Health Care in the People’s Republic of China: A View from Inside the System

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Abstract: During a three-month period, all admissions to an infectious disease ward at a tertiary care hospital in the People’s Republic of China were studied. The hospital’s catchment area covered a population of almost eight million, 10 per cent urban and 90 per cent rural. Seventy-two per cent of the patients admitted to this facility were city dwellers with illnesses which were significantly less serious in degree than the illnesses encountered among patients transferred from rural facilities. Ease of travel, nature of the disease process, availability of beds, ability to manipulate the referral ladder, and cost of health care may account for these results. Charges for health care in China proved very expensive relative to per capita income. This may be of major consequence to rural persons who are personally liable for some portion of this cost. These results suggest that although referral to tertiary care in China occurs more commonly among rural patients than is the case in other developing nations, access to this care and its cost are significant problems of the present system. During the drive for modernization, a multifactorial approach (including health policy, administrative controls, and patient and physician education) will be essential to avoid deterioration of the rural health system, and the increased financial burden to be expected with the introduction of advanced medical technology. (Am J Public Health 1982; 72:1238–1245.)

Introduction

Since the People’s Republic of China (PRC) was established in 1949, the radical social experiments undertaken by Mao Zedong and his followers have attracted the attention of Western scholars. Dramatic improvements in the health of the Chinese people, particularly the rural majority, have been reported by both Chinese officials and foreign visitors.1–4 A supplement to the American Journal of Public Health described the situation in Shanghai County in some detail.5

These improvements appear to have resulted from a deliberate government policy to redistribute health care resources. Beginning in the late 1950s, and emphasized in 1965 (just before the onset of the 10-year “Cultural Revolution”), China’s leadership attempted to reverse the direction of its elite, urban, “physician-oriented” medical establishment.6,7

Following Mao’s well-known 1965 dictum, “In health work, put stress on the rural areas,” funds, personnel, and facilities were shifted from city to countryside. Education for physicians and nurses was shortened considerably. Medical research funds disappeared. An attempt was made to provide health insurance for Chinese peasants through decentralized, cooperative programs. A well-organized patient referral system was strengthened by the introduction of at least one local paramedic (“barefoot doctor”) into most rural production brigades.8 Finally, partly through increasing China’s national production of pharmaceuticals, and partly through emphasis on the use of traditional herbal (and less expensive) drugs, the cost of medicine declined significantly.9,10

The resulting system, particularly the use of indigenous paramedics to carry out basic educational, preventive, epidemiological and simple curative work, has served as an influential model for other developing nations. Its success has focused attention on the shortcomings of the health care delivery system in the United States, where due to geographic or financial constraints, segments of the population have found it difficult to take advantage of technical advances in medicine.1,11

Not surprisingly, American physicians and health planners have been interested in concepts in health care delivery which might be extracted from the Chinese experience.1,12 Currently, at least 10 per cent of all officially sponsored trips to China are medical delegations.12 To date, however, students of China’s health care system are still confronted by a field with very limited data on health care delivery. As an alternative to the information available from brief delegation visits, investigators in Hong Kong have engaged in refugee interviewing which has produced a somewhat different picture of life in the PRC.13

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In the last two years, relations between the PRC and the United States have improved sufficiently to allow cultural, educational, and scientific exchanges. During a six-month study of the feasibility of developing an exchange program in the People’s Republic of China (PRC), we were given the opportunity to observe inpatients on the infectious disease ward of a tertiary care facility.14

Materials and Methods

This study was made possible by the 1978 joint agreement on technical, educational, and cultural exchanges between the United States and the People’s Republic of China15 as well as informal negotiations between Yale University and Hubei Provincial Medical College. It was conducted at the Second Attached Hospital, a tertiary care facility of Hubei Provincial Medical College (HPMC), located in the provincial capital, Wuhan, and described elsewhere in detail.14

