Beijing Police Bureau had to cut healthcare expenditure by laying off sanitation workers. Consequently, Beijing's roads were full of dust, a failing that was often lampooned by newspapers at the time.[13]

In short, China took the initial steps to build a modern healthcare administrative system either voluntarily or involuntarily in the late Qing and early Republican period. Some healthcare administrative agencies were established, though medical and health services were not yet identified as state-sponsored endeavor. Only in a couple of Chinese cities were healthcare administrative agencies established and their functions were confined to urban sanitation. Nevertheless, with the financial support from the central government, the two professional epidemic prevention centers established during this period made a dent in medical research.

III. Medical professionals and the predicament in the period of the Nationalist government, 1928–1949

The Nanjing Nationalist government, established in 1927 by the Nationalist party, preferred to relying on experts in policymaking and administration in modern developmental projects. This tendency of professionalism was seen in the area of healthcare administration as well. For example, Liu Ruiheng, the former President of Peking Union Medical College (Xiehe yixueyuan), was appointed to take charge of the national administration of health care Both public health experts and sociologists at the time agreed that issues related to organization, expertise, and budget were the most essential components of medical and health services.[14] To tackle these issues, both experts at home and abroad advocated a state-centered solution, letting the state to play a dominant role.[15] More specifically, they insisted that the government should take responsibility to put in place a public healthcare system and nationalize all the medical and healthcare entities for the sake of the people's health. As one expert put it, "we should rely on the government's support to carry out medical research, promote medical progress, establish equitable and accessible healthcare organizations, and ensure that all the people will enjoy equal health service."[16]

The aforementioned state-centered solution was to some extent echoed by the Nanjing Nationalist government, and the latter made concrete efforts to provide state-sponsored medical and health services. It took the initiative to build medical and healthcare organizations, but was constrained by the political condition on the ground. The government was beset by

[11]For Ministry of Internal Affairs expenditures, see Dier lishi danganguan, *Zhonghua minguoshi dangan ziliao huibian*, 305. For Municipal Police Bureau of Beijing budget data, refer to "Jingshi jingcha jingfei leinian bijiao."
[12]"Jingshi jingzheng qiantu zhi beiguan."
[13]This point was mentioned by Xue Zhiyan, the superintendent of the Municipal Policy Bureau of Beijing, in his report to the Ministry of Internal Affairs; see "Beijing jingchajie zhi weiji."
[14]Yang Fumei, "Jin shunianlai guonei weisheng," 1–6; Jin Baoshan, "Woguo weisheng xingzheng de huigu," 1–7; and Wu Jingchao, "Weisheng shiye zai kunnan," 12–13.
[15]Lan Ansheng, "Zhongguo jianshe xiandai yixue," 302; and Tandler, "Zhongguo zhi gonggong weisheng," 323–324.
[16]Ji Qing, "Lun woguo yixue jiaoyu," 7.

serious factional infighting, and its political structure was far from completed. The Nationalist Party and government were unable to establish a tight-knit hierarchical administrative system in China. In particular, weaknesses in county-level administrations held back the government's power from reaching to the counties, and below.[17] Under this circumstance, the Nationalist government was never able to establish a stable and unified medical and healthcare organizational framework. Only in a small number of provinces and counties were healthcare administrations incorporated within local administrative systems.

On November 1, 1928, the Nationalist government established its Ministry of Health. However, financial difficulty forced the government to downgrade it to the Healthcare Bureau (Weisheng shu) two years later, and it was under the jurisdiction of the Ministry of Interior. Apart from its inspection and quarantine functions at Chinese ports, this Bureau was also responsible for medical and health services in China's northwest and other frontier areas. In September 1932, the Central Health Experimentive Agency (Zhongyang weisheng shiyanchu) was established under the National Economic Commission (Quanguo jingji weiyuanhui) and became a healthcare administrative agency enjoying the same rank as the Healthcare Bureau. A commentator at around that time, writing in a journal, lamented that such a development fragmented the national healthcare administration into different systems, resulting in ambiguous mandates, organizational overlap, and inconsistent policies.[18]

