

The Yale-China Health Journal

Autumn 2002 Volume 1

Mission

The Yale–China Association is a private, non-profit organization that contributes to the development of education in and about China and the furtherance of knowledge, understanding and friendship between Chinese and American people. Our work is based on the conviction that sustained, one-on-one contacts between Chinese and American people through educational exchange not only enrich the lives of the individuals involved but contribute, ultimately, to more peaceful relations between our two nations. Teaching and learning are at the heart of our work.

History

The Yale–China Association was founded in 1901. For its first half-century, Yale–China’s work was centered in Changsha and Wuhan, where it helped to found Hsiang–Ya Hospital, Medical College, and Nursing School, the Yali Middle School, and Huachung University. Collaboration with New Asia College, now a part of the Chinese University of Hong Kong, began in 1953, and programs at mainland institutions were resumed in 1980.

Relations with Yale University

While closely affiliated with the Yale community, Yale–China is separately incorporated and administered and receives no financial support from Yale University apart from limited funds for two exchange programs involving Yale students and for special projects conducted on behalf of the University.

Membership

Yale–China greatly appreciates the loyal support of its members. If you are interested in learning more about joining our membership and other giving opportunities, please contact Shelley Stonecipher at (203) 432-0881, or contact her by e-mail at <shelley.stonecipher@yale.edu>. All contributions are tax-deductible.

Current Programs

The Teaching Program provides fellowships for recent Yale graduates to teach English in China for two years. Fourteen Fellows currently teach at five schools in four cities: The Chinese University of Hong Kong; Yali Middle School (Changsha); Sun Yatsen University (Guangzhou); Huizhen Academy and Xiaoshi Middle School (Ningbo). The Teaching Program also includes a sister-school teacher exchange between Huizhen Academy in Ningbo and the Foote School in New Haven.

The Health Program links Chinese medical educators, researchers, physicians, and nurses with their counterparts at Yale. Current projects focus on nursing education, AIDS prevention, training to prevent the spread of blood-borne pathogens, and fellowships for Chinese women working in public health. The *Yale-China Health Journal*, published annually, highlights recent research related to health care and health education in China.

The American Studies Program, established in 1995, provides opportunities for independent research at Yale and Yale faculty-led workshops at universities in Asia for young scholars from throughout East Asia. The *Yale-China Journal of American Studies* publishes the work of summer institute participants and faculty, helping to strengthen the community of American Studies scholars in East Asia.

The Yale–China Legal Education Fellowship Program sends U.S. law school graduates to China to teach in Chinese law schools for one year. The Fellows offer courses on American law and the American legal profession and promote awareness of American approaches to clinical practice and the place of clinical education in the law school curriculum.

Programs for Yale Students

Yale–China administers the annual Yale–New Asia Student Conference, which brings together students from Yale and New Asia College for a four-week exchange. Eight students from each school spend two weeks in New Haven and two in Hong Kong exploring various dimensions of a common topic in each society.

A second program, Yale–China’s Summer Internship Program, gives Yale students the opportunity to engage in public service work in non-governmental organizations in Hong Kong, Taiwan, and mainland China.

Yale–China also organizes a language exchange program for English- and Chinese-speaking students on campus.

The Yale-China Health Journal

Autumn 2002 Volume 1

Introduction

- 3 Turning Points in Chinese Health Care: Crisis or Opportunity?

Deborah Davis and Nancy E. Chapman

Essays

- 11 Rural Health Care in North China in an Era of Rapid Economic Change

Mark Strand and Alice Chen

- 25 Inaugurating Medical Care Insurance Reform in China

Peter Nan-shong Lee

- 47 The Development of Xiangya Hospital as a Model for Chinese Hospitals

Bing Jiang and Yongquan Tian

- 61 Changing Economics and Health Worker Training in Modern China

*Samantha Mei-che Pang, Thomas Kwok-shing Wong,
and Jacqueline Shukching Ho*

- 85 Growing Pains: Mental Health Care in a Developing China

Doris Chang and Arthur Kleinman

Perspective

- 99 A Conversation with P. C. Leung

Interview by Nancy E. Chapman

- 107 Contributors

Editors:

Nancy E. Chapman

Deborah Davis

Cover:

Carol Waag

The Yale-China Health Journal is published by the Yale-China Association, Inc., a non-profit organization with offices in Hong Kong and New Haven, Connecticut. Although based at Yale University, Yale-China is incorporated independently and administered separately from the University. The views expressed herein by individual authors do not necessarily represent the views of the Yale-China Association or its members. Information is available from our office.

Yale-China Association

Box 208223

New Haven, CT

06520-8223, USA

Tel: (203)432-0880

Fax: (203)432-7246

E-mail: yale-china@yale.edu

<http://www.yalechina.org>

INTRODUCTION

Turning Points in Chinese Health Care: Crisis or Opportunity?

Deborah Davis and Nancy E. Chapman

During the Mao years, China was a model for health care among low income, agrarian societies. With an emphasis on prevention and a nation-wide network of clinics and hospitals, life expectancy at birth, infant mortality, and maternal mortality approached that of middle income countries. The key to this success was a powerful bureaucracy that mandated access, controlled the training and job assignments of medical personnel, and kept direct charges to patients below cost.

There were also systemic inequalities. Most noticeably, the rural majority relied primarily on paramedics and had limited access to modern hospital care. The government-mandated insurance systems covered only urban residents, while rural residents had at best village medical cooperative insurance. Thus, as before 1949, the most highly trained physicians, most modern technology, and best medicines were concentrated in the cities.

Since 1978, the Chinese leadership has explicitly rejected most of the core tenets of the communist revolution. Deng Xiaoping ended the discriminatory system of class labels and class struggle, and re-legitimized private ownership and entrepreneurship. His successors went much further, encouraging foreign investors, hailing the superiority of markets, and eliminating many bureaucratic controls over labor, capital, and property.

The impact of this shift away from bureaucratic controls and political struggles toward markets and individual incentives spurred the highest level of economic growth in Chinese history, and China today continues to have one of the highest growth rates in the world. Because these decades of economic gain coincided with a sustained reduction in fertility rates, the financial gains in per capita terms have been spectacular.

But the collapse of the commune system in the early 1980s and the bankruptcies of state-owned industries in the 1990s have also destroyed the social welfare system. As Peter Nan-shong Lee notes, when the leadership shifted from an ideology that emphasized low wage, guaranteed employment, and extensive welfare to one that lauded higher wages, more competitive markets, and “slim welfare,” the economy grew and foreign investors were increasingly confident of their returns. However, what is less obvious is how best to manage social welfare services. The challenge of providing cost-effective health care has confounded politicians and experts in mature capitalist democracies with well-developed insurance industries. How can a hybrid market-socialist society, with a per capita income under US\$600 per year, solve these problems of access and equity when there is no insurance industry to sell effective protection against medical catastrophe to individual workers, their dependents, and retirees?

In short, as a result of China’s economic reforms since 1978 and the embrace of a new political economy of market-socialism, there has been a fundamental shift away from the low cost, bureaucratically controlled, collectivist health system that stressed prevention first. The organization, financing, and philosophy for providing health care at the beginning of the 21st century dramatically departed from the socialist blueprint that had served Chinese citizens so successfully in the first three decades after 1949. The question now is: what do these departures mean for the health of China?

To address this question, the Yale-China Association organized, during its centennial year, a conference at Yale University in July of 2001. We invited a range of scholars and practitioners (a list of participants follows this introduction) to address the questions we felt were most pressing by looking at a variety of health care outcomes: the declining quality of medical care in rural China, the collapse of enterprise welfare programs, the impact of a new political and legal environment, provision of mental health services, challenges to medical education and hospital administration, and the challenge of AIDS. In the substantive contributions of this inaugural issue of this journal, five of our participants will provide a detailed discussion of several of these core questions. We will devote the next issue of the journal to China’s response to the AIDS pandemic. We now conclude with a brief descriptive overview of health care in China today that draws on the materials our contributors analyze in more depth.

Organization of Care

The Chinese health care system remains administratively hierarchical and bifurcated. As in the Mao years, there is one system for rural areas and another for urban. Rural residents are served primarily by 5,811 county hospitals and roughly 49,000 township (formerly commune) clinics. On average, the rural health care system provides 1.5 beds and 1.1 physicians per 1,000 residents. Urban residents, who in 1980 represented 17% of the population and today represent

approximately one third, are served by 11,000 hospitals. On average the urban system provides 3.5 beds and 2.3 physicians per 1,000 residents. Until 2000, all hospitals and clinics were publicly owned. Since 2000, the government has decided that up to 15% of hospital beds can be cooperatively owned and up to another 15% can be for-profit and privately owned.

In rural areas, after the collapse of the commune system, most village paramedics—the well known “barefoot doctors”—became fee-for-service private practitioners, but it was only after 2000 that clinics and hospitals could be fully privatized. (The essays by Mark A. Strand and Alice Chen and by Bing Jiang and Yongquan Tian discuss in detail the impact of greater privatization. Samantha Pang focuses on the impact on staff training and education.)

Payment for Care

Currently, rural residents pay 90% of their medical costs. Many immunizations provided through mass public health campaigns are highly subsidized and the government pays the salaries of some township clinic staff and occasionally supports construction costs, but overall the rural patient “consumes” health care as a commercial product and has almost no opportunity to purchase any kind of insurance. Urban residents continue to receive higher quality care at less direct cost. Since 1998, however, there is increasing convergence toward the rural situation even though most urban medical staff and physicians remain state employees and 70% of hospital beds are publicly owned with state-mandated charges. Currently, the 10% of the urban population that works for government or party agencies receives “free” care through an insurance program created for government and party employees in 1952. One percent rely on new commercial health insurance policies that offer a wide variety of reimbursements. The majority of urbanites now struggle with a patchwork of programs that frequently fail to reimburse patients and their families. Since 1998, there has been an impressive national system that requires both employers and employees to contribute to a two-tier insurance program. The first tier creates personal medical accounts, the second, a universal (at municipal or county level) fund. After patients have exhausted their personal accounts, they can then turn to the universal fund. All illnesses—including psychiatric illness—are covered, but the insurance system is still in its financial infancy and many employers and employees do not contribute. (The papers by Doris F. Chang, Arthur Kleinman, and Xu Yifeng; by Peter Lee, by Mark A. Strand and Alice Chen, and by Bing Jiang and Yongquan Tian all discuss the challenges of financing the new system for different populations of patients and their families.)

Challenges to Chinese Health Care

Over the decade of the 1990s, Chinese health care entered a new economic and political terrain where the national leadership embraced private ownership, eco-

conomic efficiency, and financial profitability as essential for China's modernization and increased prosperity. Marketizing health care has been difficult enough in established, affluent welfare states in Europe or North America, and it would be unrealistic to expect China to find easy solutions to the trade-offs of equity and efficiency, profitability and access. In addition, Chinese health care faces new challenges in patient needs and a changing professional environment for medical staff.

At the turn of the 21st century, China has a rapidly aging population and a cohort of elderly who, unlike the elders of the 1950s and 1960s, have enjoyed access to modern medicine all their lives. They have—or will have—chronic conditions for which there are now effective, but often expensive, medical interventions. Patients in China are now also “globally” informed. They know about new medications and new procedures, and in the private hospital sector and the increasingly fee-for-service clinics, patients will press for high-tech modern medicine. The government can no longer make prevention first their primary policy: they must simultaneously lay equal stress on prevention and clinical care. The one-child policy—that is, in practice, a one-son policy for the majority—has created a demand for outstanding health care for all children. Unless parents can be assured that their children will all thrive and survive, they will disregard exhortations to curb fertility. Finally, there are new diseases. AIDS is the most frequently identified, and AIDS cases in China are increasing at a rate of 30% per year.

Changes among medical professionals raise additional challenges to Chinese health care. In the 1970s, all medical graduates were assigned by the state to their jobs and often to their specialties, and physicians had virtually no control over what and where to practice and how much to charge. Under market-socialism, the rules have changed. Medical education continues to be largely state-funded, but physicians, nurses, and technicians can now decide where to practice, and they are increasingly free to set up fee-for-service private practices. The majority of staff still work within the parameters of the system created in the 1950s, but the changes are rippling beneath the surface and creating alternatives unknown for half a century.

What will these multiple changes mean for the Maoist model of prevention-first health care? Will there be a dramatic departure from the existing profile of mortality and morbidity? Will health care become ever more fragmented with increasing distance between care for the affluent and the poor? No one has clear answers to these questions as of yet, but the authors of the five essays in our inaugural issue of *The Yale-China Health Journal* identify the central considerations and prepare us for understanding, and responding to, the changes that are sure to come.

