

# Research on the Current Status of Talent Teams in Public Healthcare Institutions in District W

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**Abstract:** This study aims to investigate and analyze the staffing within public healthcare institutions in District W, identifying issues and limitations in the number and structure of healthcare personnel that constrain the development of the healthcare sector. The objective is to provide a theoretical basis for strengthening the construction of the primary healthcare workforce in District W. Through literature review, questionnaire surveys, and interviews, the study statistically analyzed the quantity and structure of the healthcare workforce within public healthcare institutions in District W. It also investigated multiple dimensions such as job satisfaction, promotion opportunities, performance evaluation systems, and training needs of healthcare professionals. Among the 286 healthcare professionals within public healthcare institutions in the district, only 2.45% hold a postgraduate degree. Approximately half of the personnel are aged between 46-55 years, with those holding senior professional titles predominantly within this age group. Personnel with less than 10 years of service are all at the junior professional level, while those with intermediate and lower professional titles are mainly aged between 36-55, comprising 68.89% of the total. The questionnaire results indicate that about half of the staff within public healthcare institutions in District W are dissatisfied with the current salary system, promotion and evaluation system, and performance appraisal system. Public healthcare institutions in District W face issues such as imbalanced educational and age structures among personnel, dissatisfaction with the current salary, promotion, and performance evaluation systems, and inadequate training effectiveness. Strengthening the construction of the primary healthcare workforce in District W is an urgent necessity.

**Keywords:** Public healthcare institutions; healthcare personnel; salary system; professional title evaluation and promotion

## 1. Introduction

Public healthcare institutions are the main body of China's medical service system, characterized by accessibility, continuity, and comprehensive coordination<sup>[1]</sup>. In recent years, with the introduction of a series of national policies related to medical and health services, significant achievements have been made in the construction of primary healthcare services in China, particularly in the implementation of tiered medical services and the essential drug system. However, structural and specific issues still need to be addressed<sup>[2]</sup>. Healthcare personnel, generally referred to as medical and health professionals or technical personnel, play a crucial role in the development and construction of medical institutions, as emphasized in the Basic Medical and Health Promotion Law of the People's Republic of China<sup>[3]</sup>. However, the construction of grassroots healthcare personnel teams has not received enough attention, leading to severe shortages of healthcare personnel in many regions, especially in remote and underdeveloped areas<sup>[4]</sup>. The quantity, quality, and structure of healthcare personnel directly impact the capability and level of healthcare service institutions<sup>[5]</sup>. For instance, a study by Xie Sulan et al.<sup>[6]</sup> on the operational status of grassroots healthcare institutions in northern Jiangsu revealed a shortage of professional technical personnel and insufficient healthcare service capacity. Thus, rationally allocating healthcare personnel in grassroots public healthcare institutions and ensuring high-quality healthcare services are essential for promoting the development of healthcare in District W.

This paper focuses on the healthcare technical personnel within the public healthcare institutions in District W, thoroughly analyzing the current issues in talent construction, including the basic situation of the healthcare personnel team, salary system, professional title evaluation, performance appraisal mechanism, and training needs. The aim is to provide useful insights for improving the service

capabilities of grassroots healthcare personnel and optimizing policy formulation.

## **2. Subjects and Methods**

### **2.1 Study Subjects**

The study subjects include all in-service healthcare technical personnel within public healthcare institutions in District W, covering various positions such as medical, pharmaceutical, nursing, and technical posts.

### **2.2 Study Content and Methods**

#### **2.2.1 Literature Review**

A comprehensive review and evaluation of current policies supporting public healthcare institutions in China were conducted, collecting relevant national policies on public healthcare institutions and healthcare technical personnel to lay the foundation for this study.

#### **2.2.2 Quantitative Research**

Based on the basic personnel data from the 2023 annual report of the W District Health and Family Planning System, a detailed statistical supplement was conducted on the healthcare technical personnel within public healthcare institutions in District W. The data covered aspects such as professional title level, gender, education, age, and years of service. Additionally, a questionnaire survey was conducted to obtain the satisfaction levels of healthcare technical personnel regarding salary, professional title evaluation, performance appraisal system, and training needs.

#### **2.2.3 Qualitative Research**

Targeted interviews were conducted with leaders from the health administrative departments of District W and relevant business directors of public healthcare institutions to deeply analyze the current situation of grassroots healthcare technical personnel team construction and individual career development status. The differences were thoroughly analyzed, and corresponding suggestions were proposed.

