

This article summarises the major changes in the role of township health centres since the initiation of socioeconomic reforms. It begins by describing the officially defined functions of health centres. Using a case study of Donglan, a poor county in southwestern China, it then shows that a wide gulf exists between the ideal model and reality in poor areas.

1 The Official Roles of Township Health Centres

The term 'township health centre' (THC) describes a variety of health facilities that are smaller than county hospitals but more sophisticated than village health stations. Health centres provide a link between village health workers and county level health institutions. According to government guidelines, health centres are responsible for providing or supervising all curative, preventive and promotive health activities for a township's population.

Box 1 presents the functions of township health centres as defined by the Ministry of Public Health (MoPH) in the late 1980s. They include the provision of outpatient care and a limited number of inpatient services, the provision of a range of preventive services, and training and supervision of village health workers. This article assesses the performance of Donglan's township health centres in terms of the following:

- provision of outpatient and inpatient services
- implementation of disease prevention programmes
- provision of MCH care
- training and supervision of village health workers
- submitting reports on health-related matters
- execution of health-related laws and regulations.

2 Curative Services

2.1 Outpatient services

One of the key functions of township health centres is to provide outpatient consultations. According to Donglan County Health Bureau, total outpatient visits to the county's health centres declined from 235,441 in 1986 to 152,589 in

The Changing Role of Township Health Centres

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IDS Bulletin Vol 28 No 1 1997

Box 1 Functions and Tasks of THCs

Curative Services

- Taking responsibility for treating common diseases via outpatient consultation and inpatient services for local people. Providing serious and emergency patients with life-maintaining services and transferral to higher level hospitals.
- Teaching local people knowledge and techniques of how to deal with emergency patients, and how to use manual cardio-pneumatic resuscitation effectively.

Preventive and MCH Care

- Taking responsibility for disease prevention for local community, including the expanded immunisation programme, and prevention of infectious and endemic diseases. Implementing hygiene monitoring and management under the supervision of higher level anti-epidemic stations.
- Providing women and children with screening and treatment of common diseases. Providing MCH care services.
- Taking responsibility for the family planning programme via provision of birth control operations and technical assistance.
- Giving local people knowledge on disease prevention and health promotion through various forms of health education.

Health Administration

- Assisting in making the health development plan for the local community. Providing higher levels with accurate health statistics.
- Assisting relevant bodies to organise the Patriotic Health Movement and to improve health conditions in the local community.
- Implementing monitoring and management of relevant sectors according to the national laws.
- Taking responsibility for managing village health workers and private practitioners. Providing technical support and training to village level health workers.
- Compiling and submitting health statistical reports based on the rules defined by the MoPH.

Source: Zheng *et al.* (1991)

1994, a decline of 35 per cent. This finding is consistent with statistics published by the MoPH (1989, 1993), which show that the total number of outpatient visits to township health centres in China fell from 1.2 billion in 1986 to 0.9 billion in 1993.

In 1993, 31 private practitioners were working in Donglan, most of whom operate at the township and village levels. A household health survey in Donglan found that in 1993 only 23 per cent of outpatient visits were made at health centres. Private practitioners provided 35 per cent of outpatient services and village health workers provided

29 per cent. Only a small proportion of services were sought at the county level or outside the county (Yu *et al.* 1997).

2.2 Inpatient services

Many township health centres provide inpatient services, which vary from general clinical observation to surgery. The total number of inpatient admissions to township health centres in Donglan fell from 4,043 in 1986 to 3,336 in 1994. A decline in the volume of inpatient admissions in township health centres is found throughout rural China (MoPH 1981, 1993), and in other poor counties (MoPH 1994).

In 1986 there were 4,043 admissions at township level compared to only 3,658 at county level. By 1992 inpatient admissions to health centres had decreased to 3,253, while county hospital admissions had increased to 4,227. The increase in inpatient admissions at the county level could be due to increased utilisation by residents of the county town. Since the volume of inpatient admissions at township health centres declined over this period, it is more likely that there was a shift in inpatient utilisation among rural residents from townships to the county level.

Township health centres are still the most important providers of inpatient services to the rural population in Donglan. According to the 1994 household survey, of the 250 patients hospitalised in 1993, 56 per cent were admitted to township health centres, 34 per cent were admitted to the county hospital, and 10 per cent received care outside the county.

