Proceedings of the 3rd International Conference on Financial Technology and Business Analysis
DOI: 10.54254/2754-1169/136/2024.18657

Analysis of Market Trends and Strategies in the Health Industry: A Perspective Based on the PESTLE Model

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Abstract: The health industry has received unprecedented attention globally as a key area for improving people's quality of life. With the ageing population, rising prevalence of chronic diseases, and increasing consumer health awareness, the health industry is undergoing rapid development and transformation. This study uses the PESTLE model (Political, Economic, Social, Technological, Legal, and Environmental) to analyse market trends in the health industry. It is found that government-supportive policies, macroeconomic growth, growth in social demand, technological innovation, improvement in laws and regulations, and requirements for environmental protection have all contributed to the development of the health industry to varying degrees. However, these factors have also brought about new challenges, such as overall cost control, service quality improvement, technological safety and sustainable development. By considering these factors in a comprehensive analysis, this study provides useful insights into the future development of the health industry and suggestions for sustainable development.

Keywords: Health Industry, PESTLE Analysis, Digital Health, Elderly Care, Policy Support.

1. Introduction

1.1. Definition and the current status of its development

The health industry refers to a collection of industries that provide a range of services and commodities such as prevention, diagnosis, treatment, and rehabilitation, as well as health management and healthcare products, and is an integrated whole covering a wide range of fields. It includes traditional medical services, pharmaceuticals, medical device manufacturing, health insurance, nutritional supplements, fitness and leisure, health consulting and other sub-sectors. These sectors work together to improve the overall health of individuals and society. The importance of the wellness industry is growing as global demographics change and technology advances significantly. In China in particular, with the introducing of the Chinese government's 'Healthy China 2030' plan, the health industry has gained unprecedented development opportunities and has become an important part of the country's economic and social development.

Globally, the health industry is regarded as one of the most promising emerging industries and is used by many countries as a new engine of economic growth. According to the World Health Organisation, the potential market size of the global health industry is huge and is expected to grow at a high compound annual growth rate in the coming years. In developed countries and regions, the

DOI: 10.54254/2754-1169/136/2024.18657

health industry has become an important part of the national economy that cannot be ignored. Also in China, under the promotion of the 'Healthy China 2030' strategy, the health industry has shown strong development momentum, not only the rapid expansion of the market scale, but also the industry chain tends to be complete. The Chinese government continues to introduce supportive policies to encourage the innovation and development of the health industry and strives to build a high-quality health service system with Chinese characteristics.

1.2. Opportunities and Challenges in the Health Industry

The health industry is facing multiple challenges and opportunities. On the one hand, cost control and affordability of healthcare services are the primary challenges, with high technology development costs leading to high prices for healthcare products and services, affecting consumer accessibility. "The increasing cost of healthcare over the last decade has put unprecedented pressure on the National Health Service (NHS) in the UK [1]." Secondly, the issues of technology security and privacy protection are becoming increasingly prominent. As the process of healthcare digitisation accelerates, information security and data protection have become issues that cannot be ignored. "With the increasing digitisation of healthcare records and the use of a variety of information technologies, ensuring that sensitive health information maintains confidentiality and prevents disclosure or unauthorised access is a major challenge [2]." In addition, talent shortages and skills gaps are also bottlenecks that constrain the development of the healthcare industry, especially in emerging areas where the demand for talent is even more pressing.

On the other hand, the health industry has also ushered in several development opportunities. First and foremost, governments' policy support and market opening have created favourable conditions for the development of the healthcare industry. Meanwhile, technological innovation drives the improvement of medical service efficiency and quality, giving rise to new business models. "By creating and implementing a health delivery model that incorporates a system of technological interventions, it is possible to improve patient prognosis, reduce the cost of healthcare and provide personalised and efficient care to patients [3]." On top of that, international cooperation and exchanges have promoted technology sharing and diffusion of innovations. "International exchanges allow healthcare professionals from different countries to share knowledge and expertise, leading to better treatment plans, innovative solutions and better patient care [4]." Undeniably, the ageing population has brought new market opportunities, prompting the health industry to focus on the special needs of the elderly population. Faced with both challenges and opportunities, the health industry needs to respond positively and grasp the opportunities to achieve sustainable development.

