Research on Smart Pension Mode based on the Background of Third Tier Cities

-- A Case Study of Bengbu City, Anhui Province

Jialing Sang

Anhui University of Finance and economics, Bengbu, Anhui, 233000, China

Abstract

The problem of population aging in China is becoming more and more serious and the birth rate is declining year by year. It is urgent to improve the elderly care service system, and explore the new concept of "Internet +" elderly care mode to provide a new way to solve the constraints of traditional elderly care. Compared with the developed economy, perfect system and advanced technology of the first and second tier cities, it is difficult to develop smart pension in the third tier cities, and there are many third tier cities in China, which have heavy pension burden. This paper focuses on the current situation of intelligent elderly care in Bengbu, analyzes the existing problems such as information asymmetry, resource waste, and imperfect system, and puts forward constructive opinions and suggestions, aiming to solve the problems of real-time information collection, intelligent information sharing, personalized service, and solve the unexpected problems of the elderly in daily life, transportation, medical treatment, etc, It can provide reference for promoting the development of "Internet +" smart pension model in third tier cities.

Keywords

Smart Pension; "Internet +"; Population Aging; Countermeasures and Suggestions.

1. Background and Significance of Smart Pension

(1) Connotation of smart pension

Generally speaking, smart elderly care is a sensor network system and information platform for the elderly at home, communities and elderly care institutions, and provides real-time, fast, efficient, low-cost, connected, interconnected and intelligent elderly care services on this basis. With the development of society and the progress of science and technology, a new pension model came into being. Various types of pension services emerge in endlessly, such as high-tech products such as one button call and all-round monitoring, which provide great convenience for the elderly in their later life, and to some extent solve the prominent problems of daily life, transportation, medical treatment and so on that the elderly will encounter in their lives alone, It can be said that this is a new way and method to solve the problem of Chinese pension, which fully demonstrates the new forms of smart pension, migrant pension and information pension.

(2) Development stage of smart pension

China's pension model is constantly changing, and smart pension is also developing steadily. Since 2010, it has been the embryonic stage of smart elderly care, and telephone call service has started to appear. The national office for the elderly has proposed the informatization of elderly care service; In 2012, the national office for the elderly first proposed the concept of "intelligent elderly care"; In 2015, the pilot phase, the country released the Internet + action plan, and smart pension was included in the national project; 2017 marks the beginning of the demonstration phase of intelligent elderly care. From the embryonic stage to the development

stage, the regulations, policies, standards and innovation system to adapt to the elderly care service industry have been gradually established, and the smart elderly care service enterprises continue to innovate. Since 2020, the smart elderly care service industry has entered a period of rapid explosion.

(3) The significance of smart pension

1. service products are more humanized and personalized

The traditional way of providing for the elderly pays too much attention to the material satisfaction of the elderly, while ignoring the spiritual comfort needs. Smart elderly care provides humanized and personalized needs. Older people can use simple one click smart products to communicate with their loved ones, and build a family social platform to maintain the emotion between the elderly and family members; With the continuous upgrading of artificial intelligence technology, intelligent robots can be launched as "invisible companions" to accompany the empty nest elderly, and can monitor the elderly's daily life and respond to emergencies in time.

2. system health management combining online and offline

The demand for old-age care is not only to provide the elderly with food, clothing, housing and transportation, but also to pay attention to the physical condition of the elderly. Therefore, health management and medical care demand play an important role in the elderly care service system. Intelligent equipment monitors the emergencies and physical function of the elderly in real time, and the medical management system provides balanced diet and exercise programs and physical risk assessment.

3. transformation and development of pension service system

With the advent of an aging society, providing for the aged has become an important issue related to the national economy and the people's livelihood, and the traditional mode of providing for the aged has been challenged unprecedentedly. Under the background of accelerated aging development, society's understanding and demand for smart elderly care are also growing rapidly. In the future, smart elderly care services will enter the community to meet the needs of the elderly, which is the inevitable trend of social development. Therefore, China's elderly care service industry will usher in new opportunities and historic changes. New science and technology will continue to lead the industrial transformation, better serve the elderly, and promote the high-quality development of China's elderly cause.

2. Status Quo of Smart Pension Mode in Bengbu

(1) Population aging

According to international standards, the population aged 60 and older accounts for 10% of the total population, which means that the region has entered an aging society. According to the sample survey data of population change in Bengbu, approved by the National Bureau of statistics, by the end of 2021, there were 628400 elderly people aged 60 and older in Bengbu, accounting for 16.24%, an increase of 0.1 percentage point compared with the end of 2020, an increase of 7600 people. Bengbu's aging population has further deepened.

(2) Development of smart pension

Bengbu is committed to pursuing innovative development and seeking a more appropriate smart pension model. Smart pension starts from the application of "Internet +" technology, the construction of network platform and the promotion of new pension products and services. Carry out smart elderly care service pilot projects in bengshan District, Longzihu district and Yuhui district respectively. In order to facilitate the management of pension information, the government has built a pension service information platform to integrate the basic information

of 133 pension institutions through investment promotion and other means. Actively recommend smart elderly care service products to the elderly at home and in the community.

