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Research on the Optimization of Rural Schools' Emergency Handling Capacity for Public Health Emergencies in The Post Epidemic Era

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Abstract: From the end of 2019 to now, due to the spread of covid-19 in all corners of the world, it has exposed the lack of public health construction in rural schools, and the obvious lack of public health emergency handling ability and literacy in schools, prompting the state, society and the public to pay increasing attention to public health in rural schools. In the post epidemic era, the epidemic situation may return. The prevention and control of sudden infectious public health events in rural schools still faces great uncertainty, complexity and arduousness. The public health construction in rural schools cannot be taken lightly. Taking this opportunity, this paper analyzes the existing problems, puts forward effective targeted optimization strategies, and provides directions and ideas for the future public health strategies of rural schools, in order to maintain the normal teaching order of rural schools.

Keywords: Rural Schools; Public Health Emergencies; Emergency Treatment; Public Health.

1. Introduction

When public health emergencies occur in schools, especially in rural schools, it will cause serious injuries to the teachers and students' bodies, and may cause the epidemic of infectious diseases. Therefore, it is very important to improve the ability to deal with public health emergencies in schools. For schools, the health problems of students are not only related to the safety of students themselves, but also related to the health of all teachers and students and the normal teaching activities of schools. Major public health events in schools are related to students' lives and health. If they are not prevented and properly handled early, they will not only affect the normal development of school teaching activities, but also disturb social order. Therefore, under the current situation, improving the ability of rural schools to respond to public health emergencies is not only an essential part of school education, but also an important task.

2. Public Health Service and Health Education Professionals are Scarce, and The Ability to Identify and Early Warning Sudden Infectious Diseases is Poor

The basic standard for the trial implementation of physical health conditions in national schools issued in 2008 stipulates the allocation of school doctors: "boarding schools or non boarding schools with more than 600 students should be equipped with health professional technicians, who should hold health professional qualification certificates, and non boarding schools with less than 600 students should be equipped with health care teachers or health professional technicians." with the development of society, this provision has been seriously lagging behind[1]. According to this regulation, most primary and secondary schools cannot meet the conditions for equipping school doctors, especially more than 90% of rural primary and secondary schools, with a small number of students. The basic health work of the school can only be undertaken by non professional teachers, who can only be responsible for the dissemination of health education knowledge. Students' simple disease diagnosis and treatment must go to the township or higher-level medical institutions, which is not conducive to the health of primary and secondary school teachers and students[2]. Therefore, the prevention and control of infectious public health emergencies after the opening of rural schools still faces great uncertainty, complexity and arduousness. Campus public health safety is related to the health and lives of teachers and students. Once a mass public health event breaks out, the consequences are extremely serious. As the professionals of school health work, school doctors are responsible for basic diagnosis and treatment, disease prevention, morning and afternoon inspection, establishing student health files, and discovering and reporting public health events at the first time. School doctors play a vital role in discovering infectious public health events as early as possible, as soon as possible, and as far as possible. The construction of school doctors' team is an important part of the capacity system for dealing with infectious public health emergencies in rural schools.

(1) Problems in the training of school medical talents

First, staffing is the biggest problem. At the national level, although the state has issued the "school health work regulations" for a long time, the relevant provisions in the regulations only put forward the requirements for schools to allocate full-time health technicians, but did not specify how to implement the staffing of full-time health technicians. Due to the shortage of subject teachers, some schools even arrange school doctors to undertake subject teaching tasks; Other schools are equipped with school doctors from non-medical graduates, temporary staff or transferred teachers who have received short-term training. Basically, they are not qualified to practice and cannot perform the duties of school doctors[3]. Due to the unclear staffing of school doctors for a long time, school doctors do not have the promotion channels for medical personnel with professional background in

traditional Chinese medicine in the health system, and it is difficult to participate in the professional title evaluation.

