THE MEDICAL CARE AND TREATMENT
OF THE CRITICALLY-ILL ELDERLY IN CHINA:
ISSUES AND LESSONS FOR AMERICAN POLICIES

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It is only change that is at work here.

- I Ching

The Chinese love jade. That strange lump of stone with its faintly muddy light, like the crystallized air of the centuries, melting dimly, dully back, deeper and deeper...[the Chinese] seem to find in its cloudiness the accumulated sediment of the long Chinese past, and we think how appropriate it is that the Chinese should admire that surface and that shadow.

- Tanizaki Junichiro, 
  In Praise of Shadows (1934)

PROLOGUE

Like the emphasis and prediction of its ancient and venerated book, the I Ching, China appears to be in the midst of great social and economic change, even transformation. For nearly a decade, Chinese leadership has undertaken and pursued a daring and often paradoxical "Four Modernizations" policy—a national effort to update the country's industry, agriculture, science and technology, and defense. The unabashed goal of this self-proclaimed "second revolution" is the reshaping of the world's most populous nation into a prosperous and technologically-sophisticated world power. What has caught the eye of the Western observer is not only the pace and zeal of the peaceful yet dramatic shape of events within this country, but also the way in which its goals are being pursued. Living under the dictates of Karl Marx since the 1949 revolution, led by Mao Tse-Tung, the new system emerging in China either ignores or defies many of the precepts most cherished by traditional Marxists. State ownership has begun to give way to private property, central planning to competitive markets, and political dictatorship to limited economic and cultural freedom (Iyer, 1985; Church, 1986).

Such a turnabout has affected all aspects of Chinese life, including its
health care delivery system. Such a turnabout also has affected its many population groups and subgroups, including its elderly. This paper focuses on the delivery of care to China’s fastest growing age group—the elderly, and in particular to its critically-ill elderly. It emphasizes the utilization of life-sustaining technologies and several accompanying factors—economic and financial, legal, socio-cultural, and religious—that shape not only the delivery system itself, but also the decision to initiate and continue treatment of the country’s critically-ill elderly.

While this discussion cannot and will not overlook the current social and economic forces of change, the importance of this recent cultural drama must be viewed in the larger context of Chinese tradition and continuity that stretch back over three to five millennia. There is little evidence, for example, that the new elements of market capitalism will completely replace the older Marxist approaches. Rather, the conscious policy directive is an attempt to combine or blend these two contrasting and often conflictual approaches. Likewise, the communist and Maoist-inspired elements of four decades have never fully replaced, but have more often been blended with, the many disparate traditions of its pre-socialist past.

Kissinger (1986) has noted that such amalgams and balancing acts have been characteristic of the Chinese over time. Ideological shifts go hand in hand with the longest uninterrupted history of self-government. Its cultural uniqueness goes hand in hand with an extraordinary variety among its regions, which are physically separated by vast distances and daunting geographic obstacles. These ethnic and geographic realities have historically "generated an oscillation between a fear of anarchy leading to stifling centralization and a loosening of controls in danger of turning into regional separatism." Nevertheless, the Chinese have time and again managed to find a middle ground—an accumulated sediment of culture and
spirit. Kissinger has characterized it as a "rhythm" distinctly Chinese. The "oscillations" have been, perhaps, tempered by the age-old dictum to, in the words of the Chinese sage, "seek balance and harmony in all things" (Lao Tzu, n.d.).

Against this backdrop of change within continuity, this paper begins with a background discussion of China and its people. For purposes of the Office of Technology Assessment report, this discussion includes a special focus on the country's strong religious and philosophic tradition. The Chinese health care system is then briefly described. A discussion of Chinese customs and policies toward the aged follows, with an emphasis and review of a number of relevant factors that influence and affect the care of the country's critically-ill elderly. And while the Chinese experience is arguably unique in many ways, this fact need not preclude lessons and implications for policies relating to the care of America's critically-ill elderly. The paper concludes with a discussion of possible benefits for the corresponding American experience.

BACKGROUND

**Demographic Characteristics**

Situated in the eastern part of Asia, China covers an immense area of about 3.7 million square miles—just slightly larger than the United States. Population density, however, is four times greater in China than in the U.S.\(^1\) In fact, China is the world's most populous nation, with slightly more than one billion citizens. The Chinese count 56 distinct ethnic nationalities among its populace, though approximately 93 percent

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\(^1\) Only seven countries in the world have populations of more than 100 million. China ranks first, and the U.S. ranks fourth (Fisher, 1985).
belong to the largest group, the Han nationality (MOPH, n.d.).

China is administratively divided into 22 provinces, 5 "autonomous regions" (minority populations such as Inner Mongolia and Tibet), and 3 municipalities (Beijing, Shanghai, and Tianjin) that report directly to the central government in Beijing. There are also about 2,700 counties, and about 55,000 people's communes. Provinces contain districts composed of counties and smaller cities (Summerfield, 1979).

Despite its large land area, China contains vast stretches of mountain and desert, with only a relatively small part being arable. China must feed approximately 20 percent of the world's population with only 8 percent of the world's cultivated land. China's population, furthermore, is most unevenly distributed. The vast majority of people live in eastern China, with its three great river basins. Western China, with its mountains and deserts, is exceedingly sparsely populated with less than 5 percent of the population. In addition, fully 80 percent of the Chinese people live in rural areas, an almost exact reverse of the population distribution in the United States.

Even within its borders, China is recognized as a developing nation economically. A gross national product of $300 per person in 1981 (as compared with $12,820 in the United States) places China in the bottom third of developing nations (World Bank Atlas, 1983; Esaio, 1984). Both the urban-rural makeup of its population, and its limited economic capacities have strongly influenced China's policies toward health and medical care.

Chinese Religion\(^2\)

The allure of its modernization and new economic policies aside, China

\(^2\) This discussion of Chinese religion, unless otherwise noted, is based on discussions by Capra (1975) and Samagalsky and Buckley (1984).
also must be viewed as an ancient country. The influence of its history is nowhere more evident than in its rich religious and philosophic tradition that continues to permeate the many facets of its culture, including its health care. Chinese religion, like other aspects of Chinese culture, has developed over a period of more than 3000 years and has absorbed many influences. It has been characterized as a mixture of philosophy, tradition, and superstition, but in the main has been influenced by three great trends in human thinking: Taoism, Confucianism and Buddhism. In their pure forms, each of these is more a philosophy (or way of life) than a religion. Taoism and Confucianism are often seen as two complementary traditions that developed in ancient China to deal with the two kinds of knowledge: intuitive and rational, and represented by the Chinese archetypal pair yin and yang which form the very core of Chinese thought. At the same time, all three philosophies have been inextricably interwoven into the fabric of Chinese religious consciousness, and the "popular religion" of the Chinese is best viewed as a fusion of ancient superstition with the three philosophies. The founders of these philosophies have all been deified and the Chinese have worshipped both the founders and their disciples. The people also have come to worship their own ancestors and a multiplicity of gods and spirits.

