

Establishment of Medical Transport Sharing Service System for Elderly Community based on GIS Technology

-- Taking Nanhu Elderly Community in Bengbu City as an Example

Jian Yang¹, Yuxin Yuan², Keer Wang², Changsheng Yin¹, Wei Zhu¹

¹School of Management Science and Engineering, Anhui University of Finance and Economics, Bengbu, China

²School of Finance and Public Administration, Anhui University of Finance and Economics, Bengbu, China

Abstract

Community pension can mobilize the enthusiasm of the elderly group to participate in the community, in the elderly group gradually retire, have a lot of free time, time arrangement and life pace has changed dramatically, community pension will provide the elderly group with activities and outdoor space within their ability, increase the interaction and communication between the elderly group, strengthen the body, realize self-space, and improve the level of community medical services. Technology empowers the community pension system to accurately match the needs of the elderly group, and at the same time explores the technology empowerment through data mining, shifting from passive service to autonomous service, providing personalized and precise services for the elderly group, and better providing services such as medical care and psychological counseling, carrying out interactive services, and promoting the "technical pension" of the elderly group, which will be elaborated in this article.

Keywords

Senior Community; Medical Transportation Sharing; GIS Technology.

1. Research Background

1.1. Current Situation of Population Aging

As early as 2000, China has entered an aging society. In the past decade, due to economic development, constant updating of ideas, continuous improvement of medical level and other factors, the aging of the population has been rising, and gradually reached its peak. There are severe pension pressure and huge support burden behind the reality of "getting old before getting rich", "getting old before getting ready" and other realities. According to the released 2021 China Statistical Yearbook, since 2015-2020, the proportion of the elderly aged 65 and above in the total population has been rising, from 10.5% in 2015 to 13.5% in 2020, and the elderly dependency ratio has also increased from 14.3% in 2015 to 19.7% in 2020. The pressure of financial support and child support has been increasing. According to the summary of the report during the "Fourteenth Five Year Plan" period, China is about to move from mild aging to moderate aging, and the degree of population aging is deepening, so corresponding measures are needed to alleviate the pressure of providing for the elderly.

According to the current level of economic development in China and the economic stoppage caused by the epidemic, the current level of elderly care demand has been affected, and the trend of population aging has been strengthened. However, the contradiction between supply

and demand is growing. For the growing elderly population, economic pressure and social problems are constantly emerging and intensifying, such as health care, psychological counseling. The corresponding social facilities and public services such as rehabilitation and health care can not meet the needs of the growing number of elderly people, and the development level is lower than the growth rate of the elderly population. In addition, due to the low fertility rate of the young groups due to the differences in fertility concepts and lifestyle pursuits, the government needs to increase the proportion of financial expenditure under the background of population aging, and the corresponding proportion of child support will continue to increase. It will exert pressure on the sustainable economic development in the future. The growing number of the elderly population is faster than that of the young labor force, which is not conducive to the employment rate and industrial construction. At the same time, with the acceleration of urbanization and the increase of the population base year by year, the problem of urban elderly care is also becoming increasingly prominent. How to "provide for the elderly" and how to allocate elderly care resources are the urgent problems to be solved in the current situation of population aging.

The increasing aging of the population will lead to the expansion of the pressure on the young family groups. In addition, the shrinking of the family unit and the weakening of the traditional concept and sense of responsibility of providing for the elderly will lead to the intensification of the difficulty of "providing for the elderly at home". In addition, the population base will increase under the imperfect situation of institutional pension, which will ease the problem of population aging, and find corresponding solutions for the pain points of "aging before preparation", "aging before health", etc. Stable social development and economic prosperity.

1.2. Status Quo of Elderly Care

Traditional pension can be divided into home pension, community pension and institutional pension. According to the data, more than half of the elderly in China want to provide for the aged at home. Based on the home distance, they can be classified as near living, co living and neighbor living; Community based elderly care refers to providing relevant services for the elderly in the community based on the community, providing familiar community environment and elderly care methods for the elderly, and meeting the elderly care needs to the greatest extent. It can be divided into door-to-door type and elderly care type; The former includes door-to-door services, such as household service, physical care, medical consultation, etc. The latter is similar to the nursing home. The elderly participate in various activities conducive to physical and mental health under the leadership of community personnel during the day, and make independent arrangements at night. Health care, sports, etc. are determined according to individual needs. Institutional elderly care can take different forms, such as nursing homes, nursing homes, apartments for the elderly, nursing homes, and so on. In the form of institutions, elderly groups are concentrated and service beds are provided. However, due to the large population base in China and the increasing proportion of aging population, although the government has created many welfare institutions, nursing homes, and nursing homes, they are still insufficient, accounting for only about 30% of the elderly in the country.