The national healthcare administration was plagued by the fragmentation problem, while the local level was confronted by the difficulty to put a state healthcare system in place. As early as in 1928, the Nationalist government required that a healthcare agency should be established in each province and its local branches be established in counties and cities. However, many Chinese provinces did not establish such an agency by 1937; those doing so were Jiangxi, Hunan, Gansu, Shaanxi, Zhejiang, Yunnan, Anhui and Guangxi. However, the established local healthcare agencies did not even have the same name, let alone same status within government. Some were under the direct jurisdiction of the provincial government, while others were supervised by the provincial Bureau of Civil Affairs.[19]

The plan to establish county-level healthcare administrative agencies started at the end of 1932, but faced strong headwinds. The Second Conference of Interior Affairs adopted a proposal named "Promoting Local Healthcare Administrative Agencies," which required that counties with economic wherewithal should establish government-sponsored hospitals that were expected to provide medical relief and healthcare administration. Thereafter, the Ministry of Interior sent a directive to provincial Healthcare Bureaus and county governments, requiring them to establish government-sponsored hospitals or clinics in counties.[20]

During the all-out War of Resistance against Japanese Aggression, beginning in 1937, the Nationalist government attempted to put in place a government-sponsored healthcare system in its efforts to implement its New County System (Xin xian zhi).[21] By 1944, 903 county-level hospitals, 108 government-sponsored hospitals or clinics, and 1357 township clinics in the 1,118 counties had been established. However, most of these agencies were in disarray. Chen Wanli, who was in charge of the provincial healthcare agency in Zhejiang (1928–1948) and the

[17]Wang Qisheng, *Dangyuan dangquan yu dangzheng*.
[18]Lin Jingcheng, "Zhongguo gonggong weisheng xingzheng," 953–954.
[19]Liu Ruiheng, "Shinianlai de Zhongguo yiyao," 428.
[20]"Gedi weisheng sheshi zhi zhidao," 46.
[21]Liu Heqing, "Gonggong weisheng yu gongyi zhidu," 51.

first director of the Zhejiang Provincial Hospital (1931–1948), complained that, "(these hospitals) were not sufficiently funded and had neither competent staff nor necessary medical equipment. Hospital directors did not know their responsibilities and doctors had no idea of what a hospital is for. As a matter of fact, hospital directors should not take charge of healthcare administration in a county in the first place."[22] It should be noted that the Nationalist government seldom put hospitals or clinics under its direct control except for a few ministry-affiliated and provincial government-affiliated hospitals. Most hospitals and clinics could function legally in so far as they obtained the required license from healthcare administrative agencies. They were largely independent from the state.

In the period of the Nationalist government, as in the earlier period, China was confronted with the acute problem of lack of qualified modern medical workers. On the one hand, only the medical workers trained in modern Western-style medical schools could be registered by the healthcare administration. However, the number of modern Western-style medical workers was very limited, and only a small number of people could receive modern medical training each year. They were far from sufficient to meet the basic healthcare of the general population. According to some published statistical data, there were 2,738,[23] 6,599,[24] and 30,343 registered Chinese and foreign doctors in, respectively, 1930, 1932, and 1946. Although the Nationalist government carried out a reform of medical education, the annual crop of graduates could hardly meet the social demand. By 1936, the total number of graduates from all the medical schools in China stood at 5,358.[25] In 1942, only 466 students graduated from medical colleges or universities across China.[26] In 1946, after the War of Resistance, the number of graduates from all kinds of medical schools in China was 1,013, more than doubled compared with the number in 1942, but still insufficient considering the large population.[27] To make things worse, few medical graduates were willing to take a job in healthcare administration. Most of them preferred to stay in big cities like Shanghai, Tianjin, and Beiping (today's Beijing). Few, if any, chose to work at the grassroots level, where demand for medical service was urgent.

