



# SWOT Analysis on the Construction of Hospice Care Demonstration Center Under the Hierarchical Medical System in Southwest China

Mei Xu<sup>1, †</sup>, Han Xingping<sup>2, †</sup>, Zhang Jing<sup>3, †</sup>, Zhang Tingting<sup>1</sup>, Qiu Fang<sup>1</sup>, Yin Aini<sup>1</sup>, Liu Mengjie<sup>1, 4, \*</sup>

<sup>1</sup>School of Nursing, The Southwest Medical University, Luzhou, China.

<sup>2</sup>Department of Oncology, The Affiliated Hospital of Southwest Medical University, Luzhou, China

<sup>3</sup>Department of Thoracic Surgery, Sichuan Academy of Medical Sciences & Sichuan Provincial People's Hospital, Chengdu, China

<sup>4</sup>Department of Nursing, The Affiliated Hospital of Southwest Medical University, Luzhou, China

## Email address:

luzhouyoyo@163.com (Mei Xu), 1050777826@qq.com (Han Xingping), 499098257@qq.com (Zhang Jing),

1751847681@qq.com (Zhang Tingting), 1327308139@qq.com (Qiu Fang), 1173838640@qq.com (Yin Aini),

liumengjie80@163.com (Liu Mengjie)

\*Corresponding author

† Mei Xu, Han Xingping and Zhang Jing are co-first authors.

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**Abstract:** Due to the influence of various factors, the development of hospice care in China is very slow, and the quality of life while dying in patients with critical illness is low. At present, the management of chronic diseases under the hierarchical medical system has achieved good results in China, but to date, there is no report on the implementation of hospice care services under the hierarchical medical system. The purpose of this study is to explore the strengths, weaknesses, opportunities, and threats (SWOT) of establishing a "hospital-community-home" linked hospice care demonstration center under the hierarchical medical system in Southwest China. Based on the baseline survey, the SWOT analysis method was used for analysis. In all, there are 26 medical institutions of different levels, including 440 medical staff and 650 community-dwelling elderly take part in the quantitative research, and 24 related professionals participated in the panel discussion. We came to the conclusion that under the hierarchical medical system, a "hospital-community-home" linked hospice care demonstration center has the following opportunities when initiating hospice care activities in Southwest China: effective integration of resources, diversification of demand, policy support, positive attitude of medical staffs, etc. However, the lack of laws and regulations, the imperfect social security system, the lack of public awareness, and the lack of institutional operation and certification standards of practitioners are challenges when building such centers.

**Keywords:** Hospice Care, Quality of Life, Aging Situation, Hospice Care Model, SWOT

## 1. Introduction

Hospice care was defined by the World Health Organization (WHO) as "an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical,

psychosocial and spiritual." [1, 2] Although Song-tang Hospital, the first hospice care institution in China, was established as early as 1987 in Beijing, the development of Chinese hospice care was hindered by various reasons, such as lack of policy support, imbalance of medical and health resources, and lack of professional practitioners [3, 4]. In 2015, "The Economist Intelligence Unit" released Quality of death index 2015, ranking hospice care across the world<sup>5</sup>. Among the 80 countries in the world, China ranked 71st. It

said the following: "Currently, China is still in the stage of increasing awareness" [6]. In the face of the low quality of life while dying, the demand for constructing a healthy China, and the appeal from domestic scholars and people from all walks of life, hospice care has gradually received the attention of the Chinese government. In 2017, the Chinese government promulgated the norms and guidelines for the implementation of hospice care [7, 8], and initiated the baseline survey of the national hospice care pilot. The survey results showed that there was a serious lack of hospice care resources in China, with uneven distribution, mainly concentrated in big cities such as Beijing, Shanghai and Guangzhou [9]. As the aging situation was severe, the chronic disease spectrum changed and became prevalent among a younger age group, the demand was great and diversified, and the existing hospice resources and operation mode could not meet the growth of diversified hospice needs.