Papers Presented at the “Health of China Workshop” July 6–8, 2001, New Haven, Connecticut

“Nutritional Problems in China”

Presenter: Bill Watkins

“Non-communicable Diseases in China”

Presenter: Vivian Lin (co-authored with Hongwen Zhao)

“Medical Ethics in China”

Presenter: P.C. Leung

“Mental Health in China” and “Rehabilitation of Schizophrenia Patients
in China: The Shanghai Model”

Presenter: Doris E. Chang

“Developing Chinese Hospitals”

Presenter: Yongquan Tian

“Reinventing China’s Welfare State: Medical Care Insurance Reform
in the 1990s”

Presenters: Peter Nan-shong Lee, Guoxuan Cai

“Health Law in China”

Presenter: Ruotao Wang

“Chinese Medicine in China Today”

Presenter: P.C. Leung

“When Riding a Tiger it is Difficult to Dismount: Sexually Transmitted
Infections in China from the Late Qing to the Post-Deng Era”

Presenter: Sandra Teresa Hyde

“Health Workers: Training and Deployment”

Presenter: Samantha Mei-che Pang

“Reproductive Health in China: Progress and Challenges”

Presenter: Vivian Lin (for author, Joan P. Kaufman)

“Rural Healthcare” and “Trends in Child Health in China after the
Transition”

Presenter: Mark Strand (for co-author, Mary Young)

The Yale-China Association gratefully acknowledges the financial support of the Coca-Cola World Fund and the Council on East Asian Studies at Yale University for their support of the “Health of China Workshop.”

OVERVIEW OF HEALTHCARE REFORMS

1950

First national health conference puts prevention first

1951

Nationalization of Xiangya and Peking Union Medical Colleges

1952

Establishment of mother and child health centers in county

First “patriotic” health campaigns

Provision of free health care for all government and agency employees

1953

Provision of subsidized healthcare for all workers in state owned firms

1955

Establishment of first Cooperative Medical Station (CMS) in Zhengyan, Henan

Establishment of Academy of Traditional Chinese Medicine

1957

Nationwide campaign against snail fever

1959

CMS endorsed as model for entire country

1965

Mao’s June 26 speech: “Put Emphasis on Health in Rural Areas”

1966–1970

No new students admitted to medical schools

1973

China joins 26th World Health Conference and elected to Executive Committee

1979

First cutbacks of state appropriations to public hospitals

Ministry of Health announces reduced support for CMS

1980

MOH permits privatization of former commune clinics

1985

New bonus system for hospital employees

1989

Comprehensive regulations to require each locale to have Management Committee

Experiments with new forms of co-payments

1998

Reform of urban health insurance, increased co-payment

2000

Privatization of hospitals permitted for first time since 1949

Rural Health Care in North China in an Era of Rapid Economic Change

Mark A. Strand and Alice I. Chen

Yang Ti is a 49-year-old rural doctor and part-time farmer. As a village barefoot doctor, Dr. Yang was once a model worker, and known as a local hero. Although his salary was small, it was enough to live on. In recent years Dr. Yang has faced many challenges. Transition in rural health care has made his job unstable and is challenging his ability to meet the health needs of his family.

Because of decreased public funding for health care, Dr. Yang's salary as a village doctor has not changed in many years. Through the 1990s he received around 1,000 yuan a year (US\$121). This salary was paid by the village committee from fees collected from the citizens. In poorer villages, many of his contemporaries received nothing at all.

In 1995, Dr. Yang landed a job in the Township Health Center as a clinician in the outpatient clinic, a promotion for him. But because of erratic management in the clinic, his position did not last. He bounced from one township clinic to another, trying to secure a stable job. Although Yang has limited medical skills, definitely not enough to keep up with the developing Chinese health care community, he is diligent and conscientious and able to perform routine tasks. Desperate to support his family, he has continued to search for a clinic that could pay his salary and assure him a stable job. The young medical assistants in the clinic resent him because more patients come to him (because of his seniority) even though he has less formal training.

In addition to the struggle to maintain a stable job, Yang has a heavy burden tending to the health and well-being of his aging parents, wife, and three children. Because he is busy trying to maintain his status as a clinician and preserve

the little income he does earn, the farm work is left to his wife and father. His wife has experienced several “mental breakdowns” from the pressure.

Yang Ti’s daughter tested into the teacher’s college, and by borrowing from friends and taking jobs tutoring the children of wealthy families in the city, she was able to make it through college. While this is now Yang’s future hope, in another sense it is merely the transfer of the burden from himself to his young daughter. She will now be expected to support her family on her modest teacher’s salary. When she is married, the little support she provides them will fall under the control of the family into which she marries. Fortunately, Yang Ti has a son who will eventually grow up and be able to support the family.

The majority of China’s population resides in rural areas, and although there is a trend toward urbanization, China will be primarily a rural nation for many years to come. A healthy and productive rural population is crucial to China’s stability and development. While great accomplishments have been made since 1949, economic reforms introduced in the early 1980s changed the system of funding and management of rural health care so significantly that the affordable, generally effective cooperative health care system of the Mao years collapsed, and by the late 1990s medical coverage in China’s rural areas was uneven and its quality erratic.

In addition, the government’s efforts to commercialize and privatize many health services have put rural health institutions in financial difficulties. Unable to cover their costs, let alone make a profit, rural clinics can no longer pay salaries. At the same time, the direct costs to patients increasingly exceed their ability to pay. The Chinese government is aware of these issues and consideration of them is routinely on the agenda of the highest level discussions. But the tremendous changes brought about by economic reform are making difficult the decision of how best to make this transition. Yang Ti’s experience highlights some of the challenges currently facing citizens and health practitioners alike in rural China. The clinics struggle with financial shortfalls, variable skills of health workers, and inability to retain skilled workers. Rural patients struggle to obtain and pay for quality health care. Although the local governments continue to issue public health mandates, they have not created ways to adequately subsidize these preventive services on the local level. This has wearied the rural health workers, who suffer a malaise born of lack of leadership and support for their roles. The economic transition has resulted in many changes in rural health care.

Township Health Centers in Crisis

There are 50,000 publicly owned Township Health Centers (THC) in China (Liu et al. 1996). From the 1960s into the 1980s, these Township Health Centers were the linchpin of the three-tiered system, being located near enough to provide rural residents with timely health service, and having staff with more formal

training than village doctors. But following economic reforms in 1982, this began to change drastically. Outpatient visits to Township Health Centers fell by one-fourth from 1986 to 1993. Usage rates in the 1990s were only 40–50%. With government contributions as low as 15%, these facilities must rely entirely on user fees to survive.

In 1995, the crisis of the financial sustainability of the Township Health Centers was highlighted in China's national *Jiankang Bao* (Health News). The majority of rural clinics were reported unable to pay staff salaries (Ren 1995). Township Health Centers felt acutely the need for increased federal allocations, as well as for staff who were willing to stay at the Township Health Center (many of them were leaving medicine) and a reliable and complete health policy. There appeared to be a loss of confidence in the centers on the part of rural residents. Villagers were known to say, "Small illnesses can be seen in the village clinic, more serious illnesses you need to go to the county hospital; regardless, don't go to the township clinic" (Ren 1995).

There were several reasons for decreased patient satisfaction: a perception that the skill level of the young medical assistants is inadequate, and frozen federal allocations to the Township Health Centers resulted in a demoralized staff unwilling to go the extra mile for patients. In addition, the management skill of many of the Township Health Center directors is extremely limited. In the late 1990s, most of these directors were in their late 40s, of the generation whose high school and college education had been interrupted by the Cultural Revolution. By the time reform policy was introduced in 1982, these workers were in their early 30s. At that time, some attended short training courses but few enjoyed formal education. In the 1980s they worked as clinicians and then, in the 1990s, they assumed directorship of clinics. It is a struggle for them to effectively manage their respective facilities.

In a December 2000 report on rural health reform, Li Changming, Director of the Department of Primary Care and Maternal and Child Health of the China Ministry of Health, urged the Township Health Centers to "hold the line" and continue to fulfill their role in rural health. In particular, he suggested that they focus more on preventive and less on curative care. He advocated continuing to reduce staff numbers, but also to increase the training and quality of the existing staff. These are good suggestions, but without policy backing or funding, they mean little to rural health workers.

What can be done to reverse the downward spiral of the Township Health Centers? One possibility is that Township Health Centers be left to survive on their own, as is now the case, but to guarantee funds for preventive services (Liu et al. 1996). Alternatively, those centers which function effectively could be supported and the rest left to normal attrition. The risk here is that the link provided by Township Health Center workers to the Mother and Child Health (MCH)

system will be broken. It is crucial that cost-sharing by provincial government, township government and patients be used to guarantee the salaries of the few key employees, but it is equally important to improve the quality of their medical skills.

Staff Training and Retention

China's health service infrastructure is considerably larger and more complicated than that of other developing countries. The number of hospital beds and doctors per capita is extremely high. China needs to streamline the existing health system, continuing to reduce the overall number of health workers in rural health facilities while increasing the skill level of those who remain through formal Continuing Medical Education (CME).

The challenge of streamlining the system lies in the system's long history of the "iron rice bowl" which precluded staff layoffs. China did address the iron rice bowl system beginning in 1999 when state enterprises instituted large-scale layoffs. However, this process has been very difficult and the results are not yet clear. Breaking the "iron rice bowl" is even more difficult in rural settings, where networks of personal relationship are tighter. These intricate network relationships (*guanxi*) create intense interpersonal obligations that are hard to violate. The Chinese virtue of *renqing* (human feelings) complicates the challenge of trimming superfluous or unqualified staff. These cultural variables are part of the richness of Chinese society, and while they are conducive to care and helping, they add another layer of complexity to the move to a privatized, free-market environment.

The transition experienced by rural health providers also involves a generation gap. There is now a mix of workers, one group comprised of those over age 45 and trained before the onset of economic reforms, another group made up of younger workers. Members of the older generation, like Yang Ti, are trusted by the people, but are only minimally trained, many of them having begun their careers in medicine as barefoot doctors. The younger workers have received better training, but have always worked in a system threatened by financial pressures and lack of administrative support. In some cases, the young workers have also been witnesses to or victims of bad clinic management, contributing to their reluctance to throw themselves completely into their work. Clinics where the older generation supports the young workers, giving them opportunities to expand their skills and gain additional training, are weathering this transition the best and definitely have the brightest future.

As shown in Table 1, by international standards, rural health workers in China have minimal formal training. University-trained physicians make up between 1.1 and 20.8% of the physicians in county hospitals. Most of the remainder have had "middle education" (*zhongzhuan*) or lower, equivalent to

technical high school training in the U.S. In township and village clinics, many workers have had no extended training at all. Under the circumstances, it is appropriate to develop and expand secondary school (three-year medical school) training and adult learning schools (*zhigong yixue yuan*). These schools could train, re-train, and upgrade rural doctors for service in County Hospitals and Township Health Centers.

Programs to increase Township Health Center utilization rates through staff upgrading programs have been introduced nationwide (Hesketh and Zhu 1997). There is now a group of rural health workers with “middle education” who were first trained in the 1990s and have been working for about five years who are now studying for the “upper level” diploma (*dazhuan*) by correspondence or non-residential methods. These young people are key players because they are from the area, and are not likely to move to the cities. They can fulfill the mandate of rural health care delivery if their salaries are guaranteed, a system of required Continuing Medical Education is instituted, and clinic management is improved. Given support and opportunities to develop the necessary clinical experience, these young workers could provide good service and regain patient trust. Ethical standards of practice and clear definitions of malpractice also need to be introduced and strictly enforced to regain this trust.

Table 1: Health Professionals in Various Institutions in 1992

Level of Training	County Institutions		Township Hospitals
	Urban	Rural	
Bachelor's degree (<i>daxue</i>)	20.8%	1.1%	1.74%
Higher education certificate (<i>dazhuan</i>)	10.9	1.4	6.66
Middle education certificate (<i>zhongzhuan</i>)	48.4	61.9	38.95
High school (<i>gaozhong</i>)	11.0	20.3	19.75
Middle school or below (<i>chuzhong</i>)	8.91	8.2	32.90

In March 1998, the Ministry of Health established two policies aimed at closing the gap separating the urban and rural health systems. All medical students are required to spend one year working in rural health facilities. All medical doctors hoping to be promoted from the status of attending physician (*zhuzhi yisheng*) to that of assistant chief physician (*fu zhuren yishi*) need to spend six months working in a health facility at the county level or lower. These policies demonstrate the central government's desire to keep rural health a national priority and to lessen the impact of the growing rural-urban divide. Although

these programs have been used in the past, they have not proven effective. Those coming from the city to the countryside for their compulsory service are considered “experts.” In keeping with Chinese hospitality, the clinic is expected to host these guests well, incurring further costs on an already strained budget. Technically, the expert may be able to address a few complicated cases, but he or she also obstructs the normal routine of the local doctors, who dare not display their skills in the presence of the expert. While these programs may help keep urban medical students and practitioners in touch with the realities of rural health care, the result is often a net loss for the local clinic. In order to be effective, the experts would need to see themselves as trainers, employing participatory methods to guide the rural doctors in the delivery of patient care in the clinic.