1.3. Analyse market trends in the health industry using the PESTLE model

This study aims to systematically analyse the market trends of the health industry and identify and assess the major external factors affecting its development through the PESTLE model, which is an effective analytical tool for analysing the impact of the macro-environment on a specific industry, helping us to comprehensively understand the macro-environment of the health industry from the six perspectives of political, economic, social, technological, legal, and environmental, and then providing companies with an opportunity to provide systematic support for decision-making.

1.4. Explain the rationale behind the PESTLE model and its role in market analysis

The PESTLE model consists of six dimensions: political, economic, sociocultural, technological, legal and environmental. Each dimension represents different types of factors that may affect the health industry. In this study, the basic concepts of the PESTLE model and its practical application value in market analysis will first be introduced. This will be followed by a review of a large amount

DOI: 10.54254/2754-1169/136/2024.18657

of relevant literature and the latest information from multiple sources, such as official statistics and industry reports, to ensure the comprehensiveness and accuracy of the analysis. The use of a comprehensive methodology enables a more comprehensive understanding of the macro-environment in which the health industry operates and provides strategic guidance to the relevant companies.

By applying the PESTLE model, this paper not only reveals the current development trend of the health industry but also provides necessary reference information and strategic suggestions for enterprises when formulating strategies. By analysing various factors such as political support, economic input, social demand, technological innovation, laws and regulations, and environmental requirements, this paper aims to present a comprehensive picture of the health industry's current status and future direction. Future research will continue to track the evolution of the health industry to provide more in-depth insights to help companies grasp opportunities and meet challenges.

2. Case Description

2.1. Digital Health

Digital health refers to the use of information technology to provide medical services and health management, covering a variety of segments such as mobile medical applications, telemedicine, wearable devices and so on. With the popularity of smartphones and the expansion of Internet user groups, the digital health industry has developed rapidly in recent years. According to market research reports, the market size of the global digital health industry continues to grow. It is expected to reach hundreds of billions of dollars in the coming years. Key players include tech giants such as Google, Apple, Huawei, and numerous healthcare-focused startups such as Fitbit, Keep, etc.

The evolution of the digital health industry can be broadly divided into three phases: the start-up phase (early 2000s to 2010), the rapid development phase (2010 to 2020) and the mature development phase (2020 to present). The start-up phase focused on the initial exploration of mobile medical applications and wearable devices; the rapid development phase saw explosive growth in multiple types of digital health products and services, with a focus on telemedicine and big data analytics; and the mature development phase saw the gradual standardization of the industry, increased policy support from the government, and more mature technology applications on the ground.

The Chinese government has strongly supported the development of the digital health industry, implementing various policies to accelerate its growth. Notable initiatives include the "Healthy China 2030" Plan Outline and the "Opinions on Promoting the Development of 'Internet + Medical and Healthcare'." These policies have significantly advanced the infrastructure needed for the digital health sector's expansion. The construction of infrastructure for the digital health industry has been promoted. In recent years, the digital health field has attracted a large number of domestic and overseas investments, the amount of global venture capital has increased significantly, and several start-up companies have successfully obtained financing. With the improvement of citizens' health awareness, more and more consumers have started to pay attention to daily health management and achieve comprehensive daily monitoring of their health through digital means. "Digital healthcare services offer a cost-effective alternative to specific health problems, are attractive to young, educated people, and can be de-emphasised through acceptable demand management and patient segmentation practices to further improve cost-effectiveness [5]."

2.2. Elderly Care

Elderly care refers to the care services provided specifically for the elderly, covering a wide range of aspects such as care for daily living, health management, and psychological comfort. With the accelerated ageing of the global population, the geriatric care industry has ushered in huge market

DOI: 10.54254/2754-1169/136/2024.18657

demand. "The results of econometric modelling show that healthcare expenditure in Egypt is influenced by GDP per capita and the population over 65 years of age [6]." China's elderly care industry is in a rapid development stage, and the market scale is expanding, with major players including professional nursing institutions, community health service centres and emerging home-based elderly care service providers.

The elderly care industry has experienced a development process from scratch and from small to large. In the early days, it mainly relied on the traditional family care model, and as socio-economic development and population ageing intensified, specialised elderly care services gradually emerged. In recent years, the government's support for the elderly care industry has been increasing, and social capital has also begun to gradually enter, the elderly care industry has shown a booming trend.

