

NURSING PRODUCTIVITY

INVESTING IN RURAL HEALTH IN WESTERN CHINA

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The recent debate on the development strategies for western China focuses essentially on capital construction investment under the assumption that if the central government concentrates its investment in this part of the country, the western regions will take off economically. Without doubt, capital construction investment is important. However, the author holds that the method of allocating public resources for concentrating simply on material aspects and neglecting the human element is misleading. Absent competitive human resources, funds will not be used effectively and efficiently, nor will it be possible without qualified managerial and labor resources to establish a well-regulated market system or form an economic environment attractive to the investors in the recipient areas. Capital flight from the western into the eastern regions is evidence of this, and the example of Israel is a case in point. Israel's natural environment is no better than that of most part of the China's west; yet, thanks to the Israel's educational and health levels—higher than the world average—Israel has attained an arguably leading position in science, technology, medicine, agriculture, and manufacturing.

The regional socioeconomic gap between western and eastern China is explained not only by the gaps in infrastructure and the ecological environment, but also by gaps in human resources. In western China, especially in the rural areas, education and health indices are considerably lower than the national average. In recent years, thanks to the common understanding of the value of primary education in poor areas, the government has increased investment in education. Non-governmental organizations have launched such educational programs as the "Hope Project" and the "Spring Bud Program" in poor areas, and as a result, education in the rural areas of the western part of the country has assumed a certain developmental momentum. However, basic health care has not been sufficiently addressed yet, perhaps because the return on health

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investment cannot be calculated directly but rather must be calculated according to the losses resulting from diseases. This is similar to investment in anti-flood facilities—A benefit accrues only when a flood occurs: the indispensability of basic health care receives attention only when disease has damaged the population.

It is necessary, therefore, to discuss ways of improving basic health care and the role of rural health investment in the overall development of western China.

THE GOVERNMENT'S ROLE IN BASIC HEALTH CARE

Basic health care refers to the minimum medical and health services commonly recognized by the public under given social and economic conditions. In 1986, the Chinese government committed itself in clear-cut terms to providing medical and health services to all by the year 2000. In 1990, some fifteen criteria were defined to measure such efforts in rural areas. These included rural medical centers, childrens' immunization rate, food hygiene standards, health education, the safety of drinking water, sanitary lavatories, infant and maternal mortality rates, the incidence of infectious diseases, and so on (Ministry of Public Health, et al, 1990.) These indices have been regarded as the minimum requirements by the Chinese public for rural health care provision by the end of the 20th century. They are also the objectives that must be achieved by governments at all levels through direct action and public support.

Basic health care requires government action because, first of all, basic health care is a necessity if the population is to maintain a normal life. The government's commitment to making basic health care available to all is similar to a provision of food security—it reflects the mainstream values of the society. Secondly, sustained growth is impossible if the labor force is weak in health. The government's commitment to providing basic health care to all is obviously intended to protect human resources, and to improve the quality of labor as a whole, thereby enhancing the competitiveness of the state.

The creation, application, and popularization of knowledge as evinced by the 21st century's interest in a knowledge economy in fact determine international competition. That is an important reason to explain why governments everywhere are vying with one another to commit themselves to the global goal of

providing basic health care to all by the year 2000.

For developing countries to realize this goal it is necessary to improve accessibility to basic health care by ensuring service provision and improving service quality so that every member of the society has access to such services. This in turn requires improvement in the availability of basic health care, and entails regulating the behavior of medical and pharmaceutical suppliers, the curtailing of sky-rocketing drug prices,

and ultimately the redistributing of income within the society. Then, all citizens, especially those in the low-income group, can afford such services.

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THE CURRENT STATE OF RURAL HEALTH CARE

Given the above, it is not difficult to observe where basic rural health care provision in western China needs improvement. First of all, public investment in disease prevention projects is inadequate. Since the beginning of the economic reforms, the proportion of government spending on health care provision as expressed as a proportion of the GDP has steadily fallen year after year, especially during the 1978-1993 period, when spending plummeted from 0.11 per cent to 0.04 per cent. Disease prevention allocation averaged one yuan nationally in 1978 and no more than 1.3 yuan in 1993 in terms of absolute value (World Bank, 1997), which, if the inflation factor is taken into account, reveals also a downward trend.

In view of government reductions, the public health services have increasingly relied on fee collection, so much so that the basic health care standards in some rural areas in the western part of the country scarcely attain the minimum planned by the state. In the children's immunization and inoculation program, for example, the single inoculation rate (planned immunization coverage) in rural Guizhou was ten percentage points lower than the national average in 1993

Table 1. Immunization Coverage in China in 1993 (%)

Area	BCG Vaccine		Polio Vaccine		Diphtheria Vaccine		Measles* vaccine	
National	90	96**	88	97**	86	96**	85	95**
Urban area	95	***	94	-	93	-	85	-
Rural area	85	-	86	-	84	-	73	-
Rural Guizhou	72	-	74	-	67	-	53	-

*Note: National, urban, and rural figures for measles are inconsistent.