At present, the development type pension is constantly emerging, which can be divided into mutual aid pension, tourism pension and housing pension. Mutual aid for the elderly, with the village or neighborhood committee as the unit, rent vacant houses in the area, improve and use the corresponding facilities, help the elderly to live free of charge, the government funds, various social groups raise funds, improve and improve the living environment and living conditions of the elderly, enrich activities, so that the elderly can live, have fun, have trust, and provide employment for the idle labor force in the village and neighborhood committee, help economic development. However, medical expenses, daily living and eating, sports facilities, etc. need to be borne by themselves, which is not detailed enough. Tourism pension is a new way

of providing for the elderly with free time and stable retirement wages. It can be close to the countryside, feel the countryside, breathe fresh air, and reflect the new concept of pension and consumption mode. Housing based pension means that the elderly rent their spare rooms to young groups or mortgage maternity rooms in exchange for a certain amount of stable pensions. However, this approach has made relatively slow progress in China, because most elderly groups are constrained by traditional ideas such as "returning to their roots after falling leaves" and "no house, no home", which is not conducive to the promotion of this approach.

In general, the elderly care industry market is large in scale and fast in growth. It is generally in the early stage of development, with large growth space. According to Ai Media consulting data, the market size of China's elderly care industry will reach 8.8 trillion yuan in 2021, an increase of 22.3% over 2020. It is estimated that the market size will be 10.3 trillion yuan in 2022, an increase of 16.7% over 2021. The market has a good prospect.

However, the shortage of elderly care services such as nursing population gap and insufficient elderly care beds, the mismatch between supply and demand structure, and the unbalanced development of elderly care institutions also bring about severe and opportunities for elderly care.

1.3. Status Quo of Community Elderly Care

Since the "14th Five Year Plan", China has entered the stage of moderate aging

The dilemma of "one bed is hard to find", and according to the data, more than half of them are willing to provide for the elderly in the community. At present, the community elderly care model has become an indispensable part of elderly care services. The improvement of community environment and facilities needs to be constantly improved to gradually meet the growing elderly care needs of the elderly, and to meet the spiritual and cultural needs of the elderly through various forms of activities.

Community based elderly care can mobilize the enthusiasm of the elderly group to participate in the community. As the elderly group gradually retires, they have a lot of free time. The schedule and pace of life have changed dramatically. Community based elderly care will provide activities and outdoor space that the elderly group can physically reach, increase interaction and communication between the elderly group, strengthen their health, achieve self space, and improve the level of community medical services. According to some surveys, poor community conditions will be limited by the quality of elderly care. The elderly can only do outdoor activities such as chatting and walking, and they even need to spend a lot of time and travel to participate in square dancing, limiting the breadth and depth of outdoor activities, which is not conducive to the improvement of the level of elderly care in the community.

2. Research Purpose and Significance

2.1. Research Purpose

As China has entered a moderately aging society, the speed and degree of aging are deepening, and the demand for elderly care is also growing. How to ensure "who will support", "how to support" and "how to support" is very serious. The technology enabled community elderly care model proposed in this paper was born according to the needs of elderly care services. It integrates the deep integration of artificial intelligence and the Internet of Things to achieve accurate matching between communities, individuals and elderly care resources. It meets the multi-level and multi-directional elderly care services and personalized care, adapts to the trend of aging population and the increasing elderly care needs of elderly groups, achieves high-quality development of elderly care services, and further explores the development of the elderly care industry.

2.2. Research Significance

The technology enabled community elderly care model has provided development ideas for the difficulties faced by the aging population

With the help of modern technologies such as the Internet and the Internet of Things, we will build an intelligent platform to collect the needs and information of the elderly, strive to meet the needs of the elderly in all aspects and at multiple levels, and provide efficient and convenient wolf raising services for the elderly across regions and time, which is conducive to coping with the decline in the quality of elderly care caused by the increasingly severe population aging, and giving play to the self value of the elderly, Access to new ways of providing for the elderly and lifestyle, keep pace with the times, integrate with society, and connect with technology.

The technology enabled community elderly care model emphasizes the community as the core. With the help of modern science and technology such as intelligent platforms and intelligent devices, the elderly can also enjoy medical services, health services, emergency calls and other functions at home. Online and offline elderly care services meet the needs of the elderly. At the same time, it also cooperates with surrounding catering, supermarkets, medical institutions, etc., and takes the community as a unit to recruit high-quality resources. The government, the market, and social groups are financing to create a safe and comfortable environment for the elderly.

Through the combination of technology and community services, the technology enabled community elderly care model is conducive to meeting the traditional single elderly care needs of the elderly group. It can also help the elderly group to obtain spiritual and cultural satisfaction through multi-level and multi-directional personalized product services. At the same time, it can accurately match the health detection information of the elderly group through the use of intelligent equipment, and simultaneously synchronize with family members and medical institutions to help grasp dynamic information, It is helpful for medical staff to understand basic information, promote the continuous improvement and intelligence of the community elderly care system, and ease the plight of aging population.