Financing Rural Health Care

In the 1990s, a collapsing rural health network and the inability of rural residents to pay for care motivated local governments and health authorities to institute new rural health financing schemes. These called frequently for the reinstatement of rural health cooperatives (Feng 1995). The central government made such directives in 1991 (Yin 1995), 1994 (Feng 1995; Liu, Hsiao, et al. 1995; Carrin, Ron, et al. 1999), and again in 1997 (Bloom and Tang 1999). Some of these were successful, most commonly in wealthier areas, such as the south and the coastal areas or areas bordering large cities. Unfortunately, they are not easily replicated. The political will of the county and township governments has proven essential to make these financing methods work. In areas with less progressive or less creative leadership, it has proven difficult to create sustainable programs. In addition, areas with few local resources or a poorly developed collective economy have been unable to generate funds necessary to fund local health care. These areas desperately need preferential allocations of government budgets (federal, provincial and/or county) for health services.

In 1997, the call was for pre-payment as the key to rural health financing. These pre-payment schemes are based on the premise that Chinese people would rather pre-pay for health care than pay more taxes to support a larger public health service. But even in areas where pre-payment plans have been instituted successfully, reimbursement comprised only 32% of the costs. Most people were not satisfied with this coverage, but neither were they willing to pay higher premiums to extend it (Carrin, Ron, et al. 1999). Patients are reluctant to pre-pay for services of which they are unsure. But in the current system, they do not have the cash reserves to “post-pay” for services already provided. The result is that each health event is a crisis requiring a mad scramble to scrape together the deposit required for admission to the hospital. On another note, some researchers found that these new rural health insurance schemes had the negative results of

increased health care expenditures, a further shift from preventive to curative services, and increased reliance on higher level tertiary care (Bogg, Dong, et al. 1996). Pre-payment schemes proved successful in areas with close supervision by local political leaders, indicating that in China, the government continues to be the crucial actor in a reorganized rural health sector.

The result of all this activity is that health costs for 90% of rural residents still rely completely on out-of-pocket user fees (Schwarz, Chavigny, et al. 2001). However, pricing and hospital management continue to be regulated by the central government. These financing, pricing, and organizational policies are not well coordinated, resulting in irrational prices, over-prescription of drugs and ancillary tests, and unequal access to health care by the poor.

The Chinese government has been creative in establishing various “pilot projects” around the country. Unfortunately, these projects have been implemented with inadequate attention to local variation, and the result is often a waste of time and resources, as those on the local level struggle to implement new policy. Furthermore, emphasis on replicating national models may stifle the creativity of local leaders attempting actively to solve their own problems.

Through the 1990s, the cost of clinic visits or hospitalization at county-level hospitals rose over 30% per year (Dong, Bogg, et al. 1999). One reason for this increase is the perceived incompetence of the health workers by patients, resulting in underutilization (hospital occupancy rates range less than 50%). Increasing cost is another contributing factor, due to poor management and the inability to set prices that are both affordable for the patient and reasonably profitable for the hospital. County hospitals generally receive a grant from the county government for operating expenses. But this grant covers only a small portion of their expenses, so roughly half of rural hospitals have financial shortfalls (Schwarz, Chavigny, et al. 2001). The staff of some hospitals receive only a portion (perhaps 80%) of their salary and/or receive it late. Consequently, hospitals increasingly rely on the sale of medications to boost their income. Among county hospitals, 65% of hospital income comes from drug sales (Young 2000). Consulting fees charged for diagnostic services are very low (from no fee to less than US\$1 per visit). The health worker’s income is generated, for the most part, by ordering laboratory testing, X-rays, and writing prescriptions. Increasing profits by selling drugs at legal mark-up levels is legitimate, but over-dependence on drug sales and unreasonable markups lead to unethical prescribing practices and over-prescription. This topic will be further addressed below.

Medications

The pharmaceutical industry in China is booming, in the area of both Western and traditional Chinese medications. Between 1988 and 1992 sales of both Chinese traditional medicines and Western medicines increased by over 50%

(Hesketh and Zhu 1997). China is able to produce the medications needed by its population and even has a substantial export industry. However, specialized drugs such as anti-cancer agents, and certain foreign medicines demanded by the consumer, are still imported (Dong, Bogg, et al. 1999).

Although better medications are now more widely available, equipping clinicians with important tools of therapy, medicines also have become the primary source of revenue for clinics. Reform of the pharmaceutical industry has moved from a centrally-controlled supply system to a market-oriented demand system. Hospitals can purchase drugs directly from drug companies, factories, and retailers (Dong, Bogg, et al. 1999). Patients have easy access to drugs and more competitive pricing. However, these changes have led to the rampant overuse of drugs. Seventy-five percent of households surveyed in six counties reported buying medicines without a prescription during the previous two weeks (Dong, Bogg, et al. 1999). Uncertified and fraudulent medications can also be found especially in rural areas, where farmers wish to spend less on health care. Since 1985, the government has used the Drug Administrative Law to fight fraudulent use of medications. Some progress has been made, but it is limited and sporadic.

The over-prescription of medication is a common practice, as rural doctors, like medical practitioners all across China, derive much of their income from selling medicinal products (Zhan, Tang, et al. 1998). National legislation allows for a 10–15% markup on Western drugs and a higher mark-up for traditional Chinese medicines. One 1988 study reports that drug sales in a certain region of China accounted for over 75% of charges for outpatient care and 60% of inpatient treatment (Gu 1993). According to the World Bank, spending on drugs accounts for 52% of China's current total expenditure on health. Some township clinics stock over 200 kinds of medication (Gu 1993), though it is unlikely that their staff, with their limited training, are knowledgeable enough to safely prescribe all these medications. In many hospitals, a bonus is paid to health workers for their productivity, measured by the profit they bring in, thus creating a financial incentive to prescribe unnecessary medications.

Multiple medications are routinely given for simple, self-limited illnesses such as colds. Intravenous antibiotics are commonly prescribed for upper-respiratory-tract infections. This practice contributes to serious drug-related complications. For example, it has been reported that up to 30% of deafness in children in urban China may be due to overuse of antibiotics such as gentamycin and streptomycin (Callaway 2000). This phenomenon also exists in rural areas. Equally serious is the rise of drug-resistant bacterial strains, such as *Shigella*, *Streptococcus*, *Staphylococcus* and *Mycobacterium tuberculosis*.

The desire for pharmacotherapy is also a reflection of the health and illness behavior of the Chinese people. While Chinese people are opposed to the aggressive nature of Western surgical procedures, they welcome the aggressiveness of Western medicines. They seem to share the worldwide trend toward demanding or expecting a pharmaceutical solution to every concern that brings them to the clinic. This, combined with the pricing structures currently in vogue, motivates practitioners to prescribe multiple medications with little consideration for the cost-effectiveness of the chosen drug or the patient's ability to pay for it.

Conclusion

The health of the majority of China's rural population has improved steadily throughout the 50 years since the establishment of the People's Republic of China. The incidence of infectious diseases in China has declined from 20,000 (per 100,000) in the 1950s to 7,061 in 1975 and to 176 in 1995. This remarkable achievement, accomplished largely during a period of minimal or no economic growth, shows that basic health care can be delivered by minimally trained health personnel (Feng 1995).

After the introduction of economic reforms in the 1980s and the dissolution of the Cooperative Medical System, gains in health outcomes began to plateau (Shen, Habicht, et al. 1996). Growing economic disparity across regional divides and between rural and urban areas also posed a threat to health service delivery. Increasing privatization compromised the integrity of preventive health services and led to inflation in health care costs. Out-of-pocket payment for health care services became burdensome for most rural residents. Financial difficulties for nearly all rural health institutions compromised the quality of care and the morale of the staff. This crisis has threatened to undo many successes made in improving the quality of life for China's rural residents.

During the 1990s, the Chinese government began to recognize the critical nature of these problems and took strides to bolster the rural health care system. This was accomplished through intensified administrative involvement in the establishment of health insurance schemes and increased federal allocations to health care. However, these reforms were applied sporadically. As China deepens its integration into the global economic market, rural areas will experience increasing economic pressure. Under such circumstances, strong political leadership is essential to sustain and strengthen China's rural health network, especially among the marginalized regions and those regions experiencing less economic growth. Keys to China's success include political will enforced from top to bottom, an intact and organized rural health care system, and trained personnel at each level prepared to carry out their responsibilities. Chinese people have a long history of following their political leadership. The current crisis in rural

health care calls for strengthened government support, demonstrated by increased funding for rural health care, especially to vulnerable areas, minority areas, the west and the high-altitude regions.

REFERENCES

- Associates, A. (1999). Financing, provision and utilization of reproductive health services in China. Shanghai, Shanghai Medical University with Kunming Medical College [reported in chinabrief (Spring 2000) 3(1):9–14].
- Bank, W. (1993). Investing in health. New York, Oxford University Press for the World Bank.
- Bloom, G. and S. L. Tang (1999). “Rural health prepayment schemes in China: Towards a more active role for government.” *Soc Sci Med* 48(7): 951–960.
- Bogg, L. (1995). “Health insurance in rural Africa.” *The Lancet* 345: 521–22.
- Bogg, L., H. Dong, et al. (1996). “The cost of coverage: rural health insurance in China.” *Health Policy Planning* 11(3): 238–52.
- Callaway, A. (2000). *Deaf Children in China*, Gallaudet University Press.
- Carrin, G., A. Ron, et al. (1999). “The reform of the rural cooperative medical system in the People’s Republic of China: interim experience in 14 pilot counties.” *Soc Sci Med* 48(7): 961–772.
- Chang, Y., F.Y. Zhai, et al. (1994). “Nutritional status of preschool children in poor rural areas of China.” *Bulletin of the World Health Organization* 72(1): 105–12.
- Chen, X., T.-w. Hu, et al. (1993). “The rise and decline of the Cooperative Medical System in rural China.” *International Journal of Health Services* 23(4): 731–742.
- Deng, Y. (1990). “Development of medical education in China.” *Academic Medicine* 65(8): 512–513.
- Dong, H., L. Bogg, et al. (1999). “Drug policy in China: pharmaceutical distribution in rural areas.” *Soc Sci Med* 48(6): 777–86.
- Ensor, T. (1999). “Developing health insurance in transitional Asia.” *Soc Sci Med* 48(7): 871–879.
- Feng, X. (1995). “Cooperative medical schemes in contemporary rural China.” *Soc Sci Med* 41(8): 1111–1118.
- Group, P. R. L. (2000, February). *China, Overcoming Rural Poverty*, State Statistical Bureau.

- Gu, X. (1993). "Financing health care in rural China: Preliminary report of a nationwide study." *Soc Sci Med* 36(4): 385–391.
- Guo, A. (1999). *Brundtland: Mental care crucial to world health*. China Daily (English). Beijing: 1.
- Henderson, G. E. and M. S. Cohen (1982). "Health care in the People's Republic of China: A view from inside the system." *Amer J Pub Health* 72(11): 1238–1245.
- Hesketh, T. and W. X. Zhu (1997). "Health in China: Maternal and child health in China." *BMJ* 314: 1898–900.
- Hesketh, T. and W. X. Zhu (1997). "Health in China: The healthcare market." *BMJ* 314: 1616–8.
- Hesketh, T. and W. X. Zhu (1997). "Health in China: Traditional Chinese medicine: one country, two systems." *BMJ* 315: 115–7.
- Hsiao, W. C. L. (1995). "The Chinese health care system: Lessons for other nations." *Soc Sci Med* 41(8): 1047–55.
- Huang, S. M. (1988). "Transforming China's collective health care system: A village study." *Soc Sci Med* 27(9): 879–888.
- Huang, S.-m. (1994). *Rural China in transition*. China Briefing. Boulder, Westview Press: 87–112.
- Hwang, S. M. (1989). *The spiral road: Change in a Chinese village through the eyes of a Communist Party leader*. Boulder, Westview Press.
- Janes, C. (1999). "The health transition, global modernity and the crisis of traditional medicine: the Tibetan case." *Soc Sci Med* 48: 1803–20.
- Kantha, S. S. (1990). "Nutrition and health in China, 1949 to 1989." *Progress in Food and Nutrition Science* 14: 93–137.
- Koblinsky, M. A., O. Campbell, et al. (1999). "Organizing delivery care: What works for safe motherhood?" *Bulletin of the World Health Organization* 77(5): 399–406.
- Liu, X., L. Xu, et al. (1996). "Reforming China's 50,000 township hospitals—effectiveness, challenges and opportunities." *Health Policy* 38(1): 13–29.
- Liu, Y., W. C. L. Hsiao, et al. (1995). "Transformation of China's rural health care financing." *Soc Sci Med* 41(8): 1085–93.
- Ministry of Health, C. (1999). *Health News*, Ministry of Health, P. R. China. www.moh.gov.cn/new/f000519one.htm. 2001.

