

# Research on the Present Situation and Countermeasures of Health Human Resources Development at Grass-roots Level in China

Qi Zhang <sup>a</sup>, Yibing Chen <sup>b</sup>

College of Pharmacy, Shandong University of Traditional Chinese Medicine, Jinan 250355, China

<sup>a</sup>Zq010505@163.com, <sup>b</sup>cyb292@163.com

**Abstract.** China's primary medical and health service level is improving day by day, but it is still at a relatively primary level. In this paper, more than 30 articles reflecting the problems, present situation and prospects of primary health human resources in China have been studied, and various existing problems of primary health human resources have been analyzed. Corresponding solutions and policy suggestions have been put forward for different levels of problems, which will help the scientific development of primary health care.

**Keywords:** Human resources; Primary medical care; Health Personnel; Balanced development.

## 1. Introduction

With the continuous development of primary health care in China, the demand for high-quality health services from the grassroots is increasing. At present, there are still many problems in China's health system, especially in the human resource management of primary medical services, such as difficulty in talent recruitment, confusion of human structure, and low skill of medical staff. However, the level of primary health care is closely related to the national happiness index, so it is very important to find appropriate policies and measures to improve the level of primary health care services according to different levels and environments.

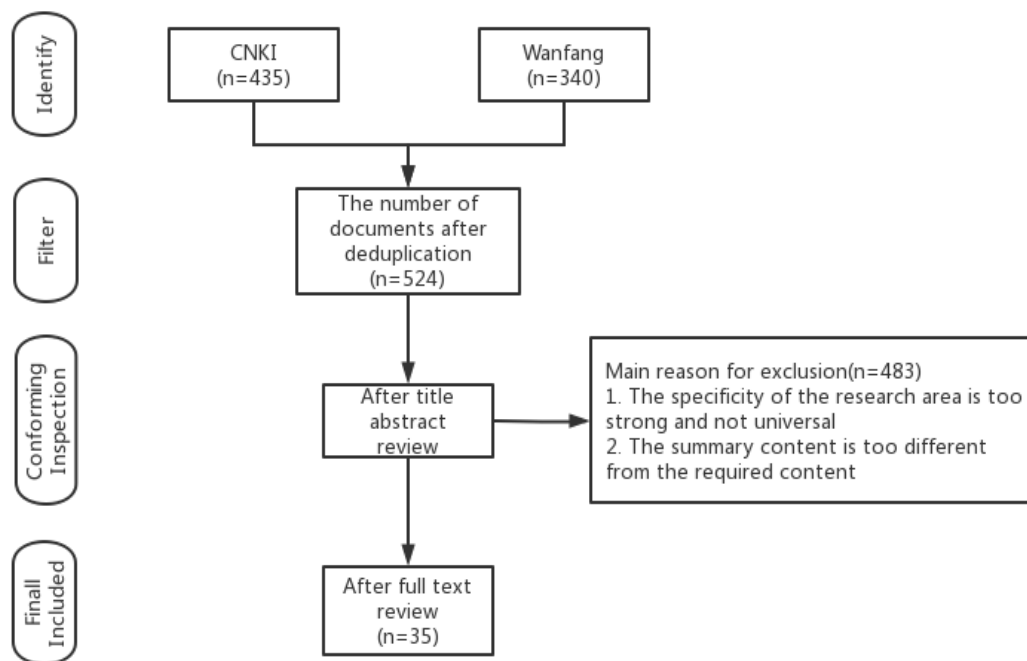
## 2. Materials and methods

### 2.1 Retrieval strategy and retrieval results

In this study, the keywords such as "primary medical care", "rural medical care", "health", "community health", "health human resources", "human resources development in public institutions", "countermeasure analysis", "incentive strategy", "configuration fairness" were used to construct the retrieval expression, Take the search expression as an example: the search condition is "theme or keywords or title = 'medical' or theme or keywords or title = 'rural medical' or theme or keywords or title = 'community health' or theme or keywords or name = 'health human resources' or topic or keywords or title = 'institution human resources development' or topic or keywords or title = 'countermeasure analysis'" source category, Release date limited between 2004 and 2001, A total of 524 relevant documents were retrieved, Thirty-five articles were finally included as references.

