

# Aligning Vocational Health Education with Rural Revitalization: Strategies for Grassroots Talent Cultivation in Medical and Health Colleges

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**Abstract:** *This study examines the intrinsic relationship between the rural revitalization strategy and primary medical and health services, with a systematic analysis of the weak links in the development of the primary health workforce. Focusing on the role and practical challenges of medical and health vocational colleges in cultivating primary health talents, the study identifies several key problems, including the limited scale of special medical student programs and the lack of primary-care-oriented elements in the training of non-specialist talents. In response, this paper proposes targeted improvement measures, such as deepening the education of special medical students, strengthening the cultivation of professional qualities essential for primary health work, integrating primary-care-oriented components into the curriculum, developing a novel continuing education model, and establishing an interactive platform between vocational colleges and primary medical and health institutions. The ultimate goal is to enable medical and health vocational colleges to better serve the cultivation of primary health talents and to provide robust human resource support for the successful implementation of the rural revitalization strategy.*

**Keywords:** Rural Revitalization, Vocational Colleges, Primary Health Talents, Serving the Grassroots.

## 1. Introduction

Since the 19th National Congress of the Communist Party of China officially put forward the rural revitalization strategy and expounded on the importance of solving the issues concerning agriculture, rural areas, and rural people, finding suitable ways to promote the development of agriculture and rural areas and narrow the development gap between urban and rural areas has become an important issue [1]. Primary medical and health services play an important role in the rural revitalization strategy. By strengthening primary medical and health services, not only can the health level of farmers be improved, but also the sustainable development of rural social economy can be promoted, providing a solid foundation for the realization of the goals of the rural revitalization strategy. Therefore, this study starts from the relationship between the rural revitalization strategy and primary medical and health services, discovers the problems existing in the cultivation of local primary health talents through the investigation of the cultivation status of primary health talents in medical and health vocational colleges in Jiangsu Province, and puts forward reasonable suggestions.

## 2. Rural Revitalization Strategy and Primary Medical and Health Services

### 2.1 Primary Medical and Health Services are the Basic Guarantee for Rural Revitalization

Rural revitalization is an important strategy in the new era of China. Its core goal is to achieve all-round construction and progress in rural areas, which not only involves the development of the agricultural and rural fields, but also relates to the quality of life of rural residents and the all-round progress of society. As one of the basic guarantees for rural revitalization, primary medical and health services play an irreplaceable and important role. In the process of rural revitalization, health is one of the most precious resources.

The construction of the primary medical service system directly affects the physical health of rural residents, enabling farmers to receive timely medical treatment when they are ill, improving their production capacity and labor productivity, and providing important social and economic support for rural revitalization. Therefore, it is necessary to continuously promote the sinking of basic public medical service resources and focus on strengthening weak links. The report of the 20th National Congress of the Communist Party of China put forward the strategy of comprehensively promoting rural revitalization [2]. The "No. 1 Central Document" in 2023 put forward the key tasks for comprehensively promoting rural revitalization, requiring the optimization of the construction and services of county, town and village-level hospitals in rural medical and health care, eliminating service gaps; promoting the overall planning of medical and health resources at the county level, strengthening the construction of medical and health care and medical security service capabilities at the rural two levels; overall solving the problems of rural doctors' salary distribution and treatment guarantee, and promoting the professionalization and standardization of the rural doctor team [3].

### 2.2 The Shortage of Primary Health Care Professionals is the Biggest Shortcoming in Medical and Health Services

In Jiangsu Province, a region with extremely developed county-level economies, despite certain achievements in medical and health services, it still faces problems of shortages in "human, financial, and material resources". For example, there is too little capital investment, insufficient business premises, and it is difficult for primary medical institutions to meet national standards. However, what is more prominent is the insufficient total quantity and service capabilities of the primary health talent team. The weak primary health talent team is difficult to support a large number of tasks such as vaccination, physical examinations, chronic disease management, and rehabilitation, and it is difficult to achieve home visits. The quality of the primary

health talent team is also a problem that Urgently needed to be solved. There are deficiencies in aspects such as office capabilities, computer use, doctor class communication, and collaborative communication, which directly affect the overall service level and work efficiency of the primary health talent team. A long time, problems such as insufficient total quantity, low quality, unreasonable structure, and low income of the primary health talent team have not been effectively solved, resulting in frequent brain drain. This not only restricts the development of primary medical and health services but also affects the rights and interests of the people to enjoy high-quality medical services [4].