The Chinese government has been increasing its support for the elderly care industry and has issued a series of policies, such as the Opinions on Promoting the Integration of Medical and Health Care and Elderly Services, and Several Opinions on Promoting the Development of the Health Service Industry, etc., which have officially clarified the development direction and goals of the elderly care industry. With the ageing of the population, there is a growing demand for high-quality care services for the elderly, especially in densely populated urban areas, where the elderly are more dependent on professional care services due to their children's busy schedules and other reasons. In addition, as living standards continue to improve, the needs of the elderly for health management and spiritual comfort are becoming more and more diversified. The elderly care industry needs to continuously innovate its service model and provide more comprehensive and personalised services to meet the diverse needs of the elderly.

Through the above case studies on digital health and elderly care, it is easy to see that as an important part of the health industry, the health industry has unprecedented development opportunities. Factors such as policy support, economic investment, technological innovation and social demand have combined to drive the rapid development of these two fields.

3. Analysis on the Problem

3.1. Political Factor

3.1.1. Government policy support in the health industry

Globally, governments are generally aware of the importance of the health industry to national economic and social development and have adopted a series of policy measures to support its growth. In the United States, the Affordable Care Act (ACA) has expanded the scope of people covered by health insurance and increased the popularity of medical services. In Europe, a universal health insurance system has been implemented to ensure all citizens have access to basic medical services. In China, the government has launched the ‘Healthy China 2030’ strategy, signaling that the healthcare industry has risen to the level of a national strategy. The strategy not only emphasizes the need to improve the health of the entire population further, but also puts forward specific action plans, including measures to strengthen public health infrastructure, promote reform of the medical security system, and encourage innovation in medical science and technology. This strategy not only strengthens the public health system but also improves the accessibility and affordability of healthcare services through healthcare insurance reform, further enhancing the quality of healthcare services.

3.1.2. Impact of policy uncertainty and international relations on the industry

However, policy uncertainty and rapid changes in international relations have also brought great challenges to the health industry. "Sustainability in healthcare is a major global challenge [7]." International trade frictions in the context of trade wars and anti-globalisation, the Russia-Ukraine

DOI: 10.54254/2754-1169/136/2024.18657

conflict, and geopolitical tensions in the Middle East may affect the international cooperation and development of the health industry. For example, the surge in tariffs in the context of the US-China trade war has led to an increase in the cost of imported medical devices, affecting the allocation of domestic healthcare resources. In addition, changes in government policies may further exacerbate instability in the health industry, such as the drug price regulation policy and the reform of health insurance payment methods, which may cause short-term fluctuations in the health industry.

3.2. Economic Factor

3.2.1. Economic inputs and outputs of the health industry

The health industry has attracted significant public and private sector investment. The government usually increases its financial support for the health industry by increasing the financial budget in the field of public health and setting up special funds. According to official statistics, the Chinese government's financial expenditure on public health has continued to grow in recent years, which not only strengthens the construction of public health facilities but also further improves the capacity of primary healthcare services. "There is a complementary effect between the human capital of physicians and the accessibility of healthcare services [8]." Private capital has also seen the huge market potential of the health industry and has invested in areas such as medical equipment manufacturing, emerging pharmaceutical R&D, and health services for the middle-aged and elderly. These investments have not only promoted technological innovation and service upgrading in the health industry but also boosted employment and economic growth.

3.2.2. Impact of macroeconomic Factors

Macroeconomic factors have a significant impact on the health industry. During a country's economic boom, the health industry is fuelled by an increase in consumer spending power and a subsequent increase in demand for medical services and healthcare products. During an economic recession, however, consumers may focus only on basic medical services and spend less on non-essential and high-end medical services, leading to some development pressure on the health industry. In addition, inflation may lead to an increase in the cost of healthcare services, compressing the profitability of the health industry, which in turn affects the sustainable development of the industry as a whole. For example, an increase in the price of certain raw materials may lead to an increase in the production cost of medical equipment and medicines, which is ultimately passed on to the consumer through the closed-loop economic flow from production to consumption, thus affecting the affordability of healthcare services.

3.3. Social Factor

3.3.1. Demand for the health industry driven

Globally, population ageing is a major social issue facing the health industry. As the proportion of the ageing population continues to increase, the demand for health services such as chronic disease treatment and rehabilitation care has risen significantly. According to statistics, the proportion of China's elderly population aged 60 or above is increasing yearly and is expected to peak in the coming decades, which puts more urgent development requirements on China's health service industry. Meanwhile, the improvement of national health awareness and changes in lifestyles have also promoted the development of the health industry. More people are focusing on preventive healthcare and are willing to invest more in health management and healthcare products, such as regular medical checkups in hospitals, purchasing green and healthy food, and strengthening exercise and fitness.