Despite the blurring of distinctions between the three philosophies in popular culture, it is useful here to briefly isolate the separate strands. Individually, each came to occupy a needed philosophic space. Taoism taught man to maintain harmony with the universe, not to disturb it. Confucianism, on the other hand, attended to the more practical political and moral aspects of life, and Buddhism took care of the afterlife.

**Taoism.** The concept of Tao itself is the center of Taoism. Tao is the way of ultimate reality, the basic mystery of life—it cannot be perceived
because it exceeds the senses, all thoughts and all imagination. It can be known only through mystical insight, which cannot be expressed with words. Tao also is the way of the universe, the driving power in nature, the order behind all life, the spirit which cannot be exhausted. For the masses, the power of the universe was often the power of gods, magic, and sorcery. And Tao refers to the way man should order his life to keep it in line with the natural order of the universe.

The Taoists rejected self-assertiveness, competition, and ambition. They revered humility and selflessness, and were disinterested in the things the world prizes like rank and material goods. Nature was an entity to be made friends with, rather than conquered, dominated, or controlled—the idea being to blend harmoniously with the Tao which flows through everything. Civilization tended to be condemned and simplicity encouraged.

Confucianism. While the Tao is perceived as running through everything, Confucianism focuses on man. And with the exception of Mao, the one name which has become synonymous with China is Confucius. Born only a few years after Lao Tzu (the founder of Taoism) around 551 B.C., the ideas of Confucius permeated every level of Chinese society within a few generations: government offices presupposed a knowledge of the Confucian classics, and spoken proverbs trickled down to the illiterate masses.

Living during a period of great social conflict, Confucius sought to find a way which would allow people to live together peacefully. For Confucius, the answer was derived from selected traditions, handed down from generation to generation; if the continuity were ruptured, then the society broke down. Confucius also further devised what he thought were the values necessary for the collective well-being. These included not only the building of ideal relationships between humans, but also a knowledge of how to behave in a given situation, a set of manners. Behind these concepts is
the presumption that the various roles and relationships of life have been clearly defined.

In the Confucian system of things there are five main relationships: father-son, elder brother-younger brother, husband-wife, elder friend-junior friend, and ruler-subject. What one does affects others, each is never alone when acting; one's actions must not damage or create conflict with other individuals. Confucius reinforced the pre-existing Chinese notion of the family as the basic unit of society. The key to family order is children's respect for and duty towards their parents—filial piety or xiao. Also embedded in this concept is respect for age, which gives everything—people, objects, institutions—their value, dignity, and worth. The old, while at their weakest physically, are at the peak of their wisdom, knowledge, and experience. Respect flows upwards, from young to old.

Lastly, Confucius rejected the use of force and even the notion of a rigid code of law. Conduct could not be enforced by some organization set up for that purpose. Taking legal action also implied an incapacity to work things out by sensible compromise and negotiation advocated by Confucius.

Buddhism. Buddhism is more of a philosophy and code of morality than a religion because it is not centered on a god. Rather, Buddha rejected the supernatural.

Buddha taught that all life is suffering, that everyone is subjected to the trauma of birth, to sickness, to decrepitude, and to death. In Buddhism, the belief is that one is always tied to what one abhors (e.g., an incurable disease or personal weakness), and is separated from what one loves. Real happiness cannot be achieved until suffering is overcome. The cause of happiness is kama—or desire—specifically, the desires of the body and the desire for personal fulfillment. Happiness can only be achieved if those desires are overcome. This requires following the
"eight-fold path" of the right: knowledge, aspirations, speech, behavior, livelihood, effort, mindfulness and absorption. The right absorption involves the techniques of Hinduism's yoga, a discipline designed to teach control over all the functions of the body. Buddha also accepted the Hindu concept of reincarnation, the cycle of rebirths, and karma, the law of cause and effect.

Contemporary Religion, Culture, and Communism. Besides Taoism, Confucianism, and Buddhism, other religions at one time or another in various places around the country took root and continue to thrive as well. These include Islam, Christianity, even Judaism.

Presently, the Chinese government professes atheism, and considers religion and superstition a tool of ruling classes to keep power and privilege, and an archaic remnant of old China. China’s public policies are, of course, strongly influenced by the newer political and economic philosophy of Communism. In brief, Communism professes that the means of production (factories, land) be owned by the people collectively, rather than privately, and espouses policies that benefit society as a whole rather than individuals. Ideally, each individual is to receive according to his/her need. Typically, centrally planned and governed economies are created to transform this philosophy into practice.

Still, freedom of traditional religion is guaranteed under the Chinese constitution, and over the last few years there has been a resurgence in active, organized religion in China. At some places, the monks and priests, driven from temples and monasteries during the Cultural Revolution, have been allowed to return. Other temples have even been renovated and are often attracting many worshippers, in large part, the elderly (Zhong, 1986).
Health Policies

By all accounts, China has given high priority to public health and medical care since the founding of the People's Republic in 1949. Before 1949, China's population suffered a crippling burden of disease and premature death. Periodic epidemics of plague, cholera, smallpox, etc. swept the land which—combined with frequent famine—sometimes decimated entire populations. These epidemics were superimposed on a high underlying level of morbidity and mortality that continued into 1949. Such occurrences earned pre-Maoist China a reputation as the "sick man of Asia" and led to low levels of life expectancy generally believed to be less than 35 years (World Bank, 1985). Such a state of health reflected a century of political factionalism and social upheaval, much of it caused by foreign traders and foreign armies as China began to open its markets to the world.

For the first three decades of the new socialist regime, Chinese development efforts emphasized two main objectives—development of a heavy industrial base and elimination of the worst aspects of poverty. An important part of the subsequent anti-poverty struggle was to undertake basic public health measures and—relative to other countries—to develop national policies that emphasized public preventive over curative health services for the task of controlling communicable diseases. Experiments in meeting basic health needs were started during the 1930s and 1940s by Mao and the People's Liberation Army while encamped in various provinces. These efforts involved mobilizing the people to educate themselves and encouraging them individually and collectively to provide their own health care and medical care services (Sidel & Sidel, 1974). These experiences generated an
interest in health especially related to rural areas and peasants. Major campaigns were mounted under a strong central policy shortly after 1949 to improve environmental sanitation; to eliminate the "four pests"—rats, flies, mosquitoes, and bedbugs; to vaccinate against and cure infectious diseases; and to control the major endemic disorders such as malaria. Mass mobilization played a key role in the success of these campaigns (see, for example, Sidel and Sidel, 1974; and Ma Bai De, 1985). These vigorous prevention efforts, according to a recent World Bank report (1985), were "undoubtedly...enormously successful in reducing morbidity and mortality."