One aspect of a modern state's responsibility for medical and health services is to fund them through a budget process, which is the sine qua non of functional organizations, research, supply of medicines, and training of talent. Faced with incessant warfare, the Nanjing Nationalist government spent most of its budget on the military. As a result, the government had a meager budget earmarked for medical and health services. The central government spent 1.38 million yuan on medical and health services in 1936, only accounting for 0.14% of the year's total expenditure.[28] In 1947, the budget for the Ministry of Health only accounted for 0.2% of central government's total.[29]

By heeding various suggestions from both Chinese and foreign health experts, the Nationalist government went to great lengths to strengthen healthcare administration, promote healthcare organizations, and train medical professionals. Nevertheless, it failed

[22]Qian Li, "Wuguo tuixing gongyi zhidu," 1. Qian Li is Chen Wanli's penname.
[23]"Yishi yaoshi zhuchanshi tongji," 984.
[24]"Zhongguo de yixue jiaoyu," 209.
[25]Liu Ruiheng, "Shinianlai de Zhongguo yiyao," 438.
[26]Ye Weifa, "Woguo yixue jiaoyu zhi gaizao," 33.
[27]Du Congming, "Kaocha neidi kexue sheshi," 37–38.
[28]Tong Mengzheng, "Woguo zhongyang caizheng shouzhi," 71–92.
[29]"Sanshiliu niandu guoku shizhi," 3.

to establish a coherent system and fell short on training a sufficient number of modern medical professionals.

IV. Medical and health services organizations as public institutions in the People's Republic of China, 1949–1960s

In the blueprint of the founders of the People's Republic of China (PRC), medical and health services were a part of the Party's "culture and education projects" (*wenhua jiaoyu shiye*). The objectives of the Party's "culture and education projects" were twofold. First, it aimed to transfer the culture and education controlled by and benefiting a few elites to a culture that would serve the vast majority of working people. Second, it aimed to ensure that culture and education serve the purpose of economic recovery and the development of the newly founded regime.[30] Thus, healthcare was expected to serve the purpose of national economic construction, on the one hand, and to dispense health services to the ordinary person, on the other. After its creation on November 1, 1949, the Ministry of Health of the PRC stuck to the principles of "serving workers and peasants, focusing on prevention, and relying on both Chinese traditional medicine and Western medicine."[31] It unequivocally announced that medical and health services in the People's Republic were expected to "serve the vast majority of the people and facilitate economic production."[32]

Through its penetrating organizational network down to the grass-level, the state put in place a well-developed healthcare administration system, one that in particular ensured the state's monitoring and control of medical and health services. At the very beginning of the PRC, the Party initiated large-scale social engineering campaigns by relying on the numerous branch organizations. The new regime per se had sprung from the many Party organizations after the military takeover of the country. This resulted in a new social order, in which the Party penetrated all the other organizations.[33] Healthcare agencies were a function of this reorganization of Chinese society in general and China's local, grassroots society in particular. Healthcare agencies were soon established in factories and the countryside, thanks to the relentless efforts from the new regime.

By 1965, China's provinces, prefectures and counties had established 224,266 healthcare agencies, of which 25,306 were located in ethnic minority areas. The number of general hospitals and specialized hospitals reached 42,711, of which 6,275 were located in ethnic minority areas. Centers for Disease Control and Prevention were established from scratch and their number reached 2,499 by 1965. The number of Maternal and Child Care Service Centers (*fuyou baojianzhan*) jumped from 9 to 2,795. In China's countryside, 36,965 People's Commune Clinics had been established by 1965. In addition, production groups, the lowest administrative level of the regime, in rural villages developed the system of "bare-foot doctors," which featured practitioners who were part-time peasants and part-time medical workers. From all

[30]Lu Dingyi, "Xing Zhongguo de jiaoyu," 331.
[31]Li Dequan, "Guanyu quanguo weisheng huiyi," 1.
[32]"Weishengbu guanyu jianquan he fazhan," 510.
[33]Lu Feng, "Danwei," 73.
[34]"Quanguo nongcun gongshe weishengyuan," "Quanguo minzu zizhi difang," 250, 251; and "Quanguo weisheng jigou chuangwei," 38.

of this, a penetrating healthcare network covering both China's urban and rural areas emerged.[34] Hospitals sponsored by county government were the backbone of China's healthcare network at the grassroots level. They were expected to take charge of disease control and prevention, provide training for grassroots health workers, and supervise and direct the operation of other healthcare agencies in their localities.[35]

