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STUDY ON THE MEDICAL AND HEALTH SERVICES IN THE RURAL AREA OF CHINA

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China is situated in the eastern part of Asia. It covers an area of 10.40 million sequare kilometres and has 56 nationalities with a total population of 1.045 billion. 80 per cent of population are in the rural areas.

During the past 39 years since the founding of the People's Republic of China in 1949, a considerable progress has been made in the development of rural health services. Up to the end of 1986, the statistics indicated that there were 2,309 the medical and health institutions 375,976 township health centers with 711,234 beds and 882,923 professional health workers, the health units were built in 87.7 per cent of village.

As center of disease prevention and control for the whole county, the countylevel medical and health institutions have played a important role ih strengthening of medical and health services at the township and village levels by way of giving technical guidance. The township health centers are thought of as the middle pivot to supply technical help to primary medical organizations-village health centers. A three-tier prevention and care network embracing county township and village has been set up. A complete system of the medical and health services has been formed.

With the development of social econcmics in our country and constant improtment in material and cultural life, people demands for the medical and health services have been changing step by step. In order to further study the present status of the medical and health services and inhabitants' needs in rural areas, to analyse the resourees available and define its rational exploitation and untlization, to provide a scientific basis for the formulation of health programme and strategy in the rural areas, we carried out a survey on the rural medical and health services from May to November, 1985.

Contents and methods

1. Scope and Method of Investigation

Taking into account of the differen in geographical conditions, economic development and specific features in various parts of this country, nine representative provinces(i. e. Inner Mongolia, Shanxi, Jiangsu, Anhui, Yunnan, Guangdong, Shaanxi, Jilin, Heilongjiang) were selected as surveyed provinces by means of stratified cluster random sampling. According to same sampling principle, 5 counties were investigated in per provinec and 6 townships out of every county. Among several villages with differant economic conditions, household was as investigation unit and abount one thousand persons were randomly selected to conduct visits. The survey covered 56,641 households with a population of 265, 567(which accounted for 0.33 per thousand of the rural population) in 520 villages from 270 townships of 45 counties. In addition, 278 township hospitals and 583 village clinics were also investigated.

2. Contents of investigation

(1) Present health status of rural inhabitents

(2) Stuff equipment and finances of the medical and health institutions at three levels so as to defend the health resources and their distribution in rural areas.

(3) Outpatient service and inpatient service in the variously medical institutions including country township and village.

3. Measures taken to ensure the quality of investigation

(1) 1500 investigators were chosen and required to have a professional training background being equivalant to that of a graduate from medium medical school. They were trained at all levels so as to make them master identical standard and method to go in for investigstion

(2) Every household visit was conducted by 2 investigators simultaneously ; and

(3) investigation rate for household visit was demanden to reach to 95% and above the results were re-checked through 5% random sampling, and the accurate rate must be over 95%. More than 90% of outpatients were investigated in the fixed date with the accurate rate 95%.

Results and Analysis

1. The general status of investigated population

This investigation covered 56,614 households with a population of 265,567, averaging 4.8 persons : in every household.

(1) Composition of both age and sex

In total investigated population, male made up 50.03% and female accounted for 49.97% respectively. 21,158 persons were beyond the age of 65. The aged efficient was 7.97% and belonged to young-middle pattern of age composition.

(2) Occupational composition

According to proposition order, the first five places of occupational composition were as follows, peasants 47.07%, students 21.20% childeren 13.96%, workers 8.71% and stuff 4.25%.

(3) Cultural composition

In total investigated population, educational levels were as follows : 39.31% with primary degree ; 21.02% with secondary degree ; 6.25% with senior middle degree and 0.20% with university degree. Illiterate rate beyond the age of 12 was 24.33% and it was higher than average level of the whole country.

(4) Economic situation

This investigation showed that there was annually average 455.55 yuan(Ren minbi) per person in the highest income province and 227.90 yuan in the lowest income province. The average income of 9 provinces war 306.43 yuan.

(5) The means of undertaking medical care fee

Rural inhabitants enjoying both free medical care and labour insurance medical care(LIMC) accounted for 7.03% ; half-LIMC 1.75% ; cooperative medical service 9.5% ; paying medical care at one's own expense 85.5% and others 1.07%.

2. Health conditions and demand for medical services in rural areas

Morbidity of population may indirectly reflect people's demand for medical services. Prevalence rate in a 2-week time ann morbidity of chronic diseases were chosen as main indexes in the investigation.