- Ministry of Health, C. (1999). Rural neonatal mortality. China Ministry of Health. www.moh.gov.cn/digest99/T7-100.html. 2001.
- Popkin, B. M., G. Keyou, et al. (1993). "The nutrition transition in China: a cross-sectional analysis." *European Journal of Clinical Nutrition* 47: 333–346.
- Ren, F. (1995). Township health clinics have three wishes. *Jiankang Bao (Health Daily)*. Beijing: 3.
- Research Group, C. R. H. C. S. (1991). Research on the rural health care system in China. Chinese. Shanghai, Shanghai Science and Technology Press.
- Rosenthal, M. M. (1990). "The People's Republic of China and its health care system." *Cahier Socio. Demo. Med.* 30(1): 51.
- Schwarz, M. R., K. H. Chavigny, et al. (2001). Rural practice in China. *Textbook of Rural Medicine*. J. P. Geyman, T. E. Norris and L. G. Hart. New York, McGraw-Hill.
- Shen, T., J. T. Habicht, et al. (1996). "Effect of economic reforms on child growth in urban and rural areas of China." *NEJM* 335(6): 400–6.
- Shi, L. (1993). "Health care in China: A rural-urban comparison after the socioeconomic reforms." *Bulletin of the World Health Organization* 71(6): 723–736.
- Shi, L. (1994). "Elderly support in rural and suburban villages: Implications for future support system in China." *Soc Sci Med* 39(2): 265–77.
- Sidel, V. W. (1972). "The barefoot doctors of the People's Republic of China." *The New England Journal of Medicine* 286(24): 1293.
- Sitthi-amorn, C. and W. S. Janjaroen (1999). The bubble in Thailand health care system: a "reform" without plan. Halong City, Vietnam, Meeting on efficient and equity oriented health care systems.
- Strand, M. A. and R. J. Strand (2000). "Getting the Destitute Back on Their Feet." *chinabrief* 3(1): 30–32.
- Sugar, S. A., A. Kleinman, et al. (1991). "Development's 'downside': social and psychological pathology in countries undergoing social change." *Health Transition Review* 1(2): 211–220.
- UNICEF (2000). China., UNICEF. www.unicef.org. 2001.
- Unknown (1997). China Netherlands Poverty Alleviation Project Design Document.

- Wilkes, A., H. Yu, et al. (1997). Coping with the costs of severe illness in rural China., Institute of Development Studies Bulletin. Working Paper No. 58.
- Yan, Y. X. (1992). "The impact of reform on economic and social stratification in a Chinese village." *Australian Journal of Chinese Affairs* 27: 1–23.
- Yang, H., Y. Mei, et al. (1991). "A Multisectoral Approach to Primary Health Care in Fujian, China." *Health Education Quarterly* 18(1): 17–27.
- Yin, Y. (1995). Cooperative shares system has given fifteen township clinics in Wuxiang County new life. *Shanxi Jiankang Bao (Shanxi Health News)*. Taiyuan: 1.
- Yip, R. (2000). Survey shows minority children vulnerable to 'silent killer' Vitamin A deficiency. *chinabrief*. 3: 16.
- Young, N. (2000). "County Hospital Battered by Market Forces." *chinabrief* 3(1): 39.
- Young, N. (2000). "Microcosm of uneven growth." *chinabrief* 3(2): 30–35.
- Young, N. (2000). "Xiao Li goes to the doctor." *chinabrief* 3(1): 9.
- Yu, H., S. H. Cao, et al. (1997). "Equity in the utilization of medical services: a survey in poor rural China." *Institute of Development Studies Bulletin* 28(1): 24–31.
- Zhan, J. (1999). "China Grows Older." *chinabrief* 2(2): 20–23.
- Zhan, S. K., S. L. Tang, et al. (1998). "Drug prescribing in rural health facilities in China: implications for service quality and cost." *Trop. Doct.* 28(1): 42–8.
- Zhao, X. H. (1992). "Nutritional situation of Beijing residents." *Southeast Asian J Trop Med Public Health* 23(Suppl. 3): 65–8.
- Zheng, Y. (1996). Three Bests programme to help children. *China Daily*. Beijing.
- Zhu, F., L. Han, et al. (1997). "The report of IDA of pre-school children surveillance and intervention in rural areas of Qinghai Province. Chinese." *Acta Nutrimenta Sinica* 19(3): 355–58.

Inaugurating Medical Care Insurance Reform in China

Peter Nan-shong Lee

The introduction of modern forms of medical service in the last century was a part of the process not only of modernization, but also of state building in China. In the decades following the Communist victory in 1949, the provision of medical care was a key element in the building of a colossal welfare state in urban China in conjunction with the construction of the centrally planned economy (CPE). Its basic structure remained intact until the reform era, when fundamental changes were initiated (Lee and Wong 2001:67–73; Yan 1987). The re-engineering of China's welfare state in the field of health insurance in urban China is a process that entails a fundamental redefinition of a cluster of obligations and entitlements in the relationship between the state and society by analyzing the process of policy evolution, various phases of implementation, main design features, initial problems and challenges, and policy outcomes of the first round of reform.

Background

China's health insurance was first introduced in the urban sector in the 1950s. It became an integral part of the remuneration package for employees in the public sector, along with wages and salary, compensation for work-related injuries, retirement pensions, medical benefits, and "collective welfare" including housing (Bian 1994:178–208; Yan 1987:190–354). It covered subscribers to the publicly-financed and labor insurance systems, both of which were job-related in that eligibility was based on employment in the government, so-called "service organizations," or enterprises. The publicly-financed system catered to the medical needs of public sector employees, including civil servants, members of political parties and mass organizations, teachers and researchers, and members of service

organizations, whereas the labor insurance system served staff and workers in public enterprises only (Hou and Ye 1998:29–35).

Within the structure of the centrally planned economy, medical care provision in the public sector was financed through multiple channels and an exceedingly complicated arrangement combining direct state appropriations, grants to “producers” (e.g., hospitals), franchises to medical services and pharmaceutical retail outlets, labor insurance, and some users’ charges at a nominal level. The publicly-financed system for civil servants and other public sector employees was mainly funded through state appropriations. In the labor insurance system, medical bills were primarily covered by a labor insurance fund that in turn depended almost exclusively upon contributions from enterprise units coupled with tax exemptions.

Beneficiaries in both systems were also indirectly subsidized through franchises of public hospitals and pharmaceutical retail outlets in regulated markets. The state allocated grants to hospitals to cover capital investments such as construction costs, expensive medical equipment and facilities, and laboratories. The state also provided “differential quota appropriations” to pay for part of the cost of daily operations and personnel. Since public hospitals were given franchises (i.e., a share of the medical service market), neither private hospitals nor private medical practice were permitted. Patients only paid nominal charges and were not required to shoulder any financial burden in the urban as well as the industrial sector (Lee 2001:66–68).

Balancing the Interests of the State and Individual Citizens

In the pre-reform era, medical benefits were defined as part of a cluster of rights and obligations linking the state with individual citizens eligible to receive these entitlements. They were granted in accordance with legislation, rules, regulations, and administrative directives to ensure the stability, continuity, and universality of medical benefits to the defined categories of the entitled population. Implicit in this legal framework are the administrative, managerial, and financial commitments of the state needed to ensure the full protection of the rights and entitlements of eligible citizens (Wong 1998:214–215).

One of the most salient features of welfare reform in China, including that of medical care, is articulated by the view that “the state pays the debts of the past.” In other words, the state has obligations to public employees because of their sacrifices and contribution to China’s “forced modernization,” for which they received only minimal remuneration under the planned economy. These obligations were translated into policy through the phenomenal growth of spending on all forms of benefits, including housing, retirement pensions, and medical care (Lee and Wong 2001:67–95).

Surveys of two major cities, Shanghai and Guangzhou, in 1996 provide an illustration of how urban residents perceived the relationship between the socialist state and citizens amidst the drastic shrinkage of the planned economy in reform-era China (Table 1). The survey results suggest that Chinese citizens tend to feel that their work unit and the state, rather than they themselves, should shoulder the main financial responsibility for medical expenses (see Questions 6 and 7 in Table 1).

Immediate Concerns and Long-Term Objectives

What motivated policy makers to initiate fundamental restructuring of the health insurance system in the urban sector? How did they approach it? According to Vice Premier Wu Bangguo, the “state must establish insurance systems for retirement, medical care, and unemployment in order to diversify and resolve the risks that will be brought about by market competition” (Wu 1999:31). He suggested further that the government should perform “basic social functions” and build “safety nets” and “stabilizers” on behalf of the whole society (Wu 1999:31).

What is significant here is that, for the first time in the history of the PRC, policy makers have shown their resolve to dismantle the hierarchy and privileges that existed within the planned economy, and remove the inequalities that existed between the planned and non-planned sectors. This new health insurance system is intended to complement the emerging market economy, to facilitate social mobility and the movement of manpower, and to ensure the autonomy of enterprises and choice of employment. Wu’s foresight is further substantiated in light of the rapid expansion of the non-public sector of the economy. It is estimated that, within two decades, employees in the non-public sector increased from 150,000 in 1977 to 37,540,000 in 1997, amounting to one-third the number of employees in state-owned enterprises. Most of these non-public sector employees were denied access to any insurance benefits, a situation which generated considerable dissatisfaction. Even within the public sector, economic and financial disparities among state-owned enterprises, departments, and regions resulted in inequalities in the benefits of various insurance systems. The issue of inequality was bound to become politicized because it was tied to the fiscal burden and the share of retained revenue within work units and at different administrative echelons.

A close look at the case of health insurance reform reveals an immediate and urgent concern with the drastic and unbridled growth in the cost of medical care. This concern resulted in an incremental approach to policy-making that tended to be remedial and pragmatic in nature. In a 1998 speech, Vice Premier Wu Bangguo summarized the official position of the central policy makers, focusing on the rapid increase of medical expenses in the public sector, includ-

**Table 1: Medical Care Provision in Urban China:
Shares of Financial Responsibility by the State, Work Unit, and Individual**

Questions		SD (%)	D (%)	N/O (%)	A (%)	SA (%)	N
1. It is quite reasonable for each individual to be responsible for one's own medical expenses.	Guangzhou	7.1	49.9	11.4	30.4	1.2	806
	Shanghai	8.7	64.4	7.0	19.5	0.5	982
2. Each person should manage to solve one's own problem of medical expenses when he she finds himself/herself financially inadequate.	Guangzhou	5.6	52.8	10.9	28.5	2.2	810
	Shanghai	5.4	70.3	7.5	15.5	1.2	981
3. One should seek help from relatives when one finds one's own financial resources.	Guangzhou	4.7	36.7	22.6	33.7	2.4	802
	Shanghai	5.2	64.3	7.2	22.8	0.4	981
4. Shanghai/Guangzhou resident should not have to worry about medical bills when they are ill.	Guangzhou	24.6	52.7	7.5	14.3	1.0	773
	Shanghai	18.1	63.3	6.2	11.4	0.9	954
5. One ought to be responsible for one's own expenses of minor illness; and for serious illness, one should take part in unified management.	Guangzhou	1.3	13.0	15.9	64.3	5.5	778
	Shanghai	1.3	20.6	8.4	64.2	5.4	973
6. The work unit should be responsible to medical bills of an employee.	Guangzhou	0.5	12.0	13.0	65.6	8.8	815
	Shanghai	0.6	9.9	7.5	73.7	8.2	986
7. The state should be responsible to the medical expenses of each person.	Guangzhou	0.5	14.1	15.3	61.8	8.3	803
	Shanghai	0.5	14.4	10.8	67.5	6.7	970
8. Either the state or the work unit should provide subsidies to those patients who could not afford to foot their medical bills.	Guangzhou	1.1	3.8	8.6	69.3	18.2	823
	Shanghai	3.0	3.1	3.7	76.4	16.4	989
9. The medical benefits for staff and workers ought to be adjusted upward along with the improvement of living standards.	Guangzhou	1.5	4.4	6.3	74.8	13.0	813
	Shanghai	1.2	7.7	6.1	77.9	7.0	983

SD: Strongly Disagreed D: Disagreed N/O: No Opinion A: Agreed SA: Strongly Agreed

Table 2: The Growth of Medical Expenses, 1988–1998

Year	Medical Expenses (100 million yuan)*	Annual Growth Rate (over preceding year)	Medical Care Expenses (per person/yuan)	Annual Growth Rate (over preceding year)
1988	183.4	N/A	120	N/A
1989	224.4	22.4 %	143	19.2 %
1990	268.6	19.7	167	16.8
1991	315.0	17.3	190	13.8
1992	372.7	18.3	219	15.3
1993	461.0	23.7	167	21.9
1994	561.2	21.7	321	20.2
1995	660.7	17.7	374	16.5
1996	737.0	11.5	415	11.0
1997	797.1	8.2	447	7.7
1998	834.0	4.6	469	4.9

Sources: Statistics Bureau PRC, China's Statistical Year Book (2000), p.100.

