

Research on Empowering the Development of Zhengzhou's Medical and Elderly Care Model with New Quality Productivity

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Abstract: *New quality productivity is a new concept first proposed by the national leader in September 2023 during his research trip to Heilongjiang. New quality productivity is primarily driven by technological innovation. Accelerating the development of new quality productivity is an objective requirement for liberating and developing productivity in the new era and new journey, and an inevitable choice for achieving modernization. As a key driving force for promoting the transformation and upgrading of the elderly care industry and achieving high-quality development, the connotation and importance of new quality productivity need to be further understood. The new quality productivity has high technological content and relies on innovation to drive the development of medical and elderly care integration in Zhengzhou. Currently, the empowerment of new quality productivity in Zhengzhou mainly faces three difficulties: insufficient factor production, lack of high-tech application, and poor integration of industrial formats. In response, efforts should be made to accelerate factor production, promote high-tech research and application, and promote the integration of medical and elderly care service industry formats. The aim is to stimulate new vitality in the development of medical and elderly care integration in Zhengzhou, assist in the development of the elderly care service industry in Zhengzhou, and promote the high-quality development of the elderly care service industry in Zhengzhou.*

Keywords: *New quality productivity; Elderly care industry; Integration of medical care and elderly care; High quality development*

1. Introduction

In September 2023, national leaders first coined the term ‘new quality productivity.’ The proposal of the new quality of productive forces is precisely an interpretation of the process of exploring the veins of our modern economy. During the 2024 sessions, ‘new quality productivity’ was not only written into the government work report for the first time, but also listed as the first of the ten major tasks of the government work in 2024. The new quality of productivity represents a completely new kind of economic dynamics, the core of which is information technology, which redefines the connotation and extension of productivity through innovation and the transformation of knowledge.

As a result of the aggravating trend of population ageing and rapid socio-economic development, the existing elderly care services are no longer able to meet the ever-increasing diversified and personalised needs of the elderly. Against this backdrop, the combined medical and nursing service model has emerged. ‘Medical-care integration’ is an elderly care service model that integrates medical and elderly care resources to meet the dual needs of the elderly for medical care and elderly care^[1]. Cultivating new quality productivity of smart elderly care, enhancing the supply of integrated medical and nursing services, and meeting the multi-level demand of residents for elderly care and medical care has become an urgent issue for the development of the elderly care industry at present.

2. The Introduction of ‘New Quality Productivity’

On 7 September 2023, national leaders stressed the need to accelerate the formation of new quality productive forces and enhance the new dynamic energy for development at the Symposium on

Promoting the Comprehensive Revitalisation of Northeast China in the New Era. September 8 in listening to the work of the Heilongjiang Provincial Party Committee and Provincial Government, stressed that the integration of scientific and technological innovation resources, leading the development of strategic emerging industries and future industries, accelerate the formation of new quality productivity. On 31 January 2024, while presiding over the eleventh collective study of the Political Bureau of the twentieth session of the Central Committee, the State Leader stressed that the development of new-quality productive forces is an intrinsic requirement and an essential point of focus in promoting high-quality development and that it is necessary to continue to do an excellent job in the article of innovation and promote the accelerated development of new-quality productive forces.

Many scholars from different perspectives on the ‘new quality of productivity’ connotation of interpretation Ran Qi and Li Fengliang, that the new quality of productivity is a revolutionary breakthrough in technology, innovative allocation of factors of production, the depth of industrial transformation and upgrading of advanced productivity qualitative state ^[2]. According to Qiu Haiping, the theory of new quality productivity inherits the theoretical essence of Marxism, clarifies the concept of ‘quality of productivity’, and helps to realise Chinese-style modernisation ^[3]. Yao Shujie and Zhang Xiaoqian believe that the new quality of productivity focuses on scientific and technological innovation, which can promote the productivity to achieve a revolutionary leap, and promote the people to enjoy a high quality of life ^[4]. In terms of meaning interpretation, existing studies summarise its core connotation as ‘innovation’ and ‘quality improvement’. ‘Innovation’ refers to the innovation of production factors, and “quality improvement” includes the optimisation and deepening of the indicators of various factors of productivity and the ultimate purpose of productivity improvement, such as the growth of human material needs and spiritual needs.