In recent years, the city has selected five institutional community pension units in the second batch of smart pension demonstration projects in Anhui Province. Due to the smart elderly care service platform provided by these institutions' community elderly care units, the operating costs of customers are reduced, and the information between the elderly and the elderly care institutions is more symmetrical. The development of Bengbu's smart elderly care model has enabled the elderly to obtain diversified services to a certain extent, and provided technical support for collecting a large number of elderly data information for classified storage and precise management. With the practical experience, it is found that due to the factors such as the underground economic level of the region, the low level of cultural cognition of the elderly, and the cold market, there are still problems such as the uneven regional distribution of smart pension resources, the simple underground of existing smart products, the shortage of high-quality professionals, irregular data management, and the lack of collaboration among various entities of the smart pension platform

(3) SWOT analysis of smart pension model

1. advantages

With the help of the information sharing function of the Internet, smart elderly care promotes the allocation of elderly care service resources, solves the barriers to information exchange, matches the elderly care service resources with the needs of the elderly, and improves the lack of convenience, pertinence and timeliness of traditional forms of elderly care. Under the smart elderly care mode, develop service projects suitable for home-based elderly care, improve the quality of life of the elderly in their later years, and meet their spiritual needs.

2. disadvantages

On the one hand, the investment cost in the R & D stage of the elderly care service industry is high, and the use training of equipment and software, door-to-door debugging, maintenance services, and the training of professional talents in the later stage all increase the operating cost; On the other hand, smart elderly care service products lack technical standards, regional development is uneven, and products do not have unified technical indicators, which makes products incompatible with each other, data is difficult to unify, R & D and upgrading are hindered, the good and bad are intermingled in the market, and resources are wasted, which is not conducive to long-term stable development.

3. opportunities

China's aging population base is large, and the pension system needs to be improved. In the next few years, it will face the impact of accelerated aging, and the transformation and upgrading of the elderly care service industry is imminent. The establishment of smart pension mode can best deal with the aging problem and alleviate the congestion of the pension system. The concept of "raising children to prevent old age" relying on family pension is deeply rooted, the effect of traditional institutional pension and community pension is not obvious, the function of community pension is not perfect, and the allocation of institutional pension resources is uneven. Smart pension can provide functional supplement and avoid the tilt of regional pension resources. In the face of the obvious low efficiency of government pension performance, smart pension enables third tier cities or remote areas to enjoy balanced pension resources.

4. threats

First, at this stage, the elderly's cultural level is low and their social experience is traditional. It's difficult to accept new smart elderly care service products, which is not conducive to the promotion of elderly care service products. Moreover, there are security risks for the elderly due to the uneven quality of smart elderly care products on the market. The second is the lack

of relevant laws and regulations, which have been issued since 2017 and are still in the exploratory stage. Third, China's smart pension industry started late and developed relatively slowly. Compared with foreign smart pension models, it has not established a mature market structure and business model operation mode.

3. Challenges Faced by Smart Elderly Care

(1) Uneven resources of smart elderly care services

Due to the uneven level of economic development in various regions, the development of the smart elderly care service industry is also different. The smart elderly care service model has prospered relying on advanced network technology and huge capital investment. However, the current smart elderly care industry relies more on government financial support and community home help. It can be seen that in some relatively backward third tier cities and poor and remote areas, the smart elderly care industry is even more difficult. The smart elderly care industry is closely related to the economic level of a region. The more government financial funds are allocated in economically developed regions, the better the local infrastructure is. To some extent, the problem of population aging in relatively backward regions is more serious, and the infrastructure is not perfect and the effect of government support is not obvious.

(2) Information asymmetry among subjects

The traditional ways of providing for the aged include home-based care or institutional care. Home-based care can make the elderly feel the sense of belonging, but it is inevitable that the empty nest elderly are lonely and inconvenient in daily life; Institutional pension takes into account the basic necessities of the elderly, but it also ignores the spiritual pursuit of the elderly and the economic burden of the family. Different from the traditional form of pension, the subject of smart pension involves many aspects. The elderly, communities, enterprises and governments are closely related. The information sharing among these subjects needs to be timely, effective and accurate. Intelligent devices belong to the knowledge blind spot of most older people, and communities and hospitals need to receive a large number of older people's data and information. In addition, the local government is difficult to accurately grasp the problems of smart elderly care enterprises and community older people that need assistance in various counties and districts, which is easy to cause information asymmetry among participants.

(3) Unbalanced supply and demand, low degree of specialization

Both traditional and intelligent forms of pension are based on meeting the material needs of the elderly. They do not pay enough attention to the spiritual needs and spiritual comfort of the elderly, or it is difficult to take care of them comprehensively. In fact, with the development of the times, older people not only pursue basic material needs, but also pursue higher-level needs, such as cultural construction, interest and entertainment. The smart elderly care service system at this stage is the convergence of resources and information sharing among medical care, service recipients and suppliers, so as to ensure the health of the elderly. The elderly's pension needs can be divided in a more detailed level, and personalized services can be provided by using tools such as the Internet to make smart pension smart.