3. Problem Thinking and Countermeasures

3.1. Question

3.1.1. Lack of Professional Talents

At present, the number of elderly care service employees is seriously insufficient. Many elderly care service practitioners actually do not have the professional skills and professionalism to engage in this industry. As far as Anhui Province is concerned, there are only 24000 people engaged in elderly care service related work in the province at present, only 5200 of them have obtained the professional qualification of nurses, and only 3800 have obtained other professional and technical qualifications. Compared with the international demand for 5:1 nurses, the gap exceeds 400000, which is really shocking. From the actual data, many of the current nursing staff in this industry are farmers working in cities or unemployed and re employed. Most of them have not received pre job training, do not have professional qualifications, and their professional level is insufficient. Why does this happen? The main reason is that the industry is not attractive. Due to long working hours, high intensity and other reasons, such work is difficult to attract professionals. In view of this problem, we should attach importance to the training of elderly care skilled personnel and the welfare work of related personnel. The training of elderly care staff's service ability is an important content to promote the all-round development of elderly care service industry.

3.1.2. Insufficient Hardware Facilities

Many communities have inadequate facilities for various reasons. Many communities have only simple medical rooms, no geriatric expert consultation, and no relevant departments. They are unable to provide medical emergency and professional nursing care services. The limited number and backward equipment of medical conditions can not meet the growing needs of the contemporary elderly. In this regard, I believe that increasing infrastructure construction is of considerable positive significance for improving people's happiness.

At the same time, the construction of spiritual and cultural facilities in many communities is also quite scarce. With the development of science and technology and the deepening of globalization, the spiritual needs of the Chinese people are deepening, and the needs of the elderly are no longer limited to some simple entertainment activities. More and more elderly people are eager for knowledge, but quite a few communities are not equipped with book reading rooms. The lack of the source makes the elderly have to walk a long way to the library, which is very inconvenient for the elderly.

3.1.3. Lack of Funding Sources

At present, the funding sources of community pension are divided into financial allocation, self raised funds and service income. The financial allocation comes from the financial revenue of each region. The wealth of each region is uneven, and the development of each region is different. Therefore, the level of elderly care services in each region is different. Self raised funds mainly come from social fund-raising, donations, etc. Many residents have a low sense of donation, and self raised funds are relatively weak in supporting the development of the elderly cause. Many elderly people have a negative attitude towards service income. Due to the lack of funds, some elderly people live in poverty, which has further contributed to the failure to sell paid services and the imbalance between supply and demand.

Community elderly care needs financial support in facilities construction, service personnel employment and other aspects, while China's financial allocation is obviously insufficient to meet the development of elderly care services. At the same time, compared with some mature volunteer organizations abroad, domestic volunteer organizations have developed very slowly and their strength is too weak. The government departments have not formulated some perfect preferential policies to encourage volunteers to participate in elderly care services. Relatively speaking, China's social resources are insufficient.

3.2. Countermeasures

3.2.1. Strengthen the Quality Construction of the Elderly Care Team

Government departments should promote the employment construction of elderly care services, combine employment issues with elderly care construction, pay attention to the training of elderly care skilled personnel and the welfare work of related personnel, and colleges and universities should pay attention to the elderly care service specialty, and be more meticulous and professional in terms of personnel training.

3.2.2. Increase Infrastructure Construction

The community needs to plan from public culture, public sports, public education and other aspects, constantly improve public entertainment facilities, increase hardware equipment, improve basic public services and profitable services for the convenience of the people, constantly improve the comfort and happiness of community residents, so that the elderly in the community can live better. The government can relatively raise funds from social organizations to meet the needs of social public service construction, and the civil society should also actively respond to the government's work. After all, the improvement of social welfare requires everyone to work together. Relevant government departments should consider the construction of community elderly care in urban planning, and some older

communities should be transformed according to their own conditions. The construction of community gardens, smart elderly care systems, and medical and elderly care integrated services are all products stimulated by the needs of contemporary society for elderly care. For new communities, government departments should take the community elderly's wishes as a guide to do a good job of elderly care construction land in advance. The community should expand the service content while continuously meeting the needs. According to the needs of the elderly, the community should use the existing facilities and Human and material resources, providing considerate services for the elderly in the community, or actively organizing the elderly to carry out various collective activities. For example, community schools for the elderly have hired professional teachers to teach them calligraphy, computer, digital painting and other learning skills, enrich the content of learning, and improve the quality of life of elderly friends and their appreciation of art; Carry out interest groups such as calligraphy, cross stitch, beading, etc., encourage the elderly to participate, and establish their sense of belonging and identity; Let the old people get spiritual comfort.

3.2.3. Raising Funds through Multiple Channels

At present, community pension seems to be the main trend of future pension in China. Government departments should increase capital investment, and special funds should also be improved to promote the development of community pension. At the same time, the government should also use financial subsidies, preferential policies and other methods to mobilize the enthusiasm of social organizations, give play to the collective power to raise funds, so that the operation of the community pension fund chain will no longer have worries. Relevant departments should actively publicize and encourage the organization of internal resources in the community to form a non-governmental volunteer team. The development of the elderly care needs the joint efforts of each of us. The government can cultivate a number of leading elderly care enterprises, encourage the production of elderly care products while stimulating the demand of the elderly population on the basis of adhering to the two-way progress of supply and demand, and achieve the balance between supply and demand. In contemporary society, due to differences in age, income, physical condition, etc., the needs of the elderly are actually diversified, and their consumption desire should be stimulated to broaden the source of funds.

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