2.3 Causes of declining utilisation of curative services

2.3.1 Changing capacity of service provision

One reason for the fall in utilisation is that the variety and quality of services has decreased due to the loss of experienced personnel and a lack of medical equipment.

- **Loss of qualified doctors.** Prior to the 1980s, many medical college graduates were assigned to health facilities at the township and county levels. In the 1970s, 38 doctors with five or six years formal medical and public health training worked in Donglan, 29 of whom served at the township level. By the late 1980s, almost all these qualified doctors had left the township health centres. During the 1980s, the THCs recruited eight medical graduates with four or more years training. However, in 1994 only two were still working at township health centres. The majority of other recruits had received two or three years training at secondary medical schools. The director of the County Health Bureau said that the loss of better qualified health workers had diminished the quality of services provided by health centres (see Gong 1997). The lack of skilled professionals may also have undermined patients' confidence in the quality of services.

- **Lack of essential medical equipment.** An inadequate supply of essential medical equipment is frequently taken by users as an indicator of poor service quality (Becker *et al.* 1993; Omorodion 1993; Stock 1983). In five THCs visited, three owned X-ray machines which were out of order, and one health centre had never had an X-ray machine. Only one centre's X-ray machine was functioning. Some THCs have stopped doing certain laboratory tests because the equipment no longer functions. This situation is common in many other areas (MoPH 1994).

In focus group discussions, many villagers said that health centres were not much different from private practitioners. If their illness was minor they preferred to seek care from private practitioners. If it was severe, they preferred to go to the county hospital.

- **Shrinking scope of services.** Even though the numbers of health workers in most health centres have risen in recent years, their technical standards have fallen with the loss of better qualified doctors. Most health centres in Donglan no longer provide surgical operations which had been provided in the 1970s. The changes in staffing structure and availability of equipment have caused a decline in the scope of services provided.

2.3.2 User charges

People in rural China have paid for medical care for many years. During the 1960s and 1970s, they were able to get a certain proportion of fees reimbursed through the cooperative medical schemes (Feng *et al.* 1995; Zhu *et al.* 1989). Such schemes no longer exist in Donglan and most of the rural population must bear the full cost of treatment themselves.

According to the household health survey, the average charge per outpatient visit at health centres in 1994 was ¥5.84. The average charge per inpatient admission in 1993 was ¥130.71. The County Statistical Bureau estimated the average annual per capita income in rural areas of Donglan was ¥574 in 1994. These expenses imposed a heavy burden on households when medical care was needed.

2.3.3 Competition in the medical care market

Prior to the socioeconomic reforms, there was almost no competition between providers of health services in rural areas. With the support of the cooperative medical schemes that operated in most villages and townships, the referral system functioned relatively well. The collapse of these schemes and the legalisation of private practice have contributed to increasing competition between providers in rural areas (Liu *et al.* 1994). Many small businesses have obtained permission to sell drugs. Health centres in Donglan face strong competition, not only from village health workers, private practitioners and private pharmacies, but also from the county level preventive facilities, which have opened outpatient clinics to generate revenue (Shu *et al.* 1997).

Utilisation of curative services is influenced by many factors, including price (Gertler and Van der Gaag 1990), quality (Akin *et al.* 1995), and convenience and service attitude (Tipping *et al.* 1994; Waddington and Enimayew 1989). The household health survey revealed that health centres charge a much higher fee per outpatient visit than village health stations and private practitioners. In focus group discussions, villagers reflected that the quality of care in the health centres was not better than that of other providers. Private pharmacies and private clinics often have longer and more flexible opening hours, and private practitioners had a better service attitude than government-employed health workers. These factors have diminished the ability of health centres to compete for patients.

3 Preventive Services

Township health centres are responsible for disease prevention and control, and the protection of the health of women and children. Within each health centre the former are the responsibility of the disease prevention group, consisting of one to three part-time or full-time health workers. The latter is the responsibility of the MCH groups, which have one to two health workers who are mostly female assistant doctors or nurses. There are no routine budget allocations earmarked for these tasks. Some funds are occasionally made available through vertical preventive programmes.

3.1 Disease prevention

Disease prevention activities identified in the MoPH guidelines include immunisation, endemic and communicable disease prevention, food hygiene, and school (child) health. The extent to which these are provided by a health centre depends on the availability of funding, public health personnel and equipment.

