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2026 Volume 11, Issue 3
Advances in Precision Medicine
ISSN: 2424-9106 (Online)
ISSN: 2424-8592 (Print)

Construction of a Collaborative Model of Community Pharmacy Services and Family Doctor Contracting System and Evaluation of Its Application Effects

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Abstract: *Objective:* To analyze the specific content of the collaborative model of community pharmacy services and family doctor contracting system, and explore the application effect of this plan. *Methods:* This article selects the research subjects who visited our hospital as the research object. After grouping by the odd-even number grouping method, 40 cases each. After investigation, all patients were admitted during the same time period, namely: January 2024 to December 2025; during the treatment phase, routine management was used for the control group, and the collaborative model of community pharmacy services and family doctor contracting system was used for the experimental group. The blood pressure, blood sugar, health knowledge mastery, self-management ability and satisfaction were compared between the two groups. *Results:* (1) Before clinical intervention, there was no difference in blood pressure and blood sugar levels between the two groups of research subjects, $P > 0.05$; after intervention, the above indicators were significantly improved, and the experimental group was at a lower level, $P < 0.05$; (2) Health knowledge mastery and self-management After ability statistics, the experimental group scored higher than the control group, $P < 0.05$; (3) In terms of satisfaction, 77.50% (31/40) of the research subjects in the control group and 95.00% (38/40) of the experimental group. The comparison results showed that the experimental group was higher, $P < 0.05$. *Conclusion:* In the clinical treatment stage, the collaborative model of community pharmacy services and the family doctor contracting system is more effective. For the research subjects, it can significantly improve blood pressure and blood sugar levels, improve health knowledge, self-management ability, and ensure patient satisfaction. It is worthy of widespread implementation.

Keywords: Community pharmacy services; Family doctor contracting system; Collaborative model; Application effects; Satisfaction analysis

Online publication: March 26, 2026

1. Introduction

Chronic diseases are a global public health problem. According to epidemiological surveys, the incidence of such diseases has shown an increasing trend year by year, and the degree of harm is high [1]. In specific classifications, typical manifestations of chronic diseases include: hypertension, diabetes, etc. The causes are: family inheritance, long-term mental stress, unhealthy eating habits, lack of regular exercise, etc. Once the disease occurs, it will cause a serious decline

in the patient's quality of life and pose a greater threat to the patient's health [2]. In the field of clinical treatment, research subjects rely on drug regimens. Although the effects are obvious, during long-term intervention, patients are prone to irritability, depression, and rejection behaviors, which in turn lead to poor prognosis. Therefore, it is necessary to actively analyze, explore, and introduce effective management models in clinical practice to better meet the various needs of research subjects [3]. In this study, with reference to the analysis of research subjects admitted to the hospital from January 2024 to December 2025, after grouping them, the application effect of the collaborative model of routine management, community pharmacy services and family doctor contracting system was explored. The specific report is as follows.

2. Clinical data and methods

2.1. General information

This study was carried out after approval by the hospital's ethics department. There were 80 reference subjects, all of whom were admitted to our hospital. The selection time started in January 2025 and ended in February 2026. After grouping by the odd-even number grouping method, the details are as follows. Control group: 40 cases. After counting male and female patients, the ratio was 22:18. In terms of age, the upper and lower limits were 78 and 55 years old, and the average was (66.59 ± 1.24) years old. Experimental group: 40 cases. After counting male and female patients, the ratio was 21 and 19. In terms of age, the upper and lower limits were 77 and 57 years old, and the average was (67.01 ± 1.03) years old. There is no difference in the above information (gender, age), this study is feasible, $P > 0.05$.

2.2. Method

Control group: Provide routine management. During the treatment phase of the research subjects, clinical indications need to be continuously monitored, including: blood pressure, blood sugar change trends, disease symptoms, etc. Patients are supervised to take medications correctly and drug reactions are recorded; symptomatic intervention is provided if discomfort occurs.

Experimental group: Provide a collaborative model of community pharmacy services and family doctor contracting system. The main contents are:

(1) Creating a team. Led by the person in charge of the community health center, community pharmacists, family doctors, nurses, and health managers are selected to form a working group. Secondly, professional training is arranged. The core content includes: information related to common chronic diseases, typical characteristics of such patients, pharmaceutical service content, and family doctor contract service content. After the training, an assessment link can be added, and those who pass the assessment can clarify their responsibilities and formally take up the post.