The Second Attached Hospital (SAH) has 580 beds and 830 staff members. The authors were assigned to the Infectious Disease (ID) Ward, a 40-bed facility with 11 physicians,16 11 nurses, and three health aides. With the assistance of the ID staff, the medical charts of 84 consecutive patients admitted between December 1979 and March 1980 were reviewed. It was possible to record the following variables for 82 cases: residence and distance from the hospital, occupation, diagnosis, degree of seriousness of illness, length of stay, and type of insurance coverage. Interviews with 76 patients (conducted in Chinese by GEH) provided detailed information about the access routes by which these patients reached SAH, including referrals from lower level or intermediate health care facilities, and non-standard routes of admission. Of the remaining six patients, two were children and four either were not on the ward long enough or were too ill to be interviewed. The inpatient cost for 19 patients, whose selection was based upon type and seriousness of illness, was obtained from the SAH accounting department. Interviews with SAH financial officers provided the general information about hospital budget and utilization figures.

The purpose of this study was to generate propositions about the nature of access to tertiary care centers such as SAH. Although we were provided the opportunity to observe the inpatient population of one ward, we were unable to survey the health needs of the entire SAH referral population. Consequently, statistical techniques designed to predict admission to this ward based upon our available data set would be inappropriate. Instead, we present simple measures of association between variables and, wherever possible, attempt to describe the gross characteristics of the population from which these patients came.

Results

The Patient Population

The Second Attached Hospital (SAH) is on the highest rung of a referral ladder serving both urban and rural residents. For city dwellers, this begins at a work unit or street clinic, with referral to a larger neighborhood or district hospital; the municipal, provincial, or national level hospital is the apex of the system. For the rural population, the ladder begins with the “barefoot doctor” paramedic at the brigade level, with referral to the commune hospital, the county or district hospitals, and finally to a prescribed large urban referral center. This referral system is depicted in Figure 1. Referral to higher level facilities must generally be recommended by the lower level. For urban workers and cadres,** the work unit or neighborhood clinic gives a referral form (called the “triplicate form”); peasants must have at least an introduction from the brigade clinic.***

As part of this referral network, the SAH is responsible for referral from 15 of 72 rural counties in Hubei Province, as well as a section of the city of Wuhan in which the hospital is located, a potential patient population of 7 million rural and approximately 750,000 urban residents. The furthest referral county is approximately 150 km away from SAH. Ninety-five per cent of the patients studied were from the appropriate catchment area; four patients were from non-referral rural counties ranging from 50–600 km away, and were either hospitalized while traveling through Wuhan or were transferred to the SAH for specialized (unique) care.

The majority of patients (72 per cent) were from Wuhan city and suburban areas. (This figure includes urban residents, peasants on temporary work assignments in the city, and peasants from a suburban commune.)

Distance from the Hospital

The distance traveled to the hospital by the 23 patients referred from SAH’s rural counties is shown in Table 1. Roughly half the referral patients traveled over 75 km to reach the SAH and 26 per cent traveled over 100 km (equivalent to a day’s bus or boat ride).

Eight of the 15 referral counties were represented on the ward. Of the five referral counties under 100 km from the hospital, at least one patient came from each county. Only three of the 10 counties located more than 100 km away were represented (see Table 1).

Degree of Illness

Patients at SAH were assigned one of three gradations, defining the seriousness of their illness in terms of nursing care requirements.† During the time of this study, 63 per

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**Cadre refers to an administrator or a professional working in state-sector organizations.

***Unpublished communication, Martin K. Whyte. See also “Introduction to Shanghai County” and “Use of Health Services,” reference 5.

† Although self-care ability is not an accurate measure of degree of illness, it was the standard used throughout the hospital. On this particular ward, it was a reliable measure because no patients with chronic (physically disabling) illness were admitted.

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*Although 11 physicians were assigned to this ward, only five were present during our stay.
cent of the patients in the Infectious Disease Ward were classified as mild (able to care for themselves), 22 per cent were serious (still able to participate in their care), and 15 per cent critical (totally disabled by illness). It was significantly (p<0.001, Chi-square test) more common for patients from Wuhan city to be admitted for mild illness compared to patients admitted from more distant referral areas.

**Diagnosis and Location**

Admissions over the three-month period included 49 patients with hepatitis, 20 with dysentery, five with schistosomiasis, five with epidemic hemorrhagic fever, and three with fever of unknown origin. The outcomes of these hospitalizations have been described previously. The average length of stay for all patients in the ward was 30.4 ± 4.01 days (mean ± standard deviation). The hospital officially reported average length of stay in 1979 for all patients as 19.0 days.