3.1.1 Immunisation programmes

By the end of the 1980s, immunisation coverage rates had reached the 85 per cent target set by the MoPH. This success has not been maintained. The director of the anti-epidemic station reported that formerly mobile teams had carried ice kits six times each year to each household with children eligible for vaccination. These operations were usually performed jointly by disease prevention groups and village health workers. Since the early 1990s, the county government has stopped providing funds for six rounds of immunisation, so the number has been reduced to three or four a year. Health workers in the disease prevention groups no longer receive subsidies of ¥10 a month.

In 1993, the anti-epidemic station adopted a fixed facility strategy for providing immunisations, in which parents had to bring their children to the health centres. The aim was to reduce costs and improve the quality of services, since vaccines stored in ice kits deteriorate after three days. The vaccines were provided free, and a nominal fee was charged for each injection. There was a sharp decline in coverage provided after this policy was introduced.

In consequence, there were outbreaks of measles, poliomyelitis and diphtheria in a number of townships in 1994. Although local health managers recognised that the fixed facility strategy has not worked, they have little alternative to continuing it because of lack of funds.

3.1.2 Communicable and endemic disease control

The county anti-epidemic station reported that the major communicable and endemic diseases in Donglan are diarrhoea, tuberculosis, hepatitis, malaria, and iodine deficiency. According to senior

staff, prior to the reforms, township disease prevention groups devoted great efforts to the prevention of these diseases.

Most of these activities are no longer undertaken by the disease prevention groups. Preventive health workers explained that a major reason was the lack of funds earmarked for disease prevention. Blood samples of suspected malaria patients are often not sent to the anti-epidemic station for testing, even though this has been encouraged, and school children are seldom screened for parasitic diseases despite the urgings of the State Education Commission. Members of disease prevention groups suggested they would do these tasks if parents paid for the service.

Where health workers receive financial incentives, preventive programmes have grown. For example, since the enactment of the Food Hygiene Law in the 1980s, the government has required all kitchen staff of restaurants to pass an annual physical examination. The examination fee was ¥49.40 in 1994. Part of this fee was retained by the health centre, and laboratory staff and health workers in the disease prevention group received small bonus payments out of the revenue generated.

Although the formal mandate of the disease prevention group of THCs has not changed, their activities have changed. They have diminished the provision of preventive services, such as immunisation, which are strongly supported by the central government. Activities which can generate revenue are more actively undertaken.

3.2 MCH Care

Health centres' MCH groups are supposed to screen for and treat common diseases of women and children. They are also supposed to provide perinatal care.¹ Many of these services are not provided by MCH groups in Donglan. The 1994 household health survey showed that many pregnant women do not receive antenatal services. Most babies are delivered at home by untrained personnel (see Shu *et al.* 1997). These findings are similar to those of a recent survey of poor counties (MoPH 1994).

¹ In many MoPH documents, THCs are also responsible for providing family planning services and technical supervision to local people. These are also the responsibility of another vertical programme led by the

There are a number of full-time and part-time MCH workers at county, township and village levels in Donglan. However, the director of the county MCH centre reported that the relationships between health workers at different levels have changed. Due to the lack of funding, few training activities are organised by the MCH centre or township health centres. Village health workers and birth attendants no longer receive sterile delivery packages, and they are reluctant to purchase them themselves. The MCH centre has stopped subsidising deliveries for village health workers and birth attendants. Neither village nor township health workers report data to the MCH centre on service provision and infant and maternal mortality.

Cost-recovery has become the primary principle for selecting what kinds of MCH activities are done. Village and township level MCH workers acknowledged that they are supposed to carry out many activities, including child growth monitoring, perinatal care for women and children and treatment of common gynecological diseases. Some services they were providing were for those who could afford to pay, while other services that are free of charge, as defined by the government, were rarely provided.

4 Training, Supervision and Health Administration

The MoPH states that township health centres should provide training and supervision to village health workers. Health centres are also responsible for submitting statistical reports to county health bureaux and county level preventive facilities, organising public health campaigns and monitoring the implementation of health-related regulations and laws.