### 2.2 Inclusion and exclusion of the literature

Inclusion criteria: (1) current situation research, which can describe the current status of grassroots health human resources in China. (2) There are countermeasures analysis, in the theme, summary or key words include incentive, development, policy suggestions and other words. (3) Publicpublished journal literature as literature type. Exclusion criteria: (1) the stated problems have been basically solved, and the proposed countermeasures are no longer of practical significance. (2) The particularity of the research area is too strong for universality.



1Figure 1. Studies the selection process

### 3. The status quo analysis

#### 3.1 The distribution of the number of primary medical and health personnel varies significantly

With the rapid development of economy, the market demand of primary medical and health personnel is increasing day by day. Although the total number of primary medical and health human resources in China has been rising steadily in recent years, the regional development is still unbalanced. The distribution of personnel varies significantly due to geographical location, economic conditions and other factors. According to China Health and Family Planning Statistical Yearbook 2015, the quantity and quality of health human resources in economically developed areas (such as Beijing, Shanghai, Guangzhou, Shenzhen, etc.) are leading in China, with one general practitioner per 3000 persons, intermediate and above titles and college degree, grassroots health service personnel are seriously insufficient, with low degree and title structure, and the brain drain is serious.

#### 3.2 The professionalism of primary medical and health human resources is insufficient

##### 3.2.1 Low educational level

At present, the level of primary medical and health services in China is still in the initial stage. Most of the primary health service personnel mainly have bachelor's degree and junior college degrees, and their professional knowledge is not deep enough. 23.8% to 49.3%, 16.3% have technical secondary school), 16.3% to 57.2%; doctors (high school), 43.3% to 57.8%, and 4.57% to 23.0%. There is still a big gap with the requirements of the Outline of China's Health workforce Development from 2001 to 2015.

##### 3.2.2 Personnel specialty and job requirements are not match

According to Song Aiqin [2-4] According to the study of grassroots health personnel in China, about 10.0% to 22.4% of the total cop. of general practitioners, and 27.2 to 50.0% of specialists can basically meet the medical needs of residents, but less than 30% are engaged in preventive medicine such as health education, public health, family planning and rehabilitation health care. After the study of grassroots health human resources in 10 provinces and cities, Tang Longmei believes that nursing staff in China, some rural areas are only about 1:0.3, and the WHO is 1: 2; by the limitations of

medical division and education in China, there are almost no professionals in behavioral science, medical psychology and social medicine, it is difficult to achieve "six in one" primary health care function.

### **3.3 Human resources structure is chaotic**

Whether primary medical institutions can build a good human resource structure is the key to improve the service quality of primary medical institutions and introduce and retain highly professional medical talents. However, currently the human resource structure of primary medical institutions in China is still relatively chaotic. Wang Mengying, et al., investigated and analyzed the primary medical and health human resources in Henan Province. It was found that there were chaotic health personnel hierarchy and unreasonable structure within the grassroots health service system; Dai Mengna and others studied the allocation of grassroots health human resources in Shandong Province. After the new medical reform was found that the age structure gap of grassroots health human resources in Shandong Province gradually widened, the age group moved backward, the lack of young people, a significant aging trend of human resources, the age structure is still unreasonable; Chen Qiaoling. After investigating the human resources survey of primary medical institutions in Chengdu, others found that the performance appraisal standards and assessment operations of primary medical institutions were extensive, and the proportion of performance pay was low, so it was difficult to stabilize high-quality talents.

### **3.4 Recruitment high quality talents is difficult**

Influenced by economic and regional factors, their workload and work pressure is not proportional to the income, affecting their quality of life; and the uncertainty of local grassroots medical workers, grassroots medical and health service institutions are more difficult to attract and retain talents, seriously affecting the improvement of grassroots medical and health service capacity and the people's satisfaction with medical service. In addition, the working environment of primary medical institutions is relatively simple, and the quality of related equipment is poor, which also becomes one of the factors that are difficult to retain high-quality talents.