Two-thirds or more of the patients with hepatitis, schistosomiasis, and dysentery were city or urban commune dwellers (home ≤ 50 km from the hospital); in contrast, most patients with the other two diagnoses (5/8) were transferred from more distant facilities.

**Patient Occupation and Health Insurance**

Since most patients admitted to SAH were likely to live in the city, it is not surprising that the patient population was comprised primarily of workers (33 per cent) and cadres (34 per cent) and their dependents (7 per cent). Twenty-six per cent were peasants and 1 per cent were state farm workers.

The health insurance coverage for patients in China varies by occupation. Workers in state-owned (and some large collectively-owned) enterprises receive complete medical coverage (ultimately paid by the work unit organization), and partial coverage for dependents. Cadres are also covered completely, although dependents are seldom covered. On the other hand, peasants and workers in most collectively-owned enterprises are insured through local collective insurance programs where coverage varies depending upon the wealth of the collective.

Unless they transfer under emergency conditions, peasants are required to deposit a considerable sum of money with the hospital accountant before they are admitted. At SAH, this amounts to $66 for surgery patients and $53 for internal medicine patients. In this study, 67 per cent of the patients were completely insured while 33 per cent enjoyed only partial coverage.

**Routes of Patient Access**

Despite the fact that 80 per cent of the catchment population resides in the countryside, admission to this tertiary care facility strongly favored the urban resident. To

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**TABLE 1—Distance from SAH and Frequency of Referral**

<table>
<thead>
<tr>
<th>Distance from SAH</th>
<th>No. of Patients Referred</th>
<th>No. of Counties Referring</th>
<th>Total Possible No. of Counties Referring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50–75 km</td>
<td>11</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>76–100 km</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>101–125 km</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>126–150 km</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23</td>
<td>8</td>
<td>15</td>
</tr>
</tbody>
</table>

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**FIGURE 1—The Health Care Referral System in the People's Republic of China**
further explore possible explanations for this observation, we studied the access patterns as well as personal strategies employed by these patients. Three typical cases are reported in detail in the Appendix.

The circumstances which ended in admission to SAH for 76 of the 84 patients in this study are summarized in Table 2. It is clear that both urban workers and cadres frequently went directly to the hospital outpatient department, bypassing designated paramedical personnel and work unit clinics. On the other hand, peasants and rural cadres tended to follow the prescribed access route, beginning at the brigade or commune level. Those peasants who did follow the urban route were either temporary workers, already in the city, or had some personal connections in the city.

The scheme employed for non-standard referral is summarized in Table 3. Workers and cadres initiated referral mainly because they felt the treatment they had received at lower levels was inadequate. Several had been treated at work unit clinics and were dissatisfied with the medication they were taking. Two (one worker and one cadre) had each visited the outpatient departments of at least five hospitals before arriving at SAH.††† Two (one worker and one cadre) used personal connections at SAH to get themselves transferred from lower levels. Finally, two cadres were the objects of intervention by their work unit leaders, emphasizing the potential role of work unit leaders in the medical care system.

We also observed peasants initiating referral when they were dissatisfied with lower level care. One peasant insisted on transfer to the county facility when he realized the commune physicians had failed to diagnose hepatitis. Two other peasants (one a temporary worker in Wuhan, the other acting on advice from city relatives) visited five city hospital outpatient departments before being admitted to SAH.

Finally, peasants, rural cadres, and dependents were all observed initiating referral to be closer to a relative. This reflects the common practice of relatives performing nursing tasks for patients in hospitals.