To properly allocate medical resources and promote the equalization of basic medical and health services, the Chinese medical and health service system has implemented a hierarchical medical system of diagnosis in primary hospitals, two-way referral, separate treatment for acute and chronic disease, and links between the upper and lower levels [10]. Tertiary hospitals mainly provide diagnosis and treatment services for critical and difficult complex diseases; secondary hospitals mainly receive from tertiary hospital those referred patients who have recovered from an acute situation, those in the postoperative recovery period, and those in a stable period of critical illness; primary medical institutions provide treatment, rehabilitation and nursing services for patients with chronic diseases whose conditions are clearly diagnosed and stable, patients in the recovery stage, patients with geriatric diseases and patients with advanced tumors [11]. A "hospital-community-home" triple linkage hospice care demonstration center integrates hospice care elements into the hierarchical medical system, organically combines general hospitals, primary medical institutions and family care to meet the diversified and multilevel needs of different dying patients. The demonstration center takes the regional secondary general hospital as the center, sets up a professional hospice care service team, and radiates to the primary medical and health institutions relying on the joint medical system. Primary medical and health institutions are the main body, playing a connecting role. Based on home care, relying on the contracted services of family doctors, home hospice care services are provided for dying patients and their families. The medical care model of hierarchical diagnosis and treatment, this link between the upper and lower levels has achieved good clinical practice in Chinese chronic disease management, but there is no report on the application of the hospice care service. Therefore, to meet the people's growing demand for hospice care services, it is necessary to assess the challenges and opportunities of this model in the field of hospice care services to provide basis for the formulation of hospice care policies.

The Aim of this study is to discuss the strengths,

weaknesses, opportunities, and threats (SWOT) of establishing a "hospital-community-home" linked hospice care demonstration center under the hierarchical medical system in Southwest China.

## 2. Methods

Based on the results of the baseline survey, a group discussion was organized to determine the SWOT of a "hospital-community-home" hospice care demonstration center under the hierarchical medical system. SWOT analysis was chosen because it could provide a broad overview of this topic [12]. Due to the lack of such research papers and the differences in the current situation of medical and health services in various countries, the systematic evaluation of this topic was not selected.

SWOT implementation: The potential application value of this linked demonstration center in a hospice care service was obtained through the baseline survey of hospice care in the early stage and discussion in the later stage. The research group discussed and analyzed the results of the survey and concluded the opportunities and threats of establishing a demonstration center. These events included the following:

(1) A baseline survey of hospice care was conducted in 26 medical institutions of different levels, including 440 medical staff and 650 community-dwelling elderly people in Southwest China by using the baseline survey questionnaire of National Health Commission of PRC from March 10 to May 18, 2020.

(2) Epidata3.02 were used for entry, and SPSS21.0 was used for the statistical analysis of the data obtained from the investigation.

(3) A baseline survey report was formed, a meeting discussion was conducted based on the survey results, and the results of the discussion were recorded and sorted out.

The above data were sorted and divided into such four themes as strengths, weaknesses, opportunities and threats. The meeting to discuss feedback on the baseline investigation organized by the National Health Commission was conducted to further enrich the SWOT information. The meeting was attended by and the survey was discussed among health administrators (4), members of the research group (7), experts (3) and medical staff (10). Discussions were conducted on this topic: "What are the strengths, weaknesses, opportunities and threats of providing hospice care services by constructing a 'hospital-community-home' linked hospice care demonstration center?" Discussion lasted for 60-90 minutes, and a moderator introduced the research carried out on this topic first and then raised open questions. The participants expressed their views on the strengths, weaknesses, opportunities and threats of this service model. When the opinions of new topics from participants no longer appeared, the discussion was considered to have reached saturation. Another staff member kept a written record of the discussion and collated the relevant information.

### 3. Results

Finally, the number of effective recovered questionnaires from the medical institutions, medical staff, and

community-dwelling elderly people were 22 (23), 436 (440) and 644 (650), and the effective recovery rates were 95.65%, 90.09% and 99.08%, respectively. Table 1 shows the SWOT analysis.

**Table 1.** SWOT analysis of the construction of a hospice care demonstration center under the hierarchical medical system.

Strengths	Weaknesses
1. Integration of medical and health resources at all levels by complementing each other's advantages 2. Supplement the resources and capacity of primary medical institutions and home care 3. Wide coverage 4. Fulfilling the demands of diversified and multilevel hospice care services 5. Positive attitude of employees engaged in hospice care Opportunities 1. There is a big gap in the demand for hospice care services. 2. The demand for national health care service system construction, policy support 3. The hierarchical medical system is improving day by day. 4. Reference of foreign experience in graded hospice care services	1. Lack of professional hospice practitioners 2. Weakness in the technical strength of primary medical treatment 3. Lack of willingness of general hospital governing 4. Family caregivers lack relevant knowledge and skills. Threats 1. The influence of the traditional Chinese views of life and death and filial piety 2. Lack of perfect social security system 3. Lack of protection by laws and regulations 4. Lack of infrastructure construction 5. Unclear direction of financing 6. Lack of relevant industry standards and regulatory system