By working closely with local governments, China's healthcare agencies were able to provide basic medical service to those living even in the remotest villages. However, such progress did not come without a price. The bourgeoning healthcare network in the countryside put the government's finances under a huge strain. It was financially unsustainable for the government to sponsor an enormous healthcare network on its own. In 1962, in order to relieve the financial burden of the healthcare agencies on the government at various levels and the People's Communes, the Ministry of Health allowed doctors to collectively own and operate rural healthcare agencies, such as local hospitals. Furthermore, due to the lack of clear guidelines and supervision in the expansion of healthcare, its administrative agencies had to issue warnings about incompetent staff being assigned to agencies at and below the county level.[36]

To eradicate highly contagious diseases that posed risks, the government also established a variety of specialized medical research institutes that were expected to carry out scientific studies of prevention and treatment. The number of medical research institutes in China jumped from four in 1947 to 120 in 1963, and the number of medical researchers increased from 300 to 8,250 during the same period, registering a growth of 27.5 times.[37] Meanwhile, the Ministry of Health established Epidemic Prevention Centers (Weisheng fangyizhan) across China, whose number jumped from 481 in 1952 to 3,388 in 1965.[38] The nationwide system for the purpose of epidemic prevention, including both research and implementation, was effective enough to eradicate all sorts of highly contagious diseases and regional diseases in a relatively short period of time and greatly improve the health of the Chinese people. According to one statistic, the morbidity rate of contagious diseases in China dropped from 4% in 1949 to 1.5% in the mid-1960s, and the fatality rate dropped from 0.25% to 0.04% during the same period.[39]

The Ministry of Health attached great importance to the training of medical workers. Under the principles of "popularization and improvement,"[40] the government divided a new medical education system into three levels: high-level, middle-level, and elementary-level, with the middle-level as the priority. In high-level medical education, the government changed the old comprehensive curriculum used at medical colleges or universities in the Republican period and replaced it with specialized training in shorter terms, so that more medical students could be trained to meet the enormous demand in healthcare service. The government completed the reorganization of medical colleges and universities in 1952. In

[35]*Dangdai Zhongguo de weisheng shiye dashiji* bianxiezu, *Dangdai Zhongguo de weisheng*, 29.
[36]Ibid., 123–124, 127.
[37]"Quanguo yixue kexue yanjiu," 475.
[38]"Quanguo weisheng fangyi jigou," 44.
[39]*Dangdai Zhongguo de wensheng shiye* bianji weiyuanhui, *Dangdai Zhongguo de weisheng*, 10.
[40]Li Dequan, "Guanyu quanguo weisheng huiyi," 3.

Table 1. Numbers of medical schools and their students in 1949 and 1965.

	Numbers for Year 1949	Numbers for Year 1965
Medical colleges and universities	22	92
Enrolled students at medical colleges and universities	15,234	82,861
Middle-level medical schools	N/A	298
Enrolled students at middle-level medical schools	N/A	88,972
Medical workers	541,240	1,872,335
Traditional Chinese medicine practitioners	276,000	321,430
Advanced-level medical workers	38,875	203,402
Intermediate-level medical workers	103,277	619,870
Primary-level medical workers	86,888	315,045

Sources: "Quanguo gao zhong deng yiyao," 71; "Quanguo weisheng jigou zhuanye," 39.

1956, the Ministry compiled a set of medical textbooks that were universally adopted by China's medical colleges and universities. As shown in Table 1, medical education in China made significant progress in the first 15 years of the PRC.

From 1950 to 1965, the total number of graduates from China's medical colleges and universities reached 165,328 and that of the graduates from middle-level medical schools was 366,363.[41] The increasing number of professional medical workers made the expansion of the Chinese healthcare system possible.

