

Perspectives

Strengthening Organizational Support Is Essential for the High-Quality Development of Disease Prevention and Control Initiatives

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Organizational security in public health encompasses structural and supportive measures designed to ensure public health security and effectively prevent and control disease outbreaks. These measures include organizational leadership, investment mechanisms, information technology support, scientific research, and international exchange and cooperation. Disease prevention and control is often described as an “invisible war”, emphasizing the need for preparedness and proactive measures (1). As the adage states, “Before soldiers and horses move, food and grass go first,” highlighting the critical role of a robust organizational security foundation for successful disease prevention and control efforts. This foundation is essential for promoting high-quality development within the field. During its 14th Five-Year Plan period, the Chinese government has implemented policies to bolster organizational security. Furthering this commitment, on December 25, 2023, the State Council issued the “Guiding Opinions on Promoting the High-Quality Development of Disease Prevention and Control.” This new policy aims to comprehensively strengthen the organizational security of disease prevention and control system construction and development. This study provides an examination of the development of organizational security work in China.

Strengthening Organizational Guarantees

The May 2021 listing of the National Bureau of Disease Control and Prevention (NBDC) (2) prompted a system-wide reform of disease prevention and control efforts. This reform aimed to strengthen management, organizational safeguards, and leadership capacity. Subsequently, local disease prevention and control bureaus were established across provincial, municipal, and county levels, further enhancing organizational leadership in disease control (3–4).

The May 2021 listing of the NBDC initiated a reform of China’s disease prevention and control system, strengthening management, organizational

safeguards, and leadership for disease control efforts (2). This reform led to the establishment of local disease prevention and control bureaus at the provincial, municipal, and county levels (3–4). Under the Fourteenth Five-Year Plan, the Chinese government allocated 13.1 billion Chinese Yuan (CNY) to support disease control system development at the national, provincial, prefecture, and county levels. This funding further increased in 2023, with 17.687 billion CNY allocated through transfer payments for projects focused on preventing and controlling major infectious and endemic diseases (5). The “14th Five-Year Plan and the 2035 Vision for National Economic and Social Development of the People’s Republic of China,” issued in March 2021, outlined plans to strengthen China’s public health infrastructure by building a robust public health system, establishing stable investment mechanisms for public health initiatives, improving foundational disease control conditions, and strengthening the primary public health system. Subsequently, the central government and relevant departments issued a series of important policy documents to further these goals (Table 1). These evolving policies, aimed at safeguarding national health, seek to strengthen and improve the medical and healthcare service system. They establish organizational safeguards for disease prevention and control and outline targeted, operational measures to ensure the high-quality development of the disease control system, providing an essential foundation for future progress.

These policies encompass a range of initiatives, including: establishing a sustainable investment mechanism for public health initiatives and coordinating diverse funding channels to bolster the capacity of disease prevention and control institutions (6); emphasizing governmental responsibility; enhancing interdepartmental collaboration mechanisms; refining policies and measures in a timely fashion; developing an authoritative and

TABLE 1. Since the 14th Five-Year Plan, relevant documents have been issued on the organization and protection of disease control institutions.

Released time	Issued institution	Published by policy name
Jun 2021	The National Development and Reform Commission	The 14th Five-Year Plan for the Construction of a High-quality Medical and Health Service System
Apr 2022	The General Office of the State Council	The “14th Five-Year Plan” for national health
Mar 2023	The General Office of the Central Committee of the Communist Party of China and the General Office of the State Council	On Further Improving the Medical and Health Service System
Dec 2023	The General Office of the State Council	Guidelines for Promoting High-Quality Development of Disease Prevention and Control Initiatives

