

# Practice and Theoretical Exploration of Health Management

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**Abstract**—Based on the practical needs, this paper summarizes the development status, research literature and research contents of health management in China and abroad. It points out four major limitations of the current theoretical research and the prospect of the future development trend in order to provide references for the theoretical and practical exploration of health management in China.

**Keywords:** *health management, practical exploration, limitations, development trend*

## I. INTRODUCTION

Currently, there are several key trends in health services: first, the rising cost of medical services has increased the cost pressure on the national medical security service; second, a new supply mode for health services is needed that can somehow address problems like chronic diseases, ageing and so on; third, there is a growing gap between inadequate supply and the demand for continued access to diverse and high-quality health services. It is in this context that health management, as an emerging concept and method of health service, has attracted the attention of countries around the world. In 2013, "Several Opinions of the State Council on Promoting the Development of Health Service Industry" (No. 40 [2013] of the State Council) officially listed health management and promotion as an important part of health service industry. In 2015, as the Healthy China strategy was written into China's 13th Five-Year Plan, the health management service industry is facing greater development opportunities. In this context, reviewing and summarizing the practice and theoretical research of health management development is of great significance for grasping the development law of this industry and accelerating its development.

## II. DEVELOPMENT PRACTICES OF WORLD HEALTH MANAGEMENT

Health management first appeared in the United States, followed by developed countries such as Britain. In the late 1990s, the concept of health management was introduced to China.

### A. The US

Health management first appeared in the United States, initially stemming from the development of general practitioners, the health insurance industry and health checks. Since the 1960s and 1970s, the United States has gradually formed a multi-win health service system with health management and health insurance as the core. That is, by purchasing health insurance and relying on the negotiation ability of insurance companies to medical providers, consumers can obtain low-cost and high-quality medical services and reduce the risk of disease expenditure; insurance companies use a variety of health management means to stimulate and reduce the insured's disease risk to obtain commercial benefits; and the government encourages, supports and participates in commercial insurance, which lowers the medical expenses of the whole society, improves the health of the whole people, and thus realize macro benefits.

### B. The UK

Britain is a typical welfare state, with the National Health Service (NHS) as the main body, covering 99% of the population. Free medical care for all makes health security a pure public product and the planned managed health system is implemented. However, there are also problems of excessive consumption of medical resources, rising medical costs, doctor-patient conflicts and so on. As a result, more people turn to private medical services, giving birth to private medical institutions and commercial health insurance that provide high-end medical and health services for high-income groups, playing an increasingly important role in the field of health care in the UK. Health insurance in the UK is provided by traditional mutual aid associations, insurance companies and friendly community, providing a wide variety of health care plans, such as private medical insurance, major illness insurance, long-term care insurance, cash plan, travel health insurance, etc. The Bupa UK, AXA UK, and Norwich Union are the three largest health insurers in the UK.

### C. Finland

In the 1960s, Finland's primary health care and disease prevention system was weak. The medical system was unable to effectively manage many serious public health

problems, such as high mortality from cardiovascular diseases such as heart disease and shortened life expectancy. Finnish researchers found a strong link between high levels of cholesterol in the diet and high rates of cardiovascular mortality. In 1972, with the intervention of medical experts and policy makers, a community-based resident health management plan was initiated in Northern Karelia Province. On the one hand, an epidemiological research framework was established to screen high-risk cardiovascular population for follow-up, monitoring and adjustment of intervention measures. On the other hand, through the cooperation with the community, various community organizations were launched to carry out media publicity and other activities to change the natural and social environment of the community, guide people to adjust their diet structure and choose a healthy lifestyle, regularly assess the risk factors of cardiovascular diseases, and expand to other diseases and regions, which achieved good results.