But China's overall emphasis on prevention policy also led to pursuit of a health strategy that reached well beyond the health system per se. In particular, improved nutrition, provision of safe water supplies, sanitary and convenient means of waste disposal, fertility reduction, and widespread educational improvements have been major policy objectives. Again, the recent World Bank's report (1985) concluded that the multi-faceted strategy has been a success, thanks largely to the strong and centralized "administrative capacity and political will of the Chinese government."

The historical emphasis on public preventive measures, however, has not been undertaken while neglecting the importance of curative health measures for the well-being of the population. In fact, the allocation of health resources to preventive activities generated a demand for at least minimal curative services and pharmaceutical availability in even the more remote rural areas. Through 1982, health care facilities for curative services had increased by more than 50 times the 1949 levels. Hospital beds had increased 25-fold, and health professionals had increased by nearly 7-fold,

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3 The farmers and people of the Chinese countryside engaged in agrarian pursuits are popularly referred to as "peasants".
including about 2.7 times the number of physicians as were practicing in 1949 (MOPH, no date).

Public health and preventive measures, combined with curative services, have met with substantial success as evidenced by changes in mortality and morbidity statistics. Average life expectancy has increased dramatically—from about 32 years in 1950 to 69 years in 1982, which is only about six years less than in Western market industrialized economies. In addition, success has resulted in the emergence of new leading causes of morbidity and mortality. In urban and much of rural China, parasitic and infectious diseases as causes of death have been substantially replaced by heart disease, cancer, stroke, cerebro-vascular disease, accidents, and chronic respiratory diseases. For example, the mortality rate for cerebro-vascular disease more than doubled between 1959 and 1979 (Wu Ying-K'ai, 1985; Zhou Guanhong, 1985; Li Pei-Yiong and Li Chong-Hui, 1985). Infants, children, and young women have been supplanted by the middle-aged and elderly as the population groups with highest mortality. The older age group also are consuming an increasing proportion of medical care, in large part due to increasing amounts of curative therapies for these increasing problems of chronic diseases (World Bank, 1985).

This shift in disease incidence and prevalence, which has already occurred in industrialized countries, is commonly referred to as the "epidemiologic transition." Urban Chinese disease patterns are increasingly parallel to those in high income countries, and a similar transition is progressing in rural China as well. Still, limited economic capacities have not allowed China to reach parity with the West in health personnel and facilities. For example, in 1982 China had 2.03 hospital beds per 1000 people (as compared with 4.5 per 1000 in the United States). There are 588,000 senior doctors trained in Western medicine and 513,000 senior
doctors trained in "traditional" medicine (discussed in more detail below), yielding a ratio of about 1 senior doctor per 1000 people—about half the U.S. ratio.

The historic shortage of highly-trained doctors plus the national emphasis on prevention has led to a resulting system of greater reliance on the use of indigenous paramedics and other auxiliary personnel to carry out basic educational, preventive, epidemiological tasks, and simple curative work. China, for example, has 445,000 assistant doctors trained in Western medicine who have had two years of medical education beyond junior high school (Statistical Yearbook of China, 1983; AHA, 1982). Most of the primary health care in China is provided by paramedics called "village doctors," who usually are graduates of primary schools with up to six months of training in public health and primary care. According to Hsiao (1984), there are currently about 1.2 million of these paramedics in China. As the basics of hygiene and community involvement in preventive health become more established, however, it will become necessary to upgrade their skills to undertake more specialized care. The Chinese in fact plan to upgrade 50 to 60 percent of its village doctors to the level of assistant doctor within the decade. Likewise, the increasing prevalence of chronic diseases, which places greater demands on the upper end of the system of health care workers, has led to more intensive training and education for senior doctors—including a greater emphasis on the use of Western technology (Dobson, 1981; World Bank, 1985; Fox, 1984). Sidel (1982) has already noted the decline of village doctors by roughly 22 percent between 1978 and 1982.

4 In the past, these village doctors have been popularly referred to in the West as "barefoot doctors," though the term is no longer formally used.
There also is fairly widespread evidence (Henderson and Cohen, 1982; Fox, 1984; World Bank, 1985; Hsiao, 1984) that hospital beds, health personnel, and other health resources are unevenly distributed between the urban and rural areas. In 1980, the average number of beds per 1000 people was more than twice the number in urban areas, with the distribution of senior doctors even more uneven: 2.4 per 1000 people in urban areas and 0.5 per 1000 in rural areas.

The Planning Process

Health policy in China is directed by the leaders of the Party and is refined and planned in detail by various levels of an extensive bureaucracy headed by the Ministry of Public Health (MOPE). It extends down to all administrative divisions. Dobson (1981) has noted that in this sense the Chinese planning system is much like that of the U.S., in that a multi-leveled government structure is called upon to resolve and implement national health care policy (e.g., the Medicaid program).

The provincial level bureaucracy is a key planning agent that revises district, county, and municipal applications for resources. Provincial authorities can authorize limited capital construction (such as remodeling a hospital), design health prevention campaigns, transfer and place medical personnel within the province, and act in cases of large-scale medical emergencies. (In such cases, the MOPE may be called upon for extra budget assistance.) Provincial Party committees review the work of the provincial bureaus on policy issues and resource allocation.

Below the provincial level, many health care delivery activities are locally managed at the municipal and district level. Because each jurisdiction has input to the planning and delivery process, goals which at first appear uniform at the national level may be quite varied in
application.

The Ministry of Public Health controls the money for capital construction and purchases of major pieces of equipment and technology. Funds flow from the Ministry through the provinces, to districts, municipalities, and counties. Resource allocation plans are revised as they are passed up through the hierarchical structure. The Chinese planning system, then, might be termed a "top down-bottom up" process. The allocation of funds is determined by need, changes in population, industrial development, etc. Thus, developing areas may receive disproportionately more funding (Dobson, 1981). The MOPH also directly manages a major hospital, vaccine production facilities, the core medical colleges, and medical research institutes (World Bank, 1985).

Overall, though, the MOPH is organized to set general policy only. Power is being increasingly decentralized under the government's new economic policy. This is a marked departure from the 1960s when health policy was centrally formulated under the influence of a limited number of Party members, bypassing the medical establishment and technical planners.

The Organization of Care

For the Chinese, health care is one of the "five guarantees," and despite resource limitations, is organizationally available to all. Chinese health personnel, health stations, and hospitals are organized throughout the nation on a three-tier system of services characterized by increasing complexity and specialization; this system varies in urban versus rural locations.

In rural areas, the first tier comprises barefoot doctors, who provide both preventive and primary-care services. Before 1980, an average of two barefoot doctors (most of whom were also engaged in farming) served 1000
people. For more serious illnesses, barefoot doctors refer patients to the second tier: commune health centers, which may have 10 to 30 beds each, and outpatient clinics, each serving 10,000 to 30,000 people. At the commune health centers, the most qualified medical workers are assistant doctors.