As far as human resource management was concerned, the government gradually transformed healthcare facilities into work-units (*danwei*) within public institutions (*shiye danwei*). This happened after July 1963, when the government categorized employment in China into three types, namely, government (*xingzheng*), public institutions (*shiye*), and enterprise (*qiye*). Accordingly, "any work-unit that gets funding from the state coffers, with mandates to create or improve production conditions for the nation, promote social welfare, and satisfy cultural, educational, and healthcare demands of the people falls within the category of public institution."[42] As non-profit social organizations under the auspices of the government, healthcare facilities fell under "public institutions." They got their funding from governmental budgets, and their staff were cadres salaried by government. With the expansion of state planning, even jointly-run clinics owned collectively by doctors at the grassroots level were categorized as public institutions.[43]

With the new categorization, health workers were paid according to a wage standard set by the government. The Commission for Budgeted Posts (Bianzhi weiyuanhui) at various levels would determine the number of staff, and then the finance department at various levels of government, working in partnership with other government organs would make a budget for the fixed number of staff and provide hospitals with funding accordingly. Through this procedure, government started to pay hospital staff in 1960. Wages of hospital staff (including those working for general hospitals, teaching hospitals, specialized hospitals, Chinese traditional medicine hospitals, and maternity hospitals, among other types) were comprised of two parts: one was the basic wage and the other was the bonus (accounting for 3% of the total wage).[44]

[41]"Quanguo gao zhong deng yiyao," 71.
[42]Song Dahan, *Shiye danwei gaige yu fazhan*, 1.
[43]Although we have many studies of the Chinese work-unit system, few have covered specifically its formation. Lu Feng's work on the revolutionary-base origin of the work-unit system may be an exception here. See Lu Feng, "Danwei," 71–88; Li Hanlin and Li Lulu, "Ziyuan yu jiaohuan," 44–63; and Li Hanlin and Qu Jingdong, "Zhidu guifan xingwei," 1–22.
[44]Chen Rulong, *Zhonghua renmin gongheguo caizheng*, 196.

Table 2. State budget for medical and health services in various periods.

Time Periods	Medical and health budget (billion yuan)	Total state budget (billion yuan)	Medical and health as percentage of total state budget
1950–1952	0.559	36.656	1.52
1953–1957	1.455	134.568	1.08
1958–1962	2.345	228.867	1.02
1963–1965	1.884	120.498	1.56
1966–1970	4.450	251.860	1.77
1971–1975	6.562	391.960	1.67
1976–1980	11.364	524.735	2.17
1981–1985	21.535	695.200	3.10
1986–1990	35.406	1397.830	2.53

Source: "Quanguo gege shiqi de weisheng," 670.

In order to fund the growing healthcare system, the government devoted increasing government budget to medical and health services, laying a solid financial foundation for the expansion of healthcare organizations at the grassroots level and for the increasing number of medical workers (Table 2).

Moreover, medicines with acceptable quality and easy accessibility are vital to medical and health service. To ensure the production and supply of medicines, the government proceeded to nationalize pharmaceutical companies. The National Pharmacy Industry Conference in 1950 laid out the overall objectives of "serving the workers, peasants, and soldiers; scientification of traditional Chinese medicine; and sinicization of Western medicine." The conference adopted certain guidelines about "ensuring the supply of raw materials first, and developing medicinal formulation as a supplement, realizing self-reliance and self-sufficiency."[45] In the early 1950s, the government reorganized existing private pharmaceutical companies and introduced public-private joint operations, and soon they were all nationalized. Such measures enabled the government to unify medicine production and allocation in order to meet demands from both cities and villages. Under the auspices of the state, medicine research institutes worked in partnership with pharmaceutical companies, enabling China to become relatively self-sufficient in medicine in the early years of the PRC.

V. Conclusion

As a part of China's state-building efforts, a modern healthcare system gradually took shape in China in the twentieth century. By examining the different stages of this process, this article finds that China's healthcare system experienced a shift from operating in a market economy to operating as public institutions, a transition that held back the pursuit of profit and strengthened incentives to serve the public interest.

In the late Qing and the early years of Republican China, the central government established new institutions such as the Healthcare Bureau (Weisheng si) to administer issues related to medicine and health, but healthcare agencies and attempts at public health were limited to merely a couple of Chinese cities. The Nationalist government relied more on modern medical professionals in policymaking and providing public medical and health services. However, due to unstable political conditions and the state's limited capacity, it

[45]*Dangdai Zhongguo de weisheng shiye dashiji* bianxiezu, *Dangdai Zhongguo de weisheng*, 11.

was unable to extend such services evenly throughout the entire country. After the founding of the People's Republic of China, medical and health services became a part of the Party's "culture and education project," expected to serve the purpose of economic recovery and development of the newly-founded country. Although China had established a couple of advanced hospitals and made some tentative efforts in providing medical and health services in the first half of the twentieth century, the vast majority of Chinese peasants remained excluded from these benefits. Such an imbalance was finally addressed after the founding of the People's Republic, which spared no effort to develop grassroots healthcare facilities, energetically improve medical and health services, and make them accessible to all the people.