#### *D. China*

The thought of health management in China has a long history. "The sages treated disease by preventing illness" in the chapter of "Major Discussion of the Regulation of Spirit According to the Changes of Four Seasons" of "Yellow Emperor's Canon of Medicine · Plain Conversation" over 2000 years ago is the earliest concept of health management in China. However, the innovation in business forms and models of health management as in industry, the development of health management in China is relatively late. Since 2000, influenced by the development of health industry and health management in Western developed countries, especially the United States and Japan, the health management industry mainly in the form of health examination and health insurance has emerged. It can be roughly divided into two stages: first, the practice of health management centered on medical examination and leading health care before 2000; second, the development pattern centered on health examination and health insurance has taken initial shape since 2000. In 2005, the Ministry of Labor and Social Security listed "health manager" as a new occupation, and the Health Management and Health Insurance Committee of the Chinese Medical Doctor Association was established; in 2007, the "National Occupational Standards for Health Managers" was officially published, and the health management branch of the Chinese medical association was established. These marked the initial formation of China's health management industry.

### III. RESEARCH ORIENTATION OF HEALTH MANAGEMENT THEORY

Current research on health management can be divided into three categories as follows.

In the first category, the health status of a special occupational group such as teachers and mine workers is taken as the research object to describe the status quo and put forward health suggestions. There is health management consciousness, but the concept of health management with

the concept of health intervention and prevention is not clearly proposed. For example, Chen Zuyun (2001) [1] summarized the specific practices of health management for radiological workers, including regular physical examination, dose monitoring, establishment of archives and diagnosis of radiological diseases.

In the second category, the effects of health management are empirically studied by means of health intervention and prevention through experimental observation and statistical survey data. For example, Knowler WC, Barrett Connor, Etc.(2002) [2] pointed out through empirical study that the early prevention and behavior of primary care management, can reduce the Type 2 diabetes or delay the onset of complications. Ren Zhe, et al. (2014) [3] concluded after experiment that the health management has good effect on simple and non-simple obesity. Similar studies are conducted by Starfield B et al. (2005) [4], Wang Shukang et al. (2010) [5], Zhao Jingning (2011) [6], Song Kun (2011) [7] and Pu Xin (2012) [8], etc.

The third category is literature on modern health management. Domestic studies in China mainly focus on the introduction of the concept of health management, the summary of the experience of foreign countries, especially the United States, the application of health management in health insurance, health examination and other industries, and the development of China's health management industry. In foreign literatures, the relationship between health management and medical expenditure, access to health services and service quality has been discussed, as well as the research on health insurance organizations based on health management. This paper focuses on these kinds of literature.

### IV. RESEARCH CONTENTS

#### *A. The concept of health management*

With no clear and unified definition of health management concept currently, scholars in China and abroad have come up with different concepts of health management from different perspectives:

The first category is represented by Hunter & Brown (2007) [9]. Starting from the concept of maintaining health, he emphasized the important role of lifestyle change and active prevention in maintaining and promoting health, holding that "Scientific healthy lifestyle should be provided to healthy people, and passive health care should be changed into active health management, so as to protect and promote human health more effectively".

The second category is represented by Fulop N (2001) <sup>1</sup> in the United States and Su Taiyang (1994) <sup>2</sup> in China. They

<sup>1</sup> Fulop N, Allen P, Clarke A, et al. Issues in studying the organisation and delivery of health services//Fulop N, Allen P, Clarke A, et al. Studying the organisation and delivery of health services. London: Routledge, 2001.

<sup>2</sup> Su Taiyang. Health Medicine [M]. Beijing: Science and technology of China press, 1994: 78-112.

equated health management with public health services, "activities conducted around the formulation and implementation of policies and the organization of services aimed at improving health", emphasizing the use of "purposeful, planned and organized management tools" to "maintain, consolidate and promote group and individual health", which does not involve the difference between health management service and medical service and health service.

The third category is mainly represented by Chinese scholars, who regard health management as a technical means to maintain health from the perspective of preventive medicine. "The whole process of monitoring, analyzing and evaluating the health of individuals or groups, providing health advice and guidance, and intervening on health risk factors" proposed by Chen Junshi, Huang Jianshi (2007) [10] is the most widely used definition in China.

