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Opening up the Road for the Medical Personnel to the Rural Areas

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With the broadly pursuing of various forms of responsibility in production and the development of commodity economy in the rural areas in China, great changes have taken place in the rural economy and life of the peasants has changed from a life with enough food and clothing to a fairly comfortable life. They have set a new and higher demand on the medical service. And their outlook on health is now changing. The present health and technical resourses and medical technique can not suit the rural economic development. The cotradiction between supply and demand is sharpening. Therefore it is an extermely urgent strategic task to speed up the training of various qualified medical personnel for the rural areas.

1. The present status of rural health workers in China

At present, there are eight hundred million people in the rural areas in China. According to the statistics by the end of 1986, there were 1732622 health workers in the rural areas, averaging 2.10 per 1000 population(the average in the city is 7.69 per 1000 population). Of them, 695,948 were doctors,(including primary doctors) averaging 0.84 per 1000 population,(the average in the city is 3.25 per 1000 population). 263,402 were regular doctors, averaging 0.32 per 1000 population(the average in the city is 2.10).

There are 2,309 county hospitals in China with 352, 289 health workers averaging 152.6 for each hospital. Of them, 122,622 are doctors averaging 53.1 for each hospital and 82,593 are regular(Yi shi) doctors averaging 3.58 for each hospital.

There are 10,762 central township health centres in China with 304,078 health workers averaging 28.3 for each centre. Of them, 117,159 are doctors averaging 10.9 for each and 43,269 are regular doctors(Yi shi) averaging 4.0 for each.

There are 36,205 township health centres with 460, 122 health workers averaging 12.7 for each centre. Of them, 159,287 are doctors averaging 4.4 for each and 40,289 are regular doctors(Yi shi) averaging 1.1 for each.

There are 738,139 villages with 1,279,935 country doctors and health aids, of them 694,718 have received the certificates for the country doctors making up 54.28 per cent of the total.

There are still 90,289 villages in which there in no health clinic. In addition there are 507,538 midwives in the rural area.

2. Evaluation and analysis

In the 38 years after the founding of the People's Republic, there has been a great expansion of medical personnel rural areas. The number of medical personnel in 1986 increased 5.3 times compared with that in 1949(328276), 2.3 times in the number of doctors. Still, it can not meet with the development of the situation. There is a great shortage of medical personnel in the rural areas. The main problems are shortage in quantity, inferior quality unreasonable structure and proportation of personnel and difficulty in getting of medical personnel.

1) Shortage in quantity

In China, eight hundred million people live in the countryside, but there are only 1.73 million medical personnel constituting 49.4% of the total, while in the cities of two hundred million people there are 1.77 million medical personnel, constituting 50.6% of the total. The number of doctor in the cities is 3.7 times as many as in the countryside. According to the ratio of the doctor to the 1000 population, the number of doctor in the urban areas is 3.9 times as many as that in the rural areas. In the urban areas, a doctor takes care of 500 persons while in the rural areas. It's 3000. It's obvious that there is a great shortage of medical personnel at the grass-root level.

2) Interior quality

The main problems are the small amount of medical personnel with university or secondary medical shcool education. Many work in the medical field without medical school diploma. According to the randomized study sampling in 1986 in six counties in Helongjiang and Jiangsu provinces of the 8166 medical personnel. There were 530 university level medical school graduates, (6.5% of the total number). 634 who had special medical training after senior middle school education(7.8% of the total) and 2,060 were secondary health school graduates a 3-year course after junior middle school, (25.2% of the total). Put together, the number of the three kinds of medical personnel covered 39.5% of the total in these two provinces. And 60.5% of the people working in the medical field had no medical diploma.

Of the 8,166, there were 2,117 senior medical and technical peoples(the rank of regular doctors and above), 25% of them had regular training in medical colleges. 30% had special medical training after senior middle school while 45% were promoted to the rank of senior doctors from the intermediate rank. Among the 3,573 secondary medical personnel, 58% had secondary medical school training while the other 42% had no regular medical training at all.

The theory of "Diplomas alone decide everything" is incorrect. But it is dangerous for a person with no systematic training to take care of people's health. The figures mentioned above show that the quality of rural medical personnel is poor and it is a tremendous job to provide in-service training.

3) Unreasonable structure and proportion of personnel 75% of the 2,117 senior medical personnel worked in the county-level health units while 25% in the twonship.