4.1 Training and supervision

Health centre directors in Donglan reported that village health workers (barefoot doctors, health aides and birth attendants) had participated in training programmes and attended seminars sponsored by the THCs in the 1960s and 1970s. Township health workers often went to the villages to supervise pre-

State Family Planning Commission. In Donglan, in addition to some THCs, several family planning stations provide services and technical supervision, so this study did not cover family planning programmes.

ventive and MCH work. These activities were central to the success in improving the health status of the rural population (Sidel and Sidel 1973).

Training activities have stopped and supervisory activities are now limited. The most frequently cited reason was the lack of special funds. Health centres now charge village health workers for in-service training. Meetings with village health workers are only held when the anti-epidemic station needs to implement the immunisation operation. A second reason for not providing training is a change in health centres' interests. Township and village level providers are now competing for patients. A third reason, less often recognised by local officials, is that the loss of senior doctors in many health centres makes the provision of training difficult.

4.2 Health administration

THCs are responsible for local health administration on behalf of both township governments and county health bureaux. Hillier and Xiang (1991) have pointed out that legislative measures and formal directives have not been accompanied by financial support from central government. As the emphasis of health facilities has shifted from health promotion to revenue-driven activities, the autonomy of health centres has increased. The effects of this change in interests can be seen on the routine reporting system and on the implementation of health-related regulations.

4.2.1 Routine reporting system

The MoPH requires THCs to submit an annual report to the County Health Bureau on the provision and financing of health services. The disease prevention group should send regular reports to the county anti-epidemic station on the incidence of communicable diseases, and the MCH group should provide the county MCH centre with reports on infant and maternal deaths.

The director of Donglan County Health Bureau stated that annual reports on the provision of outpatient and inpatient services, and on financing and expenditures were satisfactorily submitted, although the data were sometimes inaccurate and inconsistent. The directors of both county preventive institutions expressed their concern that the

quality of reports on the incidence of communicable diseases and infant and maternal deaths were deteriorating. Much of this information depends on the cooperation of village health workers in reporting diseases and deaths to the health centres.

The township disease prevention groups should report the incidence of 35 defined communicable diseases to the county anti-epidemic station every 10 days.² Only one health centre in Donglan complied with this rule in 1994. Five out of nine of the county's THCs submitted less than 50 per cent of the required reports. A recent sample survey of outpatient, inpatient and laboratory test records undertaken by the anti-epidemic station indicated that 40-75 per cent of communicable diseases diagnosed by health centres were not reported. Similarly, routine reports on infant mortality are inaccurate. Routine infant mortality reports suggest a sudden drop in the IMR after 1992. Given that no significant changes had occurred in living standards or utilisation of MCH services, it is most likely that this was due to under-reporting of infant deaths by grassroots health workers.

The problem of under-reporting in facility-based routine reporting systems is not unusual in developing countries (Lippeveld *et al.* 1992). Over-reporting of health indicators also occurs in order to achieve specific goals. The director of the MCH centre in Donglan said that the IMR and MMR were purposely over-estimated in a sample survey performed in 1993 so as to meet criteria set by the World Bank for loan entitlement.

The directors of the county level preventive institutions regarded the weakening of the three-tier network as a key factor in the deterioration of the quality of information. Village health workers were not paid for data collection and reporting. They sometimes failed to refer patients who might have contracted a communicable disease to THCs for further examinations, as they would not be compensated for their efforts. There are also no earmarked funds for data reporting at the township level. Health centres limited their efforts and minimised the costs of routine reporting.

² The Infectious Disease Prevention and Treatment Law, passed in 1989, requires that 35 communicable diseases be reported from the grassroots levels to the MoPH.

4.2.2 Implementation of health regulations

Prior to the economic reforms, most health administration activities were based on political directives issued by the Communist Party and the central government. These were implemented through mass mobilisations such as the Patriotic Health Movement (Sidel and Sidel 1973). Since township governments have no health bureau, township health centres took on the implementation of health regulations.

Since the early 1980s, the National People's Congress has passed a number of laws and regulations relating to health and the health sector. Previous sections described activities related to the Food Hygiene Law and the Infectious Disease Prevention and Treatment Law. More recently, a Law on Maternal and Infant Health Care has been adopted.

Although health centres are obliged to implement these laws, no funds have been made available to secure the performance of the activities proposed in the laws.³ THCs have responded selectively to laws and regulations, largely on the basis of the incentives provided. Even where the costs involved are not high, the implementation of laws and regulations which would not enable them to generate revenues has been less vigorously pursued than those which allow them to charge service fees.