### **3. The Current Situation of Medical and Health Vocational Colleges Serving the Training of Local Grassroots Health Talents**

#### **3.1 The Achievements and Problems Coexist Among Rural Free Medical Students with Targeted Orders**

Since the six ministries and commissions including the National Development and Reform Commission, the former Ministry of Health, and the Ministry of Education issued the "Implementation Opinions on Carrying out the Free Training of Rural Order-based Special Medical Students" in 2010, the training of rural order-based free medical students (hereinafter referred to as special medical students, and non-rural order-based free medical students are called non-special types) has undergone 13 years of practice and has received high attention from the government, universities, society, and academia [5]. The free training of special medical students is a major measure to improve the level of primary medical services, strengthen the construction of the general medical team, and supplement primary medical talents [6]. Special medical students are the successors of the "guardians" of primary health undertakings. The effectiveness of the quality construction of this team directly affects the vital interests of the people and has a profound impact on the level of primary medical services, the overall development of medical reform, and the progress of all-round rural revitalization [7].

There are still problems with the special medical student program, such as limited scale and suboptimal major settings. Among the 11 higher vocational colleges in Jiangsu Province that recruit medical and health majors, only 4 colleges offer the cultivation of special medical students, mainly covering 5 majors including clinical medicine, preventive medicine, traditional Chinese medicine, medical imaging technology, and acupuncture and massage. The largest number of enrolled students is 420, and the smallest is only 80. According to the setting standards of township health centers at all levels, the special medical student program can be further expanded in terms of enrollment colleges, majors, and numbers. For example, majors such as pharmacy, traditional Chinese medicine, medical imaging technology, rehabilitation therapy technology, and public health management can be added. In addition, special medical students have problems such as low professional identity and weak willingness to serve at the grassroots level. The reasons are related to their initial motivation for applying and the lack of distinctiveness in the special cultivation characteristics of colleges and universities [7]. The low professional identity directly leads to problems such as low compliance rates and brain drain among students

going to the grassroots level after graduation.

#### **3.2 There is a Serious Lack of Grass-roots Elements in the Cultivation of Non-specialized Talents in Higher Vocational Colleges**

In the cultivation of medical and health talents in higher vocational colleges, the design of the talent cultivation plan is the key link determining the professional direction and cultivation effectiveness. This study found through research on 40 talent cultivation plans of 8 major non-specialized majors including clinical medicine, nursing, pharmacy, and rehabilitation therapy technology in some higher vocational colleges in Jiangsu Province that recruit medical and health majors that the proportion of conducting grass-roots health talent demand research and inviting grass-roots health units to participate in the revision of the talent cultivation plan does not exceed 20%. In the cultivation of non-specialized health talents, there is a serious problem of lacking rural grass-roots health elements. This problem not only affects the comprehensiveness and practicality of talent cultivation, but also leads to the disconnection between talent cultivation and grass-roots medical and health services. The direction of health talent cultivation is too theoretical and divorced from the actual needs of grass-roots health work. Grass-roots health units are key partners in cultivating high-quality health talents, but the current situation shows that the establishment of this relationship is not sufficient. The lack of participation of grass-roots health units makes it impossible for the talent cultivation plan to fully consider the skill requirements of grass-roots actual work, making it difficult for students to adapt to the actual needs of grass-roots health services after graduation.

#### **3.3 There is Insufficient Employment Guidance for Medical Students In Higher Vocational Colleges to Grass-roots Health Units**

The ideological awareness and behaviors of higher vocational college students are largely influenced by teachers' education and teaching. In the cultivation of non-specialized talents, the proportion of teaching teachers taking students to primary health care units during course internships is relatively low, and the introduction of primary health care cases in the classroom is insufficient. In terms of students' employment guidance, the career planning courses for students do not enable them to understand the development prospects and requirements of different occupations. The career plans guided for students are often "grandiose" and divorced from the students' background of origin and the actual employment market. In school-enterprise cooperation, schools often associate with well-known hospitals and enterprises, failing to provide students with more internship and work opportunities at the grassroots level and enabling students to understand the importance and broad prospects of grassroots work in actual work.