** Figures refer to the year 1997, see: UNICEF, 1999, "Put Children's Rights in Place: China-UNICEF Cooperation Strategy 20001-2005, (draft edition), p33, Beijing.

***No data are available.

Source: World Bank, 1997. *Financing Health Care, China 2020 Series*, Washington D.C., p. 29

(See Table 1). An UNICEF assessment pointed out that the gap had not closed even at the end of the 1990s (UNICEF, 1999).

Secondly, the impact of the lack of health education associated with the above problem may be seen in two specific areas. The first is that government investment is still focused on anti-epidemic work, so key preventative programs have not yet been extended to the non-infectious diseases. Moreover, rural health education funds are not ensured and grassroots medical workers have not received adequate training for carrying out extension services. The second deals with local beliefs: in the remote mountainous areas of Guangxi, Guizhou and Yunnan, if a family member falls ill, farmers still resort to the traditional superstitious way of driving out devils by slaughtering domestic animals. In other villages, although ailing individuals may take medicine, they back up the effect by slaughtering animals to drive out devils. Even if the disease is cured, the family sustains a loss of income from livestock production for half a year or more (He Zhonghua, 1998).

A third area of improvement lies in the changes of prevalent illnesses. Over the past twenty years, due to the increase in labor mobility, the changes in life-style and food structure, and the deterioration of the environment, the recurrent diseases in the rural areas are no longer confined to the common cold and diarrhea. Rather, they have been extended to non-infectious and chronic diseases. In 1998, the three leading causes of death among the rural population were respiratory diseases, neoplasm, and cerebral vascular diseases (State Statistical Bureau, 1999). According to oral reports by the minority nationality women in southwest

China in 1997, heart and lung diseases, high blood pressure, and cancer were not uncommon. Any family, no matter how rich, would be reduced to poverty due to excessively high medical spending if anyone in the family contracts one of these diseases. If the patient happens to be the main source of income for the family, it would be hardly possible to maintain family life at its normal level. (This is what is often referred to by poverty studies as being "impoverished by disease.")

In a fourth area, the generalized lack of effective supervision over medical service providers and over the pharmaceutical market explains why recipients frequently complain of inconvenience and

large expenditures. These general complaints have specific bases: Firstly, the irrational allocation of health resources in cities and the countryside has not been effectively corrected. Secondly, medical services are priced so low that medical organizations and doctors resort to increase their income by abusing their prescription power to induce excessive drug consumption. Thirdly, the management and supervision of drug marketing is ineffective, and violations of regulations and laws are not curtailed (Wang Jianmin, 1999). As the analyses on the problems referring to drug prices are already well known among the public, this point will not be further discussed below.

Following the reform and opening, the aggregate of the country's health resources has increased dramatically. Comparing 1998 with 1978, the number of hospital beds, doctors, and nurses per one thousand persons increased by 20.7%, 49.5% and 199.5% respectively (see Table 2). However, the rural population has enjoyed only limited benefits from such increases. The highly skilled medical personnel are mostly concentrated in large urban hospitals above the county level (Wong, 1997). The reconstruction projects undertaken over the past two decades in the rural health care sector have mainly helped improve the material conditions of the rural anti-epidemic stations, of mother and child care stations above the township level as well as housing and facilities of township health centers. The greater portion of the rural population lives in villages where village clinic or private village doctors are the health resource most available to them. According to a sample survey conducted by the Shanghai Medical University, over two-thirds of rural patients first seek village health workers for advice (Yu et al., 1997). Over half of these health workers are what was once termed "barefoot doctors" (or their children) who received some short-term training thirty years ago. Although they have, more or less, received some subsequent training in their practice, their inadequate professional training cannot meet the demands on the increasingly diverse and complicated basic health care. What is more alarming is that in 1998, about thirty to forty percent of the

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Table 2. Changes in per-capita health resources of China in 1978-98

Year	Number of hospital beds per 1000 people	Number of doctors per 1000 people	Total number of nurses
1978	1.93	1.07	407,000
1998	2.33	1.60	1,219,000

Source: State Statistical Bureau, 1999. *China Statistical Abstract*, Beijing: China Statistics Publishing house, pp.149-159.



village clinics in Xinjiang, Ningxia, Guizhou, Qinghai, and Gansu were found to have no high-pressure sterilizing facilities (UNICEF, 1999). It is doubtful then that villagers as a whole receive reliable medical and health services. With a low level of training and poor equipment, the village medical personnel cope only with common ailments and refer most of the cases to higher level clinics.