(4) Relevant laws and regulations are not yet perfect

China's smart elderly care industry started relatively late and has not established a mature market structure and business model operation mode. Relevant laws and regulations have been issued since 2017 and are still in the exploratory stage. The solution to the problems in the development of smart elderly care industry only stays at a macro level, and some specific and detailed issues have not yet been issued with targeted policies and regulations. The lack of these relevant policies has affected the development of the smart elderly care industry, making it difficult for the existing related industries to be supported. Those who want to be included in

the smart elderly care industry are still waiting and waiting, which has caused a waste of social resources. The government should play its role and encourage more enterprises to participate in the smart elderly care service industry.

4. Countermeasures of Smart Pension Mode

(1) Pay attention to regional coordinated development

As far as Bengbu is concerned, we should pay attention to the coordinated economic development of counties and districts and balance the resource allocation of various industries. The construction of smart pension is based on the policy support and economic support of the government. Relevant departments should allocate resources to various regions according to the proportion of the local elderly population and in combination with local consumption level, medical conditions and other reasonable and careful ways, so that the elderly pension in underdeveloped third tier cities and remote areas can be guaranteed. At the same time, infrastructure construction should be increased in the region, and the development of smart pension service industry should be paid attention to, We will strive to achieve the equalization of basic public services.

(2) Enhance the core competitiveness of smart pension products

The micro influence of the market will eliminate many poor quality and flashy products. In the highly competitive market, the smart elderly care industry should not stop at low-end elderly care products such as heart rate bracelets and one click calls, but should continue to promote new products and develop technology-based elderly care products that are popular with the public. A major feature of smart pension is to attach importance to user training in the early stage, experience and demand survey in the later stage, and collection of use data, so as to improve service level and enhance products. At the same time, we should strengthen the information feedback between the subject and the object, establish the health information database of the elderly, reach a sharing mechanism, regularly collect information in many aspects, and eliminate the health risks of the elderly.

(3) Pay attention to the spiritual needs of the elderly

On the basis of ensuring physical health, smart elderly care should pay more attention to the elderly's multi-level needs, spiritual comfort, self-respect and value realization. According to the specific needs, the local community can build a family social platform to maintain the feelings between the elderly and family members; Introduce intelligent robots as "invisible companions" to accompany empty nesters in daily life; Regularly conduct mental health counseling for the elderly through the Internet to enhance their sense of belonging.

(4) Strengthen government functions and improve relevant laws and regulations

China's smart elderly care industry started late, and the business model and profit mode have not yet been clear. We can learn from foreign successful cases and slowly establish a mature market structure and business model operation mode. The relevant policies, laws and regulations on smart elderly care cannot only stay at a macro level. In the face of specific and detailed problems, targeted laws and policies are needed to solve them. In addition, we should strengthen the supervision of smart pension products, stipulate unified technical indicators and incorporate them into the relevant standards of market management, and standardize the market order. The government can issue preferential policies to encourage more enterprises to carry out the smart elderly care service industry, assist in the construction of the elderly care resource sharing platform, actively improve China's elderly care service system, and alleviate the social pressure related to elderly care brought about by the aging population.

(5) Building a safe network system to ensure the information security of the elderly

The smart elderly care service system is a database of health information for the elderly, and its security is self-evident. In this era of information expansion, it is inevitable that criminals will use it to seek their own interests. It is necessary to strengthen the supervision and maintenance of the smart elderly care service system, conduct regular security testing, and review data to ensure the information security of the elderly. On the other hand, in the era of the Internet, fraud such as false pension services, sales of fake smart pension products, "health care products" scams, false assistance and false agency endowment insurance are emerging in endlessly. Older people have a low level of awareness of smart products. While enjoying the benefits brought by smart elderly care, there are many security risks and economic hidden dangers. Relevant departments should vigorously crack down on criminals who use smart elderly care products to defraud older people of money, especially focus on the investigation in rural areas, increase the punishment for such illegal acts, and strictly control the filing and review of smart elderly care products and services.

5. Concluding Remarks

China's aging population is getting worse and worse. The traditional pension system has been transformed and upgraded into a new pension model. With the development of the times and the progress of science and technology, the smart pension model will usher in new development opportunities. Combining Internet technology to further improve the smart elderly care model is conducive to creating a comfortable elderly care environment, providing high-quality elderly care services, meeting the elderly's personalized elderly care service needs, and combining online and offline health management, breaking the separation of general medical care and elderly care, and ensuring the balanced distribution of elderly care resources and medical resources. Due to the problems of uncoordinated regional economic development, limited technical level, different degree of regional aging, immature business model and so on, China's smart elderly care industry is bound to have a long way to go. There is no doubt that the "Internet +" elderly care model will become the mainstream trend of the elderly care industry in the future, and it is also a new way to solve the problem of population aging in China.

Acknowledgments

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