* The figures from 1993 to 1998 include the portion paid by the unified management accounts for serious illness.

ing both the publicly-financed and labor insurance systems. Some of Wu's factual points are revealing: with an annual increase of 19%, medical expenses for employees of state-owned and collectively-owned enterprises rose twenty-eight fold from 1978 to 1997. This rate of increase exceeded national revenue growth by 6.6 times in the same period.

Table 2 shows the overall trend toward increases in medical expenses from 1988 to 1998, and the visible reduction from 1995 onward when cost control measures were instituted nationwide. In fact, the drop in the growth rate was even greater in 1996, 1997, and 1998, suggesting that health care insurance reform may have begun to have an impact on costs after the mid-1990s.

The increase in medical expenses can be attributed to two sets of variables during the reform era: contextual variables such as the aging of the population and rising expectation for living standards, and system variables, including the organization and management of medical care, the availability of new medicines, and technological advances in equipment and facilities. Since policy makers cannot do much to control contextual variables such as the aging of the population and rising living standards, their main effort has been devoted to the control of "system variables" through reforms at the organizational and managerial level (Hsu, classified document (c):36-39).

To a considerable extent, the great leap in medical costs from the 1980s onward was an unintended result of the early round of medical care reforms. Three policy themes emerged in the early reforms. First, in view of the financial stringency of the state, health institutions were to be given space to generate revenue on their own. Second, medical personnel were to be given additional remuneration from revenue generated in new packaging of services. Third, users' charges were introduced to supplement subsidies by the state (Chen, classified document (a): 30). It is noteworthy that, starting in 1979, there was a steady and visible curtailment of state appropriations to public hospitals, subjecting them to increasing pressure to generate revenue on the basis of franchises of medical services and pharmaceutical sales, and in turn inadvertently creating a runaway increase in medical expenses.

Early Reforms and Pilot Programs

Health insurance reform did not begin suddenly, but was inaugurated through trial and error by local governments and, later, a series of pilot programs coordinated by central policy makers. Starting from the late 1980s, there were several uncoordinated reform efforts, some of which paved the way for the major health insurance reform of the mid-1990s. Reform attempts generally commenced with a narrow scope, on a small scale, and in lower echelons, but they took shape gradually under the guidance of the State Council and central ministries on the basis of well-selected pilot programs.

In response to the sharp increase in medical expenses, a series of reforms of the publicly-financed system were instituted in 1984. When the increase in costs was not arrested, four ministries, led by the Ministry of Health and Ministry of Finance, issued a circular authorizing pilot programs in various localities. A much more comprehensive and detailed set of regulations was promulgated in 1989 requiring each locality to establish a management committee to oversee publicly-financed medical care, coupled with a management apparatus. The 1989 measures also called for the establishment of a budgetary system clearly listing types of beneficiaries and well-defined categories of expenditures. Further details were made with reference to the network of designated hospitals for publicly-financed medical care, designated clinics and designated specialists (Hou and Ye 1998:40–43).

Overlapping with the reform of the publicly-financed system, the State Council authorized pilot programs of social insurance for employees of state-owned enterprises to be conducted in Dandong, Huangshi, and Zhuzhou in 1989. This group of pilot programs was based upon a draft policy paper developed by a medical care reform team involving eight ministerial ranking bodies, including the Ministry of Health, Ministry of Labor, Ministry of Finance, the State Institutional Reform Committee, and the All China Federation of Labor Unions. Subsequently more municipalities joined pilot programs throughout the country (Hou and Ye 1998:44–46).

Out of this round of pilot programs came two major policy proposals, one on the unified management of medical expenses for retirees, the other regarding the unified management of expenses for serious illness. From 1989 to 1994, when the State Council was ready for yet another round of pilot programs, the two policy proposals were introduced and experimented with in many localities with considerable success (Hou and Ye 1998:55–59). The results of the pilot programs for serious illness were especially impressive. At the end of 1994, it had been extended to 20 localities with the participation of 32,000 work units and 3,746,000 subscribers (or a 43% increase over 1993). The rate of collection of dues reached 90.1% from 74.3% one year before, and the funds collected totaled 26,000,000 RMB, about double that of the previous year. After the payment of benefits of 21,000,000 RMB, the remaining 6,000,000 RMB was held in reserve. Subsequently these two policy proposals lent confidence as well as inspiration to the famous pilot programs of Jiujiang and Zhenjiang (Hou and Ye 1998:57).

From 1994 to 1998, insurance reform passed through three stages. The first stage, which began in 1994, centered on the “two cities” pilot programs involving Jiujiang, a hinterland city in Jiangxi province, and Zhenjiang, a coastal city in Jiangsu province (Guowuyuan 1995:4–12). The two cities (called “liang jiang,” or literally translated as “two rivers”) had been successful in the aforementioned

policy experiment regarding unified management of serious illness. They were chosen and designated by the State Council for the purpose of formulating a nation-wide policy paper on medical care reform. The second stage started in 1996, when the central policy makers were confident enough to announce further expansion of pilot programs to a larger number of cities and localities (Guojiatigaiwei et al. 1996:554–560). The third stage was concluded in 1998 by the promulgation of a watershed policy paper on medical care reform. Compared with other policy issues, such as housing reform, medical care reform has proceeded relatively smoothly (Guowuyuan 1998:1250–1254). Within four years, policy papers were issued which remained relatively consistent with only minor amendments.

The central policy makers maintained tight control over the “two cities” pilot programs from early 1994. Not only did they choose the two cities as experimental sites, but they also formulated a majority of the important policy features well before the commencement of the pilot programs. In other words, the pilot programs were intended to monitor policy results in an arena where central policy makers were relatively confident. As presented in official records, the policy-making process pertaining to the “two cities” approximated what Charles Lindblom takes as the “synoptic model” and others term the “rationalism model”—namely, policy makers proceed with a comprehensive and theory-based approach (Lindblom 1977). The contributions the two cities pilot programs made lay in demonstrating at the practical level that basic policy principles were workable and that all operational details were in place (Hou and Ye 1998:65–100).

Except for minute differences, the “two cities” pilot programs later became an integral part of the formal policy of the central government. On April 8–11, 1996, the Office of the State Council convened a work conference in Zhenjiang to examine the results of these pilot programs and to discuss further extension of the experiment nation-wide. Fifty-eight cities from 29 provinces, autonomous regions, and directly administered municipalities filed applications for approval to conduct pilot programs. Indeed, all of the key ingredients of the medical care insurance system that eventually emerged were fully articulated and in place.

It is germane to ask how best to characterize the general pattern of policy change in China. In the author’s conceptual scheme (Lee 1987:208–210), did the medical care reform involve a “total” or “partial” scope of restructuring? Was it an incremental or a synchronized process of change? Examining both the scope and the process of change, one can observe China’s health insurance system in two stages of change. The first stage lasted from 1979 to the late 1980s, marking a “partial-incremental mode” in the sense that its intended scope of change was partial and confined to the existing framework of the centrally planned economy. The solutions were of a remedial nature, and the process of implementation

was incremental, being guided by the results of earlier policy adjustments. Since the early 1990s, the second stage has been “total but synchronized,” embracing a larger scope but requiring step-by-step implementation as well as coordination of several functional areas.

Major Design Characteristics

The new financial regime for medical benefit provision has taken shape under special circumstances characterizing two decades of economic reform since 1979, coinciding with the drastic reduction of the relative output value of publicly owned enterprises and the expansion of the market sector of the economy in the mid-1990s. In gauging the extent of restructuring, several questions arise. Who are the beneficiaries included in the new system? What are the major types of entitlements and benefits it offers? How is the provision of medical benefits financed and managed? And more generally, how do the new medical benefits systems differ from those of the pre-reform framework?

The new system is designed to establish broad coverage to all employees in the non-agricultural sector, serving as a kind of “safety net” to help absorb the risks of market competition, distribute the financial burden among various sectors of a large population, and serve the goal of mutual help and distributive justice. To achieve these goals, coverage needs to be as broad as the arena of the emerging market economy. It has been argued that broad coverage creates a broad base of revenue sources and therefore sustains the capability of payments on a continuous basis (Hou Ye 1998:132–133).

Another implication of broad coverage is the dismantling of institutional barriers between the public and non-public sectors, and the inclusion of all employees of all types of ownership, namely state-owned enterprises (SOEs), collectively-owned enterprises (COEs), privately-owned enterprises (POEs), foreign-owned enterprises, and even individual proprietors (Guowuyuan 1998:1251). In this new system, all employees in the urban and industrial sector will be included and no distinctions made between the centrally planned sector and non-planned sectors. Under either the publicly-financed or the labor insurance system prior to the reform era, public employees were considered an “entitled population” (Parish 1990). They consisted of approximately 10% of the population of the country and were regarded as a privileged group in light of their pivotally important place in the centrally planned economy. Their medical benefits were part of their pay package because of their functional status within the economy. However, the rise of the “socialist market economy” warranted not only a redefinition of the remunerative system but also the restructuring of key institutional requisites for the working of a market economy.

Furthermore, the broad coverage of so many employees has made it imperative to merge the publicly-financed and labor insurance systems into a unified

system in which all subscribers follow one set of standardized contributions and payments (Wu 1999:36). Under a 1996 decision, both the publicly-financed and labor insurance systems were to be restructured under a “unified” policy and a common institutional framework in a synchronized fashion. However, funds derived from different sources could be subject to different accounting procedures and managerial systems (Guojia tigaiwei et. al 1996:555). The “unified system” also meant that all work units would come under one singular residential jurisdiction regardless of their organizational affiliations (e.g., central ministries, local governments, enterprises or service organizations, mass organizations, or political parties) (Guowuyuan 1998:1251). However, the new system does not incorporate the millions of the agricultural population whose medical care is dealt with either by private households or by some “cooperative” arrangements (Liu, Hsiao and Eggleston 1999:1349–1356; Liu et al. 1995:1085–1093; Zheng and Hillier 1995:1057–1064; Henderson et al. 1994:687–699; Gu et al. 1993:385–391).

The concept of “basic needs” refers to the minimal level of entitlements needed to satisfy essential medical care needs. Here “basic needs” has two senses: one pertaining to curative requirements, meaning the curing of illness according to the prevailing medical standards of a given country at a given developmental stage, and the other regarding economic and financial considerations of affordability at a minimal level. That is to say, affordability is defined relative to productivity, economic strength, the source of revenue, income levels, living standards, and regional economic developments. From a strategic perspective, a basic and low level of need is less expensive, requiring fewer resources and less revenue to sustain the operation of the new insurance system. However, this basic and low level does not preclude adjustments upward when future economic development so allows (Wu 1998:35–36).

By the same token, a basic and low level does not demand absolute egalitarianism, but accommodates variations among work units and among individuals. In design, the new medical insurance system comprises a component of a three-tier structure of health insurance (Hou and Ye 1998:61–62). In the first tier, the system is designed to cover minimal and necessary levels of medical care. This tier is mandatory, entailing the state’s firm and continuous commitment to the majority of Chinese urban population. Of course, state intervention is extensive at this mandatory level, entailing enormous revenue and financial resources, administrative and managerial manpower, and legislative and regulatory attention. In the second tier, the “supplementary” insurance system depends on work units in business and the industrial sector to provide their employees with additional medical benefits. Thus the “supplementary” insurance system accommodates possible differences among various enterprises and work units with different financial ability. By and large, the state provides a legal framework and tax

exemptions for this supplementary insurance arrangement. In the third tier, commercial medical insurance is encouraged so long as individual employees are willing to pay extra for additional medical benefits. This also recognizes and accommodates varying insurance needs among individuals.

The new financing structure involves the creation of a new organizational entity by moving away from the work unit at the enterprise level and the office of publicly-financed medical care at the local government level. Such an insurance fund operates with considerable managerial autonomy guided by the legislation and policy of the state and supervised by a non-departmental public committee with participation of representatives from the relevant departments, public employees, and other public figures at the societal level. In other words, the core of the new medical care provision regime concerns a new financing structure, marking a fresh departure from both the design of the 1951 Labor Insurance Regulations and that of the publicly-financed system for civil servants and other employees in public organizations. Both designs took affiliation with the work unit as a prerequisite for entitlement to medical care benefits and discouraged the transfer of such benefits with changes of employment.