## **4. Development strategy**

Du Shuxia in the effective way of promoting human resource development, three levels of human resource development are proposed: social development, intermediate development and self-development. Chen Dilin Taking Tibet as an example, the method of human resource development was divided into the macro level and the micro level. Among them, the macro level coincides with the perspective of social development, and the micro level coincides with the intermediate development and self-development levels. At present, the basic health human resource development methods studied in China are mostly focused on the social development level.[6,10-14]

The above human resources development methods can also be deduced to the grassroots health human resources, so the grassroots health HR development methods are roughly divided into social development, intermediate development, including the government, grassroots health institutions, grassroots health personnel; and each level has corresponding characteristics and development methods as shown in Table 1.

**1Table 1.** A List of Grassroots Health Human Resource Development Methods

administrative levels	main body	characteristic	development method
<b>Social development level</b>	government	Advantages: The government is in a macro perspective and plays a leading role in human resources development. Disadvantages: Low policy effect; lag; policy universality is sometimes difficult to solve the local particularity	<ol style="list-style-type: none"> <li>1. Reasonable allocation of grassroots health human resources</li> <li>2. We will improve incentive mechanisms</li> <li>3. We will improve the guarantee mechanism</li> <li>4. We will increase government input to improve our input direction</li> <li>5. We will strengthen public opinion and publicity</li> <li>6. We will improve the structure of grassroots health teams</li> </ol>
<b>Intermediate development level</b>	Grassroots health institutions	Advantages: Small implementation quickly; special to solve the grassroots problems. Disadvantages: the macro policy is easy to appear "one size fits all"; vulnerable to local influence management level.	<ol style="list-style-type: none"> <li>1. Innovation of human resource management concept</li> <li>2. We will improve the compensation management mechanism</li> <li>3. Strengthen on-the-job training and continuing education</li> <li>4. Long-term primary medical services</li> <li>5. Strengthen the spiritual incentive and the target incentive</li> <li>6. Correct grasp of national policies</li> </ol>
<b>Self-development level</b>	Grassroots health personnel	Advantages: Easy to stimulate endogenous power; easy to form long-term power; from the personnel. Disadvantages: Bad control affected by personal ideological consciousness; strong stage difficult to insist; more abstract difficult to evaluate	<ol style="list-style-type: none"> <li>1. Focus on improving the awareness of service in the school stage</li> <li>2. Strengthen the professional practice ability during the internship</li> <li>3. In the employment stage, we will actively use our policies and systems to balance our interests and dedication</li> </ol>

#### 4.1 Level of social development

To give full play to the leading role of government departments in human resources development, Zhang Zheng It points out that the public attribute of human resource development determines that the government is the core subject of human resource development. (1) Reasonable allocation of grassroots health human resources: adhere to the principle of fairness of health human resources allocation, and do a good job in overall planning; We will adjust the distribution of health human