The fourth category takes health management as the institutional arrangement under the specific medical and health system, that is, "a series of contractual arrangements and management instruments formed among insurance institutions, medical institutions, patients and other stakeholders to control medical costs and improve the quality of medical services" (Gield, 1999) [11], and "strategies to solve information asymmetry, moral hazard and market failure of health services in the medical service market" (Zhao Hongzheng, 2009) [12].

It can be seen that health management is not a single concept. It includes the concept of health maintenance mode, technology, system and other aspects of connotation.

### *B. The value of health management*

1) *Social value*: Ren Jinsheng, Wang Lijun, Shen Junlong (2008) [13] discussed the social value of health management, and believed that health management is a social security model that is more economic, efficient and valuable than medical security. Chen Wenxian (2001) [14] pointed out in that the new health management theory separates the medical treatment right of patients from the supervision right, and makes efforts to control the growth of medical costs from the neutral perspective of a third party.

2) *Human capital value of enterprises*: Zhao Chunming (2000) [15] regarded health management as a means of internal motivation of enterprises, and proposed that health management is a new strategy for enterprises to improve productivity in the 21st century and an effective way to improve the efficiency of health resources. Health management is a necessary means to improve the competitiveness of modern enterprises. The healthy investment and management of employees is an important aspect to improve the quality of human capital in enterprises. Similar studies are like Chao Jianxi (2007) [16], He Qin, Wang Meng (2008) [17] and Chen Fei (2010) [18].

3) *Market value*: Chen Wenxian et al. (2001) [19] put forward the concept of commercialized regulated medical

market for the first time, holding that "the new health management theory shows a broad prospect of commercialized regulated medical market". Zhang Qiong et al. (2007) [20] further analyzed the characteristics of information and incomplete competition of medical market and pointed out the regulatory nature of the medical market, proposing that "Health management from a third party perspective can effectively make up for the asymmetry of medical information, promote the competition of medical service market, weaken the influence of market failure, so as to play the role of market regulation".

### *C. Business types of health management*

Scholars have discussed the application model of health management industry in many aspects as follows.

1) *Combination of health management and health insurance industry*: Health insurance is the most potential and widely discussed field of health management application. Effective health management to prevent and delay the occurrence of insured diseases is the key for commercial insurance companies to control risks, and is of great significance to the control of moral hazard in health insurance (Su Shengjie, 2004) [21]; health management is one of the successful strategies for health insurance to transfer financial risks, control costs, solve information asymmetry, moral hazard and other problems (Ren Chaoxiang, 2007) [22]; health management is an important means for insurance companies to control the risk of medical expenses and develop commercial health insurance (Gui Jianxia, 2012) [23]. The "self-run mode" and "co-construction mode" of health insurance are conducive to extending the industrial chain of commercial health insurance (Lai Zhijie, 2013) [24].

2) *The application of health management in the health examination industry*: Liu Qiumei, Ma Ping et al. (2007) [25] hold that health management is an organic integration of clinical medicine and preventive medicine... It is conducive to standardizing the service of physical examination and endowing physical examination with richer and more standardized connotation. Li Jinxiao (2011) [26] preliminarily discussed the necessity, content and characteristics of the integration of health management services, and made in-depth reflections on pre-sale service of physical examination products, optimization of physical examination process, and one-stop-service of health management services. Similar studies are conducted by Gong Lijie, Wang Zhihong (2011) [27], Liang Meirong, Li Hongjun (2011) [28].

3) *The development of health management and recuperation health care industry*: With the development of social economy and the evolution of medical model, new medical concepts gradually take shape, and traditional nursing homes are facing new challenges in business model, knowledge structure, talent training and many other aspects.

Dai Xinmin (2006) [29], Ping Zhao et al. (2010) [30], Peng Haiyan et al. (2012) [31] discussed the significance and practice mode for nursing homes of carrying out "health management" to seize the market, and believed that nursing homes have advantaged conditions to carry out "health management" work.

4) *The development models of third party health management group*: Jia Junbo (2008) [32] proposed that the third party business model of health management is the health management service model provided by the third party service agencies (professional health management companies) other than traditional medical institutions such as hospitals; and the business model types are insurance company + designated hospital network, alliance of insurance company + designated hospital network and health management organization in which the medical fund participates.