90% of the 530 university level medical school graduates in the six counties worked in county level medical unites and the other 10% worked in township 74% of the 634 who had 3-year medical college training after senior middle school worked in county level medical units and the other 26% in townships. It's prominent that there is a shortage of senior medical personnel at the county level medical units and below the county-level medical units.

The proportion of senior, intermediate and primary medical personnel is 1 : 1. 68 : 1.16 in those six counties. The proportion of those doctors at the county level is 1 : 1.16 : 0.47 while at the township level the proportion is 1 : 3.25 : 3.25. If the proportion of 1 : 2.5 : 1 is rational, the structure proportion of medical personnel in the six counties is irrational.

4) Difficulty in getting medical personnel

Every year, there are very few regular medical college graduates or 3-year medical college graduates assigned to the countryside. The problem of natural decrease of medical personnel can not be solved, not to mention the expansion of the number of medical personnel. Take Nantong, a well-to-do county in Jingsu, as an example. From 1977~1981, there were 161 student admitted to medical colleges, only 30, (18.6%) of them were assigned county-level health units in Nantong from 1982~1985 26.7% of them at the township(All went back to the city in the last few years). 101 were admitted to the three-year medical college from 1977~1982, 82.2 of them were assigned back to county and township level

medical units. 53(63.9%) of those worked in the township. It is clear that the number of regular medical college or three-year medical college graduates assigned to the countryside is smaller than admitted, and the number of regular medical college graduates is smaller than that of the three-year medical college graduates.

3. The reasons for the shortage and the poor quality of the rural health personnel

In the 38 years after the liberation of China, we have done some work in training college and secondary medical school graduate for the rural areas, but on the whole the aim was not clear the altitude was not firm and the measure was not concrete. We have gone through a winding road in our thought of guidance and in our specific work.

The reasons for the backing and poor quality of the rural health personnel are manyfolds both in actual practice and in our policies. For many years, we have had policies restricting rather than encouraging college and secondary medical school graduates to go to the countryside and border areas. It was reported that the health personnel who did not intend to settle down in the countryside not only had ideological problems but also practical problems : poor working and living conditions ; fewer chances for advanced study, with a result of slow important of their profession. Because of the differences between the urban and rural areas, the wages and the benefits in the countryside are lower than in the cities, and the living conditions are not as good as in the cities. As one standard in the promotion was followed, and too much attention was paid to the ability of mastering a foreign languages, writing thesis and the level speciality, the promotion was slow and the rank of the title for the rural health personnel was lower and their pay was lower too than those for the doctors in the urban areas. And it was more difficult for their children to get higher education and to find jobs. Thus, quite a number of the graduates assigned to the rural areas tried every possible way to go back to the cities or to seek for post-graduate training in the cities.

In the past few years, because of the shortage of the medical and technical personnel and also some problems in our policies(e. g. the policy of allowing children to take over jobs from their parents after they are retired), quite a few non-technical personnel entered the medical field, whithout any training, they started to do medical and technical work. The quality of medical work was affected and much work should be done to help them make up for their lessons.

Since the reform of the university enrolment system, the policy of centralized enrolment on a merit performance has been carried out. As the cultural level was low in the rural area, and the level of the middle school education in the rural area could not be on a par with that in the urban area, there were fewer medical students selected from the rural area. In recent years, priorities in admittance have been given to students from the border areas, the areas of minority nationalities and the rural areas who have the same amount of marks or even lower than those for the city students, but the students admitted are still not enough. The standards of admittance could not be lower too much fearing that the studenets from those areas cannot keep up with their fellow from the cities and the quality of education can not be guaranteed.

Another problem is the training of doctors of one standard without considering specific conditions. Specialized docters with solid basic training, high technical level and excellent skill are need in city hospitals while "versatile" general doctors with extensive knowledge, in medical treatment, prevention, health education and family-planning are needed in the rural areas. Students distributed to the rural area after graduation and without any professional training on their posts prove unequal to their task. No differences have been made between the urban and the rural areas in the aspects of the training, medical curriculum and the period of schoo-

ling. Its not proper to run the special training course in a pattern of "Compressed-biscuit" of the regular undergraduate couse.