**Charges for Health Care**

In most societies, cost is an important factor in access to health care. To evaluate the magnitude and impact of the cost of hospitalization in the PRC, a representative sample of 19 patients was selected for detailed analysis. As shown in Table 4, the average charge for the patients evaluated was $3.56 ± $.85 per day* (mean ± S.D.). Food costs were paid separately and were approximately $3.33 per day. Medicine accounted for 42.6 per cent of the charge, room 23.9 per

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**TABLE 2—Access Routes by Occupation**

<table>
<thead>
<tr>
<th>Route</th>
<th>Worker</th>
<th>Cadre</th>
<th>Peasant</th>
<th>TOTAL (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct to SAH outpatient department</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>18 (24)</td>
</tr>
<tr>
<td>Unit or street clinic → SAH</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>18 (24)</td>
</tr>
<tr>
<td>Other urban referral (other city hospitals or outpatient departments)</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>8 (10)</td>
</tr>
<tr>
<td>Brigade clinic → commune hospital →</td>
<td>3</td>
<td>6</td>
<td>14</td>
<td>23 (30)</td>
</tr>
<tr>
<td>county hospital/district hospital → city hospital/SAH</td>
<td>3</td>
<td>6</td>
<td>14</td>
<td>23 (30)</td>
</tr>
<tr>
<td>SAH internal transfer</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3 (4)</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>7 (9)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>27</td>
<td>28</td>
<td>21</td>
<td>76 (100)</td>
</tr>
</tbody>
</table>

†††In these cases, the reasons for visiting so many hospital outpatient departments fell into two categories: 1) they were dissatisfied with the treatment or diagnosis at one hospital and so went to another; 2) they were correctly diagnosed at one hospital outpatient department but could not be admitted due to lack of available beds, and so went to another hospital.

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**TABLE 3—Reasons for Non-standard Referral Routes According to Occupation**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Felt Care to be Superior</th>
<th>Wanted to be Near Relative</th>
<th>Incorrect Referral Hospital*</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Cadre</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Peasant</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Dependents</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>15</td>
<td>6</td>
<td>4</td>
<td>25</td>
</tr>
</tbody>
</table>

*Emergent illness necessitated admission to SAH
cent, procedures 17.1 per cent, laboratory tests 7.4 per cent, heat 6.5 per cent.** and x-rays 4.7 per cent. Not included in the patient’s bill are staff salaries, administration, maintenance, and capital investment costs, all covered under the state budget.

The total bills ranged from $7.13 plus food for a dysentery patient who stayed only six days to $338.69 plus food for a patient with epidemic hemorrhagic fever who was hospitalized for 41 days. The average total charges for all patients studied was $118.86. As will be discussed in detail below, these charges in many cases exceeded yearly per capita income, and were partially borne by the patients themselves.

**Discussion**

Medical care and health care delivery in the PRC have been the subject of intensive comments.4,6,7-12,14,20,21 Virtually all recent studies have been based on the collection of data during very brief visits to the PRC.4,20,21**** Earlier studies based upon more extensive experiences were often influenced by the politics of the Cultural Revolution.22 In this study, we attempted to examine health care delivery in the PRC based on the function of an urban tertiary care medical center.

A major goal of the PRC has been to provide the same quality health care to the rural peasants as to the urban dwellers. In part, this has been accomplished by health care workers (barefoot doctors) at the brigade level and by the development of commune hospitals.13 Another goal, however, was to introduce a referral system in which peasants could easily gain access to more sophisticated health care.

We found that geographic and occupational characteristics were strongly related to admission to the Infectious Disease Ward at the tertiary care facility studied. Most of the patients admitted were fully insured urban workers and urban and rural cadres, rather than peasants with only partial insurance coverage. In addition, rural patients who ultimately gained admission to the ward were generally sicker than urban patients.

This pattern of differential utilization of health services, based upon such “enabling” factors as geography, cost of care (including actual charges and opportunity costs), and cultural and demographic variables, is axiomatic in studies of both developing and developed societies.16-18,23 Even though government guidelines in the PRC have been clearly designed to encourage equal access to tertiary care for the rural majority, in our small sample this did not prove to be the case. There are several explanations for our observations.

First, travel in rural China is cumbersome and potentially expensive. Transfer to SAH from several of the outlying hospitals would require at least one day’s journey by automobile or boat, which would be recommended only for those patients sick enough to warrant the trip but well enough to survive it. Thus, the overrepresentation of urban patients is partially a result of their considerably shorter geographical access routes. It also seems clear that the regulations requiring an official referral form for an urban patient for transfer to a high level hospital were not strictly enforced. On the other hand, because of improvements in the quality of commune and county hospitals, these observations do not necessarily imply that failure to transfer means inadequate health care for the rural resident.

