Research on the Driving Force of Medical Innovation in Maoming City's Revitalization through Science and Education

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Abstract: The progress of medicine plays an extremely important role in the reproduction and development of human society, and is also an important indicator of a country's economic development level and social civilization level. This paper proposes to place innovation at the core of the development of the healthcare industry, adhere to facing the forefront of world science and technology, the main battlefield of the economy, major national needs, and people's lives and health, focus on the supply side structural reform of the healthcare sector, accelerate the cultivation of an innovation system and innovation ecosystem suitable for the development of the healthcare industry, stimulate talent innovation vitality, activate various innovative elements, improve the level of coordinated development, strive to build a high-quality and efficient healthcare service system, provide comprehensive and full cycle health services for the people of Maoming, and provide sound health guarantees for the comprehensive construction of socialist modernization Guangdong.

Keywords: medicine, innovation driven, high-quality development

1. Introduction

The country places innovation at the core of the development of the healthcare industry, adheres to facing the forefront of world science and technology, the main battlefield of the economy, major national needs, and people's lives and health, revolves around the supply side structural reform of the healthcare sector, accelerates the cultivation of an innovation system and innovation ecosystem suitable for the development of the healthcare industry, stimulates talent innovation vitality, activates various innovative elements, enhances the level of coordinated development, and strives to build a high-quality and efficient healthcare service system, providing comprehensive and full cycle health services for the people of the province, and providing sound health guarantees for the comprehensive construction of a socialist modernization of Henan. The report of the 20th National Congress of the Communist Party of China emphasizes that we must adhere to the principle that technology is the primary productive force, talent is the primary resource, and innovation is the primary driving force. We must deeply implement the strategies of revitalizing the country through science and education, strengthening the country through talent, and driving development through innovation, open up new fields and tracks for development, and continuously shape new driving forces and advantages for development. This major theoretical innovation is based on the characteristics of the development of the Chinese era and the stage characteristics of development, profoundly elucidating the significant significance of the strategy of revitalizing the country through science and education. It is an important action guide for us to consolidate the foundation and strategic support of building a socialist modernized country comprehensively.

High quality development is the primary task of the modernization drive. The Fourth Plenary Session of the 12th Maoming Municipal Party Committee clearly proposed that we should focus on high-quality development, take on new responsibilities and make new achievements in promoting Chinese path to modernization in Maoming. Maoming is currently in a crucial stage of consolidating its foundation, accumulating momentum, and making breakthroughs in transformation. The situation is complex and complex, and it is necessary to deeply examine, reflect on, and gain insight into Maoming. We must identify the focus and breakthrough points of modern Maoming construction, and take every step of deep and solid high-quality development.
To promote high-quality development in Maoming, it is necessary to fully, accurately, and comprehensively implement the new development concept. The plenary session report not only fully reflects the requirements of the new development concept, but also directly proposes corresponding work arrangements for the five aspects of the new development concept. Among them, in promoting the revitalization of the city through science and education, it is proposed to focus on improving the quality of education, strengthening science and technology innovation platforms, and attracting professional talents, demonstrating new responsibilities and achievements in strengthening the city through talent and innovation leadership.

The progress of medicine plays an extremely important role in the reproduction and development of human society, and is also an important indicator of a country's economic development level and social civilization level. Every decisive breakthrough in science and technology will bring about a leap in productivity, change the process of world politics, economy, and even technological development, and play a huge promoting role in human survival and development, affecting various aspects of society, including medicine. Every major breakthrough in medical science theory or technology will inevitably lead to the formation of new theories, the establishment of new laws, or the improvement of diagnostic and therapeutic methods. Throughout the history of medical development, every major theoretical formation and scientific discovery has had a great driving effect on the development of medicine and human health. With the development of science, technology, and medicine, constantly emerging innovative achievements will extend human lifespan, and the establishment of new scientific theories and methods often opens up a new field of science. The innovation of medicine plays a crucial role in the development of medicine. Amidst the numerous challenges and challenges faced by medicine today, innovation in medicine becomes even more important [1].