(1) Morbidity of chronic diseases

Of 265,567 rural population investigated, 23,842 persons suffered from chronic diseases with a prevalance rate of 89.78%. Morbiditys relating to respiratory system, digestive system cardio- and cerebrovascular diseases, locomotive system were 15.81%, 14.44%, 12.36%. Patients from above-mentioned diseases amounted to 66.9% of the total with chronic diseases. Secondly morbidity of infectious diseases was 9.13%. and patients from them made up 10.01% of the total with chronic diseases. Morbidity of chronic deseases increased with the growing age. Tenda-

ncy test shew a significant difference($p<0.005$).

(2) Disease and injury in 2-week time

In the past 2-week period there were 18,835 patients in investigated population with a prevalence rate of 70.92%. It is morbidity of respiratory system that was the highest(reached to 23.44%). The second place was digestive system diseases(12.84%). The order of other diseases was arranged as follows : infectious diseases(9.37%), nervous system diseases (3.26%), cardio- and cerebro- vascular diseases(3. 02%). Composition ratio of the first five places was 73.02%).

Fluctuation of age-specific mordidities in two-week time shew two peaks and one the low.

(3) Severe degree of diseases

According to data originated from family investigation, the days of sick sick leave in 2-week time were 478 per thousand persons, averaging 12.4 per person per year ; The work-lossdays in 2-week time for a thousand people were 205, averaging 5.4, and the average school-loss days were 1.2 per student per year.

3. Health resources in the rural area

Health resources in the rural area, referred to health technical personnal bed number the allocated fund and medical equipment etc, were analysed through the investigation in 45 counties which covered 583 village health clinices, 278 medical instituations including township and county levels.

(1) Health technical personnel

Fending of investigation from 45 counties in 1984 indicated there were 46997 health workers in the medical and health scetor, 82.27% of them were health technical personnel. Numbers of doctors, nurses and pharmacists possessed by per thousand persons were 0.77, 0.24 and 0.22 and 0.22 respectively. Technical composition at different levels were as follows : senior technical personnel(20.1%), middle technical personnel(43.1%) and primary technical personnal(36.8[]). Ratio of the senir, the middle and the primary equalled 1 ; 2.14 ; 1.83.

(2) Number of bed

In investigated 45 counties, there were altogather 25634 hospital beds, i. e. 1.28 beds per thousand population the utilization rates of beds were 86.2% in county genral hospital, 56.3% in key(district) health centre, 45.8% township health centre.

(3) Medical eruipment

The 45 county hospitals investigated were basiclly equipped with X-ray machine, electrocardiograph, optical microscope and operating table. 56 key health centers were all fitted out with 30-200 mA X-ray machine, operating table and routine labaratory appliane. Equipment of township health centers was comparatively simple and crude Of 189 township health centers investigated, only 138 of them were equipped with X-ray machine, and 128 with simple operating table, less than a half with optical microscope.

(4) The health funds

According to statistics from 40 counties(excluding shanxi province), the total of allocated health funds was 54.552 million yuan(Ren min bi), which accounted for 0.6% of Gross Natinal Product, averaging 2.26 yuan per person. The health funds used in epidemic prevention, MCH and capital construction made up 12.2%, 3.40% and 7.50% separately.

3. Uilization of medical services in the rural area

(1) Utilization of outpatient services

The utilization rate of outpafient services in rural areas was relatively low. The visit rate within two weeks was averagely 9.76%.

Coposition ratios to visit medical institutions at differant levels were respectively 37.8% at village heath clinics, 27.8% at township health centers, 10.4 % at key health centres, 11.7% at county general hospitals and 2.2% at above-county level hospitals. During two weeks, 4,367 out of 28,128 person-times had not enjoyed services, the no-visit rate was 22.9 %. Major reasons for no visit doctor were : patients taking their self-care services(56.2%), taking their case tightly(20.5%) and financial difficulties(18.0

%).

(2) Utilization of inpatient servicei

Of the 265576 rurrl inhabitants investigated, 8828 person-times needed to be hospitalized, but actual admission rate only 2.54%, other 2094 person-times (23.7%) not being admitted with the following reasons: financial difficulties(54.9%)- patients taking their case lightly(25.9%), and no bed available(8.1%).

Discussion

1. Rural inhabitonts' demands medicare services

Inhabitants' demands for medicard services were mainly decided by their health condition and diseases level. On the basis of data from 9 provincs(autonomous region), morbidity of chronic diseases was 89.7%, it is estimated that there are 70.11-74.69 million patients suffering from variously chronic diseases at present. In light of investigation results, rural inhabitants' morbidity in the 2-week time was 70.92%, it is reckoned that morbidity in rural areas is 1.78-1.99 person-times per person per year. As compared with urban inhabitants' morbidity of 2.68-2.79 person-times per year in 1985, oberviously rural inhabitants' dimands for medical servicer were lower tsan that of urdan side.