### **2.3 Statistical Analysis**

The data were statistically analyzed using software such as Excel 2009 and GraphPad Prism, providing a descriptive analysis of the basic information of healthcare technical personnel within public healthcare institutions in District W.

## **3. Results**

### **3.1 Basic Information of Healthcare Technical Personnel in Public Healthcare Institutions in District W**

As of the end of 2023, District W has a permanent population of over 520,000, one district-level public hospital, five township health centers, and three community health service centers. Public healthcare institutions have a total of 535 beds and 286 in-service healthcare technical personnel.

The survey results showed that within the public healthcare institutions in District W, 130 personnel hold junior professional titles (12th level and below), accounting for 45.45% of the total; 114 personnel hold intermediate professional titles (10th level), accounting for 39.86%; 42 personnel hold senior professional titles (7th level and above), with only one holding a senior professional title, while 41 hold associate senior professional titles, accounting for 14.69% of the total number of healthcare technical personnel. The majority of healthcare technical personnel with intermediate and junior professional titles are aged between 36-55 years, comprising 68.89% of the total. Only 7 personnel hold a postgraduate degree, accounting for 2.45%, and most of them hold junior professional titles due to recent recruitment policies that limit high-level positions for new hires. The majority of personnel have a university degree, accounting for 74.63%, but only 18% of those with a university degree hold senior professional titles. Personnel with less than 10 years of service all hold junior professional titles, while those with intermediate and above professional titles mainly have 21-30 years of service, accounting for 65.38% of

the total (see Table 1 for detailed data).

*Table 1: Basic Information of Healthcare Technical Personnel within Public Healthcare Institutions in District W*

Professional Title Level	Total	Age (years)			Education					Years of Service			
		≤35	36-45	46-55	≥55	postgraduate degree	University degree	College degree	Technical Secondary Education or below	< 10	10-20	21-30	> 30
12th level and below	130	24	62	35	9	5	85	27	13	16	60	49	5
10th level	114	1	37	63	13	1	79	28	6	0	28	73	13
7th level	41	0	4	33	4	1	35	5	0	0	4	29	8
4th level	1	0	0	0	1	0	1	0	0	0	0	0	1

### 3.2 Structure of the Healthcare Technical Personnel Team in Public Healthcare Institutions in District W

With the rapid social and economic development of China and the increasing demand for healthcare services, particularly after the outbreak of the COVID-19 pandemic, strengthening grassroots talent team construction has become increasingly important. In the past three years, 89 healthcare technical personnel retired from public healthcare institutions in District W, 60 of whom were practicing (assistant) physicians, accounting for 67.42% of the total retirees. Additionally, 12 personnel left their positions for various reasons, with practicing (assistant) physicians comprising the majority at 69.23%. Twenty-four new healthcare technical personnel were recruited, 13 of whom were practicing (assistant) physicians, accounting for over half of the total recruits in the past three years (see Table 2 for detailed data). In the past three years, 80 personnel with intermediate and senior professional titles retired, accounting for 89.89% of the total retirees, creating vacancies in intermediate technical positions, but only one intermediate position was filled, resulting in a net decrease of 77 personnel (see Table 2 for detailed data). 12th level and below 45.45

*Table 2: Changes in the Staffing of Healthcare Technical Personnel within Public Healthcare Institutions in District W in the Past Three Years*

Professional Title	Total Retired Personnel in the Past Three Years			Total Resigned Personnel in the Past Three Years			Total Newly Recruited Personnel in the Past Three Years		
	Practicing Physician	Nurse	pharmacist	Practicing Physician	Nurse	pharmacist	Practicing Physician	Nurse	pharmacist
12th level and below	9	0	0	5	1	0	12	4	4
10th level	21	15	6	2	0	1	1	0	0
7th level	21	3	0	2	1	0	0	0	0
4th level	9	0	0	0	0	0	0	0	0
Total	60	18	6	9	2	1	13	4	4

### 3.3 Questionnaire Survey

A total of 286 questionnaires were distributed to all public healthcare institutions in District W, with 268 valid questionnaires returned, achieving a response rate of 93.71%.