4. The aim of forming a medical team in the countryside

It is a long-term strategic task in health work to strengthen the medical term in the countryside and to train qualified personnel for the eight hundred million peasants. According to the plan of the medical institutions at the county level can basically solve the difficult and complicated health problems encountered in the counties, and the institutitions will become centers providing guidance in medical treatment, prevention, materal and child healthy, and family planning, as well as training centers for medical personnel in that county. The central township health centres are the link between counties and town ship hospitals. They are required to take over part of the hospitals responsibility in looking after difficult and complicated cases, surgical emergencies and contraceptive operations, and to become technical centers provdidng guidance for the neighbouring township hospitals in medical treatment, sanitation MCH and family-planning. The township clinics mainly take care of out-patients and can have few beds. While taking care of common and frequently-ocurring diseases, they can gradually have more preventive work. When conditions permit, they can become small specialty hospital.

According to this plan, it is estimated that the goal for developing medical and technical team in the countryside by the end of this century. (1) Gradually with regular medical college graduates in the main and a few speical medical course graduates at the county-level institutions. (2) With special medical course graduates in the main and a few regular medical college graduates at the central township hospitals ; with secondary health school graduates in the main and a few be some difference between students trained for rural area and these for the urban area in curriculum and knowledge structure. Students trained for the rural area should have more comprehensive knowledge, clinical practice ability and knowledge of preventive medicine. When necessary, speciality trainings can be tried out with an emphasis on internal medicine(including pediatrics) and surgery(including obstetrics). Training for orientation in radiology, laboratory medicine and pharmacy can be provided. Students of minority national ities can attend special classes for their nationalities and fresher courses can be provided for those students with a low educational level.

1) To develop shorter term higher medical college education according to the necessities and local conditions places.

The shorter term higher medical college can shorten the training period and save money and meet with the need for senior personnel at the grass-roots health institution. Therefore, within a certain period fo time, at least before the end of this century, this kind of education should be promoted. Apart from heving regular students with a curriculum for five years or more in the medical college there should be shorter term education in the college in order to provide medical and health care in rural area. The Capital Medical College has faculty of medicine for the country side, Xi'an Medical University and China Medical University have taken the "stretching-legs" method to train medical personnel for th rural area. At present, the upgraded medical college from secondary medical schools, should have regular college education and shorter term medical college but mainly the former education. In those prefectores or cities with special medical course graduates and with primary doctors in traditional Chinese medicine and western medicine(country doctors) at the village clinics.

5. Major measures in medical education for the rural area

To attract medical personnel to the country side and to stay there in the rural area, it is necessary to inform the traditional unitary pattern medical

education. Education principle of "multiple channels, and varying levels" should be maintained, and effective measures should be adopted to train qualified personnel who are willing to live and work in the countryside.

1) To continuously carry out and perfect the system of oriented enrollment, training and distribution.

These should be certain proportion of oriented enrollment in the regular medical colleges. The proportion of students enrolled from county level and below should be annually increased by appropriately reducing the marks of enrollment. In 1986, 41% of the students enrolled by medical colleges in Helongjiang Province came from the county, and they will be distributed back to the county after graduation; 55% of the students enrolled by medical school came from township, and they will be distributed back to the township after graduation. City students are encouraged to apply for "oriented enrollment", but administrative and legal measures must be made to ensure that these students must go to work in rural area after graduation. In some provinces, students must work in the countryside for a number of years before they are allowed for transfer, otherwise they must pay back for their college training. Students trained for the rural area should be "medical and health type" or "practical type" doctors. There should have good conditions, new shorter term medical colleges can be set up. In those secondary health school in which there is a strong team of faculty and good teaching facilities, shorter term college education can be provided after approved by the high level authority, but the number of students enrolled for secondary health school can not be reduced.

2) Setting up schools jointly

In order to solve the problem of fund shortage in setting up schools, it is asible for rural communlties to devlop horizontal relationships with other organizations so as to pull fund together in different ways. For example, some counties have developed relationships with Mudanjiang Medical School, which trains personnels for them while they provide fund for the School according to the contract signed between the training and the trainees' parties. This method digs out the School's potential teaching capacity while at the same time guarantess the native trainee's to go back where they came from to render better service. In Jiangsu Province this method has been adopted to gather fund to train more personnels for the countryside.

3) Reinforcing middle health schools and vocational schools

In the medical education system there is no substitution for the middle level medical education, which is independent of and indispensible to the whole system. As middle health schools are the main scoure that produce health professionals for the countryside, it is important to make sure that fund for those schools should be increased but not decreased.