#### **3.4 The Content and Form of Continuing Education for Grass-roots Health Workers are Single and Lack Continuity**

Continuing education is an essential part of the higher education system and has made significant contributions to

the cultivation of health talents in China. All higher vocational colleges surveyed in this study have carried out non-full-time academic education at the undergraduate level. However, in actual academic education, students and the organizers of academic education often only focus on the final result of obtaining a degree, and the students' knowledge and skills have not been correspondingly improved. Regarding non-academic education, various types of training are often short-term training commissioned by departments such as the National Health Commission, lacking targeted and continuous training programs, which cannot improve the management level of grass-roots health service personnel nor help them improve their professional level.

#### **4. Strategies for Higher Vocational Colleges of Medicine and Health to Serve the Cultivation of Grassroots Health Talents**

##### **4.1 Higher Vocational Colleges Need to Enhance Their Social Service Capabilities**

Social service is an important social responsibility of higher vocational colleges, which acts as a bridge connecting schools and society. By giving full play to the advantages of the school's characteristic majors, high-quality teaching resources, and dual-qualified teaching staff, higher vocational colleges are committed to providing the services needed for the development of local society, thereby demonstrating their value and winning social recognition and resource support. In higher vocational colleges of medicine and health, cultivating grass-roots health talents is one of the core tasks of their social service. This not only relates to the school's social responsibility but also provides useful suggestions for the government and is an inherent requirement for cultivating a grass-roots health talent team that "can go down, do well, and stay".

Vocational colleges and universities provide conditions for the cultivation of grass-roots health talents by offering professional training and academic upgrading. Through the unique professional settings and curriculum systems that are close to social needs, students can deeply understand the particularity and actual needs of grass-roots health services during their school years. This grass-roots-oriented cultivation model not only helps students better adapt to the working environment of grass-roots health services, but also lays a solid foundation for the school to play a greater role in social services.

The social services of vocational colleges and universities should also include the role of providing strategic suggestions for the government. By deeply understanding the cultivation needs of grass-roots health talents, the school can provide professional and practical suggestions for the government and comprehensively guide the cultivation of health talents. This active attitude of participating in the planning and policy formulation of grass-roots health services not only reflects the school's sense of social responsibility, but also wins more social recognition for the school.

##### **4.2 Develop a Professional Quality Framework for Health Talents and Continue to Promote the Education of Specialized Medical Students**

Vocational colleges and universities need to construct a professional quality framework for grass-roots health talents based on the development direction of the medical industry and the needs of grass-roots health units, and use it as the basic criterion for the talent cultivation plan of specialized medical students, leading the reform of the grass-roots health talent cultivation model [9]. On the basis of this professional quality framework, actively carry out "extensive visits and investigations" on the needs of grass-roots health talents, and improve the degree of fit between the cultivation of health talents and the needs of grass-roots health units. Expand the scope of specialized medical students, such as extending it to general practitioner order classes, community rehabilitation nursing order classes, and adult academic order classes for grass-roots health talents.

In the whole process of cultivating specialized medical students, we should strengthen the publicity of the policies for specialized medical students, make full and reasonable use of courses such as professional ideological education, innovation and entrepreneurship, and career planning, and increase students' sense of professional identity and benefit. The publicity and education in the whole process imperceptibly strengthen the depth of professional emotion, the degree of identity and the degree of self-worth realization of specialized medical students, and finally the willingness of students to work at the grass-roots level increases, and they are willing to fulfill their contracts at grass-roots health units.

##### **4.3 Deeply Cultivate the "sentiment for agriculture, rural areas and farmers" in Talent Cultivation and Strengthen the Introduction of Grass-roots Elements**

Vocational medical colleges should strengthen cooperation with grass-roots health units, establish a sound communication mechanism, conduct demand research regularly, and ensure that the introduction of grass-roots elements in the talent cultivation plan conforms to the actual needs of grass-roots health care. Teachers in vocational medical colleges should also be able to conduct research at the grass-roots level, understand the needs of grass-roots health talents, and regard grass-roots health units as the second classroom and practice places for internships. Teachers should deeply implant the "sentiment for agriculture, rural areas and farmers" in the ideological and political education of medical professional courses, and guide students to inherit the spirit of "combining knowledge with practice" in farming and reading. Vocational medical colleges should combine sentiment education with medical professional education, encourage students to participate in grass-roots internships, practice, summer social practice and labor practice during their school years, have early contact with grass-roots health care services, cultivate practical operation abilities and practical experience, and enhance their ability to adapt to grass-roots work. By introducing these elements and actions, the positive image of grass-roots health care can be shown to students, so as to cultivate students' awareness of serving, taking root in and loving the grass-roots, and make them willing to contribute to the development of grass-roots medical and health care.