#### 3.3.1 Satisfaction with the Salary System

To enhance the competitiveness of hospitals, maintain normal operations, and ensure the salary levels of healthcare personnel, hospitals use salary incentives as an important means to improve employee job satisfaction and motivation<sup>[7,8]</sup>. Salary incentives not only ensure the basic livelihood of healthcare personnel but also serve as a critical factor in motivating them and stimulating their enthusiasm for work. Therefore, investigating the satisfaction with the salary system is particularly important.

The rationality of salary incentives directly affects the social status and labor value of healthcare personnel. As key forces in safeguarding public health, their job satisfaction and motivation have a direct impact on the quality of healthcare services. Reasonable salary incentives can enhance the professional

identity of healthcare personnel, increase their engagement in work, and improve the overall level of healthcare services. Additionally, appropriate salary incentives can effectively alleviate doctor-patient conflicts. Reasonable salaries can increase the motivation of healthcare personnel and reduce conflicts arising from salary issues, thereby maintaining a harmonious environment in hospitals. The survey results on the satisfaction with the current salary system in public healthcare institutions in District W showed that 169 healthcare personnel were dissatisfied with their salary, accounting for 63.06%; 73 personnel were relatively satisfied, accounting for 27.24%; and 26 personnel were satisfied, accounting for only 9.70% (see Figure 1). It can be seen that there is a serious lack of salary incentives in the current public healthcare institutions in District W, with less than 10% of healthcare personnel satisfied with their salaries, indicating that salary incentives fail to effectively motivate healthcare personnel.

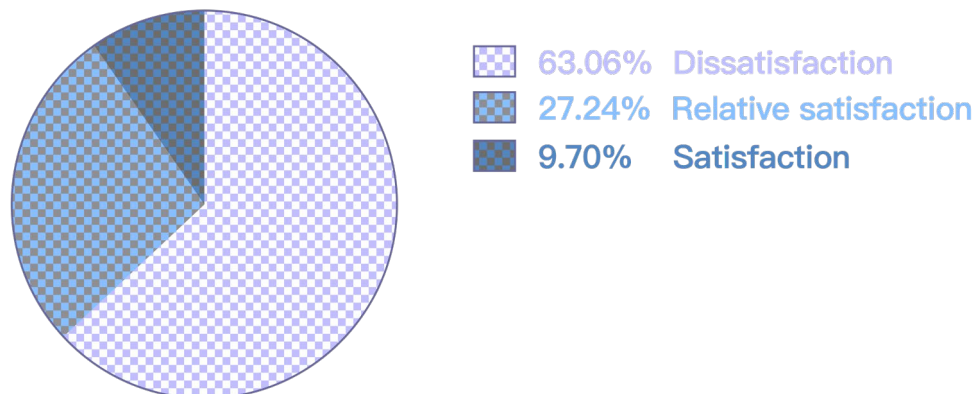


Figure 1: Satisfaction of Healthcare Personnel with the Salary System

### 3.3.2 Satisfaction with the Professional Title Evaluation System

The survey results on the satisfaction with the current professional title evaluation system in public healthcare institutions in District W showed that 124 healthcare personnel were dissatisfied with the system, accounting for 46.27%; 97 personnel were relatively satisfied, accounting for 36.19%; and 47 personnel were satisfied, accounting for only 17.54% (see Figure 2).

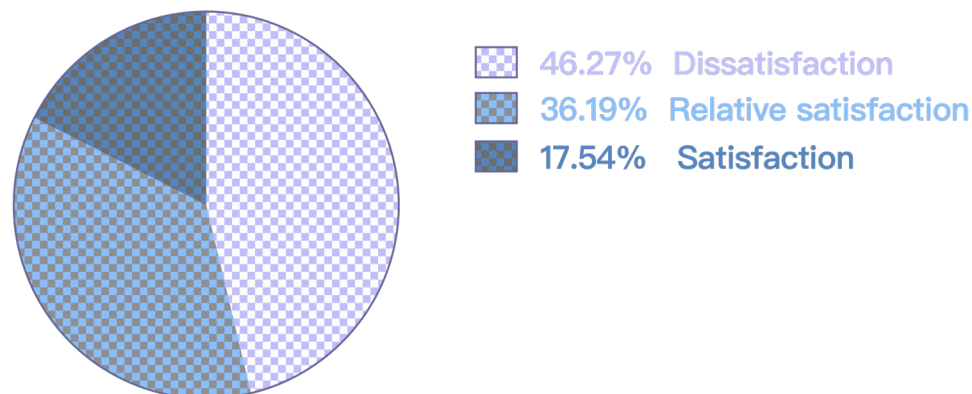


Figure 2: Satisfaction of Healthcare Personnel with the Professional Title Evaluation System

### 3.3.3 Satisfaction with the Performance Appraisal System

The survey results on the satisfaction with the performance appraisal system in public healthcare institutions in District W showed that healthcare personnel had a low level of trust in the system, with 51.12% of them dissatisfied and only 19.03% satisfied with the system (see Figure 3).