The Two Accounts System

In the early 1990s, the time was ripe for the top policy makers in Beijing to move ahead with restructuring the financing system for medical care benefits. From a long-term perspective, given the dismantling of the centrally planned economy, pressure was mounting in search of an alternative to the obsolete systems dating from the 1950s. The burden on the publicly-financed system was already too great in light of the sheer number of employees in the government bureaucracy and other public organizations, and the state-owned enterprises—the basis for the labor insurance system—could no longer provide a viable avenue for the health insurance structure compatible with sustained economic growth. More immediately, restructuring was required to address the runaway increase in medical costs induced by the first round of reforms of the public hospital system, as well as the considerable deficits, waste, and distortion that had developed in both the publicly-financed and labor insurance systems at all levels of the state hierarchy (Li 1999:5–39).

While the existing alternatives were regarded as dated, it was by no means easy to find effective options to satisfy the insurance needs of the working population in an expanding sector of a mixed economy. Four options were considered: tax revenue plans, commercial insurance plans, personal-saving plans (called personal accounts, PA, in the Chinese context), and social insurance plans (“unified management accounts” or UMA in the Chinese context). Given China’s status as a developing country, tax revenue plans were not appropriate because a well-developed taxation system in a new economy had not yet been

put in place. Commercial saving plans are in turn ideal for people who can afford them and those who opt for additional and upgraded medical care, but not suitable for meeting the basic security needs of a large working population. The remaining two options—personal accounts and social insurance—were therefore preferred, each catering to a different kind of medical care need: ordinary illness and serious illness, respectively. In the pre-reform era, both needs had been taken care of either by the publicly-financed system or by the labor insurance system (Hou and Ye 1998:136–144).

It is germane to examine the context in which the PA and UMA systems took shape. From 1979 to the early 1990s, various enterprise units and public organizations were affected unevenly by the drastic increase in expenses for medical care, intensifying the disputes among them regarding their revenue responsibility. In some SOEs, the burden of pension payments and medical expenses became so heavy that they found themselves incapable of shouldering it. Various measures were taken to circumscribe the obligations of the state and work unit and shirk financial responsibility. Examples included the payment of lump sums to workers, limits imposed on the amount of reimbursements, and simply indefinite deferment of reimbursement (Hou and Ye 1998:55–60).

From 1989 to 1994, ordinary visits and cases of illness, which had previously been seen as less critical and not distinguished in the early round of pilot programs, were subsequently incorporated into the new health insurance system. In fact, some authors only recommended the UMA for serious illness and nothing more. In this view, ordinary visits and cases of illness were included in the new medical care insurance system mainly as a result of the legacy of remuneration packages under the planned economy. After all, during the late 1990s there were still a considerable number of employees in the public sector who were paid under a remuneration package with both monetary payment and payment in kind. Unless a large portion of remuneration was monetarized, payment in kind, including medical benefits, could not be entirely eliminated. Therefore a lion's share of contributions to both the PA and UMA systems were charged to the work unit (enterprise and public organizations including government units). However, the obligations of the state were still limited because contributions to both the PA and UMA systems became a kind of a public fund that was nonetheless independent of the state budget. Through a process of structural differentiation, the fund is managed by a non-departmental public entity, with the combined accounts put under a single fund that is neither managed by the SOEs nor by the office of publicly-financed schemes at the municipal and local government level. In other words, the state was no longer expected to shoulder unlimited financial responsibility, even if the health insurance fund was mismanaged. The range of medical care entitlements does not appear to have either expanded or shrunk in any significant way since inauguration of the new system in the 1990s.

The financing of the “two accounts” system is maintained by the contribution of work units (either enterprises or employers on behalf of the state) and that of employees themselves. On a monthly basis, each work unit sets aside a percentage (say 10%) of average monthly pay, part of which goes to the PA, and the other part of which is credited to the UMA. Each employee is required to contribute a percentage of his or her pay (e.g., 1%) to a personal account. The changing role of employees is indicative of a new tendency (Guojia tigaiwei 1996:555–557): at the moment, the contribution each employee makes to the medical care fund is small in terms of percentage. However, this contribution will probably increase proportionally to cover increases over time. This will involve a shift from a policy of low wages, wide employment, and extensive welfare under the planned economy to a policy of high wages, competitive labor recruitment, and slim benefits packages in an expanding market economy (Guojia tigaiwei 1996:556).

The PA model amounts to a compulsory saving plan by requiring employees to set aside part of their monthly pay to cover medical care when needed. It also includes a vertical risk-sharing mechanism spreading costs over a career lifespan (Hou and Ye 1998:140–141). That is to say, the amount of resources needed for coping with the contingency of illness of each individual employee is accumulated through a saving plan on the basis of periodic payments. In theory, the employee “owns” the PA and thus children and relatives can inherit one’s personal account (Guojia tigaiwei 1996:557).

The UMA mode is a horizontal risk-sharing mechanism in that the masses of the employed population of the same generation work and make contributions to the UMA in a contemporary time span. Each employee facing a medical contingency becomes eligible for reimbursement from the UMA. Since not all subscribers get ill and thus claim their insurance entitlements at the same time, those who do make contributions but are in a position to make their claims can help those in real need. To put it another way, each subscriber takes turns enjoying the defined medical benefit when ill, but each contributes to the UMA on a periodical basis (Wong 1998:213; Hou and Ye 1998:557–558). UMA is an insurance fund which is public by nature and owned by a legal entity. However, as a legal entity, it is “de-linked” from state revenue and the earnings of the SOEs. It is designated for a specific purpose by law for fulfillment of obligations of the state.

Implementation and Outcome

What have been the key issues in the process of implementation since 1989? What has been the feedback in policy implementation? How have the policy makers made adjustments and amendments accordingly?

One finds, first of all, there were some noticeable adjustments of the financial roles of the work unit and the user in major policy papers issued between

1996 and 1998. According to Vice Premier Wu Bangguo, careful calculations were made in order to be sensible to the burdens of the work unit and local jurisdiction, and in the meantime to make an appropriate assessment of the ability of users in medical care provision (Wu 1998:36–37). It is noteworthy that the 1998 policy paper reduces the contribution by the work unit from 10% to approximately 6% and increases the contribution of each employee from 1% to 2%. Only 30% of the contribution by the employing unit is to be credited to the PA together with all of the contribution by each employee. The balance of the employing unit's contribution is credited to UMA (Guowuyuan 1998:1251–1253). Over all, it appears in accordance with the 1998 policy that each subscriber is required to contribute more but enjoy less from the PA and UMA systems. This can be taken as yet another step away from the extensive welfare benefits provided under the planned economy and one step closer to an increasing role for the user in an emerging market economy.

For disbursement purposes, three accounting plans have been introduced to build procedural linkage among various accounts. The first mandates that whenever the preceding account has been exhausted, the next account in the procedural sequence will be used to cover incurred medical expenses (Wong 1998 Feb, classified document (e):6–8; Wong 1998 Jan, classified document (f): 10–11). In practice, no substantial distinction is made between the PA and UMA.

The second plan is practiced in the cases of Shenzhen and Hainan, distinctively segregating PA and UMA on the basis of their policy purposes. In this plan, the patient is not automatically qualified for claims of reimbursement even after exhausting the PA and paying his or her defined share. The patient's claims are based on the medical definition of "serious illness" only, a situation which has led to disputes over such definitions (Wong, classified document (e):6–8; Wong, classified document (f): 10–11).

In the third plan illustrated in the case of Shendong, three parties—the UMA, enterprise medical account (or EMA hereafter), and PA—jointly pick up medical bills. Under this plan, most enterprise units have been managing their own medical care units. That is to say, the enterprise-affiliated hospital/clinic is often given control of the EMA (Wong, classified document (e):6–8; Wong, classified document (f): 10–11).

On close observation, one finds that the PA functions as a savings account for each subscriber, but it cannot be used for any other purpose than payment for minor or less serious illnesses. Temptations exist to use it up even when not justified on medical grounds. In some cases, a subscriber might harbor a view that his or her "deposit" might be frozen forever if not used in time. According to this logic, it is always to one's advantage to use it up, even if one is not in need. In some pilot programs, the exhaustion of the PA is a pre-requisite for applications for UMA, given a small hurdle of an equivalent to 5% of annual pay for

self-paid expenses for serious illness. As a result, subscribers are tempted to use up the deposit in their PA so as to enable themselves to apply for the UMA. This partly explains the overdraft on PA funds in the cases of the “two cities” (Hou and Ye 1998:139–140).

Concern over possible abuse was addressed in various pilot programs and in the 1998 policy paper. The ceiling for self-paid sums was accordingly raised from 5% to 10%. This adjustment was intended not only to curtail unjustifiable and unnecessary claims to UMA, but also to make better use of available resources for more patients in cases of serious illness. In addition, the 1998 policy decision set the ceiling of payment at up to four times the average annual wage, beyond which commercial insurance would be introduced to those who are in need (Guowuyuan 1998:1251–1252). Indicative of the shift toward strong market orientation, the self-paid portion is increasingly taken as an effective cost control device in medical service in China.

A new health insurance system will definitely be helpful in alleviating the financial burden of medical provision, but this is not the only avenue for patient access to medical care in urban China. There are other innovative alternatives. For example, the top policy makers have endeavored to establish networks of designated hospitals and pharmaceutical retail outlets in order to make full use of medical resources. Accordingly, health insurance agencies apply quasi-market mechanisms to build contractual relationships with all designated hospitals and pharmaceutical retail outlets, with the scope of services, concrete items, and expenses specified as a base for payments (Guojia tigiawei 1996:557–558). In building a network of designated hospitals across jurisdictions, top policy makers have taken note of the need to introduce mechanisms to encourage competition. In each jurisdiction, several hospitals have been designated so as to provide patients with choices, enhance efficiency, reduce costs and manpower, and improve managerial performance and quality of medical service (Li 1998:42).

To cope with the uncontrolled growth of medical expenses, a series of policy developments since 1989 have addressed the need for overhaul of the franchising of medical services and pharmaceutical supply, an issue neglected for many years. Indeed, an unreasonable burden had long been imposed on public hospitals in order to fulfill ill-defined public purposes. For example, the policy of artificially low prices enforced at the municipal and local level forced public hospitals to subsidize medical services and pharmaceutical supply out of their own revenue sources. In order for fundamental change to occur, the respective roles of the state and public hospitals have to be clearly defined. If public hospitals were to operate as “charitable service organizations,” their charitable functions would have to be supported financially by government grants rather than by revenue from their franchises.

In retrospect, it is fair to say that the top policy makers did not face up to the unintended consequences of the contractual responsibility system (i.e., the franchises). In other words, medical care provision has operated under an excessively distorted pricing system until very recently. For many years since 1979, serious consideration has belatedly been given to establishing reasonable pricing standards for medical services. Some efforts have also been made to review the pricing of laboratory testing and pharmaceutical products. Furthermore, governments at various levels have been requested to step up their financial appropriations to the reasonable requests of capital investment projects, large equipment and facilities, and maintenance (Guojia tigaiwei 1996:557).

In the past the system of pharmaceutical franchises were mainly responsible for the drastic increase in medical expenses. To confront this weakness, the 1996 decision recommended introducing and enforcing a separation of the accounting system for medical services and for pharmaceutical sales. In addition, a new policy to centralize all income from pharmaceutical sales with high level authorities was introduced on a trial basis. This meant the abolition of the pharmaceutical franchise system in hospitals altogether (Li 1998:41–42; Guojia tigaiwei 1996: 558).

In an unprecedented effort to restructure China's medical delivery system, central policy makers have tried to recommend some genuine market approaches. For example, a watershed policy document entitled "Guidelines Concerning the Reform of the Institutional Main Frame of Medical Care and Pharmacies in Cities and Towns" was promulgated in 2000, permitting the establishment of private practice and private hospitals for the first time in P.R.C. history, as well as liberalizing the retail sale of pharmaceutical products. This policy paper added market choices as a significant alternative in medical care provision. It is still too early to analyze the new trend of marketization of medical care provision, but its significance is beyond doubt.

Conclusion

The foregoing discussion suggests that overall, China's medical care insurance reform has entailed a significant break from the model based upon the publicly-financed system and the labor insurance system of 1950s vintage. From 1989 on, a new medical care insurance system was inaugurated in China through four rounds of pilot programs and experimental implementation in 1989, 1994, 1996, and 1998 respectively. Policy formation and implementation appear to have been "incremental" in the sense that they have been guided by feedback of the results of preceding policy decisions. The central policy makers often provided guidelines for each phase of the pilot programs and experimental implementation, and the results of preceding implementation and pilot programs in turn became the guidelines for policy making for the next round. Given China's considerable size

and diversity, further extension of pilot programs and implementation to all cities and localities will still take a long time. At present, it is not practical to make a comprehensive and final assessment of the policy results of the health insurance system since its implementation and amendments are still ongoing.