Secondly, salary is also an issue that cannot be ignored. For most schools, there is a disconnect between the assessment system and reality. The school medical institutions did not establish a unified assessment system, but followed the old wage system and implemented the wage payment method without difference. As an auxiliary Department of the school, it is difficult to carry out performance appraisal. The current basic wage system and single distribution method have limited the development of school doctors to a certain extent. So the reality is that school doctors do not only have no assessment salary, but also no performance salary. Everyone only has basic salary every month, which is not set according to workload, work efficiency and work results, which is far below the level of general teachers.

(2) Problems in the promotion of school medical staff

The vocational education system for school doctors is not perfect, a scientific and sound education and training system has not been formed, and the self-learning and self-education awareness of school doctors is relatively weak, resulting in the improvement of the comprehensive quality of school doctors is generally slow and can not keep up with the pace of the development of the times. However, the survey found that most school doctors have strong demands for personal promotion and career development. However, according to the interview and investigation of primary and secondary school doctors, they can only be promoted to the intermediate professional title due to the limitation of the practice location. The local education department believes that the intermediate professional title of a school doctor is enough, and there is no need to introduce talents with senior professional titles. In this case, even if the school agrees to promote the school doctor to the deputy senior professional title, it cannot be approved in the county or city. If fresh graduates enter the school as school doctors, they cannot apply for medical titles due to lack of clinical practice experience, and can only apply for teacher titles, but the treatment is lower than that of medical titles. Even after doctors with medical titles are transferred to school doctors, there is also a lack of promotion channels, because there is no affiliated hospital. Therefore, some doctors and nurses from hospitals still retain their professional titles in hospitals, while the establishment is in schools, which makes it more difficult for them to promote their professional titles.

3. The Education System Reported the Monitoring of Infectious Diseases Level by Level, and the Emergency Response Ability of the Sudden Infectious Epidemic was Poor

Since 2003, China has established a national public health information system platform to realize the direct network reporting of sudden infectious public health events by the medical and health system. However, restricted by the division of the "county-based" education management system, rural schools mainly report the situation of epidemic monitoring through the internal level by level reflection of the education system[4]. Taking rural primary schools as an example, their epidemic situation monitoring was successively reported to the County Center for Disease Control and Prevention (or the county-level leading group for the handling of covid-19) through the Township Central Primary Schools, the Township Education Management Office and the County Education Bureau, rather than directly reported to the township health center or the County Center for Disease Control and prevention [5]. Teaching sites and kindergartens are more passive and lagging behind. Epidemic or suspected epidemic is mainly found by village doctors and then reported through township health centers; Or the village doctors give feedback to the school, and then report it level by level through the education system. This method of epidemic monitoring and reporting is contrary to the basic principle of reporting in the first time (within two hours), resulting in the poor emergency response ability of rural schools for sudden infectious outbreaks.

4. Improvement Path of Rural Primary School Public Health Emergency Response Ability

Combining with the existing problems, this paper explores the optimization strategies of public health construction in rural schools in the post epidemic era, and proposes practical strategies from multiple levels and angles, such as school medical talent training, school medical talent promotion, two-way information communication between rural schools and rural communities, to promote rural schools to establish a more perfect public health system, so that rural schools can face public emergencies more calmly.

(1)The first is to solve the strategy of school medical personnel training

The education department, the health department and other relevant government departments jointly investigate the current situation of health education, school doctor allocation, management and use in China's primary and secondary schools, especially rural primary and secondary schools, assess the risk of school public health events, timely put forward the general guidance of school health in the new era, formulate (revise) and improve the existing basic standards of school health conditions, strive to make more schools equipped with school doctors, and let more children enjoy the equal right to health.

Improve the existing national free rural doctor training policy, include school doctors in the scope of the national free doctor training policy, and gradually solve the problem of school doctor talent shortage by solving the preparation and other conditions, adopting the order training mode of setting up a special school doctor training program in college enrollment, signing a targeted employment agreement, and setting the service period, and attracting excellent, professional, general practice, and qualified medical talents to the school doctor team. Health departments should regularly or irregularly carry out training for school doctors, especially professional knowledge training, to improve the professional level of school doctors. Relevant departments should strengthen the management and assessment of school doctors, create opportunities for their rank promotion, so as to make the best of their talents, stabilize the team, and build a strong defense line of campus health and safety.

