

## Homogeneous Management and Application of Appropriate Technology for TCM Care in County Medical Communities

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**Abstract:** Objective: Explore the homogeneous management of appropriate technology for Traditional Chinese Medicine (TCM) care based on the county medical community platform. Methods: The hospital has formed a county medical community since 2020, based on which the platform develops homogeneous management of appropriate technologies for TCM nursing, establishes a medical training center, a remote consultation center and a TCM nursing quality control center, strengthens the construction of TCM nursing specialties, integrates TCM with public health and consolidates information support. The “321” model was developed, with January 2021 to December 2021 as the post-implementation period and January 2020 to December 2020 as the pre-implementation period, to compare the application of TCM nursing techniques before and after the implementation. Results: After the implementation of homogeneous management of TCM nursing techniques in the medical community units, the TCM nursing competence of primary care staff, patient compliance and satisfaction were significantly improved. Conclusion: The implementation of homogeneous management of TCM nursing techniques in the medical community units can enhance the TCM service capacity of primary care staff and improve the “sense of access to care” of patients.

**Keywords:** Medical community; homogeneous; nursing

### 1 Introduction

Strengthening the construction of primary medical services and improving the capacity and level of primary medical services are important parts of the reform of China’s medical and health system. National Administration of Traditional Chinese Medicine and National Health Commission have repeatedly issued policies to support county-level Chinese medicine hospitals and primary health care



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institutions to form a health care community (hereinafter referred to as the medical community) and develop the integration of Traditional Chinese Medicine (TCM) services in counties and townships.

In the spirit of the Fourth Plenary Session of the 19th Central Committee and General Secretary Xi Jinping's series of important instructions on Sichuan's work, it is pointed out that the grassroots demand as the guide, the integration of medical prevention as the link, the sharing of medical resources as a grip, the construction of a high-quality and efficient medical and health service system, the enhancement of the capacity of Chinese medicine services as a breakthrough, to give full play to the characteristics of Chinese medicine advantages, and fully implement the "Healthy China" strategy. The role of TCM nursing in disease treatment has been paid more and more attention, and the Party and the government have vigorously supported the development of TCM nursing and attached great importance to the inheritance and innovation of TCM nursing techniques [1].

The Outline of China's Nursing Career Development Plan (2016–2020) clearly proposes to vigorously develop TCM nursing, improve the level of TCM nursing, give full play to the characteristics and advantages of TCM nursing, and attach importance to the role of TCM technology in nursing work. TCM nursing techniques are the core of TCM nursing and are being used more and more widely in clinical practice, but the level of TCM nursing technique operation of nursing staff in primary care institutions is uneven. Homogeneous management is a management model that combines job responsibilities with individual competencies, adopts the same management model and management content, and gradually reduces the gap in service characteristics [2]. Since January 2021, the medical community has been using the "321" construction model for homogeneous management of TCM nursing techniques, and has achieved certain results.

## **2 Related Work**

Starting from 2021, the medical community units will start the homogeneous management model of appropriate technology for Chinese medicine care, and the medical community will set January 2021 to December 2021 as post-implementation and January 2020 to December 2020 as pre-implementation. During the study period, the medical community consisted of six member units, and 516 nursing staff from these six units participated in the homogeneous management of TCM nursing techniques. Before the implementation, the community was managed in a traditional way; after the implementation, the community used the "321" model for homogeneous management of TCM nursing techniques.

### ***2.1 Medical Training Center***

#### ***2.1.1 Base Construction***

The base construction is the basic construction for personnel training, scientific research, and social services [3]. Xindu Traditional Chinese Medicine Hospital of Chengdu City is a national tertiary-level TCM hospital integrating medical treatment, rehabilitation, diagnosis and treatment, teaching, and scientific research, and is a national pilot area for comprehensive TCM reform, a national pilot unit for integrated management of county and rural TCM services, a national advanced unit for rural TCM work, and a Xindu sub-center of the "National TCM Appropriate Technology Video Network of the State Administration of Traditional Chinese Medicine" [4]. Outside the province, we have built a telemedicine center in cooperation with the General Hospital of the People's Liberation of China. In the province, we have built a non-directly affiliated Chinese hospital in deep cooperation with Chengdu Medical College, sharing laboratory equipment and medical frontier information [5].