Our survey of major policy issues in medical care insurance reform from the late 1980s to the present suggests that central policy makers have covered a much broader scope than the insurance system itself. They have been trying to overhaul the entire mode of governance over welfare policy in China. The case of medical care insurance reform has been part of a larger process of transformation, from the conventional bureaucratic mode of governance at one extreme, to the market-oriented mode at the other. Beginning with the conventional bureaucratic mode, one can observe a cluster of reform measures that are effective and often innovative. For example, there were a series of efforts to establish and improve regulations and systems, approval procedures, checking and auditing processes, listing of services, and cataloguing of medicines. Moreover, attempts have been made not only to streamline institutions and hierarchies pertaining to medical care, but also to create functionally specific agencies for insurance fund management purposes. In addition, both conventional and novel managerial tools have been tried and employed in mobilizing and distributing medical resources.

The creation of a new medical care insurance regime represents one step away from the conventional bureaucratic mode. Not only do the budgetary and financial mechanisms remain detached and independent from their bureaucratic counterparts, but the composition of specialists and professional staff also sets itself apart from the cohort of officials and civil servants. More importantly, insurance agencies have emerged as a new species of public organization that is mandated by legislation and regulations of the state, financed by revenue of a public nature, guided by formulae and professional standards, and oriented to public functions. In the broadest sense, these agencies are an integral part of the state, because they are designed to fulfill the obligations of the state and provide “collective goods,” albeit only at arm’s length.

Significantly, the management of medical insurance funds has to rely heavily upon methods of economic leverage (e.g., the design of formulae, the manipulation of the rates of collection, and the starting points and ceiling of payments). This is indicative of the changing nature of Chinese politics toward a market oriented mode of governance that reveals an increasing emphasis on economic and managerial instruments and strong formulae-orientation in the public policy arena. In addition to the trend of privatization of medical services indicated in the “2000 Opinion,” China is also responding to the emerging market sector by borrowing heavier doses of managerial tools from the business sector in order to remake its public management.

China has taken a significant step not only by introducing a network of designated hospitals but also by increasing their competition and patient choice in each jurisdiction. In the meantime, the health insurance fund system is tied to a network of hospitals through a set of quasi-contractual relations. This requires periodic review and assessment of hospitals' performance in order to maintain "contracts." In fact, the emerging patterns of China's management of medical care provision appear to echo the parallel developments of Western countries, such as the National Health Service in the United Kingdom, adding further interest of comparative study to the Chinese case.

REFERENCES

- Bian, Y. (1994). *Work and inequality in urban China*. Albany, NY: State University of New York Press.
- Bloom, G. and Gu, X. (1997). Health sector reform: lessons from China. *Social science and medicine*. 45(3):351–360.
- Chen (1989), classified document (a):29–38.
- Ge, P. (January 2001). Shilun shenhua weishen gaige mianlin maodun (On the dilemma of further health reform). *Weishen jingji yanjiu*. 1:22–23
- Gu, X., Bloom, G., Tang S., et.al. (1993). Financing health care in rural China: preliminary report of a nationwide study. *Social science and medicine*. (36 (4) 385–391.
- Guojia tigaiwei, caizhenbu, laodongbu weishenbu (1996). Guanyu zhigong yiliao baozhang zhidu gaige kuoda shidian de yijiang (The opinion on the extension of pilot programs of medical care insurance system of the staff and workers) *Zhonghua renming gongheguo guowuyuan gongbao* (hereafter abbreviated as *guowuyuan gongbao*). 15:554–560.
- Guowuyuan (1995). Guanyu Jiangsu sheng Zhenjiang shi Jiangxi sheng Jiujiang shi zhigong yiliao baozhang zhidu gaige shidian fangan de pifu (The reply of the State Council to the proposals on the pilot programs of medical care insurance system reform of staff and workers in Zhenjiang shi, Jiangsu shen, Jiujiang shi, Jiangxi sheng). *Renshi zhengce fagui zhuanke*. 6:4–12
- Guowuyuan (1998). Guanyu jianli chengzhen zhigong jiben yiliao baoxian zhidu de jueding (The decision concerning the establishment of the basic medical care insurance system of cities and towns) *Guowuyuan gongbao*. 33:1251–1254.
- Henderson, G., John Akin, Li, Z. et. al. (1995). Equity and the utilization of health services: report of an eight-province survey in China. *Social science and medicine*. 39(5):687–699.
- Henderson, G., Jin S., John Akin. et. al. (1995). Distribution of medical insurance in China. *Social science and medicine*. 41(8):1119–1130.
- Ho, L. S. (1995). Market reforms and China's health care system. *Social science and medicine*. 41 (8):1065–1072.

- Hou, W. R., Ye, Z. C. (Eds.), (1998). *Chengzhen zhigong jiben yiliao baoxian zhidu quanqu, shangce* (Encyclopedia of basic medical care insurance system of staff and workers in cities and towns, volume one). Beijing: zhongguo yanshi chubanshe.
- Hu (1999), classified document (b):2–7.
- Hsiao, W. C. L. (1995). *The Chinese health care system: lessons for other nations*.
Social science and medicine. 41(8):1047–1055.
- Hsu (1975), classified document (c):36–39.
- Lee, P.N.S.. (1984). *Industrial management and economic and economic reform in China, 1949–1984*. Hong Kong, Oxford, New York: Oxford University Press
- Lee, P.N. S.(1991). *The Chinese industrial state in historical perspective: from totalitarianism to corporatism*. In B. Womack (Ed.), *Contemporary Chinese politics in historical perspective* (pp. 153–179). Cambridge, New York, Port Chester, Melbourne, and Sydney: Cambridge University Press.
- Lee, P.N.S. (1996). *Reforming the social security system in China*. In S.S. Nagel (Ed.). *Advances in developmental policy studies*. Greenwich, JAI Press Inc.
- Lee, P.N.S. (Spring, 2001). *Restructuring China's welfare regime: a case study at the local level*. *Policy Studies Review*. 18(1):60–74.
- Lee, P.N.S. and Wong, C. K. (2001). *The tale of two Chinese cities: institutional dependency of residents in Shanghai and Guangzhou*. In Lee, P.N.S. and Lo, C. W. H. *Remaking China's public management*. (pp.67–95). Westport, CT, London: Quorum Books.
- Lee, P.N.S. and Lo, C. W. H. (2001) *Remaking China's public management*. Westport, CT, London: Quorum Books.
- Li, N. Q.(1999). *Fuzhongli zai quanguo chengzhen zhigong jiben yiliao baoxian zhidu gaige gongzho huiyi shang de zongjie jianghua* (The concluding speech of Vice Premier at the national work conference on the reform of basic medical care insurance system of staff and workers in cities and towns). *Zhongguo weishen nianjian yi jiu jiu jiu*:35–39.
- Lin (1998), classified document (d):21–23.

- Lindblom, C.E. (1977). *Politics and markets: The world's political-economic systems*. New York: Basic Books.
- Liu, Y., Hsiao, W. C., Eggleston, K. (1999), *Equity in health and health care: the Chinese experience*. *Social science and medicine*. 49(10):1349–1356.
- Liu, Y. Hsiao, W.C. L., Li, Q., et al. (1995). *Transformation of China's rural health care financing*. *Social science and medicine*. 41(8):1085–1093.
- North, D. C. (1991). *Institutions, institutional change and economic performance*. Cambridge and New York: The University of Cambridge Press.
- Parish, W. L. (1990), *What model now?* In R. Y. Kwok, W. L. Parish, A. G. Yeh, et al. (Eds.), *Chinese urban reform: What model now?* Armonk, NY: M. E. Sharpe.
- Rising PRC health costs demand tough policy choices (1996). *China Staff*. 11(10):1–7.
- Savas, E.S. (1987). *Privatization, The key to better government*. Chatham, New Jersey: Chatham House Publishers, Inc.
- Sun, Z.J., He, J.G. and Fei, Z. F. (1999). *Jianli juyou Zhongguo tese fuhe shejui zhuyi shichang tizhi de yiliao jigou de gaige silu yu duice* (The ideas and proposals for the reform of medical care institutions with Chinese characteristics and in line with the Socialist market system). *Shehui baozhang caiwu guanli*. January 1999:7–9.
- Wong, C.X. (1988). *Da fanglue: zhongguo xinyijie zhengfu kua shiji dazheng gangling* (Grand strategy: the grand manifesto of China's new government for the next century). Beijing: Taihai chubanshe.
- Wong (Feb, 1998), classified document (e):2–11.
- Wong (Jan, 1998), classified document (f):4–15.
- Wu, B.G. (1998). *Fu zhongli zai quanguo chengzhen zhigong jiben yiliao baoxian zhidu gaige gongzuo huii kaimushi de jianghua* (Vice Premier's opening speech at the national work conference on the reform of basic medical care insurance system of staff and workers in cities and towns). *Zhongguo weishen nianjian yi jiu jiu jiu*.
- Xu, W. (1995). *Flushing health work in China*. *Social science and medicine*. 41(8):1043–1045.

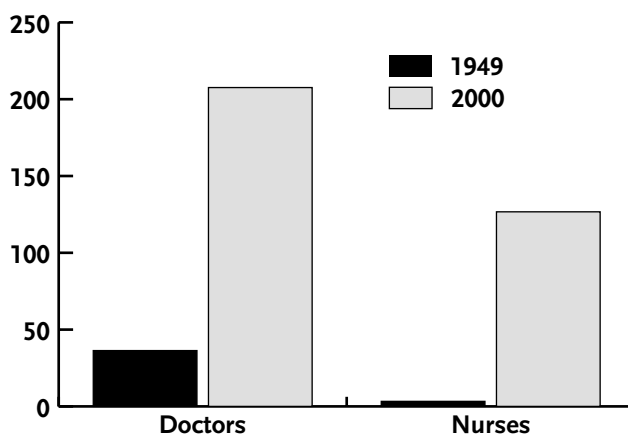
- Yan, Z.Q. (1987). Dangdai zhongguo de zhigong gongzi fuli he shehui baoxian (The wage, welfare and social insurance of the staff and workers of contemporary China). Beijing: Zhongguo shehui kexueyuan chubanshe.
- Yuen, Peter (1996), Reforming health care financing in urban China. International journal of public administration. 19 (2):211–232.
- Yun, L., Ren, M. H.(1999), Yiliao baozhang dizhi gaige (Reform of medical care system). Guangzhou: Guangdong jingji chubanshe.
- Zheng, X. and Hiller, S., (1995). The reforms of the Chinese health care system: county level changes: the Jiangxi study. Social science and medicine 41(8) 1057–1064.

The Development of Xiangya Hospital as a Model for Chinese Hospitals

Bing Jiang and Yongquan Tian

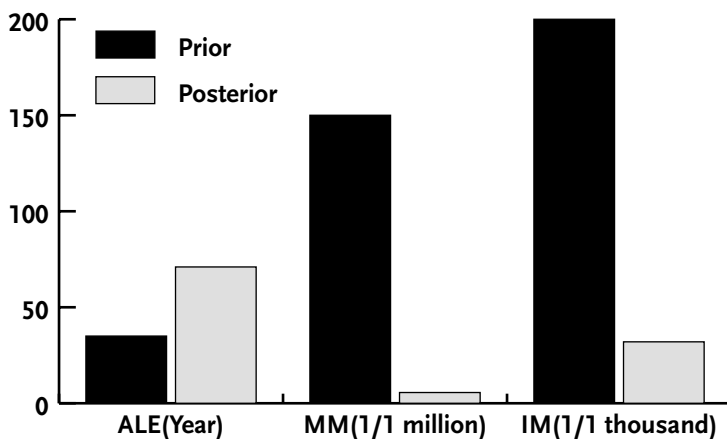
Prior to the founding of the People's Republic of China in 1949, China was nicknamed "the sick man of Asia" and its people lived with the continuous threat of severe illness and premature death. Today, as a result of five decades of sustained government commitment to meeting the basic medical needs of the population, health conditions have improved remarkably. Since 1949, the number of health care professionals has increased 7.9-fold, including a 4.7-fold increase in the number of doctors and a 37.6-fold increase in the number of nurses. The growth of the number of health personnel is significantly higher than the growth of the general population (Fig. 1).

Figure 1: Comparison of the Number of Professional Health Personnel in China in 1949 and 2000 (10 thousands)



Chinese health reforms have also been extremely cost effective: with a per capita GNP of less than US\$800 or only 2.7% of that of the U.S., the health status of the Chinese people ranks at the forefront among developing countries, and stands higher than that of some countries at the medium income level. Between 1949 and 2000, average life expectancy increased from 35 years to 71 years, while maternal mortality decreased from 15 per 1,000 births to less than one per 1,000, and infant mortality decreased from 200 per 1,000 births to approximately 32 per 1,000 births (Fig. 2).¹

Figure 2: Comparison of the Three Indices Prior to and After the Founding of the P.R.C.