DOI: 10.54254/2754-1169/136/2024.18657

These changes have not only promoted the diversification of the health industry but also service innovation in the health industry.

3.3.2. Different demands for health services from different social groups

There are differences in the demand for health services among different social groups. Young people in society may be more concerned about the aspects of sports and fitness and mental health services, while middle-aged and elderly people are more concerned about long-term monitoring and management of chronic diseases and elderly care. Therefore, the health industry needs to provide personalised and customised services according to the characteristics of different age groups to meet the health needs of different social groups. For example, emerging technology products such as health exercise monitoring and guidance APPs and smart wearable devices are introduced for young people; long-term care services and family doctor-contracted treatment services are provided for the elderly. In addition, with the rise and expansion of the middle class, the demand for high-end medical services is gradually increasing, which also provides new market opportunities for the development of the health industry.

3.4. Technological Factor

3.4.1. Technological Innovation in the Health Industry

Technological innovation has greatly promoted the development of the health industry. The expanded application of cutting-edge technologies such as artificial intelligence, telemedicine and gene editing has not only improved the efficiency and quality of medical services but also further opened up new business models in the health industry. "By investing in AI research, and strengthening the data infrastructure, the immense potential of AI can be unlocked to revolutionise the healthcare landscape [9]." For example, telemedicine has made it possible for residents in remote areas with a backward level of economic development to enjoy high-quality medical services; and the development of gene editing technology has provided a new therapeutic pathway for the treatment of genetic diseases. In addition, the application of big data and cloud computing technology has also made it possible to improve the efficiency of medical data analysis, providing greater possibilities for more efficient implementation of personalised medical services. "In healthcare, the intersection of Artificial Intelligence (AI) and public health has become an important component, presenting numerous unique opportunities for innovation [10]."

3.4.2. Disruption of the Traditional Health Service Model

Technological advances have had a profound impact on traditional health service models. For example, mobile medical applications enable patients to complete the initial diagnosis of their conditions at home, reducing the frequency of hospital visits; smart wearable health devices can monitor various health data in real-time, providing doctors with a more comprehensive diagnostic basis. The application of these technologies not only improves the convenience and accessibility of medical services but also greatly reduces the originally high medical costs, bringing new development opportunities for the health industry.

3.5. Legal Factor

3.5.1. Laws and Regulations Related to the Health Industry

The health industry involves numerous laws and regulations, including medical device regulation, drug approval, and data privacy protection. Strict and well-established industry regulatory standards

DOI: 10.54254/2754-1169/136/2024.18657

help ensure the high quality and safety of medical products, but they also significantly increase compliance costs for companies. "The national interest should be based on social security, which is a collective ability to provide health care through the help of specific organisational and legal measures, and thus to counteract the risks that may arise [11]." For example, the marketing of medical devices requires strict quality testing and complex certification procedures; patients' complete medical data needs to follow the Personal Information Protection Act and other relevant regulations to ensure the privacy and security of personal data.

3.5.2. Legal Compliance Challenges for Industry Participants

Legal compliance places higher requirements on industry participants to practice their profession. When conducting business, enterprises not only need to strictly comply with domestic laws and regulations but also need to consider the relevant legal requirements of the international market for this business. For example, the export of medical device products needs to comply with the use standards of the destination country, which requires companies to have strong legal awareness and compliance capabilities. In addition, with the continuous improvement of international standards, enterprises also need to update their management system to adapt to the new legal environment promptly. For example, the EU's GDPR (General Data Protection Regulation) has imposed stricter requirements on data protection, affecting the operations of a large number of multinational enterprises in the European market.

3.6. Environmental Factor

3.6.1. Impact of Environmental Protection Requirements on the Health Industry

As people become more aware of environmental protection, green healthcare and sustainable healthcare have become a new trend in the health industry. Healthcare organisations and enterprises are paying more and more attention to energy saving and emission reduction to promote the realisation of the vision of green healthcare. For example, measures such as the use of renewable energy and the reduction of medical waste generation help reduce environmental pollution from medical product waste. The construction of green buildings and the application of energy-efficient equipment not only reduce energy consumption but also further enhance the image of healthcare organisations.