#### 3.1. Strengths

First, under the current health system in China, different forms of care have their own advantages; for instance, general hospitals have abundant medical resources, a strong technical force and sufficient human resources; primary medical and health institutions are close to residential areas and conveniently located for quick medical treatment; home care costs are low, and the environment is warm and affectionate. Through the organic combination of these three resources under the hierarchical medical system, according to the condition of dying patients relying on the hospice care center to realize the upper and lower linkage and accurate assessment, patients with different classes of end-stage disease can share high-quality hospice care resources and services, and the quality and continuity of hospice care services can be ensured and reduce the burden of family care. Second, in the previous survey, when facing the question of "where to spend their final life", among the 644 elderly people, 220, 106 and 77 chose "at home", "in hospice care institutions" and "primary health care institutions", respectively, accounting for 62.58% of the total number and indicating that most of the elderly wanted to obtain home care or receive services in institutions close to home at the end of their lives. They did not want to be over-treated, and they wanted to spend their final days in comfort and with their families. At the same time, under the current medical environment, there was a significant difference between the urban and rural elderly in the choice of end-of-life will [13, 14]. A "hospital-community-home" hospice can meet the multilevel and diversified end-of-life needs of the elderly. Third, medical staff in various institutions have a positive attitude toward the implementation of hospice care services. Among the 436 employees surveyed, 359 were willing to engage in hospice care, accounting for 82.34%. Fourth, influenced by multiple factors, such as education and development platforms, the professional knowledge and

skills related to hospice care of medical staff at all levels varied. The construction of a linked hospice care demonstration center can provide learning opportunities for primary medical staff.

#### 3.2. Weaknesses

First, affected by the uneven levels of political, economic and cultural development in China, hospice care resources are mainly concentrated in economically developed regions<sup>3</sup>, and in economically underdeveloped regions, they are also relatively concentrated in grade three A hospitals in big cities. Our survey found that tertiary level hospitals accounted for 75% of the institutions providing hospice care services in the region in 2019. The development of hospice care in China was unbalanced with small coverage [15]. Additionally, the development of hospice care services had some problems, such as single form of service, lack of standard service content and unclear operation mode. This survey showed that the hospice care services in Southwest China were mainly outpatient services and inpatient services, and home-based care services were lacking. The service focused on pain and symptom control. Third, hospice care was a special medical service, requiring high knowledge and skills of staff. However, currently, most practitioners in medical institutions in this region have not received formal professional education and training in hospice care services, and the professional knowledge and skills related to hospice care were insufficient [15-17]. None of the 182 hospice care practitioners surveyed had received any professional qualification training or assessment. Fourth, primary medical and health institutions were highly motivated to provide hospice care services, but the relevant facilities and equipment were not perfect, human resources were insufficient, and technical strength was weak. Because of its poor benefit and occupancy of beds, hospice care was not actively developed in general hospitals, although they are stronger than primary hospitals in all aspects.

### 3.3. Opportunities

The WHO [18] predicted that by 2050, the number of elderly people aged 60 or above will reach 2 billion, and China has the largest elderly population in the world. According to the demographic statistics report of the National Bureau of Statistics of China [19], by the end of 2018, the number of elderly people aged 60 and above has reached 249.5 million, accounting for 17.9% of the population. In this survey, the elderly above the age of 65 accounted for approximately 11.7% of the total population, and the aging of the society was becoming increasingly serious. At the same time, the number of patients with chronic diseases in China was increasing day by day, and the incidence of chronic diseases was becoming increasingly serious. The number of deaths from chronic diseases accounted for 86.6% of the total number of deaths, causing 70% of the disease burden in China [20]. The social status of deep aging and the trouble of chronic diseases made the development of hospice care services in China increasingly urgent. The State has issued various documents to promote the development of palliative care [21, 22]. The hospice care service was incorporated into the integrated health and elderly care service system. The shifted national policy and great importance attached by the government provided a policy guarantee for the construction of a "hospital- community-home" linked hospice care demonstration center.

At present, hospice care in some foreign countries has formed a complete service system [23], giving full play to the functions of community health care and family doctors [1, 3], and different levels of medical institutions perform different medical care. For example, in the United States, medical care is divided into two levels [24]: the first level is family doctors who are responsible for primary health care, common and chronic diseases, and the second level is various medical institutions receiving referrals and difficult diseases. The British National Health Care System (NHS) [25] has community health service centers at the primary level and public hospitals at the secondary and tertiary levels, whose service contents are basically similar to those in the United States. Japan [26] has set up a three-level medical circle with hierarchical dislocation and functional coordination. The first-level medical circle provides basic outpatient services, the second-level medical circle provides general inpatient services, and the third-level medical circle provides advanced medical services. In recent years, the hierarchical medical system in China has been gradually improved, and the management of chronic diseases under this system has achieved remarkable results. The development of medical associations and the medical community has also gradually matured, and medical institutions at all levels have formed a linked mechanism of diagnosis, treatment and referral. The contracted services of family doctors are carried out in an orderly manner. By drawing lessons from the development of foreign hospice care services and combining these with the development trend of Chinese medical and health system, it is conducive to the construction of a "hospital-community-

home" linked hospice care demonstration center under the hierarchical medical system.