The Qing government, the Beijing government in the early Republican period and the Nationalist government were all beset by extremely limited state capacity, which hindered efforts to establish an administrative system that could promote the development of a modern society. As a result, they were unable to steer the development of a healthcare system. In contrast, the state apparatus of the People's Republic was bolstered by a tight-knit organizational framework. Its healthcare system was by design a part of the administrative system of the whole nation. Such an arrangement facilitates resolving problems within the overall social structure of China.[46] Consequently, medical and health services became a mandate of the state, dependent on the state budget. As public institutions, hospitals, pharmacy companies, epidemic prevention centers, and healthcare centers were transformed into building blocks of the state-dominated organizational framework, facilitating the state's control of medical and healthcare resources in the country. The state's control of medical resources was comprehensive, from the training of medical workers to medicine production and the operation of hospitals. Putting these resources in the hands of the government enabled the state to realize nationwide allocation of workers and medicines, which substantially improved health in China's countryside and ethnic-minority areas and narrowed the gaps between cities and villages and among different regions.

The nationalization of health care in the PRC also helped improve the public accessibility to and affordability of medical service. Medical service and public health are related but not identical, with the former focusing on medical treatment of individuals and the latter centered on general disease prevention.

In the late Qing and Republican eras, medical service was largely based on market transactions, while the government carried out rudimentary public health functions. In addition to public health, the government also started to develop healthcare administration, such as the regulation of the medical service market and supervision of medical practitioners and medicines in the New Policy Reforms of the Qing government in about 1905. Despite the frequent regime changes in the following decades, the state's healthcare functions gradually expanded. Some public hospitals and public healthcare centers were established. After the founding of the People's Republic, within about two decades, the government established a modern healthcare system providing both medical service and public health service. This was basically a state-sponsored healthcare system, under which profit incentives gave way to public wellbeing. The government not only adopted administrative measures to prevent the spread of diseases, but also changed the nature of the doctor–patient relationship from market transaction to public service. Medical and health

[46]Sun Liping et al., "Gaige yilai Zhongguo shehui," 47–62.

services became part of socialist welfare benefits that were expected to serve the needs of the people. With its extended coverage, the new healthcare system fundamentally changed the status quo of health care in China's countryside and ethnic-minority areas. Although in the reform and opening era from the late 1970s on quite a lot market elements have been added to the healthcare system to facilitate its further modernization and development, the majority of the system remains as public institutions. This has guaranteed the accessibility and affordability of medical service.

(translated by JIA Yajuan)

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Glossary

Bianzhi weiyuanhui	编制委员会
Chen Wanli	陈万里
danwei	单位
Dongsansheng fangyichu	东三省防疫处
fuyou baojianzhan	妇幼保健站
Liu Ruiheng	刘瑞恒
Neiwubu guanzhi	《内务部官制》
Neiwubu tingsi fenke zhangcheng	《内务部厅司分科章程》
Qingdao	青岛
qiye	企业
Quanguo jingji weiyuanhui	全国经济委员会
Shanxi	山西
shiye	事业
Suiyuan	绥远
Weisheng bu	卫生部
weisheng fangyizhan	卫生防疫站
Weisheng shu	卫生署
Weisheng si	卫生司
wenhua jiaoyu shiye	文化教育事业
Wu Liande	伍连德
Xiehe yixueyuan	协和医学院
Xin xian zhi	新县制
xingzheng	行政
Xue Zhiyan	薛之衍

Xunjing bu	巡警部
yiliao weisheng	医疗卫生
Yuan Shikai	袁世凯
Zhongyang fangyichu	中央防疫处
Zhongyang weisheng shiyanchu	中央卫生实验处

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