3.6.2. Impact of Natural Disasters and Climate Change on Demand for Health Services

Natural disasters and climate change have also had an impact on health services. The increase in extreme and severe weather events has led to an increase in the urgent demand for emergency medical services, such as disaster relief, infectious disease prevention and control. In addition, climate change may lead to new group health problems, such as group heatstroke caused by summer heat waves and respiratory diseases caused by air pollution, etc. These numerous problems brought about by climate change require the health industry to make further adjustments. For example, it should improve and perfect the emergency response mechanism, strengthen the construction of the public health system, and improve the ability to respond to public health emergencies. Climate change may also affect agricultural production, which in turn affects food safety and nutritional supply, and is also a potentially huge challenge for the health industry.

4. Suggestion

Based on the results of the PESTLE analysis, the following recommendations are made for the development of the health industry.

DOI: 10.54254/2754-1169/136/2024.18657

4.1. Strategic Recommendations

Firstly, the adaptability of health industry policies should be strengthened. Enterprises should pay close attention to the development trend of national policies and adjust their strategies promptly to meet development needs. At the same time, enterprises can also actively participate in the formulation process of relevant policies and provide feedback to government departments through health industry associations and other channels, to obtain a more favourable policy environment. The government should also continue to introduce policies that support the development of the health industry, such as increasing investment in public health infrastructure and improving the health insurance system. At the same time, government policy formulation should always be forward-looking, taking into account changes in the international situation at different times to ensure policy consistency and stability. Consumers should pay attention to the health policies issued by the government promptly, understand the impact of relevant policies on their rights and interests, and actively participate in policy feedback.

Secondly, they should also seize the opportunity of technological innovation. Enterprises should make full use of cutting-edge technologies such as artificial intelligence and telemedicine to continuously improve the efficiency and quality of healthcare services. "Digital transformation is key for healthcare to meet future needs and compete on an equal footing with new players in the market [12]." At the same time, enterprises should also strengthen financial investment in technology research and development and cultivate professional talents to build strong competitiveness in core technologies. The government should increase its support for medical technology innovation by setting up special funds and encouraging cooperation between enterprises universities and research institutes to promote breakthroughs and applications of key technologies. Consumers should actively apply new technologies and use tools such as wearable devices and health management apps to continuously improve their ability to manage their health.

Ultimately, there is also a need to meet social demands. Enterprises should provide customized health services according to the characteristics of different age groups. At the same time, enterprises should also focus on health education to raise public health awareness. The government should pay attention to the health needs of different social groups, especially the elderly population and the middle- and low-income groups and provide more diversified health services. Consumers should take the initiative to understand their own health needs, actively participate in health management activities, and pay timely attention to and manage their health conditions by purchasing health insurance and undergoing regular medical check-ups in hospitals.

4.2. Practical Recommendations

Resource allocation should be optimized first. Enterprises should rationally allocate resources and improve operational efficiency. By introducing more advanced management concepts, they can optimise processes, reduce costs and improve service quality. The government should optimise the rational allocation of public resources to ensure that healthcare resources are effectively used by more people. "The healthcare system is currently under enormous pressure and that efficient allocation of scarce healthcare resources is essential to ensure value for money [13]." Strengthen the service capacity of primary healthcare by geographically rationalising the distribution of healthcare facilities, thereby improving the level of public healthcare services. "The potential of telemedicine service technology through a study showed that it is an important means of improving the provision of, and access to, health care in provincial areas [14]." Consumers should rationalise their health expenditure and choose health services that better suit their needs.

Secondly, technological research and development should be strengthened. Enterprises should continue to increase R&D investment, introduce and cultivate high-level technical talents, and

DOI: 10.54254/2754-1169/136/2024.18657

promote medical technology innovation through cooperation with domestic and foreign research institutions. The government should continue to support industry-university-research cooperation, encourage enterprises to build experimental R&D centres with universities and research institutes and promote the transformation and application of scientific and technological achievements. Consumers should support and participate in the trial and feedback of health technology products to further promote technological progress. "Consumer purchases of healthcare products are largely influenced by public information, such as news reports, research articles, and online customer reviews [15]."