Finally, the most seriously ill patients are referred by the commune health centers to the third tier: county hospitals. Each serves 200,000 to 600,000 people and is staffed with senior doctors who graduated from a five-year medical school after completing high school. In rare cases, the patient may be referred to a specialized (tertiary) hospital.

In urban areas, the first tier consists of paramedics working in factories and in neighborhood Red Cross stations, where basic primary care is provided. More serious cases are referred to the district hospitals, and the most serious are referred to municipal hospitals (Hsiao, 1984).

Side by side with the network of national, provincial, and local facilities which serve the entire population, there is a network of industrial and other state enterprise hospitals as well as other facilities that provide free services to workers in those enterprises. In 1981, they provided about 25 percent of medical care in China. Depending on the size of the enterprise, complicated cases are treated in their respective health facilities, or referred to the governmental hospital system. Large enterprises handle almost all their own cases, and the Railway Ministry and Army, to take extreme examples, even have their own medical colleges as well as hospitals (World Bank, 1985).

For post-hospital care, there are few nursing homes at present, but additional homes are being planned. They are administered by district hospitals (Lee, 1985), and each prefecture has at least one, though it may serve other functions as well (Shou Shang Jue, 1985). Home care programs were begun over two decades ago as a solution to the bed
shortage (Meng, 1985), but because home care is provided by hospital personnel, it is available generally only in large cities where it is undertaken by the larger hospitals. It is a program which the Ministry of Public Health favors, though, and currently it is growing at a substantial rate (Wu Yuanjin, 1985).

At first glance, China's patient referral system appears well-organized. Given the relative scarcity of facilities and personnel, criteria for increasingly specialized care should be well-defined to allow improved and more appropriate access to more sophisticated settings. Henderson and Cohen (1982), however, note that a number of factors other than strictly medical ones have produced uneven patterns of which patients receive second and third-level care. For example, geographic and occupational characteristics are strongly related to admission at tertiary care facilities. Most of the patients admitted were urban workers and urban and rural "cadres" (government officials), rather than peasants. In addition, rural patients who ultimately gained admission were generally sicker than urban counterparts. Henderson and Cohen attribute differential patterns of use by urban/rural residents in part to ease of travel and differing levels of perception or sophistication of medical care need. Three times as many urban and government workers were found to deviate from non-standard referral routes in the pursuit of more specialized care. Because access to goods (such as specialized medical care) is often limited, many Chinese are still very much reliant on non-standard approaches, institutionalized privilege systems, and personal connections (guanxi) to supply them with goods and services considered scarce. Lastly, Henderson and Cohen attributed differential patterns of use to stem from very different levels of insurance coverage that exist in China—discussed in more detail below.
Financing Care

Overall, observers agree that policies have reduced financial barriers to health care since the 1949 revolution (Prescott and Jamison, 1984). However, there has never been any public provision for a centralized national health insurance system. At its simplest, health insurance coverage for patients in China can be said to vary by occupation, and (again) there are major differences between urban and rural areas with respect to health care financing.

While preventive and public health programs are almost totally financed by the central government, it pays only 20 to 25 percent of medical services (Cheng, 1982). As previously discussed, government funds go primarily to absorbing capital costs for hospitals and commune health centers, staff salaries in these institutions, and any deficits, including unpaid bills of patients. Operating costs are usually borne by the local cooperative health care financing systems. This means that patients must pay for primary care, the cost of supplies and maintenance of hospitals and health centers, and drugs (which account for upwards of half of health costs) (Hsaio, 1984; Dobson, 1981).

Insurance coverage is designed to cover the patients' costs. In the urban areas where most of the people are employed by the government, military, or state enterprises, health insurance reserves are created and paid for by employers. These workers typically have received complete health care coverage packages and partial coverage for dependents, financed through funds set aside for that express purpose (Prescott & Jamison, 1984; Liu, 1983).

In the rural areas, health insurance has been organized and financed through a cooperative medical insurance system, with money pooled from individual local collective welfare funds and individual monthly premium
contributions.\textsuperscript{5} In return, members (peasants) and their families receive "free care," but coverage varies rather dramatically: from 40 percent to 100 percent, depending upon the wealth of the collective—which depends to a great deal on the output of production. Catastrophic care, for example, is frequently not offered by the poorer communes. Health care financing practices, then, are not typically designed to devote large amounts of resources to "save" a very few persons (Dobson, 1981; Hsiao, 1984).

Under the recent economic reforms, self-reliance is emphasized and peasants now receive direct rewards for individual output. This has pushed up production but hurt the collective welfare system as almost 80 percent of the brigades have shifted from collective to household-based production systems. The proportion of the rural population protected by the collective system has dropped from 90 to between 40 and 45 percent (Hsiao, 1984). As a result, many of the formerly salaried village doctors employed by the collectives now minister private fee-for-service practices to a growing group of self-insured patients. For the healthy rural population, the loss of the cooperative insurance reimbursement system has not been a problem. However, those people with serious illnesses have either been heavily burdened by this out-of-pocket system, or correspondingly, facilities and doctors have accumulated large debts.

At the same time, as previously mentioned, the Chinese public-financing

\textsuperscript{5} The rural cooperative system was developed in the 1950s after the collectivization and state takeover of the land. Peasants were organized into production teams (100 to 200 people each, corresponding to one or more natural villages), work brigades (averaging 1,000 people each), and communes (averaging 16,000 people each). Under this system, village doctors, like the peasants who worked on the land, received a certain number of workpoints for each working day. At the end of the year, output and profits were pooled at the brigade level, with a portion set aside for a "welfare fund" which financed a large portion of the cost of health insurance (Hsiao, 1984).
system has been further decentralized. Each province or county has become increasingly responsible for the taxing and provision of health and social services, including the payment of bad debts. To what extent the new reforms at the individual and provincial level will further accentuate type and availability of care between prosperous and poor, haves and have nots, remains to be seen.

The Practice of Medicine: Traditional and Western Approaches

There are two distinct streams of medicine in China—"traditional" medicine and "Western" medicine. Until the seventeenth century, the history of medicine in China was synonymous with the history of traditional medicine; external influences and invasions of foreigners were often absorbed and transmitted into the Chinese way of thinking.

Chinese traditional medicine is probably the world's oldest body of medical knowledge, having a history of several thousand years of accumulated empirical observations and abstruse and complex theory. By virtue of its rich and ancient theoretical base, Chinese traditional medicine, which incorporates both diagnosis and therapy, differs from many other systems of folk-medicine which are based purely on empirical observations. Diagnosis requires data that are quite different from those gathered by Western doctors, however. Diagnostic methods include observations and questioning of the patient, and detailed and prolonged palpation of the pulse. Diagnosis also may include observation of the patient's temperament, odor, and tongue. Therapy makes use of medicinal herbs, moxibustion, breathing and gymnastic exercises, and acupuncture.