interconnected national health information platform; improving the core national health information database; promoting the integration and data sharing of medical and health institutions at all levels; exploring the establishment of information sharing mechanisms among health, medical insurance, and drug regulatory departments, and achieving cross-regional and interdepartmental data sharing through the national integrated government service platform; strengthening disease prevention, research systems, and capacity building, launching national science and technology plans such as the Health and Health-related Science and Technology Innovation 2030 — Major Projects and the Fourteenth Five-Year Key Research and Development (R&D) Plan; advancing comprehensive international cooperation in health and healthcare and promoting the development of a global community of health for all; promoting health cooperation along the Belt and Road and advancing the construction of the Health Silk Road; and innovating health development assistance and cooperation models (7). Additionally, the policies prioritize building a high-quality and efficient medical and health service system, integrating it into the government’s work goals and assessment targets; advancing the reform of the public health service system; optimizing and improving the functional configuration of disease prevention and control institutions; standardizing public health technical services provided to society; implementing government responsibility for investment in professional public health institutions and basic public health services, and implementing financial investment policies for medical institutions to carry out public health services such as infectious disease prevention; establishing a cross-departmental and cross-institutional public health data sharing and scheduling mechanism and an intelligent early warning multi-trigger mechanism; and accelerating the construction of a health and medical data security system, and strengthening data security monitoring and early warning (8). These

comprehensive policies collectively strengthen the public health safety net.

Strengthening Organizational Capacity and Promoting Development

The “Guidelines” advocate for a centralized and unified leadership and management system for disease control efforts, emphasizing improved joint prevention and control mechanisms and encouraging the participation of grassroots communities and social sectors. Strengthening interconnectivity between national and local levels of disease control institutions bolsters a unified national strategy. Enhanced collaboration between medical and preventative healthcare facilitates interdepartmental and interinstitutional joint monitoring, information sharing, and coordinated prevention and control initiatives. Financial responsibility will be clearly delineated for governments at all levels. Establishing a tiered and differentiated scientific research and innovation formation will accelerate improvements to the disease control research system, continuously strengthening scientific and technological breakthroughs and the translation of research achievements into disease control practice. Organizational support will be increased in the following areas to further promote the high-quality development of disease prevention and control:

Local governments at all levels must assume primary responsibility for the reform and development of disease control initiatives. This includes integrating high-quality disease control development into local economic and social development plans and incorporating the prevention of major public health risks into government performance evaluations. Furthermore, it necessitates strengthening the leadership and coordination of superior disease control institutions over subordinate institutions and implementing robust supervision, inspection, and evaluation mechanisms.

The Chinese government is establishing a robust public health investment mechanism to ensure consistent funding for essential infrastructure, equipment procurement, disciplinary advancement, and personnel training within disease control institutions nationwide. Government budgets encompass personnel, administrative, and operational costs, alongside dedicated policy support for scientific research investments and platform development. Financial policies are being implemented to support medical institutions in delivering public health services, including infectious disease prevention. Furthermore, the government is strengthening the financial safety net for major epidemic prevention, control, and treatment efforts, while exploring exemption systems for vulnerable populations and specific diseases during public health emergencies.

Leverage information technology to enhance disease control information standardization, network security, and data security guarantee systems. Develop intelligent, multi-trigger monitoring, early warning, and emergency command mechanisms for infectious diseases. Promote data exchange between healthcare institution information systems and the infectious disease monitoring system, establishing a comprehensive mechanism for the automated acquisition of infectious disease diagnosis and pathogen testing data. Utilize big data, cloud computing, and other technologies to improve data integration, risk identification, intelligent analysis, and timely warning capabilities.

China has established a robust scientific research network, spearheaded by the Chinese Academy of Preventive Medicine and bolstered by provincial academies of preventive medicine and infectious disease medical institutions. This network has fostered the development of numerous scientific and technological innovation platforms and key laboratories, enhancing R&D and translational capabilities in disease control. It promotes collaborative industry-university-research-application platforms involving disease control institutions, medical institutions, universities, research institutes, and enterprises, facilitating the shared use of scientific and technological platforms and resources. Moreover, the network supports the Chinese Academy of Preventive Medicine in establishing core research centers for infectious disease prevention and control, with an emphasis on strengthening research into prevention and control strategies, core technologies, and essential equipment for major diseases and health risk factors.

China will deepen its international collaborations by strengthening infectious disease prevention and control cooperation with relevant countries and regions. This initiative will focus on bolstering cross-border joint prevention and control measures, enhancing information exchange, and improving training programs for global public health personnel. Additionally, China will prioritize think tank development, actively engage in foreign aid initiatives related to public health, and participate actively in global health governance to promote the establishment of a global community of health for all (9).