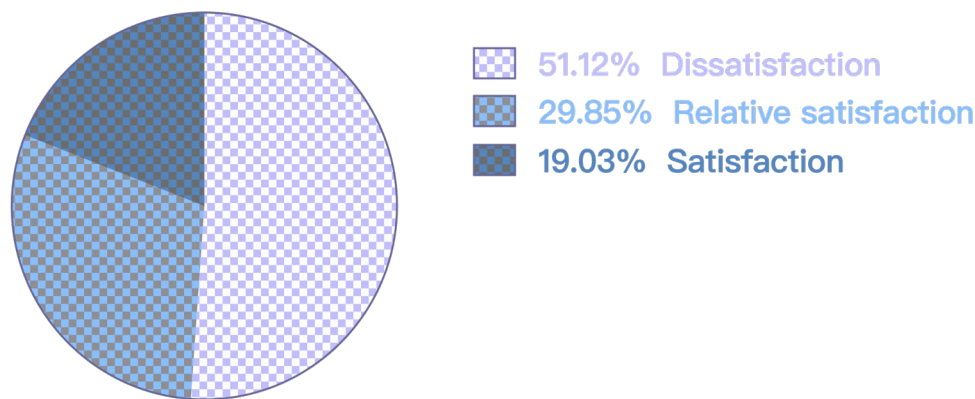


Figure 3: Satisfaction of Healthcare Personnel with the Performance Appraisal System

### 3.3.4 Training Needs

The main form of training for healthcare personnel within public healthcare institutions in District W is internal training. Data show that 236 personnel participated in internal training, accounting for 88.06%; 24 personnel went to city-level medical institutions for further study, accounting for 8.96%; and 8 personnel went to provincial-level medical institutions for further study, accounting for 2.98% (see Figure 4). Combined with interview results, most medical institutions within the W District health system mainly conduct internal training through lectures, seminars, and online training, where speakers verbally convey theoretical knowledge to healthcare personnel. This training method is easy to organize, flexible, and simple but also has the disadvantage of being less effective and providing single knowledge.