Finally, it is to enhance health education. Enterprises can raise consumers' health awareness by organising health seminars and producing promotional health tweets. At the same time, companies can also develop health education platforms to help consumers manage their health faster and more conveniently by providing online consulting services. The government should strengthen health education and popularise health knowledge through official media to improve the health literacy of the whole population. In addition, the government should support health education programmes and encourage all sectors of the community to actively participate in health public welfare activities. Consumers should take the initiative to learn about health, improve their self-care skills and actively participate in health education activities organised by the community.

4.3. Risk Management

Firstly, to deal with policy risks. Enterprises should establish a policy risk early warning mechanism to track policy changes regularly and assess the impact of policy changes on the enterprise. At the same time, enterprises should also strengthen communication with government departments to keep abreast of policy developments and prepare for policy changes. When formulating policies, governments should fully consider the impact of their policies on the health market and ensure the transparency and predictability of their policies. The government should also establish a policy feedback mechanism to listen to the views of all parties in the community promptly and dynamically adjust its policies in due course. Consumers should promptly pay attention to policy changes, understand the impact of different policies on healthcare expenditure, and adjust their health plans in real time to policy changes.

The second is to cope with technological risks. Enterprises should improve their technology risk management system, and strengthen the assessment and pre-testing of new technologies to ensure the safety and reliability of their application. At the same time, enterprises should also focus on intellectual property protection to prevent the leakage of core technology information. The government should strengthen the supervision of new technologies and formulate corresponding technical standards to ensure their legal compliance. Consumers should have an in-depth understanding of the scope of application of new technologies, and be cautious in choosing and using new technology products and services, to avoid health risks caused by technical problems.

Finally, it is to deal with legal risks. Enterprises should strengthen legal compliance management to ensure that business activities in the health industry meet legal and regulatory requirements. Enterprises should also strengthen the security management of user health data, protect user privacy, and avoid legal risks caused by violations. The government should further improve relevant laws and regulations to clarify the legal boundaries and responsibilities of the healthcare industry. The government should also strengthen law enforcement to crack down on illegal behaviours in the industry and maintain a good market order. Consumers should be aware of their legal rights and interests and seek timely legal assistance to safeguard their legitimate rights and interests when encountering medical disputes.

DOI: 10.54254/2754-1169/136/2024.18657

5. Conclusion

A PESTLE model analysis of market trends in the health industry reveals that political support, economic inputs, social demand, technological innovation, laws and regulations, and environmental requirements are shaping the development of the health industry today. Government policy support, such as the 'Healthy China 2030' strategy and the reform of the healthcare insurance system, has provided a strong policy guarantee for the development of the health industry. Increased public and private sector investment has fuelled technological innovation and service upgrades in the health industry. Population ageing, rising health awareness among citizens and the pursuit of healthy lifestyles have further stimulated widespread social demand for health services. Technological innovation, especially the application of cutting-edge technologies such as artificial intelligence, telemedicine and gene editing, has upended the traditional health service model and brought about brand-new development opportunities. Strict laws and regulations ensure the quality and safety of medical products but also increase compliance costs for companies. Increasingly stringent environmental protection requirements are also driving the health industry towards green and sustainable development.

Market trends in the health industry are showing strong momentum, with key drivers including supportive government policies, increased economic inputs, growing social demand, technological innovation, improved laws and regulations, and requirements for environmental protection. These factors are intertwined, and together they are driving the health industry in a more efficient, convenient and sustainable direction.

The PESTLE model serves as an effective analytical tool to help fully understand the macro environment facing the health industry. By analysing the six major aspects of politics, economy, society, technology, law and environment, the PESTLE model helps to identify the opportunities and challenges of the health industry more clearly, providing an important reference for enterprises to formulate strategies, governments to formulate policies, and consumers to make smarter decisions.

Looking ahead, the health industry will continue to maintain sustained growth momentum. With the continuous progress of science and technology, new health service models such as telemedicine and precision medicine will be further popularised, greatly improving the accessibility and efficiency of medical services. Meanwhile, in the face of health challenges such as the ageing of the population and the rising prevalence of chronic diseases, the health industry needs to continue to innovate and provide more diversified and personalised health solutions. In addition, as citizens become more aware of environmental protection, the health industry will focus more on green development, promoting green healthcare and sustainable health services. Although the future is full of opportunities, it is also accompanied by major challenges such as policy uncertainty, technological risks and legal compliance, and the health industry needs to continue to dynamically adjust and proactively respond to these challenges to achieve long-term stable development.

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