## V. RESEARCH REVIEW

A group of scholars with medical background represented by Huang Jianshi and Chen Junshi are pioneers in the study of health management in China. Taking the Chinese Preventive Medicine Association and the Chinese Health Association as platforms, they made valuable and commendable explorations in the introduction and tracing of the concept of health management, the introduction of American experience, and the phased summary of the development of the domestic market of health management service. However, compared with the rapid development of industrial development practice, there are still many limitations in the theoretical research on health management in terms of the number of literature studies, as well as the scope and depth of research, as shown in:

### A. *The conceptual system is not yet unified*

At present, the concepts related to health management are mainly defined from the perspective of concept and management technology, revealing the core characteristics of health management. However, it is far from enough to define an industry that has begun to take shape and has new formats and models emerging one after another just from the perspective of concepts and health promotion technologies. On the one hand, it is impossible to explain the characteristics and connotation of the development of health management industrialization, and on the other hand, it is impossible to draw a boundary between health management industry and other industries, which is the industrial boundary problem. However, the frequent mixed use of terms such as health management, health service, physical examination and disease management also needs further analysis.

### B. *There is a gap in the research of the industry as a whole*

Currently, the research of health management is mainly within the field of medicine and management. The research on the industry boundary, characteristics, influencing factors, growth conditions and mechanism of health management

service industry from the perspective of a single industry as a whole is still in a gap. As a strategic emerging industry, it is more important for health management service industry to frame the industrial idea, cultivate the industrial development environment and conditions, and explore the development path. Therefore, it is urgent to establish an industrial growth analysis framework to observe and analyze the growth of health management service industry from the perspective of industrial economics.

### C. *The development models are controversial*

Due to the special economic and social background, especially the huge differences in the medical system, China's health management service industry is significantly different from that of European countries and American in terms of the characteristics of the industrial growth process. Under the market-oriented economy of the United States, the health management service industry takes the health insurance industry as the core business form, mainly provided by the private sector. In western European countries with high welfare for all, such as the UK and Germany, the private health insurance market has also achieved steady growth while the dominant position of government responsibility maintains. It is an urgent task for China's theoretical research and practical exploration to search a development path of health management service industry suitable for China's national conditions and achieve a win-win situation of economic and social benefits.

### D. *There are limitations in research methods*

In addition to the analysis of health management strategies and medical effects of health interventions, a large number of rigorous empirical analyses are adopted. The relevant studies on health management services are all qualitative discussions and summaries, which have great limitations on the scientific and rigorous methods to reveal the law of industrial development.

## VI. CONCLUSION

To sum up, health management is an emerging health service model and strategic emerging industry. On the one hand, it helps to improve the health level of the whole nation and provides sustainable health capital for economic and social development. On the other hand, it helps to resolve the contradiction between supply and demand of public medical and health expenditure and improve the utilization efficiency of health resource allocation. Thirdly, the development of health management service industry is expected to become the breakthrough point of the third industrial revolution based on demand-side industrial innovation, driving the upgrading of China's industrial structure and becoming a strategic growth point of national economic development.

In the future, with the development of information technology in the network era, a variety of new concepts and models such as health APP, health DIY, mobile medical treatment, telemedicine, smart medical treatment and wearable health management device will emerge one after

another based on big data, Internet of things and cloud computing. The technology mode and customer demand of health management service industry are all undergoing great changes, which bring greater opportunities and challenges to the development of health management service industry. As the integration of world economic accelerates, with China (Shanghai) Pilot Free Trade Zone as the leader, China has taken the lead in opening the door to trade and investment in medical and health services. The development of international health tourism will also bring China into the global health service network. Therefore, the research on health management information and application, big data and data mining of health management information, mobile technology and technology of Internet of things combined with health management will become the hot theoretical research fields of health management in the future. The rapid development of the industry also inevitably requires more scholars with academic backgrounds to join the research team, not only in the field of health and hygiene, but also in economics, sociology, management, informatics, etc., so that the discipline system can be established faster and better.

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