The development of new quality productivity is a key strategic choice to promote high-quality economic development and inject new vigour into traditional industries through innovation. Scientific and technological innovation is the core engine of the development of new quality productivity, through increasing investment in scientific and technological innovation and improving the transformation of scientific and technological achievements, it can continuously promote the optimisation and upgrading of industrial structure ^[5]. At the same time, the new quality of productivity as an important driving force to promote economic development, the development of medical care combined with the development of the elderly model is of great significance. It not only includes advanced technology application and intelligent facilities, but also involves the cultivation of talents and other aspects. By giving full play to the role of new quality productivity, the sustainable development of the combination of health care and nursing can be achieved, and a virtuous cycle of matching supply and demand can be realised.

3. The Main Dilemmas in the Development of Zhengzhou's Medical and Nursing Care Model

In 2021, Zhengzhou City formally promulgated the ‘Zhengzhou City Medical Health and Pension Services Implementation Measures’, which aims to further promote the development of medical care, meet the diversity and individuality of the needs of the elderly health care and pension services, and ensure that the pension and medical needs of the ‘silver-haired people’ are fully satisfied. According to ‘Zhengzhou City’ 14th Five-Year ‘Development Plan for the Elderly’, Zhengzhou will continue to strengthen the health management of the elderly, improve the medical service network for the elderly, and deepen the combination of medical and nursing development measures, and strive to establish a comprehensive support system for the elderly health by 2025. However, in the specific development of health care integration in practice, Zhengzhou City is still in the production of elements, technology application and industrial transformation, facing many difficulties.

3.1 Factor production aspects

According to the latest data show that in Zhengzhou City, the existing elderly institutions in 150, of which 24 set up medical institutions, contracted medical institutions to cooperate with 126, ‘two certificates complete’ medical care combined with 35 institutions, with 3500 beds, 15 medical care combined with the demonstration project in Henan Province, three medical care combined with hospice training base^①. However, at the end of 2023 and the beginning of 2024, Zhengzhou City will have apopulation of 1,846,000 people over the age of 60, a proportion of 14.2 per cent, and 1,309,000 people

^① Zhengzhou Municipal Committee of the Democratic Revolutionary Party, [Focus on the two sessions] Zhengzhou City CPPCC member Hou Zhancheng: Explore the combination of medical care pension model, so that the old have ‘medical’.

over the age of 65, a proportion of 10.1 per cent^②, which is evident in its large elderly population. At the same time, Zhengzhou City, only 23 second-class and above general hospitals set up a geriatrics department, with the increasing elderly population in Zhengzhou City, the current set of health care combined services institutions and hospitals can not meet the needs of the elderly population.

In terms of workforce factors, in 2021, the number of practicing physicians in general hospitals in Zhengzhou City will be 20,482, and the number of registered nurses will be 32,344, while the number of practicing physicians in community health service centres (stations) will be 2,565, and the number of registered nurses will be 3,279^③. In 2022, the number of practicing physicians in Zhengzhou general hospitals will be 20,623, and the number of registered nurses will be 32,727, and the number of practicing physicians in community health service centres (stations) will be 2,738, and the number of registered nurses will be 3,646^④, which is an increase in number of healthcare personnel compared with that of 2021, but it has not reached the standard of 1:2 ratio of healthcare personnel set by the World Health Organization. From the academic composition of doctors and nursing staff, the doctor's education of medical and nursing institutions is mostly based on bachelor's degree, the nursing staff's personnel are mainly specialised, and the proportion of nursing staff with master's degree and above is low^⑤. Ren Dongyong, president of Zhengzhou Pension Service Association, mentioned in an interview that at present, there is a scarcity of talent in the field of medical and nursing combination in Zhengzhou City, and there is a situation of low professional quality. At the same time, the wage level of the industry is relatively low, resulting in the lack of sufficient attraction in the field.