The theoretical concepts of health and disease are based for the most part on a philosophic explanation of nature, on a belief of the unity of man and the universe. It was felt that the human body was constantly influenced
by the complementary forces of yin and yang, and that if all of the forces
were in perfect order and harmony, the human body would be in good health.
The traditional medicine that has flourished in China, though, has also led
to a wealth of empirical observations. Among them is said to be the
discovery of the circulation of blood 2000 years before its discovery in the
West (Sidel and Sidel, 1983).

With the advent of the socialist regime in 1949, a decision was made to
emphasize the traditional medicine approach. This was a policy rooted as
much in practicality as in theory, though. China had few practitioners of
Western medicine, and consequently, was much more reliant on the use of
traditional medicine. The considerable suspicion of Western-trained
physicians and intellectuals which existed during the 1950s further damaged
the influence and use of Western methods (Dobson, 1981).

While the number of Western medicine physicians is now greater than
their traditional medicine counterparts, official Chinese policy in more
recent years has been to encourage and develop through education and
research not two but three streams of medicine: traditional, Western, and an
integrated approach. This integrated approach is intended to borrow the
most clinically effective therapies from both traditions to the medical and
economic advantage of all (Lee, 1986; Zhong, 1986). Today, Chinese
practitioners regularly integrate the two forms of medicine. Traditional
physicians, on average, use about 70 percent traditional and about 30
percent Western medicine. Western practitioners reflect similar weights but
in the opposite direction. A course of treatment very easily could be
initiated in one mode and changed to the other, depending on the
circumstances. Similarly, the same patient might receive both traditional
and Western medicine for co-existing conditions. In some instances, the
treatment itself might represent a combination of traditional and Western

The decision to apply traditional or Western medicine is made on a case-by-case basis. The physician ultimately decides, but patients do have influence through the initial choice of provider (Wang, 1986). There is some evidence, too, that that the elderly generally prefer traditional approaches (Zhong, 1986; Waddle, 1985). Western medicine, though, is reportedly used in most cases of cancers where surgery is indicated and for coronary conditions (Dobson, 1981).

The use of herbal medicines is integral to traditional medicine. Herbal medicine is frequently in evidence in commune clinics, hospital settings, and in town shops. Varieties of herbal medicines are often stored side by side in racks, to be ground fresh for use orally or to be prepared for injection. In hospital and clinic settings, herbal medicines are also stored in close proximity to Western medicines. Herbal medicines have been reported in Western literature as effective against cancers and blood disorders (Macek, 1984), diabetes, hemaplegia, tumors, (Randel and Ling-Ling, 1983; Jain, 1973) pulmonary disorders (Hyatt and Feldman, 1978), immunological imbalances (Macek, 1984), and management of burn patients (Shi-Tsi-Siang, 1983). There is also evidence that these medicines often produce fewer side effects than comparable Western pharmaceuticals, and are sometimes useful in alleviating side effects of Western drug therapies such as chemotherapy (Macek, 1984).

Acupuncture techniques are perhaps even more integral to Chinese traditional medicine. The traditional medical schools emphasize the use of acupuncture for numerous ailments and for anesthesia; Western schools also train students in its techniques. There is little in Western literature (see, for example, Gaw, et al., 1975) that demonstrates the effectiveness of this technique. However, Chinese practitioners claim a wide range of
treatment possibilities, including treatment of neurological diseases, diseases of the digestive system, infections, acute dysentery, appendicitis, coronary heart disease, intestinal infection, diseases of the respiratory system, asthma, allergies, chronic sinus ailments, diseases of the joints and muscles, mental illness, and shock. Acupuncture is claimed to be particularly useful in pain reduction, reduction of paralysis, and stroke recovery (Sidel and Sidel, 1974; Bischo, 1974; Tan Aiquing, 1979; Dobson, 1981; Meng, 1982). Snow (1971) states that acupuncture treatment is best suited to diseases of the nervous system. Acupuncture anesthesia has also been reported by Dobson (1981) as the preferred approach in 30 percent of surgical procedures.

Utilization Patterns for Services and Procedures

What emerges in this discussion of the Chinese health care system is a picture of tremendous strides in improving the public's health over the last three-and-a-half decades. Its approaches to improving health, and its relating successes, have influenced the thinking of health care providers and professionals the world over.

In essence, large-scale and sustained efforts in environmental improvement combined with preventive medical measures (e.g., health campaigns) have greatly reduced the incidence of communicable disease in most of the country. Diffused improvements in basic curative medicine also have greatly reduced mortality rates from the acute illnesses that have recurred (World Bank, 1985).

Such progress largely has been accomplished by utilizing a labor-intensive and low capital-intensive approach to health and medicine. Medical technology and associated styles of practice, until recently, have been notably absent. In the rural areas, sanitation, immunization and
vaccination programs have been dominant. At county hospitals, the level of technological sophistication has been evidenced typically by operating room facilities, as well as x-ray and laboratory facilities (Chen and Tuan, 1983). Only in the urban areas, at the second- and third-level tiers in the medical system, have device and capital-intensive technologies and services been available. At the major municipal and specialty hospitals, as well as the hospitals associated with medical schools, an array of equipment and technology can be found. This is important in that it implies a very different mix of services and procedures for the elderly in China compared to the United States, especially the critically ill. Still, there is very limited evidence and data on available services for the critically and terminally ill.

While reliable statistics on national utilization patterns are unavailable, the existence of intensive care units (ICUs) and coronary care units (CCUs) is fairly well-established in the larger urban hospitals in China. Such facilities typically have EKG bedside monitors, ventilators, blood gas analyzers, and so on (Gao Li, 1985). Many also have sophisticated surgical units and post-surgical recovery units (Chang, 1983). Organ transplantation centers, for example, recently have been established at medical centers in Wuhan (Berki, 1986).

Kidney transplant centers also have been reported in major urban areas. In Beijing, for example, 300 transplants have been performed over the last two years. Donors are often family members (Wu Yuanjin, 1985). Kidney dialysis centers in hospitals and a limited utilization of continuous ambulatory peritoneal dialysis (CAPD) also has been reported (Chiang,

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6 Organ donors are often family members rather than cadavers because Confucian teaching does not allow the dead body to be disturbed. It must be returned to the ancestors.
1983). No data are available on utilization of transplant procedures or dialysis by age, however.

Ventilation and respiratory equipment also are common in larger urban and specialty hospitals (Meng, 1986; Chiang, 1983; Lee, 1986). The availability of MA-1 respirators and defibrillators, for example, is made possible for both emergency admissions and the inpatient critically-ill (Chiang, 1983; Meng, 1986; Li, 1986; Lo, 1986; Zhong, 1986; Wang Zan Shun, 1986; Zhou Guanhong, 1986).