The allocation of school doctors is combined with community public health care, that is, each community hospital radiates close to several schools, and a number of school doctor quotas are set aside for the doctor staffing of community hospitals. The school will send medical personnel from the community hospitals to work as school doctors at the school by semester or year, so as to solve the problem of

school doctor staffing. In this way, the problem of staffing is solved, and the staffing of school doctors can also be promoted. In this case, although the school has purchased school medical services from medical institutions, the main responsibility of students' health work is still in the school, and will not be changed because the hospital sends school doctors.

For the problem of who is in charge of school doctors, the existing medical staffing of primary and secondary schools can be taken back to the district and county-level health institutions, centralized training, assessment, and then sent to the primary and secondary schools in full proportion according to the school situation. The salaries of school doctors are allocated by the financial department at the district and county level according to the joint assessment of the school and the health department[6].

(2)Second, strategies to solve the promotion of school medical staff

First of all, the establishment of school doctors and the promotion channels of professional titles should be clarified, and the rights and responsibilities of health and education departments should be clearly divided. Specifically, a platform for the promotion of school doctors can be established, which is conducive to the integration of resources. The government sets up a management department for the preparation of school doctors' professional titles, and sets up separate indicator assessment, which will no longer occupy the preparation of school teachers' professional titles. After strict assessment of academic ability, technical level and work experience, the promotion of professional titles will be given. With the personal growth of school doctors, the combination of career design and post appointment can interact with each other, so as to guide school doctors to develop from low positions to high positions step by step. The implementation of primary and secondary school medical career planning is also an important measure to develop school doctors. The sustainable development in school medical career planning is to combine the overall school medical career development system with individual career planning, and the realization of short-term career goals and long-term career goals.

(3)Third, in order to prevent the input of sudden infectious diseases in rural communities to rural schools, and prevent the spread of sudden infectious diseases in rural schools to rural communities, we carried out the handling drills and ability assessment of sudden infectious public health events in rural schools[7].

First, organize experts in the fields of public health, centers for disease control, school management, and emergency management to formulate a double-blind drill plan for the disposal of infectious public health emergencies in rural schools; Develop an evaluation index system suitable for rural school self-evaluation, expert sampling evaluation, and county and district temporary command group self-evaluation. Each index system should cover core elements such as pre preparation ability, event discovery ability, event handling ability, and post recovery ability; Guide all counties and districts to formulate their own double-blind drilling work plan and do a good job in drilling support. Then, based on the school self-evaluation index, carry out the self-evaluation of the handling ability of sudden infectious public health events participated by all rural schools, and write the self-evaluation opinions; Based on the sampling evaluation index, a certain number of rural schools (including nurseries and kindergartens) were randomly selected across the province to carry out expert sampling evaluation and write sampling evaluation opinions; All counties and districts should choose the opportunity to implement the double-blind drill of rural sudden infectious public health events, and do a good job in the collection of audio and video data information while controlling the drill process; Based on the exercise self-evaluation index, the county and district temporary command group carried out the exercise effect self-evaluation and wrote the exercise evaluation report. Finally, the county and district temporary command group summarized the self-evaluation opinions of rural schools within its jurisdiction, combined with the drill evaluation report, wrote their own rural schools' emergency response ability report for infectious public health emergencies, and submitted it to the provincial temporary command group; The provincial temporary command group organized experts to summarize and analyze the loopholes of the Provincial Rural School Emergency infectious public health event handling ability system in combination with the sampling comments, and studied specific improvement suggestions, especially the suggestions on improving the epidemic identification and early warning ability, emergency response ability, control and guarantee ability, isolation and blocking ability, etc.; In view of the common problems exposed in the drill, it is responsible for urging all counties and districts to formulate the improvement task table, take improvement measures in time, and monitor the improvement within the specified time [8].

5. Conclusion

Through the above aspects to strengthen the construction of rural primary school public health emergency response ability, whether from the infrastructure construction, or from the quality of personnel will be greatly improved, better handle a variety of public health emergencies, can better protect the life safety of rural primary school teachers and students, better escort for rural primary school teachers and students.

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