

A Study on Optimising Family Doctors' Health Management Services for Chronic Diseases in the Elderly within the Community-Based Home Care Model

-- Taking the Pujin Community Health Service Centre in Shanghai as a Case Study

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Abstract: Against the backdrop of community-based home care for the elderly, family doctors are key service providers in the health management of chronic diseases among the elderly. Taking the Pujin Community Health Service Centre in Shanghai as a case study, this paper adopts a combination of literature review, case analysis and interviews to examine the current status and challenges of family doctors' involvement in the management of chronic diseases among the elderly. The study found that whilst family doctors are already capable of carrying out basic health management, they face issues such as high work pressure, a lack of precision in chronic disease management, low levels of active participation among elderly patients, and limited IT support capabilities. Based on these findings, the study proposes optimisation pathways including improving the development of family doctor teams, advancing the precision management of chronic diseases, strengthening health education for the elderly, and promoting IT integration and community collaboration. This research provides practical guidance for the management of chronic diseases among the elderly in primary care communities.

Keywords: Community-based Home Care; Family Doctors; Chronic Disease Management in the Elderly; Pujin Community.

1. Introduction

1.1. Research Background

According to the 2024 National Bulletin on the Development of Elderly Care Services issued by the Ministry of Civil Affairs of the People's Republic of China and the National Working Committee on Aging, the elderly population currently accounts for 22.0% of China's total population, and this demographic continues to grow. With advancing age, immunity declines, and the prevalence of chronic conditions such as hypertension and diabetes continues to rise. Against this backdrop, China is continuously advancing the development of primary healthcare service systems, actively promoting the integration of hospitals and communities to implement health management for elderly patients, thereby enhancing the social well-being of the elderly. [1]

However, as hospitals primarily focus on acute care, they find it difficult to provide long-term, continuous and detailed health management for elderly patients with chronic conditions. Consequently, community health service centres play a vital role in the management of chronic diseases among the elderly. At the same time, the family doctor contract service has gradually become a key method for managing chronic diseases at the primary care level. According to the "Guiding Opinions on Promoting the Family Doctor Contract Service" jointly issued in 2016 by seven departments including the State Council's Medical Reform Office, family doctors are clearly defined as the first line of defence in primary care for chronic disease management.

Through signing up for family doctor services, families can establish health records to assess health status and develop personalised health plans. However, due to the large

population of elderly patients and a shortage of family doctors, these practitioners face significant pressures in their daily work. Some communities are also confronted with issues such as inadequate follow-up care for the elderly and a lack of diversity in service delivery. Furthermore, some elderly people lack sufficient understanding of the family doctor contract model and are reluctant to sign up; even after signing up, they often show low compliance with the health management guidance provided by family doctors, thereby increasing the difficulties in managing chronic diseases among the elderly at the community level.

1.2. Significance of the Study

Taking the Pujin Community Health Service Centre in Shanghai as a case study, this paper analyses the actual circumstances of family doctors' involvement in the management of chronic conditions among the elderly at the grassroots level, thereby reflecting, to a certain extent, the existing issues in community health management. By examining the current status and challenges of family doctor services, this research contributes to a better understanding of the difficulties currently faced by community health services, thereby enabling the formulation of appropriate recommendations for optimisation and further advancing the development of grassroots health services.

1.3. Research Methods

1.3.1. Literature Review

This study reviews research materials in the field of health management from China National Knowledge Infrastructure (CNKI) and relevant policy documents. It conducts an integrated analysis of research findings on family doctor contract services, chronic disease management for the elderly, and community-based home care models, thereby providing

a theoretical foundation for this paper.

1.3.2. Case Study Method

Taking the Pujin Community Health Service Centre in Shanghai as a case study, this paper analyses the practical issues encountered by family doctors in the course of their work, thereby gaining an understanding of the current status and challenges facing primary community health services.

1.3.3. Interview Method

Through brief interviews with residents in the community who have signed up for family doctor services, combined with descriptions of the family doctors' daily work provided by neighbourhood committee staff, this study gained an initial understanding of the actual service content provided by family doctors in the management of chronic diseases among the elderly. The findings revealed that community family doctors play a relatively active role in chronic disease follow-ups and health guidance, providing some support for the implementation of chronic disease management for the elderly in the community.