Nutritional therapies and antibiotics, on the other hand, are considered basic in China and enjoy widespread use. Taylor and Xu (1986), for example, report that oral rehydration has been used widely in both urban and rural areas for over two decades. Nutritional therapies, too, have been emphasized as basic public health and preventive measures for both the young and the elderly. Greater production of food as well as higher levels of protein-enriched foods have alleviated many of the nutritional deficiencies of the past (World Bank, 1985). Nutritional fads are not uncommon, such as the use of herbal medicines intended to increase strength or to prevent aging. Enteral tube feeding and parenteral nutrition generally are available at second- and third-tier level facilities (He Huide, 1985; Meng, 1985; Heimburger, 1984). One observer has noted, however, that nutrition and nutritional therapies are not being emphasized adequately in China's medical education programs (Heimburger, 1984).

Antibiotics and drug production generally have been extremely important since the beginning of the socialist regime, again in conjunction with China's prevention policies (Wang Zan-Shun and Zhou Guanhong, 1986). Drug production is largely state-controlled and is growing at the present rate of 6 to 7 percent per year. Current production is 14 times greater than in 1957. In recent years there has been a very rapid increase in the
production of drugs for the treatment of tumors and cardiovascular disease. Further, new antibiotics are being introduced in place of the old (World Bank, 1985).

For the future, there are strong indications that China may increasingly move closer to the highly capital-intensive medicine of the West. There already is some evidence of such movement. At least half a dozen CT scanners have been reported available in each of the municipalities of Beijing, Shanghai, and Guangzhou, for example (Teng, 1986; Zhou, 1986; Wang, 1986; Zhong, 1986) Medical schools have emphasized technology utilization in the curricula, and a rapidly increasing number of medical students are receiving training in the West. How prudent such a policy push may be has been questioned, however, because of continued economic constraints and the limited evidence of gains in average life expectancy in the West from the utilization of expensive, technology-specific practice styles of medicine (World Bank, 1985).

THE CHINESE ELDERLY: HEALTH AND WELFARE POLICIES


According to the 1953 census in China, there were 64 million men over sixty and women over fifty. By 1985, according to World Bank figures, the number of Chinese over the age of fifty had roughly tripled to just under 200 million (see figure). That number is expected to triple again—to 600 million—over the next 50 years. In terms of percentages, the Chinese National Committee on Aging (Wang Gongshi, 1986) estimates that about 8 percent of the current population is over 60 years old, but by the end of this century the proportion of the nation's elderly will have increased to 13...
CHINA:
Projected Population over 50 Years of Age, 1980 — 2030

percent. Such growth in the population of this age group in Western industrialized economies has certainly been the norm, not the exception; but for China it represents a new phenomenon, and policies affecting the elderly are increasingly important and visible.

Since the advent of the socialist regime, China's elderly have typically had two levels of support: the family and insurance (or pension) benefits. For the great majority of the elderly, care and treatment is inextricably bound up with the family. The traditional importance of the family—and the corresponding respect for the elderly members—are legendary. Dominated by Confucian thought, Chinese society has always emphasized the significance of close family and kinship ties. Traditionally, family relationships have provided the individual with not only emotional security and a sense of belonging but also economic, political, and social support. Family became the basis of government, and correspondingly, assumed many of its functions, such as education, dispute settlements, poor relief, and support for the aged (Wu Yaunjin, 1985; Dixon, 1979).

Since the 1949 revolution, the role of the family has been downplayed at various times in an effort to strengthen and prioritize commitments to the state and collective. During the early 1950s, and again during the "Great Leap Forward" of the late 1950s, policies were developed to encourage separation of elderly from their families. Since the 1950s, however, prime responsibility for the welfare of the elderly has remained with the family. Current constitution and marriage laws in fact require that children provide for their parents. Typically, aged parents live with one of their married children, receiving economic support while helping with child care and household tasks (Wu Yaunjin, 1985; Dixon, 1979).

A second level of support for the elderly worker is usually a retirement pension paid out of labor insurance programs; the rural peasant also is
provided a guarantee to the basic necessities of life and a funeral. For both pensioners and the rural peasant, continued medical care coverage is provided, as part of an overall benefit package. Elderly workers, though, are generally encouraged not to retire and seek income support, but rather to continue gainful employment for as long as possible. Still, once the minimum pensionable age is reached, usually 60 for men and 55 for women, monthly financial assistance can be received until death. The individual pension rate is usually pegged to length of service and wage rate immediately prior to retirement. The elderly peasant in the rural areas, on the other hand, never seem to fully retire. Rather, responsibilities diminish with age and capabilities, but never completely cease until death is near. The lack of financial independence relative to the urban worker generally creates dependence upon family for the peasant (Wang Gongshi, 1986; Ma Hai De, 1985; Dixon, 1979).

For the aged without families, limited accommodations are available. Rural communes have set up so-called "homes of respect" for the elderly. Likewise, municipalities and provincial governments have built a limited number of facilities and centers for the elderly and disabled with no families. Somewhat worrisome is the impending demand for accommodation for the elderly with no families. This demand is expected given China's one-child family policy.\(^7\) The policy appears to be meeting with some

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\(^7\) In 1979, Sichuan province instituted a policy designed to persuade married couples to have no more than one child. This policy was backed by a system of incentives to parents who agreed to have no more than one child, and penalties for those who persisted in having more than two. Because of great leaps in the population and decreases in infant mortality rates over the last three decades, this policy was soon embraced as a national policy, and all provinces have now adopted such incentive and disincentive systems—including a provision that living standards will be maintained when they become old or widowed (World Bank, 1985).
success, especially in the urban areas such as Shanghai. To this point, though, there has been no systematic planning for social support policies and programs necessary for the elderly and widowed parental population (Ma Hai De, 1985; World Bank, 1985; Wang Gongshi, 1986; Yu, 1986; Dou, 1986; Shou Shang Jue, 1986).

The elderly are usually encouraged, even obliged, to involve themselves in neighborhood or community activities, especially social services. They also are encouraged to educate themselves or to learn new handicrafts. Cultural groups, activity centers, and 61 so-called "universities of the elderly" have been organized and provided, especially in the larger urban areas. Several of these organizations teach basic preventive and self-care skills and behaviors, such as T'ai Chi exercises and principles of good nutrition (Zhong, 1986; Wu Yaunjin, 1985).

The Emergence of Geriatric Medicine

Previous discussions have touched on the health care system in China and the various aspects of care that affect the elderly. There is no evidence to indicate that patterns of care for the elderly differ substantially from other age groups. As pointed out at several junctures, levels of insurance coverage, urban-rural location, and specific placement in the three-tiered system of services are the more significant determinants of care for all age groups in China. Unlike the special financing programs in the U.S. (e.g., Medicare and Medicaid) established for the elderly, health care insurance for the elderly is no different from insurance for their younger counterparts. Health care schemes do vary, though, according to service in government, military, factories, or rural countryside.