(2) Personalized service. After the research subject signs the contract, team members need to actively evaluate various information, including: age, education level, past medical history, current medical history, medication status, living habits and physiological indicators, etc. After fully understanding the patient's condition, community pharmacists and family doctors need to work together to review relevant literature or develop targeted management strategies based on clinical guidelines and their own experience.

(3) Follow-up. In the current social stage, when research subjects are treated at home, clinical follow-up is usually carried out by telephone and WeChat. During this process, family doctors need to take the initiative to understand and make detailed records of the patient's medication use, whether symptoms have improved, and their living habits. At the same time, family doctors still need to actively ask and record the problems and adverse drug reactions encountered in the patient's life. Community pharmacists need to analyze the above issues, determine the root cause of the patient's adverse drug reactions, adjust the medication plan, and enter them in detail into the patient's electronic information system to achieve resource sharing.

(4) Medication management. Among the research subjects, drug treatment is the main method. Therefore, community pharmacists also need to provide timely targeted introductions, including: the efficacy, principle of action, common

adverse reactions, etc. of the drugs used by patients, and understand the patient's medication compliance through family doctors; for patients with poor compliance, the specific plan can be simplified and a medication reminder alarm can be set.

(5) Knowledge mission. It can be carried out through online and offline channels, such as WeChat public accounts, WeChat group education, and offline health lectures. During the activities, community pharmacists and family doctors need to patiently introduce information about the types of common chronic diseases, their hazards, and how to prevent them, and they need to carefully answer patients' questions and correct misconceptions.

(6) Summarize improvements. During the drug treatment phase of the research subjects, the working group needs to hold a summary meeting once a month. Internal members will report on the management of the corresponding patients, sort out specific problems and launch brainstorming to determine solutions. In addition, team members need to provide targeted dietary plans and exercise suggestions based on the actual conditions of the research subjects to ensure that relevant measures are more in line with the patients' needs, thereby ensuring the overall service quality.

2.3. Evaluation indicators

(1) Among the research subjects, compare the blood pressure levels of the two groups before and after the intervention, including: diastolic blood pressure and systolic blood pressure;

(2) Compare blood sugar levels, including: fasting blood sugar and 2h postprandial blood sugar;

(3) Compare clinical indicators: health knowledge mastery and self-management ability scores.

(4) Comparative satisfaction, the specific levels set among the research objects are: satisfied, average, and dissatisfied.

2.4. Statistical analysis

The measurement data and counting data obtained in this study were analyzed and processed by SPSS 25.0 software. Among the research subjects, blood pressure levels, blood sugar levels, and clinical indicators were tested by the *t*-test, and satisfaction was tested by the chi-square test. All information was represented in the form of mean ± standard deviation (SD), (%), $P < 0.05$.

3. Results

3.1. Blood pressure level

In the statistical results of the blood pressure levels of the research subjects, there was no difference before the intervention, $P > 0.05$; after the intervention, the experimental group was at a lower level, $P < 0.05$ (**Table 1**).

Table 1. Comparison of blood pressure levels between the control group and the experimental group (mean ± SD)

Specific group	Diastolic blood pressure (mmHg)		Systolic blood pressure (mmHg)	
	Before intervention	After intervention	Before intervention	After intervention
Control group (n = 40 cases)	92.55 ± 5.98	89.23 ± 4.11	144.38 ± 6.75	138.46 ± 5.42
Experimental group (n = 40 cases)	92.47 ± 5.91	83.65 ± 4.19	144.41 ± 6.69	131.97 ± 4.88
t	0.060	6.013	0.020	5.628
P	0.952	0.000	0.984	0.000

3.2. Blood sugar level

Comparing fasting blood glucose and 2h postprandial blood glucose, there was no difference between the two groups before the intervention, $P > 0.05$; after the intervention, the experimental group had a lower value, $P < 0.05$ (**Table 2**).