resources, promote the sinking of high-quality resources, attract medical and health talents to the western region through active policy tilt and guidance, gradually narrow the differences between the eastern, central and western regions, and promote regional coordinated development. (2) Improve the incentive mechanism: improve the incentive mechanism, provide better treatment for all grass-roots health personnel, increase their economic income, and thus stabilize the existing grass-roots health team We should also attract new medical and health talents to join. At the same time, we should dare to reflect the differences and give more preferential incentive policies to health talents who have served long time and contributed greatly at the grass-roots level, rationalize the interests of grassroots health personnel, income pay proportional. (3) Improve the security mechanism: such as providing paid leave, five social insurance and one housing fund, housing subsidies, and routine physical examination; They should not only consider their social attributes, and provide perfect and reasonable supporting policy guarantee for their families. (4) Increase the financial input and optimize the input direction: increase the government financial input, improve the supporting hardware facilities of grass-roots medical care, and stabilize the grass-roots health team; The focus of financial input should be shifted from treatment to prevention; Increase the investment in grassroots medical and health care informatization, make full use of external technology to solve the problems of poor level and insufficient service capacity of grassroots medical care, and truly "reduce the burden and increase the efficiency" for the grass-roots level; Strengthen the information construction, and promote the optimization of compensation management on the basis of advanced information technology; Supporting the Internet + medical care to gradually explore "telemedicine" and "talent sharing" are good ways to alleviate the imbalance of medical resources between urban and rural areas. (5) Strengthen the construction of public opinion and improve the social environment: strengthen policy publicity, improve the public opinion environment of primary medical care, strengthen the social understanding of primary medical care, actively publicize the system of hierarchical diagnosis and treatment and primary diagnosis system, so that the public can fully understand the importance of grassroots health institutions; Strengthen the publicity and education of the grass-roots people, promote the "reasonable expectation" of the grass-roots patients to the grass-roots medical care, reduce the contradiction between doctors and patients, and thus improve the work enthusiasm of the grass-roots health personnel. (6) Improve the structure of grass-roots health teams: streamline administration and delegate power, and delegate personnel power (delegate the power to specific employers), "Fixed posts and no personnel", reduce the vacancy rate of primary-level medical and health institutions; Training of medical students with undergraduate degree or above at the grass-roots level, designated enrollment, targeted training, and agreement employment Improve the overall educational level of grassroots health personnel; train grassroots general medicine talents, and explore a new mode of general medicine personnel training To change the mode of training general practitioners in universities across the country, increase the number of enrollment, recruit medical talents, train grassroots medical and health personnel, and sign general practitioners with targeted services. We will improve the proportion of medical care workers and strengthen the ranks of nursing staff Change the social prejudice against nursing workers, improve the status of nursing workers; optimize the structure of health human resource allocation, and guide the scientific development of medical care proportion.

#### 4.2 Intermediate development level

The main body of the middle development level is the primary medical and health institutions. (1) Innovate the concept of human resource management, and modern human resource development requires paying attention to the implementation of human development, Human resource management follows the principle of people-oriented Human-centered development and management, human resource management work should fully respect human factors. (2) Improve the salary management mechanism and improve the salary management level; Strictly standardize the evaluation mechanism [17-18, 21, 30-33], Combined with the grassroots working hours and working strength and other performance assessment and open, dare to open the salary gap, income is paid by

post, paid by performance. (3) Strengthen in-the-job training and continuing education [6, 10, 13, 22, 15, 17-18, 25, 34] Training practical clinical technology, advanced medical instrument use technology and other to substantially improve the quality of grassroots health personnel; training general personnel, to achieve "one person with multiple posts" [28-29] Fully develop the existing grassroots health human resources, strengthen moral education, enrich the spiritual world of grassroots doctors, improve their dedication consciousness; strengthen grassroots preventive medical education, train preventive medical talents, and ensure the stability of preventive health care team [11, 35]; Various forms of training, such as remote discussion with third-class A hospitals, expert lectures, etc. (4) The level of primary medical service should be long-term, train backbone talents, lead the old with the new, introduce academic leaders and technical backbone, introduce one person, drive one project, and fill the gap in one side. Medical institutions at all levels and regions should realize information networking, strengthen information interconnection, and resource sharing, so as to better develop grass-roots health human resources with strong and weak.(5) Pay attention to spiritual incentive and target incentive, provide humanistic care for grassroots in-service doctors, give more honors and commendations, give spiritual support and respect, and formulate scientific institutional development goals and staff promotion goals [30, 33]. (6) Correctly study and understand the national policies, avoid "one size fits all", internalize the preferential policies according to the specific situation of the health staff of the institution, and better develop human resources. Management will return to management to reduce the burden on grassroots doctors.

### 4.3 Self-development level

The level of self-development is mainly divided into three stages. (1) in the period of school medical students, we should not only learn professional skills well, but also pay attention to the cultivation of moral education quality. Studies have shown that most school medical students hold a wait-and-see attitude towards whether to choose a medical career in the future, value the economic situation, and are not active in social practice activities All these reflect the emergence of medical students still lack of service consciousness in the stage, which is not conducive to the introduction of primary medical personnel in the future. Therefore, under the guidance of the government and schools, medical students should improve their moral education quality, actively participate in the social practice such as "three to the countryside" and "into the community", and strengthen their service consciousness.(2) During the internship, make a good career plan, clarify my own advantages and strengths, accurately position me, externalize my professional knowledge into ability and technology, and improve my medical practice ability.(3) Grassroots employment stage, make full use of the opportunities provided by the government and units, combine personal achievements, unit goals, national requirements, actively contribute to the grassroots, rationally arrange family and work according to preferential policies, fully grasp the incentive policies and training opportunities, actively select titles, actively participate in training, exchange meetings, improve their own ability and improve the overall level of grassroots health human resources.