5 Conclusions

5.1 Summary

The data presented above provide a number of insights into the current situation of township health centres in poor rural areas of China. The decline in the provision of curative services in most health centres in Donglan was associated with a diminished capacity to provide services, increases in user charges, and increasing competition in the rural medical care market. Many preventive programmes have been undermined by financial constraints, while those which enable health centres to generate revenues have been actively pursued. A number of health laws and regulations have been enacted in the past decade, and most tasks relating

³ This situation is not limited to the health sector. The nine-year compulsory education policy has not been strictly implemented, especially in poor areas.

to health administration have been delegated to health centres. However, many tasks were not satisfactorily performed because of a lack of resources.

Many activities depend on relations with other health facilities and personnel, but these links have been affected by the shift towards market-oriented health service delivery. The study found in Donglan that there was severe under-reporting of the incidences of communicable diseases and infant deaths, owing largely to a failure to submit routine reports from health centres to the county level health institutions. Training and supervision of village level health workers have also declined. The divergence between the functions of township health centres as defined by the MoPH and the functions which the health centres studied actually perform is summarised in Table 1.

5.2 A strategy for strengthening health services at the township level

Several policy options aimed at strengthening health services at the township level are being discussed in China. Some policy makers prefer to reinforce the health centres by investing more resources in buildings, equipment and assigning more qualified doctors. Others argue that more investment would lead to further waste of health resources, and suggest that the township health centres be responsible only for preventive and promotive programmes.

Both options seek to address the problems of health centres discussed above. However, the first option may only be applicable to some rich rural areas. Under the current fiscal responsibility system, local governments in poor areas are unable to increase investment in health centres significantly. Nor is the central government able to provide a large amount of funds to thousands of health centres, since the share of central government revenue in GNP has fallen (Zuo 1997). On the other hand, since the medical care market has not been well regulated, particularly in poor rural areas, it is also not acceptable to restrict township health centres to preventive and promotive services, leaving curative services to the market.

One feasible way to tackle these problems is to reorganise rural health services at the township level by

Table 1 Contrasting the Performance of THC's in Donglan and the Functions Defined by the MoPH

	Functions defined by the MoPH	Performance of THC's over the past decade
Curative services	<ul style="list-style-type: none"> • Treating common diseases 	<ul style="list-style-type: none"> • The use of outpatient and inpatient services in most THC's declined substantially
Disease prevention	<ul style="list-style-type: none"> • Implementing the child immunisation programme • Implementing disease control programmes 	<ul style="list-style-type: none"> • The child immunisation programme was a success, but now faces financial problems • Many disease control programmes have been weakening though food inspection has been strengthened
MCH care	<ul style="list-style-type: none"> • Prevention and treatment of common diseases for women and children • Providing MCH care 	<ul style="list-style-type: none"> • The capacity for service provision has diminished • No significant improvement in MCH care
Training/Supervision	<ul style="list-style-type: none"> • Providing village health workers with necessary training • Supervising village health workers in vertical programmes 	<ul style="list-style-type: none"> • Training programmes have almost ceased in most THC's • Supervisory activities have been minimised
Health administration	<ul style="list-style-type: none"> • Compiling and submitting reports on health information • Implementing health-related laws and regulations 	<ul style="list-style-type: none"> • A high rate of non-submission of reports on incidence of communicable diseases and a high degree of under-reporting of infant deaths • Implementation has been subject to financial and other incentives

Source: Compiled by the author

identifying three to five key health centres in each county, according to geographic and technical features. The key health centres should be given priority in the allocation of personnel, financial and physical resources by county governments. They

should play an important role in the provision of preventive as well as curative services. Other health centres should be required to provide preventive and promotive care, and simple outpatient consultations.

Several measures should be implemented in order to make such a model successful. Governments at various levels would have to provide political backing for these measures and county level health institutions would have to provide technical support. First, in-service training, especially for the staff of key health centres, should be provided by the county hospital so as to improve the quality of cura-

tive services. Second, both the central and local governments should ensure that preventive and promotive programmes, such as child immunisation, are appropriately funded. Third, staff management should be reformed in order to ensure that skilled health workers are adequately paid and unqualified health workers are kept out of the health sector.

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