According to the investigation, the visit rate within two weeks was 9.76% and annual admission rate 3.15%, thus it was assessed that demand ammount of outpatient services wrs 2.541 billion-times and that of inpatient seavices was 31.094-33.877 millions person-times in rural areas. In urban side, the visit rate within two weeks and annual admission rate were separately 16.66% and 5.08% in 1985, then it is estimated that demand ammount of outpatient services is 1.007 billion person-times and that of inpatient sevices is 12.19-12.86 million person-times. Thus it can be seen though rural inhabitants' demand for medicare services is lower than urban that, the demand ammount of medicare services in rural side is much higher than that in urban side.

The first five places of chronic diseases were as follows: respiratory system diseases, digestive system diseases, cardio-and cerebro- vascular diseases, locomotive system diseases and infectious diseases. It is thus clear that morbidities of commonly encountered diseases and frequently encontered diseases were still relatively high. Harmfulnes of acute infectiou diseases decreased great'sy. Both cardio-and cerebrovascular diseases and non-biologic diseases began to increase gradully, but there was aunbalanced development among various areas. In some areas, especially in outlying mountain areas, some acute infectious diseaies still had high incidences, thus, it is still put as the emphasis of rural health work to prevent and care common diseases frequently encon-tered diseases and infectious diseases which seriously affected the general level of inhabitants' health conditions.

2. Utilization of medical and health services

During two weeks the visit rate was 9.76%, and there were 22.9 patients not to seek medical services. The admmision rate was 3.15%, white other 23.7% patients not peing hospitalized for chief reason financal difficulty. The utilization rate of the medical and health services was only 76%, being lower than average level(80.2%) of tweive districs of seven contries. The investigation results in 2-week time shew there was high morpidity in a population with low average income, put the visit rate and admission rate were low level. Teh visit rate and admission rate were changed with differences among medical care systems. Inhapitants enjouing pudic medical care and lapour insurance medical care had higher visit rate and admmision rate than, population enjoying cooperative medical care, had higher vistit rate and admission rate than those enjoying to pay medical care. The apove-mentioned facts demonstrated that income level and medical care system have close relation to poth inhapitants' health conditions and utiliz ation of medicare services in

rural areas.

The investigrtion results have revealed that there were 37.8% patients to visit villafe health clinics, 27.8% patients to visit township health centers and 11.7% patients to visit county hospitals. The '3-tier' medical networks including village, township and county had provided 84.6% outpatient services and 86.3% inpatient services. It is obvious that most of patients sought modicaare services at village and township level. Therefore, to further consolidate and divelop the 13-tier' medical metworks, to strengthen the primary health care and to spread medicare services system that suit Chinese conditions only py doing the apove-mentioned aspacts rural inhabitants just have chance to obtain the essentially medical and health services.

3. Health resources in rural areas

The rural inhabitants' demands for the medical and health services will progressively increase with economic development and enhancement of cultural level. According the investigation carride out in 45 counties out of 9 provinces(autonomous region), there were 1.8 health technical perssonel, 0.77 doctor and 0.24 n rse in per 1,000 population. Because of serious outtlow of professional hralth workes, some instituions were shor of packpone power, there was irrational composition of technical perssonal in many areas. Ratio of the senior middle and primary techincal perssonel was 1.2, 14 : 1.83. This result shew there was deficiency of the senir and middle techical perssonel, and there were greater proportion of the primary perssonel. The rural health institutions, especially township health centers, had only simple and crude equipment. In 56 key(district) health centres, 36 of them had electrocardiograph, 6 of them had dental cure machine and only one had defibrilation pacemaker. In brief, rural health resources lied at low leve, there were poor equality of health professional workes, insufficient health investiment, less and oboslete medical equipment. Needs of developing rural health cause were not satisfied.

At present our country is at the socialits primary stage. There are considerable differences betweet city and countryside in economics, culture and health facilities. The policy that is to perform combination of three aspacts embracing country, collective and individual should be carried out. The various funds for developing primary health care in the rural areas ars hard raised so as to replenish deficiency of expenses. Technical teaining have to be stressed and reinforced, through which health personnel quality will be heightened. The medical care systems that there are differances in form, content and criterion have to be studied and set up, so that health institutions have ability to be re-built and developed by themselves, to speed up the development of rural health cause.