### 3.4. Threats

The WHO has given a prediction regarding the proportion of hospice care service staff: 3 doctors, 12 nurses and 6 other clinical staff (social workers, therapists, drivers, etc.) per 100,000 people [27]; however, our survey showed that the relevant data in Southwest China were 0.00046/100000, 0.00084/100000 and 0.00069/100000, respectively, and there was a severe shortage of hospice service practitioners. Due to the lack of professional education and training in hospice care, there was a general lack of hospice care knowledge and clinical experience among the practitioners. A hospice care service needs multidisciplinary team work [28, 29]. The team members include doctors, nurses, medical social workers, psychologists, lawyers, volunteers and other professionals. In terms of the current development of hospice care in China, there is still a long way to go to achieve such a perfect team configuration.

At present, social services for the elderly and hospice care services have not been included in the social medical insurance system in China, and the resulting costs are not covered by the social medical insurance [6]. Because many families must pay for hospice care services at their own expense, they are limited to choose hospice care services for their dying relatives. In addition, the source of hospice care funds is still unclear, the financing channels are blocked, the communication and coordination between various departments are impaired, the responsible subjects shift responsibility onto each other, and all the above factors make hospice care in China vulnerable to the influence of economic factors during the development process.

Laws and regulations are an important means to promote and standardize the development of hospice care services. However, the lack of laws and regulations for the implementation of hospice care in China will restrict the construction progress of a linked hospice care demonstration center. Second, the lack of unified guidance for the implementation of a hospice care service mode, patient inclusion criteria and changing guidance leads to the uneven quality of hospice care in China. Third, there is a lack of qualification recognition and access standards for practitioners of hospice care institutions, operating regulations, industry guidance standards and market supervision systems for linked hospice care centers, leading to a lack of effective protection for the interests of the dying and their families.

At present, most of the death education carried out in China is aimed at medical college students and is absent for the general public. According to the previous survey, 72.83% of the elderly have never heard of hospice care or end-of-life care. Influenced by the idea of "admire the birth but taboo the death" and the way of "performing filial piety" in traditional Chinese culture, in the face of the dying relatives, their families always try their best to prolong their lives by using modern medical technology without paying attention to the patient's real condition and wishes. Many patients die after

suffering all kinds of rescue full of pain and torment at the end of their life, without any quality of life or dignity.

## 4. Discussion

### 4.1. Main findings

In this paper, the opportunities and challenges in the internal and external environment of a "hospital-community-home" linked hospice care demonstration center under the hierarchical medical system in Southwest China were discussed. Through SWOT analysis, this paper summarized the opportunities of linked hospice care demonstration centers from aspects of carrying out hospice care activities and providing death education, policies, and human resources, etc. in the future. In addition, it was emphasized that the lack of laws and regulations, the imperfection of social security system, the lack of public awareness, the lack of institutional operation and qualification certification standards of practitioners are the challenges to build these centers.

### 4.2. What Did the Study Shows

Based on the preliminary baseline investigation and conference discussion in the later stage, the study found that the following principles should be followed in the construction of "hospital- community-home" linked hospice care demonstration centers under the hierarchical medical system. First, respect life and reflect the concept of people-oriented care. Human life must go through the process from birth to death. Hospice care services adhere to the "whole person" perspective, considering the physical, mental, social and spiritual needs of the dying person, respecting the objective facts of the terminal stage of the disease, avoiding excessive treatment, respecting the patient's will, and safeguarding the dignity of the patient's life at the end. Second, teams cooperate with each other and provide continuous hospice care services. The hospice care team is a multidisciplinary team that should adhere to teamwork, define rights and responsibilities, deeply understand patients and their family conditions, and provide complete medical, caring, psychological and diversified, all-round, continuous care services from life to death. In addition, family elements shall be valued. In traditional Chinese culture, the idea of "falling leaves return to their roots" is emphasized, and the center should provide a care environment with family elements and family-style professional care for the elderly [30].