The changing disease patterns of greater prevalence of illness of the aged (such as chronic illness) and the rapid increase in the numbers of
elderly, though, have refocused medical education, research, and care to some degree within the last five to ten years. For example, while no reliable figures are available, a substantial number of general and teaching-affiliated hospitals (above the district level) have opened special units as well as outpatient clinics for so-called "geriatric diseases", including hypertension, coronary heart, chronic bronchitis, and so on. A number of hospitals also have been reported to initiate policies giving priority to the elderly for outpatient services. Newly established rehabilitation medicine centers and pharmacies also have established priority service for the elderly and commonly-found geriatric afflictions such as arthritis, stroke, and hip fracture (Zhou Guanhong, 1986; Wu Yuanjin, 1985; Meng, 1986; He Jang Go, 1985; Lee, 1986; Li, 1986; Wang Gongshi, 1986; Lo, 1986).

Research and evaluation in connection with geriatrics also has sprouted in medical schools, colleges, and hospitals at all levels. The first geriatric research and treatment center is under construction in Beijing. Research across the country includes longitudinal studies of individuals who reach advanced age, diseases commonly afflicting the elderly, mortality and morbidity studies, investigations on the mechanisms of the aging process, predictive modelling of geriatric incidence and prevalence rates, and the immunology and psychology of the aged. In addition, a number of efforts have been initiated to investigate preventive approaches to care for the elderly, and the use of traditional medicine approaches in diagnosis and treatment. Several professional organizations and journals focusing on the elderly recently have been created. For example, the China Gerontological Association (which studies clinical care, but plans to expand its scope to include social and economic conditions), and the Chinese Society of Geriatrics (which establishes standards of practice and gathers data related
to treatment) have both been established only within the last five years
(Zhou Guanhong, 1986; Meng, 1986; Lee, 1986; Li, 1986; Lo, 1986; Wu Yuanjin,

Treatment of the Critically- and Terminally-Ill Elderly

Bioethical Framework. Not surprisingly, the changing demographics and
disease patterns, as well as the initial glimmer of high technology
medicine, have forced the Chinese to begin facing more frequent questions
concerning life, death and appropriate treatment for its elderly. Until
recently, a relatively well-defined bioethical framework and the relative
paucity of technologic opportunity have clarified treatment decisions.
While the Confucian ethic imbues the Chinese with a tradition of love,
respect and support for the aged, this has never necessarily translated into
treatment at all costs for survival’s sake (Dixon, 1979). Reinforcing this
attitude is the more recent socialist ethic that chooses public health
measures and prefers minimum levels of medical care for the masses over
advanced treatment for the few.

At the risk of oversimplifying, the ethical imperative in the American
health care system might be characterized by the welfare of the individual,
whereas in China, the “welfare of the group” is the guiding principle.
Furthermore, the Chinese Taoist/Confucian tradition of congruity, harmony,
and the common good has minimized conflict and surrounding ethical dilemmas
over interpretation of this principal. As Fox (1984) has observed, there is
a noticeable lack of conscious discussion or concern over ethical dilemmas
in China relative to concerns in the United States. (As Fox also implied,
though, the individualism, competition, pluralism, and wealth of this
culture have had the reverse effect of in some sense “breeding” ethical
dilemmas surrounding treatment decisions.)
Decisionmaking Surrounding Treatment. Discussions with physicians and
providers in China typically reveal that treatment decisions surrounding the
critically-ill elderly begin with proper diagnosis. Once that is
determined, a judgment is made whether available treatments will be
"life-saving" or "life-prolonging" (Meng, 1986; Wing, 1985). This
distinction is critical because providers will unhesitatingly begin to
administer treatment in the case of the former. Importantly, "life-saving"
for the Chinese implies not only basic physiological functioning, but the
return to some level of normal, productive living for the individual. For
example, if an individual is diagnosed as suffering a brain hematoma, and
despite its removal, the patient may linger indefinitely in a coma, the
operation will frequently not be done. Such decisions do not seem to be
age-specific; at least one case of dialysis being denied a small girl
because of permanent brain damage has been reported in the literature (Fox,
1984).

According to Meng (1986), the Chinese are particularly discerning in
cases of needed surgery because of (or at least the perception of)
post-operative complications or long recovery periods. On the other hand,
if a patient has been diagnosed with some chronic or terminal illness, but
treatment can even temporarily restore the individual to a normal,
productive regimen there is typically little hesitancy (Lee, 1986). For
example, the administration of traditional herbs and medicines for cancer
patients as a palliative (rather than restorative approach) is not
uncommon. Similarly, the Chinese have some hospice-like facilities, either
freestanding or more typically as distinct-part units of larger hospitals,
for the terminally ill. Such care is also provided in small hospitals,
particularly those associated with factories and universities, where beds
may be available (Meng, 1985). Drug therapies, often traditional medicine
approaches, are administered to maintain the patient in a comfortable state until death (Yu, 1986; Dou, 1986).

The strong exception to treat/not treat decisions for life-saving situations is the medical emergency. A fairly clear consensus among Chinese providers is to apply all necessary procedures—resuscitation, ventilation, and so on—to save and stabilize the patient until a decision about further treatment plans can be decided upon (Li, 1986). In the larger hospitals, teams of specially-trained emergency room personnel are often available for resuscitation procedures. Only with patients in advanced stages of cancer do physicians readily forego resuscitation measures (Shou Shang Jue, 1985).

Once the patient is placed on mechanical ventilation or other life-sustaining technologies, withdrawal of treatment becomes more difficult. Brain death is not used as a criterion for withdrawal either, but must be accompanied by the stopping of the heart (Mang, 1985).

Despite policy efforts in the recent past to downplay the importance of the nuclear family in China, it is the family that usually decides upon appropriate treatments. The individual patient may or may not be told of the diagnosis and corresponding clinical choices, but rarely does the individual decide alone. Instead, it is the appropriate family members—the parents in the case of a younger person, the son or daughter and spouses in the case of the aged. It is also the family that is informed first of the clinical status of the patient, and death is never explicitly discussed with the patient. There is no evidence that written consent forms are ever used in connection with treatment. Likewise, there would appear to be no formal procedure mechanisms for attaining consent, though tradition and custom have regularized the process to a significant extent (Mang, 1986; Fox, 1984; Lee, 1986; Wang, 1986; Gao Li, 1985).

On the other side of the consultation process, it is interesting to note
that doctors in China are not necessarily advocates of treatment like their Western counterparts. Further, there is little evidence that Chinese governmental or legal authorities attempt to impose explicit ethical choices (outside of broadly established boundaries) as is sometimes the policy in the United States, such as with the recent case of Baby Jane Doe (Fox, 1984). In the event that treatment is refused, the patient is normally sent home. Many who refuse, though, may seek treatment elsewhere, receive the same advice, and later consent (Meng, 1985)—perhaps to assure continued hospital care. More problematic are patients who, on their own or through their family, insist on treatment against the physician’s recommendation. A physician may agree to provide treatment in order to avoid complaints to the hospital administration or to the local health bureau (Lee, 1985; Geng, 1985).