Second, the urban patient may be more sophisticated in his needs or his perception of the health care he/she requires. Some evidence to support this notion was found in our assessment of the number of non-standard referrals to the ward. Indeed, three times as many workers and cadres as peasants used non-standard referral routes, and their motivation was to gain better quality of health care. On the other hand, several peasants also aggressively sought opportunities for admission to the infectious disease ward to receive better care.

Third, the nature of the disease processes seen among patients admitted to the ward may affect the ratio of urban/ rural admissions. Hospitalization is required by law for patients with hepatitis (59 per cent of all patients in our study), who may not be sick enough to warrant transfer from the countryside. Likewise, dysentery is a short-lived disease process which would be expected to improve before transfer.

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**Table 4—Charges for Hospitalization at SAH**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Average Daily Patient Charges</th>
<th>Average Total Patient Charges</th>
<th>Average Total Patient Charges + Food ($0.33/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schistosomiasis (n=3)</td>
<td>$1.49 ± 1.81**</td>
<td>$58.00</td>
<td>$70.87</td>
</tr>
<tr>
<td>Hepatitis (n=6)</td>
<td>5.36 ± 2.36</td>
<td>150.00</td>
<td>159.24</td>
</tr>
<tr>
<td>Epidemic Hemorrhagic Fever (n=3)</td>
<td>4.06 ± 2.1</td>
<td>178.64</td>
<td>193.16</td>
</tr>
<tr>
<td>Dysentery (n=4)</td>
<td>1.73 ± 0.34</td>
<td>51.03</td>
<td>60.77</td>
</tr>
<tr>
<td>Fever of Unknown Origin (n=3)</td>
<td>4.00 ± 1.1</td>
<td>54.80</td>
<td>58.32</td>
</tr>
<tr>
<td>TOTAL AVERAGE</td>
<td>$3.56 ± 0.85</td>
<td>$118.86</td>
<td>$128.76</td>
</tr>
</tbody>
</table>

*An exchange rate of one yuan = $0.66 US was used

**Standard deviation of the mean

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**Chinese citizens who live north of the Yangzi (Yangtze) River are reimbursed for heating costs. The SAH is south of the river, so all residents, including patients, are charged separately for heat.

***The Supplement describing health services in Shanghai County (published recently by this Journal) is an exception. This County, however, has a considerably higher per capita income than other parts of China and may not be representative.
would become necessary. These factors may explain why most patients admitted with hepatitis and dysentery were city dwellers. Epidemic hemorrhagic fever, on the other hand, is limited to areas in the countryside where the mouse vector is ubiquitous and most such patients came from distant facilities. The admission patterns of patients may well be different on a surgical ward, or in a cancer hospital, and further studies will certainly be necessary to determine whether our findings were a result of sample selection, or have more general application.

Finally, the cost of health care may play a role. In this regard, the system established in the PRC may be particularly disadvantageous for the peasant for whom only partial insurance coverage is guaranteed, compared to the cadre or worker for whom all bills are paid. Studies from the United States and other countries have shown that uninsured or partially insured groups use services at lower rates than fully insured groups. The way in which this study was conducted, however, did not allow us an opportunity to determine whether some patients were not transferred in order to save money. Nevertheless, we did see examples of discharge of terminal patients to return to the countryside, and differences in choices of medication designed toward cost containment for partially insured patients.†

Certainly these data establish that hospitalization in the PRC can be very expensive, particularly for peasants.†† Relative to per capita income and other household expenses. Whereas an average hospitalization charge was approximately $118, housing and food for employees in our unit amount to $40 and $240 per year, respectively, and a bicycle (the main form of transportation) costs about $80.‡ In a recent interview study of PRC peasants in Hong Kong, hospital bills were identified as a major source of debt.†††