3.2 Technology applications

Intelligent Instantaneous Testing (IPOCT) is a rapidly evolving medical technology that is of great significance in smart aging. This technology is able to carry out medical diagnosis in multiple places such as homes, nursing institutions and communities, while monitoring and assessing the health status of the elderly in real time, helping the elderly to manage their own health, realising the integration of medical care and promoting the development of the smart aging industry. Among them, Jiangsu Quantum Point Technology Co., Ltd, as a leading IPOCT in-vitro diagnostic company, actively tried to integrate IPOCT technology into smart senior care products in 2023 and carried out a series of practices. For Zhengzhou City, the technology has not been applied on a large scale due to the level of economic development and the limitation that IPOCT technology has just begun to integrate with smart elderly care products.

In May 2021, Zhengzhou City has completed the initial construction of the smart elderly platform and established a three-tier network platform system. Nonetheless, the development of the smart aging platform is still in the exploratory stage, its professional depth has yet to be strengthened and its intelligent functions need to be further improved. Data interconnection still needs to be strengthened and other challenges. Wang Zhonghua, Director of the Pension Division of Zhengzhou Civil Affairs Bureau, believes that the pension equipment industry in Zhengzhou City is still in its infancy compared with super first-tier cities such as North, Guangzhou and Shenzhen, and is unable to meet the current demand for pensions in Zhengzhou City.

According to Zheng Fangyan, Director of Zhengzhou Civil Affairs Bureau, as of now, the number of various types of elderly institutions in Zhengzhou is 1,266, of which 114 are street elderly service centres, 1,052 community day care centres and 100 socially-run elderly institutions^⑥, which have continued to develop a smart elderly service platform and establish a basic information base on the elderly. At present, a three-tiered 'district-street-community' intelligent elderly service platform has been set up, with 100 per cent of the elderly being connected to the network. Some street elderly service centres have high-tech facilities, such as AI cameras, Internet of Things, etc., which can assist in discovering abnormal behaviours of the elderly and gestures for help through intelligent analysis, etc. However, at present, some of the elderly have concerns about intelligent devices, worrying about leaking their privacy or radiation effects, and thus have a low willingness to accept intelligent devices, and at the same time, due to the degradation of the visual and auditory functions of the elderly, it is more difficult for them to manipulate the digital technological products. At the same time, due to the degradation of the visual and auditory functions of the elderly, it is more difficult to manipulate digital

^② Statistical Bulletin on National Economic and Social Development of Zhengzhou City, 2023, <https://tjj.zhengzhou.gov.cn/tjgb/8324080.jhtml>

^③ Zhengzhou Statistical Yearbook 2022, https://tjj.zhengzhou.gov.cn/u/cms/tjj/statistical_2022/index.htm

^④ Zhengzhou Statistical Yearbook 2023, https://tjj.zhengzhou.gov.cn/u/cms/tjj/statistical_2023/index.htm

^⑤ People's Daily, 29 February 2024, p. 06, http://paper.people.com.cn/rmrb/html/2024-02/29/nw.D110000renmrb_20240229_3-06.htm

technology products, coupled with the insufficiency of the elderly's learning and receiving ability, which easily leads to the resistance of the elderly to new technology products, and all these reasons have affected the application of digital technology equipment to a certain extent. In addition to this, due to the higher capital for purchasing new technology, the human capital investment for the use of new technology is also higher, thus leading to the reluctance of some governmental departments and elderly organisations to apply the new technology, which leads to the obstruction of the transformation and application of the new technology [7].