The implementation of the policy of revitalizing the city through science and education has played a positive role in promoting medical innovation driven development. Firstly, by increasing investment and support in the medical field, the government has provided more research funding and resources, laying a solid foundation for the development of medical innovation. Secondly, the policy of revitalizing the city through science and education also focuses on improving the talent cultivation and research environment. By strengthening cooperation between universities, research institutes, and medical institutions, it promotes talent exchange and cooperation in the medical field, providing strong support for the cultivation of medical innovative talents and team building. In addition, the policy of revitalizing the city through science and education also focuses on the transformation of scientific and technological achievements and industrial development. By establishing scientific and technological innovation platforms and incubators, it promotes the transformation and commercialization of scientific research achievements, and accelerates the promotion and application of medical innovation achievements.

2. Promoting medical innovation through science and education to revitalize the city

2.1 Policy support and increased investment

Putting talent first and always taking science and education as the strategic support for promoting high-quality development in Maoming. To pursue high-quality development, it is necessary to first have a large number of high-quality talent teams. At present, we must firmly establish the strategy of revitalizing the city through science and education, comprehensively accelerate the pace of talent construction, and fully promote the construction of Maoming's talent highland with a spirit of seizing every moment and striving for success, laying a solid talent foundation for Maoming's high-quality development. Stable funding investment is the basic guarantee for medical innovation to conduct scientific research, achieve research results, and enhance research capabilities. It is the most important means to mobilize the enthusiasm of scientific researchers to engage in scientific research. On the one hand, we should actively seek funding from higher education administrative departments and local government departments, strive to undertake research projects issued by the government or provide decision-making consulting services to the government, and obtain funding through applying for research patents. On the other hand, it is also necessary to seek widespread social support, expand financing channels, strengthen cooperation with the government, enterprises, and research institutes, implement joint development, market-oriented, and quickly transform scientific and technological achievements into real productivity. For example, research and development of new products, equipment, and processes that meet market needs can be funded by interested enterprises to transform scientific research results. This not only creates social benefits but also increases the school's research
funding. For technical problems encountered in enterprise production, experts can be organized to solve them; For some difficult problems that cannot be solved in a timely manner, we can assist in project initiation and resolution. It is also possible to organize excellent teachers in related fields to join enterprises and teach them the technical and management knowledge and new information required by the enterprise through various forms of course classes. While the enterprise obtains the required knowledge and improves market competitiveness, the school can also receive partial revenue. In addition, supplementing research funds and facilities through school assets to enhance one's own development is also an important way to improve the research environment. Schools should formulate preferential policies to encourage investment in school run industries to improve educational conditions and research facilities. On the other hand, they should closely link scientific research and development, transform scientific and technological achievements into products and production technologies as soon as possible, and add facilities for deeper scientific research needs, forming a virtuous cycle. This can not only further enhance the technological content of school production, but also promote mutual development between school production and scientific research.

2.2 Talent cultivation and improvement of research environment

The process of scientific research is a process from quantitative change to qualitative change. In order to correctly evaluate the work and performance of scientific researchers, it is necessary to establish an objective, scientific and reasonable scientific research evaluation system. We should adopt methods that comply with international standards, establish a decision support system for evaluating scientific and technological achievements and performance, and gradually form an open, fair, scientific, and effective system for evaluating scientific and technological achievements and performance that is recognized by teachers and researchers. Teachers and researchers should be evaluated in terms of research enthusiasm, research ability, research performance, etc., in order to provide them with psychological satisfaction, enhance their sense of achievement and pride, and further promote the motivational effect. For scientific research teams, a comprehensive evaluation of their overall innovation ability should be conducted from the aspects of talent team construction, management and operation mechanisms, level and value of scientific research achievements, economic benefits and social impacts generated by scientific research achievements, etc., to promote the improvement of management level and innovation ability of scientific research teams [2].