## 5. Summary

In general, the existing literature believes that there are many problems in grassroots health human resources development, but it is not difficult to solve, and all reasonable suggestions are made at the end of the research

The comprehensive sorting out of the suggestions of the existing research on grassroots health human resources development can be classified into three levels: social development, intermediate development and self-development. These three levels are progressive and interactive, and determine whether the government policies are reasonable and perfect

Whether the primary medical institutions can implement and internalize the innovation, and whether the management system of the primary medical institutions is sound determines whether the grassroots health workers can develop and realize themselves. Only by integrating the three levels

and improving the development strategies at each level can we truly solve the development problems of grassroots health human resources.

## References

- [1] Chang Xiaohua. Research and policy suggestions on the current situation of grassroots health Human Resources in China [J]. Accounting of China Township Enterprises, 2017 (10): 130-131.
- [2] Song Aiqin, Zhai Jinghua, Liang Yajun, et al. Investigation on the status quo of health human resources and basic medical services in township health centers in Shandong Province [J]. China Rural Health Service Management, 2013,33 (3): 269-271.
- [3] Ren Guangxiang, Tu Dianzhen, Xu Xiangyang, et al. Investigation and analysis of the current situation of health human resources in township health centers in Guizhou Province [J]. Primary Health Care in China, 2013,27 (2): 19-21.
- [4] Tong Chi, Ma Yanan, Guo Junqiang, et al. Analysis and suggestions of health human resources in township health centers of a province [J]. Primary Health Care in China, 2012,26 (2): 23-24.
- [5] Xie Changjun, Xia Qin, Chen Fusheng, Li Yufeng. Current status of Human resources of grassroots health services in China [J]. Journal of the Logistics College of the Armed Police Police (medical edition), 2016,25 (05): 418-420.
- [6] Wang Mengying, Dou Hongli, Liu Yanhong, Li Yong. -- takes Henan Province as an example [J]. Primary Health Care in China, 2021,35 (07): 8-10.
- [7] Dai Mengna, Zhang Jianhua, Jing Qi, Yu Zhenjie, Zheng Wengui, Zhou Shan. Research on the Allocation of Grassroots Health Human Resources in Shandong Province after the Reform of the New Medical System [J]. Nursing Research, 2018,32 (02): 220-224.
- [8] Chen Qiaoling, Wei Yumeng, Yang Yan, Li Jiaojiao, Dou Fengman, Zhang Ruihua. Investigation on the Status of Health Human Resources in Primary Medical Institutions in Chengdu [J]. Primary Health Care in China, 2020,34 (02): 13-16.
- [9] Du Shuxia. An effective way to promote human resource development [J]. Human Resources, 2021 (16): 10-11.
- [10] Cui Dawei. Analyze the problems of health human resource allocation and improvement strategies [J]. China market, 2020 (16): 98 + 100.
- [11] Aiguri Mulati Khan, Gao Hongxia. Policy recommendations for the development of health human resources in poor rural areas of China [J]. Medicine and Society, 2010,23 (03): 51-53.
- [12] Li Xiangrong, Li Wenguang, Wang Cai, Li Xiangling, Tang Rong. Analysis of the current status quo and development countermeasures of grassroots health Talents in China [J]. China pharmacoeconomics, 2019,14 (01): 98-101.
- [13] Wu Yang, Zhang Zhengqing. Distribution status and Countermeasures of Health Human Resources in Nanjing [J]. Human Resource Development, 2019 (24): 27-29.
- [14] Gao Qian, Xu Liao, Wang Yong, Kang Qian, Jia Yang. Analysis of the Current Situation and Fairness of TCM Human Resource Allocation in the Grassroots Community Health Service Center of Shanghai [J]. Journal of Preventive Medical Intelligence, 2021,37 (09): 1280-1284.
- [15] Pan Yang. Research on Human Resource Development Strategies for Rural Health in Sichuan Province [D]. Sichuan University, 2007.
- [16] Li Liqing, Zhao Yulan, Zhou Xu, Lu Zuxun. Analysis of the Current Situation and Fairness of Health Human Resource Allocation in China [J]. Health Economy in China, 2020,39 (11): 44-48.
- [17] Shi Yiyun. Incentive measures to improve human Resource management efficiency in primary institutions [J]. China market, 2021 (11): 109-110.
- [18] Guo Zebao, Chen Junxing. Policy options for Rural Health Human Resource Development in China [J]. East China Economic Management, 2008 (11): 92-95.
- [19] He Shuming. Research on the Current Situation and Development Countermeasures of Rural Medical and Health Services in Chongqing under the Background of New Rural Construction [J]. Development and Research, 2008 (02): 62-66.