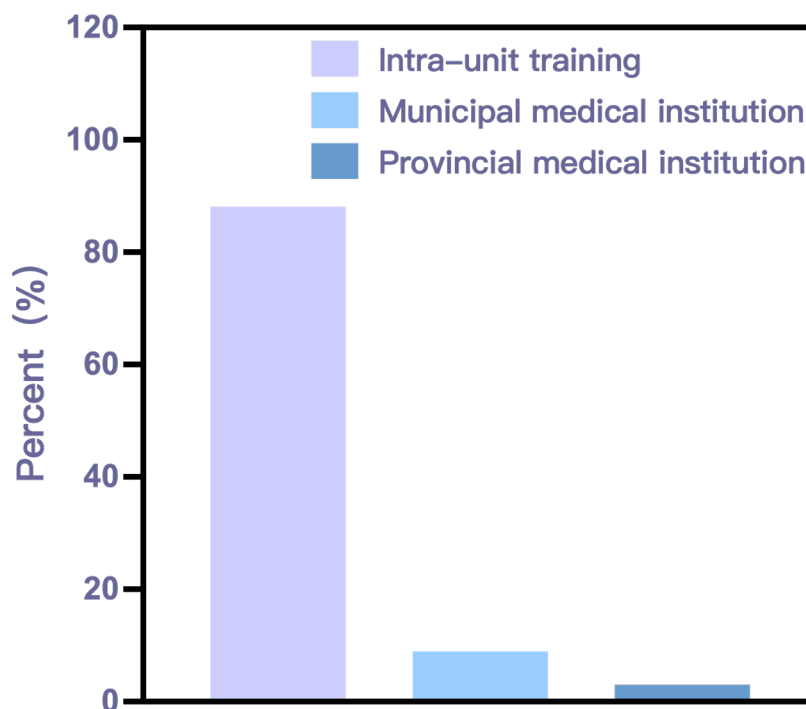


Figure 4: Main Forms of Training Participation

In terms of specific training content, healthcare personnel within public healthcare institutions in District W primarily received training in professional theoretical knowledge (55.97%), practical clinical skills (38.81%), and medical and health education safety (5.22%). It can be seen that the training for healthcare personnel in District W mainly focuses on professional theoretical knowledge and practical clinical skills. Although this training mode is highly flexible and convenient in terms of organization and implementation, interview results indicate that the training effectiveness is not ideal, particularly in terms of practical operation and comprehensive ability improvement. The single nature of internal training and the lag in knowledge updating may limit the professional development and clinical skill enhancement of healthcare personnel. Therefore, it is necessary to increase opportunities for external further study,

especially by sending more healthcare personnel to city-level and provincial-level medical institutions to learn more advanced medical knowledge and skills, further improving the overall medical level and service quality of public healthcare institutions in District W (see Figure 5).

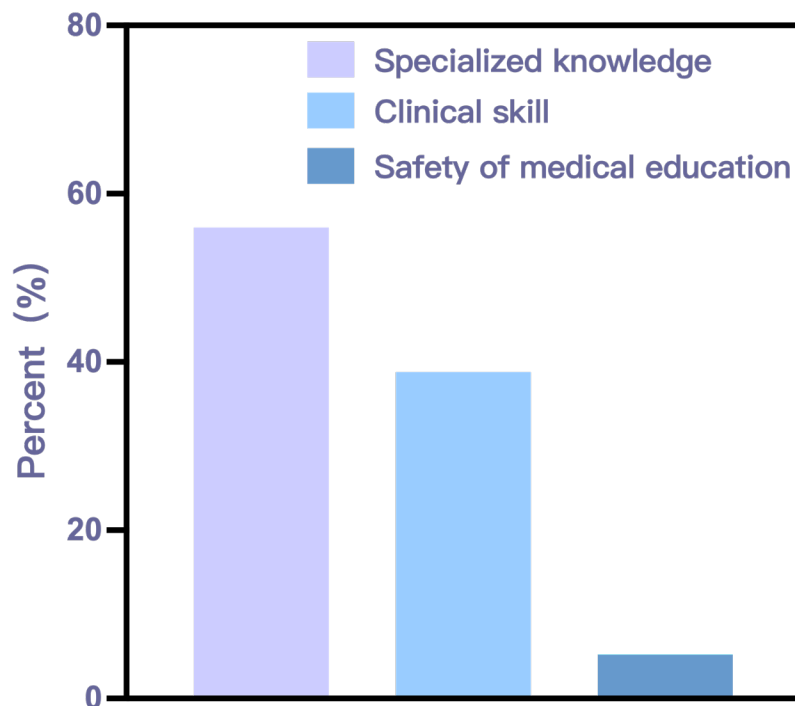


Figure 5: Main Focus Areas of Training Participation

#### 4. Discussion

Compared to other medical institutions, grassroots medical institutions tend to pursue better working environments and more advanced medical equipment, leading to high mobility of healthcare personnel and a lack of experienced and senior healthcare staff<sup>[9]</sup>. The knowledge level and professional ability of healthcare technical personnel largely depend on their educational level. However, in grassroots healthcare institutions in District W, the proportion of personnel with a university degree or above is low, with only 7 personnel holding a postgraduate degree, accounting for 2.45%. According to the questionnaire survey, only 17.54% of respondents were satisfied with the current professional title evaluation system, indicating that factors such as qualifications and age are still important assessment criteria in professional title evaluations, severely affecting the work enthusiasm of healthcare personnel in their institutions. Therefore, the talent introduction policy and professional title evaluation system in District W urgently need improvement.

Healthcare personnel have strong professional abilities, but in the current grassroots medical institutions, they cannot receive sufficiently high remuneration, which may lead to job resignation or a decrease in work quality as a way to compensate for the lack of investment returns. This also results in overall low salary satisfaction among healthcare personnel, weakening work motivation<sup>[10,11]</sup>. The survey results show that among the 12 personnel who resigned for various reasons in the past three years, practicing (assistant) physicians accounted for the majority at 69.23%. The dissatisfaction rate of 63.06% with the current salary system also indirectly reflects one of the reasons for personnel turnover.