2.3 Transformation of scientific and technological achievements and industrial development

To build and improve the incentive mechanism for scientific research, strengthen the linkage between hospitals and universities in scientific and technological innovation, and form an innovation team, it is necessary to change the management method based on funds, projects, and achievements, implement an incentive mechanism of "external rewards and punishments collectivization", promote the scientific spirit within the team, and prevent academic impatience. Firstly, it is necessary to set appropriate goals and encourage researchers or teams to explore, discover, and overcome new academic difficulties. When setting technological goals, it is important to note that the goal should have a certain level of advancement and difficulty, creating a need for achievement to achieve the goal; At the same time, it is also necessary to consider the actual level of teachers in our school, and setting goals should not be too high, but should make people feel that there is a possibility of overcoming difficulties. Secondly, it is necessary to make reasonable use of the role of material incentives and fully mobilize the enthusiasm of scientific researchers. The economic incentive methods that can be adopted include: increasing wages or bonuses, increasing research funding, increasing the amount of research awards, providing special rewards for major achievements, as well as linking housing, wages, welfare titles, honors and research contributions. Economic incentives are an important supplementary form of distribution according to work, and also an incentive method related to practical life needs such as clothing, food, housing, and transportation, with a strong inducing effect; The most important thing is that it embodies the socialist distribution principle of "more work, more pay", realizes remuneration based on scientific research work and performance, and enables teachers who actively engage in scientific research to gain a sense of fairness and achievement from their work, thereby fully mobilizing the enthusiasm, initiative, and creativity of scientific researchers, and serving the leapfrog development of school scientific research. In addition, introducing competition mechanisms into scientific research management is also an effective way to strengthen incentives. It can not only stimulate the enthusiasm of scientific researchers, but also encourage teachers to fully tap into the potential of their bodies, fully utilize their abilities, and promote the optimization and achievement of scientific research goals. It also has a great promoting effect on
improving the level of scientific research achievements [3].

3. Problems faced by medical innovation driven development

3.1 Shortage of funds and insufficient research funding

Although medical innovation driven development is considered an important strategy for revitalizing the city through science and education, it still faces some challenges and problems. Firstly, the shortage of funds and research funding is one of the main constraints on medical innovation. High level scientific research requires significant financial support, including investment in equipment procurement, personnel training, and research projects. However, currently, research funding in many places is still insufficient to meet the needs of medical innovation.

3.2 Talent loss and difficulties in building research teams

Talent loss and difficulties in building research teams are also important issues facing medical innovation. On the one hand, excellent medical talents often tend to choose to develop abroad, leading to a common phenomenon of talent loss. On the other hand, there are also certain difficulties in the construction of scientific research teams, including challenges in team formation, personnel allocation, cooperation and communication. These issues all limit the further development of medical innovation.

Finally, the reform of innovation system and technological innovation system is also an urgent issue to be solved. Medical innovation requires a sound innovation system to support, including support from policy environment, laws and regulations, intellectual property protection, and other aspects. In addition, the reform of the scientific and technological innovation system also needs to be further promoted, including the reform of the scientific research evaluation system and the improvement of the mechanism for transforming scientific research achievements [4].

4. Strategies for solving medical innovation problems

4.1 Increase government investment and research funding support

We vigorously promote government investment and research funding support to incentivize individuals with fair recognition and rewards. We insist on starting from refining the specific standards for commendation and rewards, promotion and promotion, to prevent negative phenomena such as favoritism, egalitarianism, and rotating positions, and to create a fair reward atmosphere. In implementing the standards for commendation and rewards, hard indicators such as scientific research topics, patents, papers, works, and awards are necessary conditions. In the process of merit evaluation and awards, attention should be paid to openness and transparency, and the basic information of the participating individuals should be publicly disclosed through certain means and subject to public supervision. For personnel undertaking various fund projects, special research funds shall be allocated in a certain proportion of the total number of funds, and health workers shall be encouraged to actively apply for various fund projects; For departments and individuals whose work is always hovering at a low level, and even experiencing continuous problems, a partial proportion of bonuses or welfare subsidies will be deducted to make them bear certain economic losses.