Normally, one would expect township health centers to be the first choice for patient referrals. However, excepting developed areas where technical facilities and know-how of township health centers are superior to those of village clinics, the quality of the services at the two levels in less-developed areas are almost the same. This explains why most patients are referred to county hospitals directly. The result is that patient and their relatives incur additional expense and risk of delays in treatment. A female official of the Lahu Nationality in Muga Township (Lancang County, Yunnan), for example, was rushed to the county hospital because of a miscarriage in 1997 and died on the way due to an excessive loss of blood (He, 1998). That even a township official lost her life due to the inadequacy of medical facilities underscore the difficulties of ordinary villagers in remote mountain areas in obtaining reliable medical services.

Moreover, the few outpatients' visits and low utilization rates of equipment in the township health centers reverse

the staff of the centers resorting to the practice of "killing a hen to take out eggs" by abusing their prescription power. They prefer treatment involving expensive prescriptions or inferior drugs sold at high prices (UNICEF, 1999). It goes without saying that the burden then falls on the pa-

tient. A national survey on rural health service shows that the average expense was 44.7 yuan per outpatient and 1532 yuan per inpatient in 1998. Compared to 1993, the outpatient expenses increased 2.7 times and inpatient expenses increased 2.5 times, far exceeding the growth of the farmers' income during the same period (Department of Rural Health under the Ministry of Public Health, 1999). Farmers' complaints about inconvenience in obtaining medical services and about overly expensive drugs (despite increased state investment in the three-level medical networks during this period) are understandable. The increased investment also shows how hard it is for projects of this kind to attain the

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anticipated social benefits if the investment is not entirely used where it is most needed.

INVESTMENT OPTIONS FOR RURAL PUBLIC HEALTH IN WESTERN CHINA

None of the problems mentioned above can be solved without the government's efforts to readjust its public health policies and solve the governance problems in the health care sector. Projected development strategies for western China should, based on the 1965 principle of "putting the emphasis of

health care provision on rural areas," address prevention first, along with the promotion of low-cost, high-efficiency medical technology. If two to three per cent of the total additional public investment in the western regions were allocated to rural public health, it would contribute, in the long run, to the improvement in the health status of the people in the regions. The most pressing tasks at present are as follows:

First, it is necessary to invest in the re-training of village health care workers and in the renewal of village clinics. The training could be conducted in stages and by groups mainly in the basic skills of comprehensive medical and health services for a term of three years. Trainees should be selected from among young village health care workers with junior or senior middle school education but without any professional training. The tuition and living expenses should be partially covered by development assistance. The trainees should be required to sign contracts, promising to act as interns at county hospitals or township health centers after graduation, thereby assuring their return to their villages to provide basic medical and health services when they obtain the village paramedics certificate through examination. At the same time, part of the project funds for poverty reduction should be allocated to poor counties to procure necessary sterilization equipment for village clinics. Medical administrations should carry out strict inspection of the equipment and medical records of village health care workers. Such investment will not only ensure that the rural people at grassroots directly enjoy the benefits of development projects but will also stimulate social development in the villages.

Second, greater financial resources should be allocated to preven-

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tive health projects in rural areas. The emphasis should be put on the prevention of epidemics and diseases, health education, and nutrition and living habits intervention projects. According to past experience, such projects are highly efficient in lowering the incidence of disease, having the same magic effect as "using a very small force to tackle a weight of a thousands kilograms." Cases in point are the children's immunization program and maternal health care projects, which lowered infant and maternal mortality rates by about seventeen and thirty one percentage points respectively in the 1990s (The United Nations Task Force on Health, 1999).

With regard to childrens' development, the monitoring of China's food and nutrition in 1998 showed that the number of children under five who were underweight and suffered from retarded growth accounted for 2.7% and

4.1% respectively in urban areas, and 12.6% and 22.6% in the rural areas. The areas where incidence of child malnutrition was about double the national rural average were all in the southwest and northwest provinces and autonomous regions (China Academy of Preventive Medicine and the State Statistical Bureau, 1999). Childhood underdevelopment not only impedes the development of their intellectual ability but also increases their vulnerability to coronary diseases, high blood pressure, and other chronic diseases. To add meat, vegetables, and fruit to the diet of children from the fourth month to two years will effectively increase their weight and stimulate growth. This strongly argues in favor of the necessity and urgency of children's food supplement projects. These projects should be incorporated into the anti-poverty program because all the malnutrition target groups are people living in poverty.

The above preventive and health projects mainly cover women and children. If the government in its efforts to promote health and nutritional education projects utilized the rural three-tier health network and the media (as it did with the iodized salt project in the 1980s), modern epidemic and disease prevention activities could be extended to other groups. This would not only facilitate disease prevention and health promotion among the rural dwellers in the western regions but also achieve the result of mobilizing all social groups to participate in the development of the health care provision sector.

Third, investment should be made in those research projects of the social sciences and medical sciences associated with the above projects so as to provide the scientific basis for institutional innovation and project operation. ■