Our results support the notion that financial and geographic variables are related to access to health care in the PRC. However, we must also emphasize the achievements and adaptability of the system. For example, in order to ease the cost of health care for rural residents, several infectious and other diseases endemic to the countryside are treated free of charge. These include malaria, schistosomiasis, and brucellosis; patients pay for their care, but are reimbursed by local health administrations.‡ During the period of this study, the national level government issued a series of directives aimed at decreasing the cost of medical care. These directives included reduced backlog and use of supplies, and earlier discharge of patients. Furthermore, the referral system observed in this study may in fact be superior to those in other developing nations. Twenty-eight per cent of the patients in our ward were referred from counties of over 50 km distance. In contrast, surveys in Africa have shown that less than 10 per cent of inpatients in national referral hospitals (similar to SAH) can be expected to come from outside the city.26,27

Since the end of the Cultural Revolution (1966–1976), China has embarked upon a drive toward modernization, reordering priorities in the health care field with emphasis upon medical research, advanced technology, and the development of urban medical centers. At the same time, health planners are aware of the importance of cost containment, and of improving the quality of primary care for the rural population. The issues in health care cost containment faced by China today are not unlike those experienced by other developing nations. In this study, the use of hospitalization per se and medications employed accounted for most of the hospital bill, regardless of the nature of the illness. This observation is consistent with studies in other developing countries which estimate that expenditures on drugs constitute 40–60 per cent of the health budget. This can be contrasted with the situation in developed nations, presumably a predictor of future issues, where expenditures on drugs are comparatively lower but utilization of laboratory tests and equipment represents a major burden.

Our results suggest that the two most effective means to decrease health care costs in China at present would be to avoid hospitalization whenever possible, and to avoid the use of medications without documented benefit. Although these solutions have proven effective in both developed and developing nations,† they may be very difficult to implement in the PRC. With respect to decreasing hospitalization, the high rate of employment allows few adults the flexibility to stay at home with a recuperating relative. Furthermore, there are no incentives to the professional staff for discharge, and an increased patient turnover generally means an increased work load. Reducing the use of medications must take into consideration the expectations of the Chinese patients, and the general difficulty in changing physicians' habits. On the other hand, administrative solutions may be very effective. The most recent drive to economize may create a greater consciousness among urban work unit leaders regarding the health insurance costs which workers and cadres accumulate. Strict adherence to rules designed to impede unnecessary referral to higher level (more expensive) hospitals such as SAH would be predicted to be an effective cost-reducing device. Furthermore, recent policy proposals have emphasized upgrading the technology and quality of care available in rural county and commune hospitals. This would have a major impact on health care in the countryside, and would, in our judgment, be more cost-effective and easily implemented than trying to facilitate transfer of patients to tertiary care hospitals such as SAH.

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APPENDIX

Access Patterns of Three Typical Cases Gaining Admission to Second Attached Hospital (SAH) of Hubei Provincial Medical College

Case Number 1 (Patient Number 144683)—This patient is a 26-year-old Chinese female, with no history of prior illness, employed as a middle school mathematics teacher in Wuchang (part of Wuhan municipality not far from SAH). On October 27, 1979, she visited the middle school clinic complaining of stomach pains, and was examined by a health worker who sent her home to rest. During the next three days, she developed arthritis and went to the neighborhood hospital appropriate for her housing unit. At this clinic, she was examined by a physician and diagnosis of rheumatism was made. She was admitted to the hospital's 10-bed facility on the following day and was treated with an antimicrobial agent. Her symptoms persisted over the next two weeks and she became dissatisfied with her progress and left this hospital. At the suggestion of a friend, she went to the outpatient department of SAH where liver function tests revealed acute hepatitis. She then returned to the neighborhood hospital with this information and received therapy appropriate for hepatitis. Over the subsequent two weeks, she failed to improve, but the street hospital physician refused to allow transfer to another hospital and she returned to her home.