However, due to time and resource constraints, these interviews remained at a preliminary stage and did not allow for more in-depth research; further studies incorporating additional case studies are required to refine the relevant research content.

2. Overview of Relevant Concepts and Service Content

2.1. Community-based Home Care

Community-based home care refers to a model of elderly care in which older adults live within the familiar communities where they have resided for many years, relying on the service resources provided by the community. As the notion of 'raising children to provide for one's old age' is deeply ingrained among the elderly in China, older adults tend to favour this family-based care model. By living with their children, they receive their children's care and attention, thereby alleviating the sense of emptiness associated with ageing and the longing for familial affection. The home-based care as the foundation, community-based support as the reliance, and institutional care as the supplement, not only aligns with China's national conditions but also provides significant support for the advancement of elderly care initiatives. [2]

2.2. Family Doctor Contract Services

The family doctor contract service is a vital means of better safeguarding public health in the current context. Upon signing a contract, individuals can access agreed-upon basic medical care, public health services and health management. [3] Through the family doctor contract system, health records are established for elderly people with chronic conditions, followed by health assessments, the formulation of personalised health management plans, and multiple follow-up visits throughout the year to provide health guidance.

2.3. Management of Chronic Diseases in Older Adults

Chronic diseases refer to a general term for a group of conditions characterised by insidious onset, a long duration, and a protracted course without cure; they lack clear evidence of infectious biological causes and have complex or unknown aetiologies. [4] Due to the decline in physical function and

difficulties with daily activities among the elderly, coupled with a prevalence of comorbidity as high as 74.6% within China's elderly population, community-based management of chronic diseases among the elderly is of paramount importance. [5]

3. Current Status of Chronic Disease Management by Family Doctors at Pujin Community Health Service Centre

3.1. Overview of Pujin Community Health Service Centre

This case study is set in Pujin Subdistrict, Minhang District, Shanghai, where the elderly account for approximately 21% of the total resident population. The community's primary service recipients are local residents within the area, with a contract signing rate of 72.77%. The family doctor in charge is Chen Xiaoyan, an associate chief physician in general practice [6] The community health services provided here primarily include family doctor contract signing, chronic disease management and basic public health services.

3.2. Implementation of Family Doctor Contract Services

Community staff first conducted health and safety awareness campaigns within the community to raise awareness of health management among the elderly [7], thereby encouraging elderly patients with chronic conditions such as hypertension and diabetes to proactively sign up with a family doctor. They also actively encouraged mutual communication and recommendations among the elderly population, facilitating group sign-ups. Through a series of initiatives carried out by community staff, coupled with the conscientious and responsible attitude of the relevant family doctor team, the signing-up rate within the jurisdiction has been significantly improved, having a positive impact on the development of primary healthcare services in Pujin Community.

3.3. Key Aspects of Chronic Disease Management for the Elderly

Once elderly patients have signed up, the family doctor will first establish a health record for them, documenting their medical history and medication use. After gaining a thorough understanding of their condition, the doctor will provide advice on diet, exercise and medication. Subsequently, for elderly residents who are mobile, quarterly telephone calls or text messages are sent to remind them of weather changes and medication precautions; for those with limited mobility, family doctors assist with dispensing and delivering medications to their homes. At the same time, family doctors visit the neighbourhood residents' committees within their jurisdiction on a weekly basis to conduct basic consultations and measure blood pressure.

4. Analysis of Existing Issues

4.1. Significant Workload on Family Doctors

In practice, primary care GPs generally face significant work pressure. As a single GP is often responsible for the health management of residents across multiple neighbourhoods, and given the large number of elderly

patients under their care, it is difficult to provide detailed health management.

Furthermore, due to the large number of patients, follow-up visits are largely limited to simple health enquiries, and the frequency of these visits is difficult to increase. Consequently, GPs are unable to continuously monitor the health status of elderly patients or promptly identify changes in their condition.

4.2. Lack of Precision in Chronic Disease Management

Elderly patients differ in their daily habits, physical conditions and health needs. Coupled with the issues of low follow-up frequency and limited scope of follow-ups, the health guidance provided to patients is extremely limited, failing to adequately meet their health needs.