The performance appraisal system needs improvement. As a means of achieving incentives, job performance appraisal ultimately aims to achieve feedback for improvement and optimization. However, the current feedback mechanism is not perfect, and annual appraisals lack a complete post-improvement strategy, easily leading to formalism and a lack of fairness<sup>[12]</sup>. The survey results on satisfaction with the performance appraisal system show that more than half of the healthcare personnel are dissatisfied with the current system. Interview results reveal that the current performance appraisal system in District W cannot reflect the differences in the ability levels of healthcare personnel in different departments, positions, and levels, which to some extent affects the overall performance management goals of

hospitals, thus impacting the overall business work level and quality of grassroots healthcare institutions.

Most hospitals still use traditional methods for training healthcare personnel<sup>[13,14]</sup>. In grassroots medical institutions in District W, the higher-level authorities still conduct unified training management, mainly focusing on internal training, lacking compatible training content, and not fully considering the actual needs of different healthcare personnel, leading to insufficient training in non-cognitive skills and a lack of specificity<sup>[15]</sup>. Additionally, traditional healthcare technical personnel training overly emphasizes theoretical aspects while neglecting the training and improvement of communication skills and professional spirit, leading to single training content and excessive cognitive training, thus affecting the training effectiveness to some extent. In summary, grassroots healthcare institutions in District W face many challenges in talent management and training. Improving the educational level of healthcare personnel, perfecting the professional title evaluation system, optimizing the salary system, and improving the performance appraisal system are all important measures to enhance the work enthusiasm and business level of healthcare personnel. At the same time, reforming the current training methods and focusing on the cultivation of non-cognitive abilities are essential for comprehensively improving the overall quality of healthcare personnel, thereby enhancing the overall level of grassroots healthcare services.

## 5. Prospects

Firstly, due to the special nature and working environment of grassroots medical institutions, there is a strong demand for outstanding talents, but there is currently a serious loss of grassroots medical talents and a lack of effective incentive measures. It is recommended to strictly limit transfers from grassroots positions, implement strict performance appraisals<sup>[16]</sup>. On one hand, flexible talent introduction and reemployment measures for retired personnel should be taken, along with appropriate talent protection policies to strengthen the healthcare personnel team in District W. On the other hand, public healthcare institutions in District W should reform the personnel professional title employment policy, emphasizing the principles of openness and fairness in evaluations, scientifically determining the number of professional titles based on actual institutional tasks, rationally allocating different levels of discipline talents, and ensuring that talents can fully exert their value in suitable positions, thereby improving job satisfaction and willingness to stay at the grassroots level.

Secondly, the government of District W needs to play a guiding role, emphasizing the construction and development of public healthcare institutions within the district. Based on the current situation, a sound performance incentive model should be established to strengthen the management of technical positions and improve the work enthusiasm and professional service level of personnel. At the same time, certain policy preferences should be given, and scientific and reasonable measures should be taken to optimize the conditions for professional title promotion, increase construction investment, and enhance the cohesion of existing professional technical personnel and the attractiveness to high-level professional talents from other regions. This will achieve the expansion of the talent team and the overall improvement of business capabilities in medical and healthcare institutions in District W.

Finally, strengthening the training in healthcare education safety and practical clinical skills for personnel in medical and healthcare institutions in District W is essential. The healthcare industry is highly professional, belonging to a knowledge-intensive high-skill industry, requiring a combination of theory and practice in personnel training. Therefore, the government of District W should increase funding for talent training, comprehensively carry out talent cultivation based on the actual work requirements of healthcare services in public healthcare institutions in District W, and systematically strengthen training in healthcare education safety and practical clinical skills. Scientific and effective professional training plans for grassroots healthcare service personnel should be formulated, regularly organizing healthcare personnel from District W for exchange and further study at higher-level institutions, learning more diagnostic cases and experience methods from provincial and municipal medical institutions, forming a systematic continuing education mechanism, and effectively improving the medical work level of personnel in public healthcare institutions in District W. Under the guidance and policy support of the government, District W should continuously innovate and optimize healthcare talent management models, promoting the construction of talent teams in grassroots healthcare institutions to a new level. Only by continuously exerting efforts in talent cultivation, professional title evaluation, performance appraisal, and other aspects can the comprehensive improvement of grassroots healthcare services be truly achieved, contributing solidly to the implementation of the Healthy China strategy.

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