High medical schools should open classes to improve the quality of the teaching staff of middle health schools. Middle health schools, however, should develop the mostly needed short-time, training programs for the rural health workers. When other things being equal, those rural health workers at grass root level should be first considered at school enrollments.

If situation allows, counties that need middle health schools should set them up, while those that have already had middle health schools should see to it that the quality of the schools gets improved. Hunan and Henan provinces have trained a lot rural professionals by setting up vocational schools that enroll only self-payment students and do not provide boarding, neither guarantee job assignments at graduation. It should also be encouraged that country doctors and rural health workers make use of county vocational schools and middle health schools to train themselves through full time, part time, sparetime or self-study programs in classroom or by mailings and journals. Different forms of education such as teaching through TV and broadcasting are good me-

thods and should be fully used to bring country doctors and rural health workers up to middle level qualifications.

5. County health administrator's quality emphasized

In the recent 3 years the "six health directors" at county level have benefited from the examinations they sit in to check their skills and knowledge of scientific management. They are the directors of county health bureaus, county hospitals, county epidemic prevention stations, county maternity and child health care centers, county drug exam institutions and county middle health schools.

6. Speed-up work time training for the insufficiently trained personnel

The health workers who have just been promoted from middle and low qualification to high and middle qualification should be made sure that they get sufficient training in different ways so that their professional ability will live up to their qualifications. In order to achieve this it is feasible to use audiovisual facilities and mailing education method to carry out far-distance teaching during their work time. This is of vital importance to the improvement of the quality of rural health workers and all high and middle medical schools should actively take up the task. From now on rural health workers should be trained before they get down to work. Training programs should have examination system or credit system to go with them. There should also be a self-study for health workers who want to be promoted to higher qualifications.

7. Intensify city health institutions' help to rural areas in technology

Health institutions at all levels should take it as their responsibility and form a system to train rural personnel and offer help in technology to the rural areas.

Health institutions at the provincial and prefectural levels should be responsible for the training and technology instruction of the county health institutions, should take the same responsibility for the township health clinics. The scientific meetings and seminars any institutions holds should provide the rural personnel with good opportunities of attendances.

8. Suggestions

Policies must be formulated or changed to facilitate strengthening of health team in the countryside and the enhancing of their quality.

1) The state should adopt the policy of encouragement and restriction, with the encouragement as the main. While strengthening ideological and political education and institute necessary systems, the department concerned should establish corresponding policies to encourage college and secondary medical school graduates to work in the countryside. The material benefits for those working in the countryside, especially those working in remote areas should be better than those working in the cities, for example, floating of wages ; Problems of housing, attending school and job assignment of their children should be solved ; Working conditions should be improved and opportunities should be provided to their further study in order to upgrade their technical skill ; Rotations should be taken at fix period for those in the cities who'd like to work in the countryside. Their residence cards in the city should not be transfered and reasonable arrangements should be made for them ater their retirement.

2) When inviting or appointing a person who has long worked in the countryside to the title of a technical or professional post, we should pay more attention to his practical ability in the work of medical treatment and prevention, rather than their thesis and the level of mastering a foreign language. The Shandong Provincial Department of Health has followed this principle and the result good. It is suggested that there should be low standards for the eva-

luation of general practitioners and medical specialists. Conditions should be created for founding a society for general practices and scientific activities should be carred out to raise the technical level of general practitioners working at the grass-roots level and in the countryside.

3) Postgraduate and continuing education should be systemized for those rural health workers. Records should be kept for the advanced training of the health workers and the credit system or class hour system should be practised for the renewal of knowledge. Continuing ecudation and personal benefits should be connected arouse the enthusiasm and initiativeness of the docotors. When a corresponding credential is acquired, exams can be exempted from for the promotion of professional title. When having the credential for certain level, the doctor can have the priority in becoming a member of a society. This principle has been practised in Zhejiang, Schanghai and Jilin. Favourable treatment can be given to rural health workers when they are changed for advanced training.

4) Those doctors who will be distributed to the countryside or the grassroots level can stay in a city hospital for 2-3 years on job training and then go down to the places where they are distributed. It is practised in Kunming, Guiyang and Tianjin. Hoping that conditions can be created in the other areas for this parctise so that the experience can be summed up for the whole country.