Table 2. Comparison of blood glucose levels between the control group and the experimental group (mean ± SD)

Specific group	Fasting blood glucose (mmol/L)		Blood glucose 2 hours after meal (mmol/L)	
	Before intervention	After intervention	Before intervention	After intervention
Control group (n = 40 cases)	8.09 ± 1.26	7.42 ± 1.01	10.08 ± 5.43	8.74 ± 1.19
Experimental group (n = 40 cases)	8.11 ± 1.34	6.69 ± 0.93	10.11 ± 5.37	7.02 ± 1.48
t	0.069	3.363	0.025	5.728
P	0.945	0.001	0.980	0.000

3.3. Clinical indicators

Comparing the health knowledge mastery and self-management ability of the research subjects, the experimental group scored higher, $P < 0.05$ (**Table 3**).

Table 3. Comparison of clinical indicators between the control group and the experimental group (mean ± SD)

Specific group	Health knowledge mastery (points)	Self-management ability (points)
Control group (n = 40 cases)	83.46 ± 2.57	81.59 ± 2.11
Experimental group (n = 40 cases)	92.97 ± 2.06	93.05 ± 1.62
t	18.261	27.246
P	0.000	0.000

3.4. Satisfaction

In terms of satisfaction, the subjects in the experimental group were higher than those in the control group, $P < 0.05$ (**Table 4**).

Table 4. Comparison of satisfaction between control group and experimental group (%)

Specific group	Very satisfied	Satisfied	Not satisfied	Total satisfaction (%)
Control group (n = 40 cases)	17 (42.50)	14 (35.00)	9 (22.50)	31 (77.50)
Experimental group (n = 40 cases)	22 (55.00)	16 (40.00)	2 (5.00)	38 (95.00)
χ^2	-	-	-	5.165
P	-	-	-	0.023

4. Discussions

Chronic diseases have a high clinical incidence and are generally characterized by long cycles, strong recurrence, and difficulty in curing. For such patients, in the early stages of disease onset, the subjective symptoms are not obvious, and in the continuous progression stage, some cardiovascular and cerebrovascular complications will occur, which are more harmful [4].

The results of this study show: (1) The research subjects were investigated and compared with blood pressure and blood sugar levels before intervention. There was no difference between the two groups, $P > 0.05$; after clinical intervention, the above indicators in both groups improved, and the experimental group was lower than the control group, $P < 0.05$; (2) Health knowledge mastery and self-management ability In terms of strength, the comparison results between the control group and the experimental group were significantly different, and the experimental group was higher, $P < 0.05$; (3) After different modes of intervention, the satisfaction of the research subjects was 77.50% (31/40), 95.00% (38/40). The comparison results showed that the experimental group was higher, $P < 0.05$. The specific analysis is as follows: The application of the collaborative model of community pharmacy services and family doctor contracting system

is highly standardized and coherent, which can fully highlight the "patient-centered" management concept. In clinical practice, creating working groups and strengthening training measures can improve the professionalism and collaboration skills of team members and ensure the efficiency of follow-up services [5]; in terms of research subjects, after the contract is completed, community pharmacists and family doctors need to jointly analyze and evaluate the patient's condition and develop a personalized management plan for them. During the home medication process, family doctors can proactively inquire about various indications of research subjects through phone calls and WeChat channels and make detailed records to provide patients with guidance. Community pharmacists will then analyze and judge the rationality of drug use, and dynamically adjust specific plans based on adverse reactions to improve patient treatment safety [6]. After analyzing the above collaborative management model, it can demonstrate the close collaborative relationship between family doctors and community pharmacists, and provide relatively complete services to the research subjects. Moreover, knowledge education measures through collaboration between parties can help correct misconceptions of research subjects and improve medication compliance. At the same time, this measure can help patients actively adjust their lifestyle and improve their self-management abilities [7]. In addition, the integration of summary and improvement links can help members of the working group discover problems on time, and the process can be continuously optimized through collective discussion to better make up for the shortcomings of traditional management. For research subjects, it can reduce disease symptoms, optimize self-experience, and ensure the best prognosis level [8,9].

5. Conclusion

In summary, the development of a collaborative model of community pharmacy services and family doctor contracting systems is of great clinical significance and can improve the health knowledge and self-management abilities of research subjects. At the same time, the application of this program can also reduce patients' blood pressure and blood sugar levels, relieve disease symptoms, improve curative effects, and better ensure patient satisfaction, which has significant promotional value.

Disclosure statement

The author declares no conflict of interest.

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