She remained at home for approximately 10 days during which time she was treated with herbal medicine administered by a neighbor who was self-taught in Chinese traditional medicine. Although her systemic symptoms improved slightly, she developed jaundice and went to the outpatient department of the Chinese traditional medicine hospital in Wuhan. At the Chinese traditional medicine hospital, hepatitis was again recognized, but she was not admitted because of lack of available beds. She again returned home briefly and then solicited admission to the First Attached Hospital of HPMC but no beds were available. She visited her work unit leader for advice and was subsequently admitted to the Infectious Disease Ward of the SAH. She remained hospitalized for 41 days until her jaundice had disappeared, and was discharged on January 24, 1980. Her hospitalization was paid by her work unit under the cadre medical insurance program. The breakdown of her hospital bill was as follows:
Comments—This case illustrates the wide variety of options available to the Chinese patient with respect to their health care. This young woman was dissatisfied with the care she was receiving in the classical (standard) outpatient setting and was self-referred to several other clinics. She also took advantage of Chinese traditional medicine which many Chinese patients feel is most appropriate for chronic illness. It is surprising that she was not immediately admitted to an infectious disease ward when the diagnosis of hepatitis was made since governmental rules require that patients with this illness remain hospitalized in isolation until jaundice disappears. Although it is unclear how important a role this young woman’s work unit leader played in her ultimate admission to the Infectious Disease Ward at the SAH, her visit to the work unit leader is consistent with the approach to health care taken by several patients interviewed. The patient’s hospital charges were typical for hepatitis and, although no effective therapy is available for this disease process, medicine represented 44 per cent of her hospital bill. The lack of available beds for admission in higher-level hospitals such as the SAH was a common complaint.

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Case Number 2 (Patient Number 144289)—This patient, a 56-year-old Chinese man, with no history of prior illness, is a peasant who lives in a commune approximately 60 km from the SAH. He was well until November 24, 1979 when he developed fever, headache, and a variety of other systemic symptoms. He was examined at the brigade clinic on that same day by a barefoot doctor and was treated for fever but failed to improve. On the morning of November 26, he was referred to the commune clinic for further evaluation. The physical examination revealed hypotension and other symptoms consistent with epidemic hemorrhagic fever. On the evening of that same day, he was transferred to the SAH, which is the proper referral center for his commune; the county hospital was bypassed for unknown reasons. He remained on the Infectious Disease ward of the SAH for 41 days where he received supportive therapy. He was discharged on January 6, 1980. The breakdown of expenses during his hospitalization are as follows: room, $19.13; heat, $4.67; medicine, $139.49; blood, $126.67; oxygen, $1.60; procedures, $18.27; laboratories, $28.13. Additional room charges were made for the patient’s son who remained in the hospital for two days: $0.13. Total cost of hospitalization was $338.69. The additional cost of food was approximately $13.67 during his 41 days.

Comments—This is an example of a patient who followed the guidelines of the health care system closely. As soon as he became ill he was seen and examined by a paramedical personnel and, within a short time when it was obvious he was too sick for brigade clinic care, he was transferred to the commune hospital. Epidemic hemorrhagic fever has such a high morbidity and mortality19 that patients with this particular disease are rapidly transferred to tertiary care facilities, which may explain why he was not transferred to the county hospital from the commune hospital. During his hospitalization at SAH, he received only symptomatic therapy as well as blood transfusions. Blood is an expensive product in China ($26.67 for 100 cc of blood). Although no effective therapy is available for epidemic hemorrhagic fever, the patient’s medicine represented 41 per cent of the hospital bill. Once again, this is probably not optimal utilization of scarce resources. Furthermore, the patient will be required to pay a sizable portion of his bill. The collective insurance program of this patient’s commune covers 70 per cent of the hospital costs; the patient will be asked to pay $101.60. For the average peasant in China, this represents a major portion of one year’s income.

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Case Number 3 (Patient Number 146456)—This patient, a 23-year-old Chinese male, was well until February 22, 1980 when he developed systemic symptoms and a diagnosis of viral hepatitis was made. He was a peasant living in Yingshan County and was transferred from local facilities to SAH by bus. During his hospitalization he progressively worsened. He deteriorated and developed coma and bleeding complications. At that point, there was discussion regarding the possibility of further hospitalization, expensive blood transfusions, and nonspecific supportive therapy. Because the doctors suggested that there was very little hope for survival, the patient returned to his local commune on March 4, 1980.

Comments—This unfortunate young man is typical of many patients we had the opportunity to evaluate for whom the costs of hospitalization were a major concern. As noted, he was taken from the hospital solely because the family did not think that the cost of hospitalization was justified in light of the poor prognosis.