DISCUSSION

Robust organizational support is fundamental to the success of disease control system reform in China, enabling comprehensive planning, system restructuring, and capacity building. This support is also essential for the effective implementation of the “Guidelines” and the continued safeguarding of public health. Health and organizational support policies introduced during the initial three years of the “Fourteenth Five-Year Plan” will drive progress in disease prevention and control initiatives nationwide. These recent policies are characterized by more precise positioning and objectives, directly addressing key obstacles hindering the development of disease control initiatives. Building upon this foundation, China has adopted measures aligned with both international best practices and its unique national context. These measures include strengthening organizational leadership; advancing internal reforms (10); enhancing the rule of law; integrating public health law experts into disease control expert committees (11); optimizing investment mechanisms by integrating economic considerations with public health priorities (12); strengthening information technology support; establishing a modern, integrated, and real-time public health data and surveillance core (13); promoting international exchange and cooperation; cultivating new roles and partnerships with international stakeholders; and contributing to the building of a global community of health for all (14). Guided by these national policies, local governments at all levels have issued tailored organizational support policies. These localized policies have bolstered organizational support, providing robust backing for the high-quality development of disease control initiatives and playing a pivotal role in realizing the overarching national objective of a Healthy China.

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REFERENCES

1. Wang L, Zhang H, Wang H. International report of biosafety and biosecurity (2019). Beijing: Science Press. 2020. <https://book.kongfz.com/470251/6035389428>. (In Chinese)
2. Zhang N, Mao AY, Wang DL, Wang K, Qiu WQ. Development history, bottleneck and suggestions of evaluation system on centers for disease prevention and control in China. *Chin J Public Health* 2023;39(4):540 – 4. <https://doi.org/10.11847/zgggws1141428>.
3. Qiu S. The logic of responsibilities in government institutional reform. *Jianghai Acad J* 2020(1):113-8. <http://dx.doi.org/10.3969/j.issn.1000-856X.2020.01.019>. (In Chinese).
4. Li LM. Reflections on 60 years of public health in new China. *Chin J Public Health Manage* 2014;30(3):311-5. http://qikan.cqvip.com/Qikan/Article/Detail?id=50278334&from=Qikan_Article_Detail. (In Chinese).
5. Chinese Government Website. China's disease control initiatives step onto a new stage. 2023. https://www.gov.cn/xinwen/jdzc/202312/content_6922954.htm. (In Chinese).
6. National Development and Reform Commission, Health Commission, Traditional Chinese Medicine Administration, National Disease Prevention and Control Bureau. “Fourteenth five-year” high-quality and efficient medical and health service system construction implementation plan. 2021. https://www.ndrc.gov.cn/xwdt/tzgg/202107/t20210701_1285213.html. (In Chinese).
7. General Office of the State Council. “Fourteenth five-year” national health plan. 2022. <https://www.chim.org.cn/zs/zcwj/202205/76cb5c81d1b446c6beddeda67cd61b1f.shtml>. (In Chinese).
8. General Office of the CPC Central Committee, General Office of the State Council. Opinions on further improving the medical and health service system. 2023. https://www.gov.cn/zhengce/2023-03/23/content_5748063.htm. (In Chinese).
9. General Office of the State Council. Guidelines for promoting high-quality development of disease prevention and control initiatives. 2023. https://www.gov.cn/zhengce/content/202312/content_6922483.htm. (In Chinese).
10. Morrison JS, Inglesby T. Building the CDC the country needs. *Center for Strategic and International Studies*; 2023.
11. McGowan AK, Kramer KT, Teitelbaum JB. Healthy people: the role of law and policy in the nation's public health agenda. *J Law Med Ethics* 2019;47(S2):63 – 7. <https://doi.org/10.1177/1073110519857320>.
12. Teutsch SM, Glied S, Roy K. Strengthening the use of economics in informing U.S. public health policy. *Am J Prev Med* 2016;50(5 Suppl 1):S1-3. <http://dx.doi.org/10.1016/j.amepre.2016.02.005>.
13. CDC's data modernization initiative. CDC; 2021.
14. Husain L, Bloom G, McPherson S. The China-UK global health support programme: looking for new roles and partnerships in changing times. *Global Health Res Policy* 2020;5:26. <https://doi.org/10.1186/s41256-020-00156-1>.