As a special health care service, hospice care is a kind of integrated, comprehensive and positive care that reflects the affirmation and respect for the value of life. Promoting the development of hospice care services can not only alleviate the difficult situation of provision for the elderly under the background of aging but also further meet the urgent requirements of hospice care for patients with advanced disease. Due to the current situation of the development of hospice care services in this region in China, the following suggestions are provided for the construction of linked

hospice care demonstration centers in Southwest China.

#### 4.2.1. Actively Carry out the Propaganda Work of Hospice Care Services and Strengthen Death Education

Under the guidance of the government, with the help of the media and participation by the public, together with the extensive use of the power of the media network, multiple channels and forms of publicity should be adopted to make the public understand the necessity of developing hospice care [30, 31]. Multilevel publicity activities for hospice care can be carried out, such as quality education, public welfare activities, and spiritual civilization construction, to encourage the public to participate in the construction of hospice care, guide the public to correctly understand and accept death, and adopt reasonable ways of filial piety. In addition, death education should be carried out in remote areas or economically underdeveloped areas to improve local people's awareness of hospice care. Based on respecting local customs, death should be faced scientifically.

#### 4.2.2. Strengthen the Education and Training of Hospice Care Professionals, and Give Full Play to the Role of Social Volunteers

The education department should attach importance to on-campus education of hospice care, introduce hospice care in the school curriculum for medical students, and equip professional hospice teachers in medical colleges and universities to enhance their awareness of hospice care. The medical institutions and superior departments of public affair management should cooperate with each other to establish a sound mechanism of continuing education, training, certification and supervision for hospice care professionals; performance management and incentive policies should be implemented to constantly broaden the platform for education, training and certification, and build a professional service team. Volunteers can be organized to provide services in the way of "caring for themselves" [30]; the accumulated service time should be recorded and certain economic compensation be given. Improving the compensation, incentives and training system for social volunteers and making full use of human resources is helpful to lay the foundation for promoting the specialization of hospice care services in China.

#### 4.2.3. Form a Perfect Linked Hospice Care Service System

(1) With multi-sectoral interventions, a reasonable system of hospice care under the hierarchical diagnosis and treatment service can be formulated, such as set standards of hospice care institutions, patient admission systems, referral systems, supervision system, charging standards, etc., which should be uniformly implemented after being registered and approved by the superior health administrative department. In the form of government leadership, department cooperation and public participation, the relevant system and assessment mechanism of hospice care institutions should be standardized to ensure the regulated operation of the institutions to promote the orderly and healthy development of these institutions. (2) Based on the needs of patients and their families for hospice care, by referring to the implementation plan of a nursing

clinical pathway in combination with the actual situation of the region, standardized content of hospice care services can be formulated, such as psychological counseling of patients and their families, pain control, complication management and basic nursing, which can provide high-quality hospice care services for the elderly and their families at the end of their life. (3) Relevant laws and regulations should be promulgated to further improve the social security system. Perfect laws and regulations are an important guarantee for medical staff to carry out hospice care activities, the basis for guiding the public to establish a scientific concept of death and a correct concept of filial piety, reflecting the final respect for "human beings". Further improving the medical insurance system, including hospice care services into the scope of national medical insurance reimbursement, and reducing the economic burden so that the public can safely choose hospice care services at the end of their lives, which is a manifestation of social civilization and progress of a country, are necessary.

### 4.3. Limitations

Although the conclusion of this study is based on investigations, SWOT analysis is easily affected by subjective factors. The research on how to effectively link and divide the work of hospice care services provided by hospitals, communities and homes is still in the stage of idealization, lacking practical operation effect research; therefore, there are some limitations. Based on SWOT analysis, this paper provides basic research for the standardized construction of a linked "hospital-community-home" hospice care demonstration center under the hierarchical medical system. In the future, the specific operation mechanism of the three-unit link should be discussed.

## 5. Conclusions

Under the hierarchical medical system, the three-unit link of a "hospital-community-home" hospice care service model has broad prospects in the future practice of hospice care service. It can organically integrate medical resources at all levels, give full play to their respective advantages, and provide diversified and multi-level services to the people. It can also meet the growing demand for hospice care services under the background of aging, so as to promote the construction of the national health and elderly service system. However, we must also realize that its development is still constrained by various factors, such as the weak technical force of primary medical institutions, insufficient level of practitioners, the low public acceptance, lack of legal and policy support, and so on. Therefore, future work will require a comprehensive assessment of the impact of this model on the aspects of health policy, economy, morality and culture, and a study of the relevant mechanisms for carrying out practical operations is needed.

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