4.3. Insufficient Active Participation by Elderly Patients

In the process of community chronic disease management, some elderly patients lack awareness of the importance of health management. On the one hand, some elderly people do not attach sufficient importance to their own health, resulting in a lack of regularity in areas such as medication adherence and follow-up appointments. On the other hand, some elderly patients are concerned about placing an additional burden on their families, do not wish to cause trouble for their children, or find the long-term health management process cumbersome and off-putting; consequently, they lack enthusiasm for participating in the family doctor contract scheme. Even after signing up, some patients display resistance during the subsequent ongoing management process, which to some extent increases the difficulties in developing primary healthcare services.

4.4. Limited IT Support Capabilities

Currently, operational systems such as HIS and EHR are not fully integrated with the service management system for registered patients, making it impossible to effectively verify whether residents have registered or renewed their contracts. In practice, some elderly people have limited proficiency in using smart electronic devices and struggle to adapt to online health management methods. Furthermore, community health service centres face certain shortcomings in information sharing and access, lacking effective channels for obtaining information. [8]

5. Pathways for Improvement

5.1. Strengthening the Development of Family Doctor Teams

Currently, family doctors generally face a shortage of human resources in the management of chronic diseases among the elderly. There are only a few thousand family doctors who have undergone formal training, whilst the number of people with geriatric health needs far exceeds the supply of healthcare personnel as the population continues to age. [9-10] Therefore, efforts should be made to further strengthen the development of family doctor teams and enhance community health service capabilities. At the same time, professional training for family doctors and relevant healthcare staff should be strengthened, and internal work division optimised to improve the quality and efficiency of their work.

5.2. Precision Chronic Disease Management

To address the lack of personalisation in community chronic disease management, one approach involves implementing categorised management based on elderly patients' health status, disease risk and functional capacity. For high-risk elderly patients, the frequency of follow-up visits should be increased—ideally to once every two months—to monitor changes in health status in a timely manner. For patients with stable conditions, basic health management and routine health guidance should be provided on a quarterly basis. On the other hand, to address the varying health needs of different elderly individuals, targeted guidance can be provided on daily activities such as diet and exercise, thereby improving the effectiveness of chronic disease management and enhancing the sense of well-being and satisfaction among elderly patients. [11] [12]

5.3. Strengthening Health Education for the Elderly

Community health service centres can gradually raise older people's awareness of health and safety through health lectures and promotional activities, thereby improving medication adherence and encouraging proactive follow-up appointments. At the same time, GPs can strengthen communication and collaboration with neighbourhood committees; with the patient's consent, they can work with these committees to provide health reminders, thereby enhancing the stability of community chronic disease management. [13]

5.4. Promoting Digitalisation and Community Collaboration

As infrastructure continues to improve, communities should strengthen information sharing and collaborative partnerships with hospitals. On the one hand, this involves refining residents' electronic health records to enhance communication efficiency between hospitals and communities, enabling the latter to monitor the physical condition and treatment progress of patients receiving hospital care for long-term health management. On the other hand, tailored to the specific circumstances of the elderly population, simpler digital service models should be promoted—such as streamlining online interfaces or deploying on-site guidance staff—to further improve the accessibility of community health services. [14] [15]

6. Conclusion

As China's population continues to age in recent years, the number of elderly people with chronic diseases has been steadily increasing. Consequently, residents' health needs are constantly rising within the community-based home care model. Family doctors, as a vital component of community health services, are playing an increasingly important role in the management of chronic diseases among the elderly.

Taking the Pujin Community Health Service Centre in Shanghai as a case study, this paper analyses the actual situation regarding family doctors' involvement in the management of chronic conditions among the elderly in the community. Research has revealed that the family doctor contract service has established itself as a fundamental health management model within primary healthcare. Through the creation of health records, regular follow-ups and health guidance, it has had a positive impact on the management of

chronic diseases among the elderly in the community. However, it also faces challenges such as high work pressure on family doctors, low levels of active participation among elderly patients and limited IT support capabilities, which to some extent increase the difficulties of community healthcare work.

In response to these issues, this paper puts forward corresponding recommendations in areas such as improving the development of family doctor teams, precision chronic disease management, strengthening health education for the elderly, and advancing the coordinated development of information technology and community services.

Due to the limited scope and timeframe of this study, certain aspects remain incomplete. Future research should draw upon a broader range of community-based practical experiences to further investigate and refine the role of family doctors in the management of chronic diseases among the elderly in the community.

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