##### **4.4 Create a New Continuing Education Model Suitable**

### for Grass-roots Health Care Workers

Vocational medical colleges should fully consider the actual work needs and characteristics of grass-roots health care workers, create a new continuing education model that is close to the actual needs of grass-roots health care workers and is flexible and diverse, so as to enable them to continuously improve their qualities and skills in their work. Vocational medical colleges can form a "continuing education consortium" to complement each other's advantages, establish an "Internet +" continuing education public service platform, improve the "credit bank" system for continuing education, and build a continuing education learning, examination, evaluation and quality supervision system to support the lifelong learning of grass-roots medical and health talents, so as to provide personalized learning services for the majority of learners [10].

In the process of promoting the construction of the continuing education system for health professionals, higher vocational colleges should actively promote the four-party cooperation among the government, the pharmaceutical industry association, and grass-roots health institutions. For example, they can jointly establish grass-roots health professional committees of various associations and strengthen the active participation of industry societies in continuing education, and establish them as an essential part of the education system. Try to build a "continuing order-based" training system that continues from the special program of rural order-oriented free medical students, including two paths: academic education and non-academic education, to specifically help improve the capabilities and academic levels of grass-roots health technicians. At the same time, encourage industry experts to actively participate in continuing education lectures and training, and integrate the professional qualification assessment of industry associations into the learning process of students [11].

Cultivate distinctive brands for continuing education and create highlights in the cultivation of grass-roots health professionals. For example, establish precise and distinctive continuing education brands in the directions of appropriate technologies for grass-roots traditional Chinese medicine rehabilitation, postpartum rehabilitation technology, chronic disease monitoring technology, etc., which can quickly create medical services with remarkable curative effects and achievements in specific fields, and enhance the confidence and sense of gain of higher vocational colleges, grass-roots health institutions, and grass-roots health practitioners.

#### 4.5 Build an Interactive Platform Between Higher Vocational Colleges and Grass-roots Medical and Health Institutions

Higher vocational colleges have achieved remarkable results in "integration of production and education, collaborative cultivation of talents", but the "integration of production and education" lacks the participation of grass-roots medical and health institutions, which makes students fail to grasp the current situation and dynamics of grass-roots medical care and affects students' understanding and choice of grass-roots medical and health undertakings. Higher vocational colleges should establish a closer communication mechanism in

strengthening cooperation with grass-roots health institutions to ensure a close fit with the actual needs of grass-roots health. Take rural grass-roots medical and health service institutions as the object of "integration of production and education", build an interactive platform between higher vocational colleges and grass-roots medical and health institutions, and integrate policy publicity, professional classes, curriculum ideology and politics, professional practice, skill training, and employment recruitment into this platform to show students the rich forms of grass-roots health professionals serving rural revitalization, and attract and stabilize medical graduates to go to the countryside and to the grass-roots.

### 5. Conclusion

Primary healthcare services play an irreplaceable and crucial role in the rural revitalization strategy. By strengthening primary healthcare services, not only can the health level of farmers be improved, but also the sustainable development of rural social economy can be promoted, providing a solid foundation for achieving the strategic goals of rural revitalization. The key to rural revitalization lies in talent. Vocational medical and health colleges are the main frontiers for cultivating primary healthcare talents. Higher vocational colleges should take cultivating virtues and talents as the fundamental, take the cultivation of qualified primary healthcare talents and the promotion of healthy rural construction as their mission, and cultivate more healthcare talents who know and love agriculture and serve the grassroots. Higher vocational colleges should serve as the think tanks for the government and society. Through their social service capabilities, they should encourage the government to increase its support for primary healthcare services, promote the full implementation of the rural revitalization strategy, and achieve the all-round progress and sustainable development of rural society.

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