3.3 Industrial sector

For Zhengzhou City, the combination of medical and nursing institutions, 'medical' and 'nursing' to a certain extent, are two relatively independent fields and therefore need to follow a different regulatory system; the health sector is responsible for medical institutions, while the civil affairs department is responsible for the elderly institutions, the two departments are independent of each other, making it challenging to exchange resources and information effectively, and even because of the many departments involved, it is prone to problems such as 'multi-management.' These two departments are independent of each other, which makes it difficult to exchange resources and information effectively, and even makes it easy for problems such as 'multi-management' to arise because of the large number of departments involved. The separation of medical resources and elderly care services may prevent the elderly from receiving timely and effective health management, and the lack of coordination of services may lead to duplication of examinations and treatments, thus increasing the number of elderly people. Secondly, uncoordinated services may lead to duplication of examinations and treatments, etc., thus increasing the burden on the elderly. Insufficient sharing of information and data also affects the extent to which the health status of older persons can be fully understood at the time of treatment. In addition, the human resources and social security departments are responsible for the reimbursement of medical and pension costs, and under multiple regulations, the functions of some departments have crossed over, leading to difficulties in integrating healthcare and nourishment. At present, the development of medical and nursing integration in Zhengzhou City mainly relies on government funding, with a single funding channel and insufficient funding, so it is difficult to generate a sustainable guarantee mechanism for the development of the whole industry [8].

Currently, the level of health insurance payments for nursing facilities in Zhengzhou City is somewhat limited during the development of health care integration. Most elderly care institutions, with the exception of those that have established co-operation with public hospitals and are very close geographically, usually face greater challenges in trying to integrate their medical facilities into the health insurance system. Successful integration requires not only that the facility's medical infrastructure meet certain hardware standards, but also that it have adequate medical staff. Currently, many nursing facilities in Zhengzhou City fail to meet these standards. The Zhengzhou Municipal People's Government, in its '14th Five-Year Plan for the Development of Medical Security in Zhengzhou', also mentions that it will support the development of healthcare integration, and will include medical institutions that meet the standards of healthcare integration into the designated scope of basic medical insurance in accordance with relevant regulations.

4. The Realistic Path of New Quality Productivity Enabling the Development of Healthcare Integration

4.1 Accelerating factor production

Firstly, strengthen the construction of medical and nursing institutions; for the construction of medical and nursing institutions, the government should introduce relevant policies to support its construction and development, such as financial subsidies, tax incentives and so on, to provide more opportunities for the development of medical and nursing institutions, the construction of medical and nursing institutions to carry out reasonable planning, coordination of the configuration and flow of health resources in different areas of Zhengzhou City, and to strengthen the medical and nursing institutions to manage and operate, which is also the basis for realizing new quality productivity. It should also focus on cross-sectoral cooperation, collaboration between medical institutions, nursing institutions and community service institutions to form a synergy to jointly build medical and nursing combined institutions [9]. Continuously strengthen the construction of geriatric hospitals, rehabilitation hospitals, nursing homes and general hospitals for the elderly, and continue to explore the model of 'two hospitals in one' development of community health service centres and community elderly service

institutions, township health clinics and township nursing homes.

Secondly, cultivate and introduce medical and nursing combined talents; talents are the critical factor to develop new quality productivity; from the perspective of medical and nursing combined talents, it is crucial to cultivate and attract high-quality medical and nursing combined talents. For the development of Zhengzhou City medical care combination, the education and training of medical care combination talents should be strengthened, and institutions of higher learning are encouraged to open medical care combination type of geriatric care specialties, to increase the cultivation of medical care combination professionals, and to cultivate high-quality professionals^[10]. At the same time, on-the-job training should also be strengthened to provide further training and training opportunities for those who are already engaged in medical and elderly care to improve their ability to combine medical and nursing services. At the same time, external medical and nursing talents should be introduced to optimise the structure of nursing personnel, attract experts, scholars and practitioners from different regions at home and abroad to Zhengzhou City to carry out medical and nursing combination services, promote talent exchange and cooperation, and better adapt to the needs of new technologies and new modes.

4.2 Promoting high-tech R&D and application

First, the research and development of technology in the intelligent elderly care industry should be promoted; scientific and technological innovation is the core driving force for developing new quality productivity in the combination of healthcare and nursing. For the research and development of new technologies in the smart elderly care industry, scientific research investment should be strengthened to promote innovation in the field of healthcare integration, continuously innovate and practice, promote the research and development of remote monitoring systems, and apply artificial intelligence technology to healthcare quality management. The government, enterprises and scientific research institutions can increase funding, invest in R&D resources, encourage researchers to carry out R&D work on new technologies related to the integration of healthcare and nursing, and continuously explore innovative medical technologies and services to provide personalised healthcare and nursing services for the elderly.