- [20] Su Binbin, Liu Shangjun, Lu Yanjun, Yao Fanghong, Zhao Yihao, Zheng Xiaoying. Research on the Evaluation of Grassroots Health Human Resources Allocation in China Based on Cluster Degree [J]. Health Policy Research in China, 2021,14 (04): 49-54.
- [21] Zhang Chen language. Research on Compensation Management Innovation in Human Resource Management of Primary Health and Medical Institutions [J]. Business, 2021 (13): 193-194.
- [22] wish Chang'e, Chen Zhaorong, Zhou Dandan, Song Baoxiang. Exploration of the construction path of grassroots health personnel team [J]. Medicine and Society, 2019,32 (09): 24-27 + 51.
- [23] Yue Hu, and Lin Lin Zhu. Investigation of Moral Education Development in Health Human Resources and Countermeasures [J]. Northwestern Medical Education, 2015,23 (04): 637-641.
- [24] Wang Mei, Guo Moning, Tan Peng, Leon. Research on the Current Situation of Health Human Resources in Beijing Community Health Service Center [J]. General Practice in China, 2021,24 (10): 1211-1217.
- [25] Yan Lin. Rural Health Human Resource Development Research [D]. Soochow University, 2010.
- [26] Chen Wenai, Luo iguo, Lian Yangjie, quasi. Thoughts on the current situation of human resources of general practitioners in primary medical institutions in the new era [J]. Rural Health in China, 2020,12 (11): 11-14.
- [27] Zhang Haixia, Luan Xiuling. Discussion on human Resources Development of health undertakings [J]. Practical Medical Technology Journal, 2004 (03): 355.
- [28] Sun Min. Analysis of the status quo and development of human resource management in primary medical and health institutions [J]. Gansu Science and Technology, 2021,50 (04): 80-82.
- [29] Cai Shuhuai. Research on the Status quo and Countermeasures of Human Resource Management in Grassroots Community Health Service Center [J]. China Management Informatization, 2019,22 (24): 80-81.
- [30] Yang Sumei. On Incentive Strategies in Human Resource Management of Primary Health Care Institutions [J]. China market, 2019 (25): 91 + 111.
- [31] Ye Yingmei, Hu Yunjiao, Lao Zhenxiong. Analysis of health human resource allocation in primary hospitals under hierarchical diagnosis and treatment [J]. China Urban and Rural Enterprise Health, 2020,35 (02): 78-80.
- [32] Zhu Youfang, Lai Ruinan. Exploration of health Human Resources Development and management under the new situation [J]. Health Economy Research, 2004 (06): 47-48.
- [33] Zhao Jing. On Incentive Strategies in Human Resource Management of Primary Medical and Health Institutions [J]. China Sankei, 2021 (15): 188-189.
- [34] Wang Yanchun. Training and development of human resources in public institutions [J]. Business Culture, 2021 (15): 116-117.
- [35] Shan Baoshun, Zou Yuanjun, Zhang Tingting, Wang Singh, Zou Hao. Current status of Human resources of basic public health services in primary medical institutions [J]. Electronic Journal of General Stomatology, 2020,7 (04): 78.