Clinical nursing is the key specialty of Chengdu City Medicine, with 21 clinical nursing units have been established. It has 1 large TCM nursing laboratory equipped with TCM nursing clinical equipment, instruments and training models. It is the main place for the nursing profession to carry out teaching practice, scientific research activities and social services.

### *2.1.2 Management Team Construction*

We set up a TCM nursing techniques homogeneous management group, formulated a TCM nursing techniques homogeneous management plan, and revised the TCM Nursing Routine and TCM Nursing Program. We formulated 28 training manuals for TCM nursing techniques according to the “Manual on the Use of TCM Nursing Techniques for Nursing Staff” and the actual situation of the medical community, and the operating procedures for TCM nursing techniques were formulated, including concepts, indications, contraindications, operating methods and procedures, evaluation cycles, technical evaluation indexes, health education, preventive measures, prevention and treatment of complications, operating steps, flow charts, and scoring criteria, etc. [6].

Homogenization first refers to the phenomenon of goods borrowing from each other and imitating each other and tending to be the same. Implementing homogenization management in the medical field can improve the level of TCM nursing technology in primary units and gradually reach the standard of care so that the level of hospitals and nursing staff at different levels can remain balanced and consistent. The implementation of homogenization management can improve the TCM nursing techniques in primary hospitals and enhance patients’ trust in primary nursing staff and satisfaction with TCM nursing techniques.

### *2.1.3 Faculty Construction*

The faculty is mainly composed of the national backbone of TCM nursing and provincial TCM nursing specialist nurses within the Chengdu Xindu District TCM Hospital, and also includes nursing staff who have graduated from TCM nursing or have experienced systematic 100 h of TCM knowledge and skills training, are qualified as nurse practitioners or above, and have been engaged in TCM nursing clinical work for more than 10 years. The abovementioned personnel will serve as teachers of the Medical Training Center [7].

### *2.1.4 Training Course Curriculum*

① Theoretical training in the first stage: training nursing staff on the basic and technical theoretical knowledge of TCM. The training adopts both online and offline forms: online learning mainly relies on the nail software platform to learn by watching live broadcasts and playback; offline learning is based on independent learning and group lectures [8]. The theoretical training covers the basic knowledge of TCM and the theoretical knowledge related to TCM nursing techniques. The training hours are set at 33 h. Participants take study notes carefully. The teacher regularly spots-checks study notes. After the course, the teacher conducts a theoretical assessment of the participants. A score of 80 is qualified, and those who pass the theoretical assessment can enter the TCM operation training. Those who fail the theoretical assessment continue to undergo theoretical training until they pass the assessment before entering operational training [9].

② Operation training: The standardized training of TCM operation is conducted in two ways: online and offline [10]. The filmed video of TCM nursing techniques operation is uploaded to the medical community information intranet platform for online learning, while offline learning is based on centralized training in the skill center. The total training hours of the training course are set at 33 h.

After completing the required training hours, a unified operational examination will be conducted and a score of 90 will be considered qualified.

### ***2.2 Tele-Consultation Center***

The implementation of up-and-down linkage and resource sharing within the six units of the medical community, and collaborative and cooperative video consultation at the upper and lower levels together. The members of the TCM nursing subspecialty team will guide the primary nursing staff in the identification and health education of individual cases according to the patient's specific syndrome manifestations, key points of syndrome identification, syndrome analysis, and nursing treatment rules to realize remote consultation. At the same time, in order to facilitate patient access, patients can make online appointments for TCM care subspecialty outpatient services through the Medical Community Smart Medical Center [11].

### ***2.3 TCM Nursing Quality Control Center***

The Quality Control Center of TCM Nursing in the Xindu District of Chengdu City formulates the standardized rules of TCM nursing in the whole district, collects and feeds back quality control information, implements professional TCM nursing quality evaluation, carries out quality control of appropriate TCM nursing technology and maintains its effectiveness, coordinates and solves problems in TCM nursing work of member units of the medical community, and promotes standardized and scientific management of TCM nursing [12,13].

### ***2.4 Construction of a TCM Nursing Specialty***

The construction of TCM nursing specialties relies on the platform of the medical community to carry out research related to the integrated nursing management model of county and township and promote the development and integration of nursing disciplines in the county [14]. In addition, by carrying out some grass-roots support activities, signing "teacher-apprentice" agreements for counterpart support projects, and promoting appropriate technology of TCM in the primary medical institutions of the medical community, which is conducive to the construction of Chinese medicine nursing specialties [15].