Second, promoting the application of digital medical service technologies; for the application of new technologies, a variety of measures need to be taken to promote their application in the field of combined medical and nursing services. Firstly, demonstration projects can be established, through government guidance and support, organise and carry out some demonstration projects of new technologies for combined medical and nursing services, promote the application and verification of new technologies in practice, focus on providing online consulting services, and establish an online and offline interlinked service system. Secondly, technical training can be strengthened to train and educate practitioners on relevant new technologies, improve their application level and technical ability, and ensure that new technologies can be effectively applied to actual services^[11]. For the elderly, appropriate volunteers should be arranged to counsel them on the use of intelligent equipment, strengthen the care for the elderly, and inform them of the benefits of intelligent equipment in detail, as well as introduce and eliminate their concerns about privacy. In addition, the popularisation and promotion of new technologies should be promoted through policy incentives and market orientation, and enterprises and institutions should be encouraged to actively adopt new technologies to provide accurate and intelligent medical services for the elderly, so as to improve the quality and efficiency of the integrated medical and nursing services.

4.3 Promoting the integration and development of industrial forms

First, the coordination mechanism for integrating health care must be improved. For the regulatory system of healthcare and nursing institutions, the government should take the lead in formulating unified regulatory standards and policies for healthcare and nursing services, clarifying the responsibilities and obligations of all parties, and ensuring the seamless integration of medical and nursing services. Relevant civil affairs departments should establish coordination procedures to regulate the behaviour of practitioners. Meanwhile, a cross-departmental collaboration mechanism should be set up to establish an interconnected healthcare information platform and promote information sharing and resource integration between medical and nursing institutions. Strengthen supervisory power and technical means, establish a sound mechanism for monitoring and evaluating combined medical and nursing services, and improve service providers' and supervisory authorities' sense of responsibility and behaviour through an open and transparent supervisory mechanism. At the

same time, it focuses on optimising the process of combining medical and nursing services, integrating the service items of rehabilitation appliances, means of transport, daily necessities and living aids, and actively creating a brand cluster and brand system for combining medical and nursing services, so as to provide refined medical services for the elderly.

Secondly, participation in all sectors of society is encouraged. The essence of the integration of health care is in-depth integration. The main body includes not only the medical sector and institutions, elderly care institutions and the community but also involves every family and individual and requires the extensive participation of members of society as a whole, so the development of the integration of health care should be strengthened in terms of social participation and supervision. The active participation of all community sectors in the supervision and evaluation of the services provided by the integration of health care should be encouraged, including the elderly, their families, community organizations, professional organizations. Optimize the social security system, raise the level of essential protection for urban and rural residents, and enhance the purchasing power of socialized elderly care services [12], and at the same time, do an excellent job of integrating elderly care services into the social security management system, and set up a sound insurance system for the elderly with long-term medical care needs.

5. Conclusion

The proposal of new quality productivity is another innovative development of Marxist productivity theory, which is the stage product of China's current high-quality economic and social development and provides guidance for China's future development. The combined medical and nursing service model is a new type of pension in line with China's national conditions, which can meet the rigid pension needs of the elderly, disabled and other people, and will become an important direction for the future development of the pension industry. In the process of promoting the high-quality development of the senior care industry, the new productivity has injected vitality and power into the development of medical and nursing combination, and promoted its upgrading and transformation. For Zhengzhou City, the development of health care combination should be aware of the new quality of productivity in driving its development process facing the central dilemma, which needs to strengthen the construction of health care institutions, build health care combination of talent system, increase technology research and development efforts to promote the application of digital technology in the pension industry. At the same time, to strengthen the supervision of the field, actively encourage the participation of all social forces, and jointly promote the new quality of productivity in the combination of medical care in the depth of development so that the elderly can enjoy better quality, convenient life of old age, and promote the high-quality development of Zhengzhou City, the elderly industry.

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