4.2 Establishing a talent incentive mechanism and a research team cultivation plan

Innovate the talent utilization mechanism and stimulate the technological innovation potential of high-level medical talents. Firstly, innovation should be made in the talent utilization mechanism, and various innovative measures should be taken to stimulate the technological innovation potential of medical innovative talents. Through job competition, outstanding high-level young and middle-aged medical talents are selected to enhance transparency in competition, create a strong competitive atmosphere, resolve conflicts in the promotion of technical positions for medical innovative talents, enhance the motivation of medical innovative talents for innovation and entrepreneurship, and transform their innovation and entrepreneurship work from passive to active. Secondly, innovate incentive mechanisms to mobilize the enthusiasm of medical innovative talents for technological innovation. Innovation should be made in the incentive mechanism, and various incentive measures should be taken to mobilize the enthusiasm of medical innovative talents for scientific and
technological innovation. We should take the construction of a learning hospital as the fundamental plan for hospital development, strive to create a positive, united, and harmonious humanistic environment, and keep medical innovative talents in a positive and innovative atmosphere. Motivate people with a strong atmosphere of innovation. To establish a sound incentive mechanism that conforms to the growth laws of innovative talents, it is necessary to create a strong innovation atmosphere throughout the entire hospital, enhance the importance of scientific research work, and enhance the status of medical innovative talents [5].

The government sets up a platform for enterprises, hospitals, and universities to collaborate on scientific and technological innovation, promote the reform of the innovation system and scientific and technological innovation system, implement two special projects of introducing leading talents at the municipal level and cultivating outstanding talents, create a joint scientific and technological innovation workshop between hospitals and universities, and create a national strategic scientific and technological support force called the "Maoming Team"; Recruit reserve young talents, implement special projects for introducing young talents, cultivating young scientific and technological talents, and providing postdoctoral support; Cultivate and select outstanding engineers and high skilled talents, focusing on the key industrial chains in our city. Following the concept of "one industry chain, one training plan", cultivate and select a large number of technical and skilled talents that meet the needs of industrial development; Give full play to the role of social organizations as bridges and links, build a network for attracting talents and talents, and achieve the goal of attracting talents from all over the world.

On the one hand, we focus on cultivating and connecting national strategic scientific and technological forces, and on promoting industrial and technological innovation and creation, in order to enhance the overall scientific and technological innovation capabilities. We aim to build a national high-tech innovation highland, establish a mission driven and task oriented high-level laboratory system, promote the improvement and expansion of the national innovation platform, strengthen applied basic research, and cultivate national strategic scientific and technological strength. By strengthening the research and development of key core technologies, supporting the cultivation of technology-based enterprises, improving the technology financial service system, and vigorously developing the technology service industry, we aim to promote the integration of innovation and industrial chain development. Enhance the innovation strategy capability of the Science and Technology Innovation Park, highlight functional services, and construct the Tiankai Higher Education Science and Technology Innovation Park with high standards, striving to build the "Maoming Edition" national independent innovation demonstration zone [6].

5. Conclusion

The path of Maoming, which is to uphold integrity and achieve high-quality development, has been clearly defined. Under the grand blueprint outlined at the 20th National Congress of the Communist Party of China, we must ensure the implementation of the decisions and deployments of the Municipal Party Committee, actively take action, overcome difficulties, and achieve good results. Firstly, we should be problem oriented and demand driven. Focusing on the expectations of the people, focusing on the shortcomings of problems, and addressing public health incidents and major disease threats that seriously endanger people's health, we will benchmark against international and domestic leaders, with a focus on advanced technology, high-end talents, distinctive services, and brand quality. We will promote capacity improvement, service innovation, and business upgrading to meet the diverse, differentiated, and personalized health needs of the people.

Innovation means reform and innovation, accelerating breakthroughs. The government sets up a platform for enterprises, hospitals, and universities to collaborate on scientific and technological innovation, focusing on the trend of deepening the development of life sciences, wider application of new technologies, and interdisciplinary integration. It strengthens the overall allocation of resources and the integration and utilization of talents, and strives to build a number of national first-class hospitals and leading disciplines, playing a leading, supportive, and driving role in medical services, clinical research, talent cultivation, technology transformation, and technology radiation.

Adhering to basic principles, adhering to integrity and innovation, we must place innovation at the core of the development of the healthcare industry. We must adhere to facing the forefront of world science and technology, the main battlefield of the economy, major national needs, and people's lives and health, and focus on the supply side structural reform in the healthcare field. We will accelerate the
cultivation of an innovation system and innovation ecosystem suitable for the development of the healthcare industry, stimulate talent innovation vitality, activate various innovative elements, improve the level of coordinated development, and strive to build a high-quality and efficient healthcare service system, provide comprehensive and full cycle health services for the people of Maoming, and provide solid health guarantees for the comprehensive construction of socialist modernization Guangdong.

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References