### ***2.5 Deep Integration of TCM and Public Health***

The measures that include continuous care services with TCM characteristics and conduct home visits for discharged patients within the medical community, such as elderly patients, hypertensive patients, diabetics, chronic obstructive pulmonary disease, and long-term bed-ridden patients have been implemented [16]. Carry out community lectures, charity clinics, and other forms of health guidance and guide patients to implement Tui Na, Ba Duan Jin, Five Animal Play, and other TCM home rehabilitation techniques [17]. It is also possible to carry out publicity days on the theme of disease prevention and control, hold various lectures on medical knowledge, and hold scientific activities in the countryside to deepen the integration of Chinese medicine and public health.

### ***2.6 Building an Information Platform***

Integrating HIS, LIS, PACS, EMR, and other systems of 6 units in the medical community, assisting all units in the medical community to achieve the interconnection of information systems, ensuring sharing and continuity of patient medical records in the medical community, and at the same time, the information platform includes videos on the operation of appropriate TCM nursing

techniques, as well as videos on the promotion of health care with TCM characteristics, so as to realize the interconnection of medical resources within the medical community [18,19].

### 3 Observed Indicators

The Min-Cex is a modified and simplified version of the tCEX by the American Board of Internal Medicine as a way to assess residents' clinical skills. The assessment is completed by the clinical caregiver and the patient under care, with 15–20 min of evaluative feedback given immediately after the caregiver-patient interaction. The Min-Cex assessment scale is a method of assessing health care professionals' competency in Chinese medicine care in terms of skills, humanities, and judgment using a real-life clinical case assessment [20].

The advantage of TCM Min-CEX is the continuous assessment-feedback-improvement process, where the assessor points out the nursing staff's shortcomings and teaches and instructs the nursing staff, so that the nursing staff can receive timely and constructive feedback and improvement. The examiner points out the students' shortcomings, while the instructor explains and instructs them, so that the students can receive constructive feedback and suggestions for improvement in time. In response to the feedback from the assessment process the appraisers will also focus on typical case analysis, PBL teaching, mind mapping teaching, participatory teaching, etc., to improve the quality of nursing staff comprehensively. The clever joint application of TCM nursing and Min-Cex in the assessment of TCM nursing staff, linking theory and practice, can achieve satisfactory results [21].

The Min-Cex is used to evaluate the clinical competence of residents and also has a teaching role. In recent years, this concept has been increasingly used in medical schools and teaching hospitals in China, but there is still much room for improvement, and it is worth exploring and practicing in clinical teaching. It is also a major innovation in the reform of medical and health personnel training in the new century. Its fundamental purpose is to cultivate high-quality medical personnel who are competent in clinical and preventive work with the focus on the health of patients and populations, as required by the world health system. In China, the competencies are based on the job competencies and are adapted to our own national conditions, and the evaluation indicators cover a wide range of professional qualities such as medical service, clinical skills, health management and promotion, communication and teamwork. In addition, the assessment content and criteria of the Min-Cex itself are not perfect, and the clinical teaching practice varies among clinical specialties, therefore, attention should be paid to the adaptation of the clinical teaching practice in each specialty. The Min-Cex has been cited as an assessment tool in the clinical function of nursing staff, and different scholars have improved the Min-Cex to varying degrees, for example, by adjusting the dimensions of the Min-Cex to seven dimensions of medical interview skills, physical examination skills, professional attitudes, clinical judgment, communication skills, organizational effectiveness, and overall clinical competence based on the characteristics of the nursing profession.

In this study, a modified version of the Min-Cex scale was used to assess the TCM nursing competence of nursing staff before and after the implementation of homogeneous management, and higher scores of the assessment results indicated stronger TCM nursing competence of nursing staff [22]. Min-Cex is practically relevant as an assessment tool for clinical structured practice skills, and the assessment is combined with clinical cases. In the assessment process, the relationship between healthcare professionals and patients is considered from different perspectives, while the concept of holistic is applied to the clinic. The assessment results are divided into two aspects: patients' compliance with TCM nursing techniques and patients' satisfaction with TCM nursing techniques [23]. On the one hand, the patients' compliance with the TCM nursing techniques before and after the

implementation was counted and classified into compliance, partial compliance and non-compliance. On the other hand, patients' satisfaction with the operation of TCM nursing techniques before and after the implementation was compared and classified as very satisfied, more satisfied, average and unsatisfied [24].