Closely related to this issue is the issue of malpractice. Medical malpractice as Americans know it would not appear to be an issue in China. Confucian tradition precluded the historical growth of a body of common law, and there is no civil law to settle disputes among individuals. Not surprisingly, liability insurance is largely unneeded as a result. What is needed, however, is the assurance that the proper diagnostic and therapeutic regimens are being undertaken. To assure this, physicians often work in teams, and develop consensus when difficult cases are deliberated over. Chinese physicians do fear not only the possibility of clinical mistakes, but the possible public embarrassment and "loss of face". Even so, physicians rarely are penalized in any form by the state, and peer review processes are both rare and non-binding—education (or "re-education") is usually the only "punishment" (Tung, 1986; Lee, 1986; Fox, 1984). According to Geng De-Zheng (1985), patients or families can request hospitals to compensate for provider mistakes. Institutional committees, not courts,
though, evaluate the individual case and make the decision concerning the level of just compensation. Large, urban hospitals may have one or two such cases per year. The largest single payment awarded to date has been 4,000 yuan—about $1,200.

Lastly, according to Lee (1986), the Chinese are now struggling in the public forum with the issue of the right to forego treatment. Currently, before the People's Assembly in Beijing is a proposal whereby physicians would not be obligated to treat the patient if the following patient conditions are present:

- the patient is in the final state of a disease,
- the heart has stopped beating for 5 minutes or more, or
- respiration has not taken place for 20 minutes or more.

The proposal, however, is given little chance of enactment in the near future.

**Economic Factors.** Economic and financing factors increasingly affect treatment decisions in the new China, especially since the institution of its market reforms. As previously discussed, levels of insurance coverage together with placement in the urban or rural transfer/referral system are crucial determinants of the type of care received, as well as the availability and patterns of utilization of Western technologies (Henderson and Cohen, 1981). Additionally, these factors will in large part determine eligibility for placement in special geriatric research and treatment centers discussed earlier (Meng, 1986). Other than placement in these units, though, available evidence points to undifferentiated utilization patterns of procedures and technologies for the critically-ill elderly/non-elderly within individual hospitals or facilities. If, for example, a large specialty hospital in Shanghai was well-equipped with ventilator-assisting drugs, dialysis machines, and specialty units, differences in use reflected levels of coverage and case mix rather than

This was rather overtly argued by at least one Chinese administrator of a newly formed and non-government supported hospital in the south of the country, who stated that even if a patient was near death but had no insurance, s/he would be transferred or sent home as quickly as possible. The insured patient, on the other hand, would be given treatment (regardless of effectiveness) as long as it would be requested by the family (Lo, 1986). Similarly, it is not uncommon for the rural, poorly-insured patient to have much shorter hospital stays on average than his urban, well-insured counterpart. Indeed, there is some evidence that families in urban areas often will request that their relative be kept in the hospital as long as possible—even until death. In the new China, more and more urban patients are dying in the hospital, not at home. This in part reflects the housing shortages in urban areas in present-day China, and reflects the inability of families to care for the elderly at home given that husband and wife are commonly both employed full-time (Lee, 1986). Wang (1986) has observed that keeping relatives in the hospital also assures against legal/social allegations of neglect.

On the provider side, the vast majority of physicians are salaried at levels predetermined by the government (Hsiao, 1984). Unlike the situation in the United States, there is little resulting economic incentive to undertake unnecessary surgery or procedures. Likewise, they are often constrained by the limited availability of medical equipment and supplies. A reverse situation is the government subsidizing of pharmaceuticals, vaccines, and antibiotics. To the extent that the price of these is set artificially low, opportunities and some evidence (World Bank, 1985) exist as to their overutilization.

Through all of this discussion surrounding decisions to treat the
critically- and terminally-ill elderly, it is important to again keep in mind that China is changing. In the pursuit of modernization and national wealth, individualism, competition, and pluralism are assuming new significance. As a few selected medical centers Westernize and modernize, and physicians move away from salary-based payment, differing styles and levels of quality of care may generate a whole new set of decision-making processes and ethical dilemmas. One clue may be the recent experience in relatively affluent, modern, and largely Chinese (98%) Hong Kong, where rationing policies for kidney dialysis have recently been developed, and which largely place the elderly last after most other groups in priority of available care (Lam, 1986).

**IMPLICATIONS FOR AMERICAN POLICIES**

Chinese providers and policymakers largely believe that China has much to learn from the western experience in the treatment and care of the critically-ill elderly. This has been observed in China's recent demonstrations that it may want to become the latest eager American imitator in its pursuit of technologies such as CT scanners and specialization. Nevertheless, there would seem to be important lessons that the Chinese can offer this country.

For one, Chinese traditional medicine and a wide variety of other herbal and medical preparations have possibly provided the Chinese with cost-effective alternatives to more expensive Western therapies. Unfortunately, little is known or understood empirically about levels of safety, efficacy, and effectiveness of traditional approaches and regimens. Important efforts now are underway in China to improve biochemical knowledge of the active ingredients in many of the herbal preparations, and attempts
to initiate scientific inquiries into this area enjoy strong support from the Ministry of Public Health. Some American drug companies and universities (e.g., the University of Kentucky) have performed research in this area (Handerson, 1986). Because the manufacture of Chinese drugs, pharmaceuticals, and other preparations are exclusively under the control of the government, though, there is little market incentive (in terms of new markets in China) for American concerns to invest in this area. Due to the potential application in American medicine, though, Congress may want to consider incentives to firms in this country to carry out research and development efforts. Such incentives could include grants or cooperative agreements, or financial tax incentives similar to those structured under the recent Orphan Drug legislation.

Secondly, the policy direction in China to decentralize clinical and economic decisionmaking to the extent possible warrants careful watching. Early evidence indicates that this policy will generate greater disparities of access and quality care than presently exist. The United States also has experienced such lessons in the past that parallel this experience. For example, the Kerr-Mills legislation in the early 1960s authorized health care coverage for the indigent elderly, but delegated much of the financing and decisionmaking to the States. One result was unacceptable differences in the provision of benefits and resulting care. The recent impetus to privatize and further decentralize health programs for the elderly not only should reflect upon historical American experience, but upon contemporary Chinese lessons as well.

Thirdly, despite the current infatuation with expensive medical technology and the relative disregard for their true cost-effectiveness, the Chinese have made efforts and inroads in designing and implementing prevention policies and strategies for its elderly and chronically-ill.
Because of the success with preventive policies for acute illnesses, the social, political, educational, and economic planning and programs in this area may provide the U.S. and other Western nations lessons and opportunities for more health care cost savings. This is especially important as long as the primary concern in the U.S. system continues to be cost-containment.

There obviously are important differences between China and the United States. These include differences in the stage of development and industrialization, demographic profile, nature of historical health problems, degree of cultural uniformity, differences in interplay between scientific and folk beliefs about health and illness, and differences in political and economic systems. These differences should not obscure our increasing similarities, though, or the lessons that are possible for both nations.
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