#### 4 Statistical Methods and Results

The earliest statistical analysis software is SPSS, designed by three graduate students from Stanford University in the late 1960s. SPSS headquarters was formed in Chicago in 1975, and the world's first microcomputer version of statistical analysis software was launched in 1984, which extended the application of SPSS. At present, the applications of SPSS data analysis software are distributed in many fields such as medical, insurance, business, marketing and education, and it is the most widely used statistical software at present. SPSS is an easy-to-use, user-friendly statistical analysis software, with complete editing, statistical analysis, charting, etc. Because the user does not need to memorize the command statements, it is very applicable; both beginners and experienced programmers can achieve powerful functions.

The SPSS 19.0 statistical software was selected to analyze the results, and the measurement data were expressed as  $(\bar{x} \pm s)$  with t-test; the count data were expressed as % with  $\chi^2$  test, and  $P < 0.05$  indicated that the difference was statistically significant.

A comparison of the TCM nursing competencies of the nursing staff before and after the implementation, as shown in Table 1.

**Table 1:** Comparison of nursing staff's Chinese medicine nursing competence ( $\bar{x} \pm s$ , points)

Project	Theoretical ability	Operational ability	Four diagnosis ability	TCM nursing planning ability	Dialectical nursing ability	Communication and missionary ability
Before	5.84 ± 0.76	0.38 ± 0.55	6.02 ± 0.22	5.25 ± 0.36	6.32 ± 0.52	7.05 ± 0.66
After	7.25 ± 0.78	8.75 ± 0.66	8.25 ± 0.76	8.22 ± 0.77	8.68 ± 0.68	8.89 ± 0.42
<i>P</i>	0.013	0.011	0.013	0.013	0.018	0.028

A comparison of patient compliance and satisfaction with TCM nursing techniques before and after the implementation, as shown in Table 2.

**Table 2:** Comparison of patients' compliance and satisfaction [example (%)]

Project	Dependency			Satisfaction			
	Dependent	Partially dependent	Non-dependent	Very satisfied	More satisfied	Average	Unsatisfied
Before	28	32	40	22	38	28	12
After	52	30	18	55	36	8	1
<i>P</i>	0.001	0.022	0.015	0.001	0.03	0.001	0.001

The results of this study showed that after the implementation of the “321” homogeneous management model, the theoretical ability, operational ability, TCM nursing planning ability, four diagnosis ability, dialectical nursing ability, and health education ability of nursing staff were greatly improved, which effectively improved the theory and skills of nursing staff and ensured the homogenization of TCM nursing techniques. Meanwhile, patients’ compliance and satisfaction with TCM techniques were significantly improved ( $P < 0.05$ ). This shows that homogeneous management can improve the TCM service capacity of primary care staff, ensures the quality and effectiveness of TCM nursing techniques carried out, and enhances patient satisfaction and access to medical care. In summary, the “321” model is an innovative homogeneous management model in this study. TCM nursing attaches importance to the discursive logical thinking, requiring nurses not only to have a solid theoretical foundation of TCM but also to being able to apply holistic and evidence-based care concepts to clinical practice [25]. This places a higher demand on the theoretical level and operational skills of nursing staff. Only by laying a good foundation stone of theory and operation can we have the ability to integrate the knowledge of TCM nursing [26–28].

## 5 Conclusion

This study consolidates the foundation of TCM nursing for primary care staff and enhances the ability of flexible application of TCM nursing techniques through 3 centers, 2 enhancements and 1 support model; and implements homogeneous management with standardized training, assessment and quality control within the medical community member units to ensure the standardized application of TCM nursing techniques in the region. In the future, the medical community will become a new development system in the medical industry.

In the subsequent research, we will continue to conduct in-depth research on county medical communities, strengthen homogeneous management, continuously smooth the mechanism, open up the process, circulate talents, promote the transformation of research results through coordination and integration of multiple parties, continuously combine TCM care with modern medical needs, give full play to the advantages of TCM characteristics, and achieve high efficiency, high quality, and Highly satisfactory integrated county TCM care management system.

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