ALE: Average Life Expectancy; MM: Maternal Mortality; IM: Infant Mortality;
Prior, Posterior: Prior or Posterior to the founding of PRC

Initial Profile of China's Hospital System

- The Urban Medical Care Service System: Statistics at the end of 2000 show that China has 157,000 urban health institutions in all categories, of which 11,000 are hospitals equipped with 1,914,000 beds and staffed by 2,825,000 medical and health professionals in all categories. This averages 3.49 beds, 5.17 medical and health professionals, 2.31 physicians and 1.64 nurses per 1,000 urban residents. Prior to the founding of the People's Republic, China had only 3,700 health institutions in all categories, of which 2,600 were hospitals equipped with 84,600 beds and staffed by 363,400 physicians and 32,800 nurses.²
- The Rural Medical Care Service System: By the end of 2000, China had 167,000 rural health institutions in all categories, including 5,811 county

hospitals and 49,000 township hospitals with 1,034,000 beds and staffed by 1,656,000 medical and health professionals. This averages 1.5 beds, 2.41 medical and health professionals, 1.17 physicians, and 0.54 nurses per 1,000 people in the rural population. In addition, 90% of rural villages maintain clinics staffed by 1,320,000 paramedics.

- The Traditional Chinese Medical System: Traditional Chinese medicine (TCM), an indispensable component of the Chinese medical and health care system, is provided both in specialty TCM hospitals and within general hospitals. In 1999, there were 2,631 TCM hospitals with 336,000 beds, including 2,449 affiliated with county and higher facilities and 42 attached to TCM colleges.³ Throughout China there are 508,048 TCM practitioners.⁴ These make up 17.1% of all Chinese medical workers; in rural areas, one-third of outpatients and nearly a quarter of inpatients were treated with TCM methods. In a developing country like China, with a population of 1.2 billion, TCM plays a crucial role.⁵

Xiangya Hospital

Xiangya Hospital, in Changsha city, Hunan province, which traces its origins to the Yale-in-China clinic on Cao Zhong Street established by Dr. Edward Hume in 1906, stands today at the apex of the provincial hospital system. The history of the hospital and the experience of its staff also is representative of both the past successes and the current challenges of Chinese health care since 1949. As shown in Figure 3, Xiangya has steadily increased the number of beds from 250 in 1949, to 790 in 1978, and 1,500 in 1991. The hospital is currently equipped with such state-of-the-art equipment as the gamma knife, Excimer 1, Accelerator, MRI, CT, and SPECT. The total value of permanent assets is more than 40 billion RMB. The hospital runs 53 clinical and medical technology departments, two research institutes, and four research centers. By the end of 2000, there were more than 2,100 members of the hospital staff, more than 1,800 available beds, and the hospital's total income per year was more than 40 million RMB.

In 2000, Xiangya treated more than 800,000 outpatients, an increase of more than 80% over 1985 (Fig. 4). In this same period, inpatient mortality decreased from 5.2% in 1985 to 1.04% in 2000, while the average length of hospital stay of inpatients dropped from 25.5 days in 1985 to 14.4 days in 2000.

Xiangya is also one of the premier teaching hospitals in south central China and numbers among its present and past faculty such eminent clinicians and researchers as Zhang Xiaoqian, Tang Feifan, Xie Shaowen, and Li Zhenbian.⁶ Recently Xiangya physicians and researchers have also increased their research output and Xiangya Hospital ranks in the middle-high level in SCI ranking overall for the country, with 233 scientific and research prizes won by staff members during the past decade.⁷

Figure 3: Change in Number of Beds at Xiangya Hospital by Year

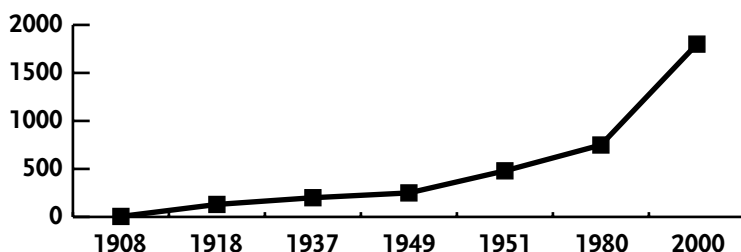
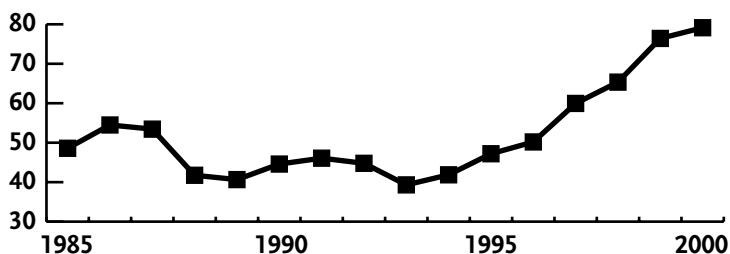


Figure 4: Total Number of Outpatients Treated at Xiangya Hospital Between 1985 and 2000 (10 thousands)



Recent Achievements and Current Challenges for Chinese Hospitals

The recent history of Chinese hospital development can be divided into four periods: 1949–1978, 1979–1990, 1991–2000, and 2000 to the present. During the first period, emphasis was given to expansion of facilities and creation of city and county health care networks. In the second period, after the fourth plenary session of the 15th Central Committee, investment was focused on increasing the capacity of large- and medium-size hospitals and the creation of specialty clinics and services. In the third period, after 1990, hospitals focused on upgrading equipment in order to become world-class hospitals. The fourth period began in February 2000 with the release of two landmark documents, the “Decision Regarding Health Care Reform and Development by CCCP and State Department” and the “Decision Regarding the Creation of Basic Medical Insurance for Employees in Cities.” These policy statements represent the first fundamental shift in funding and administrative organization since the 1950s. As a result, even as Chinese health care remains a model for developing countries worldwide and many of our urban hospitals offer first-world surgical and medical care, we also confront a range of new challenges as we work to offer new services without lowering our ability to meet the basic needs of patients across the nation. Below we elaborate on both our many recent achievements and the

variety of challenges we now face as hospital administrators and physicians at Xiangya.

Changes in Patient Expectations

An investigation showed that most outpatients prefer to be treated in large-scale or comprehensive hospitals. More than 60% of patients who suffer from common diseases want to go to large-scale hospitals and less than 20% of them are treated in small clinics. As a result, the number of outpatients in large-scale and comprehensive hospitals has increased rapidly while the number in regional hospitals continues to decrease.

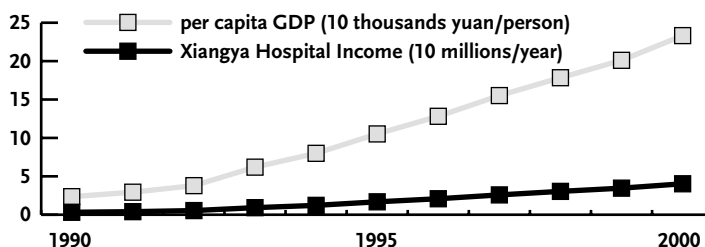
Changes in Income Sources

In the past decade, the income of all large and comprehensive hospitals in China has risen faster than the GDP. The main causes are increased medical care fees, the utilization of new medical techniques and equipment, and the rising price of drugs. Of these factors, the cost of drugs has risen most quickly and drug sales now provide the main source of increased revenue. The following figure illustrates this pattern at Xiangya Hospital, where each year after 1990 income rose two to three times the growth of the GDP (Fig. 5).

Changes in Government Financial Support

Since 1990, government support for developing hospitals has decreased annually, and by 2000, direct government subsidies were focused primarily on basic construction and scientific research. The result is a much more fragmented financial system whereby we rely on medical insurance, payment by patients, donations from social organizations and charities, and loans from international groups.

Figure 5: A Comparison of Xiangya Hospital Income and P.R.C. Per Capita Income by Year Between 1990 and 2000



Changes in Administration and Payment for Non-Medical Services

Prior to 1990, hospitals administered and directly financed a wide range of non-medical services. At Xiangya we had already put such employees as canteen workers, carpenters, and janitors on contracts. Failure to complete work according to budget would mean not only loss of pay but also forfeiture of the risk-bonded money. The latter is a whole cost contract, in which contractors pay all wages and expenses up front, as well as posting a certain amount of money as a guarantee. In this way, not only has market competition been introduced into the hospital, but the hospital's economic burden has also been reduced. Over the last decade we have experimented with a variety of different forms of subcontracting. In some cases we administer the service, but charge it to the users. In others we adjudicate among different bidders or cooperate with all hospitals in the same region to share a single service such as a laundry. In the latter situation, new centers or groups not only serve hospitals but also communities.

Changes in Employment Practices

Since 1949, almost all staff of Xiangya Hospital—medical and non-medical—have been full-time, permanent state employees. Since 1990, however, an increasing number of staff have been hired on time-specific contracts. Initially only non-professional, non-health workers were hired on contract, but by the end of 2000, there were 279 contracted nurses and 591 contracted wage workers in the hospital, making up 12% and 25% of the total staff, respectively. The system of waiting-for-position (*daigangzhi*) has also been used. Staff members who perform poorly in their positions and those responsible for a medical mistake or accident have been put on probation. Recently, this employment system has been implemented in all large-scale hospitals in China. Management goals have been formulated for the staff of different departments, and there is no longer the expectation of lifetime employment.

Changes in Wage System

Beginning in 1985, Xiangya experimented with a bonus system to supplement the pre-existing system of fixed and standardized wage scales. The leaders of the hospital now sign a contract with the directors of each medical department and medical technical department, so systematic management has replaced administrative orders. During this period, “total income verification” (*zongliang hesuan*) of bonus distribution has been agreed on, which sets total income for each unit. When the income falls below this total, the unit receives just the basic bonus, but above this total income, additional bonuses are awarded as a proportion of the total excess. In 1990, with reform gathering momentum and hospital management becoming more efficient, “total income verification” was no longer suit-

able for hospital development, and the plan was changed to “whole cost verification” (*quancheng ben hesuan*), which meant “total income minus total pay.” The depreciation of fixed assets and expenses is assessed and achievements are acknowledged in this new plan. The bonus is derived from the residual of total income minus total pay according to a definite proportion. This kind of the bonus distribution plan of whole cost verification has generally been implemented in Chinese hospitals, although there have been some modification at various institutions. Reform of the bonus distribution system has had a great effect on staff morale by increasing the pay of competent medical personnel.

Changes in Administrative Rank

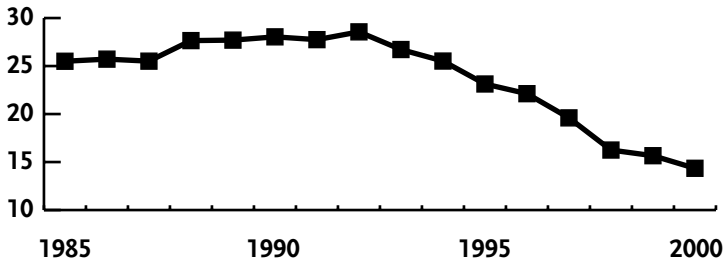
Graduated hospital management has been instituted nationwide since 1990 under the Ministry of Health. All hospitals in China have been divided into three categories: the hospitals in cities and provinces are grade 3, in counties, grade 2, and in communities and regions, grade 1. Different aims have been set up for different grade hospitals and different medical fees have been established for each hospital grade. A hospital can reach a designated grade only after a state evaluation. Xiangya Hospital was the first institution to be appraised as a grade 3, class A hospital, in March 1992. The implementation of graduated hospital management has accelerated the development of hospital management and led to improvements in medical care, quality of service, and patient satisfaction.

Changes in Length of Stay

Management of the average length of hospital stay was suggested by the president of the First Affiliated Hospital of the Chinese Medical Science University, Ma Xiaowei, as a way to combine the aims of administration with quality control, medical framework modulation, and quality service. The methods are as follows: 1.) build up the daytime department and chronic disease department so as to adjust and improve the structure and function of the hospital and allocate the patient load according to the functions of different departments; 2.) set up a duty system (*zerenzhi*) of comprehensive quality management centering around shortening the average length of hospital stay; carry out quality control for single kinds of diseases; and assign various responsibilities to different departments; 3.) guarantee medical quality and medical security and emphasize the care of patients in critical condition; 4.) improve the efficiency of the medical technical departments; and 5.) upgrade the supervisory system for promoting medical service quality. The results show that the average length of hospital stay has been shortened from 25.52 days in 1995 to 16.25 days in 1998, and indicate that patients' care needs in hospitals have been lowered, the social burden has lightened, and the benefits to hospitals have increased. Medical management, especially for the average length of hospital stay, has been practiced in Xiangya

Hospital since 1996. During these five years, the average length of hospital stay decreased from 28.5 days to 14.4 days (Fig. 6), the death rate decreased from 1.91% to 1.04%, and the income of the hospital increased from 20.8 million RMB in 1996 to 40.3 million in 2000.

Figure 6: Change in the Average Length of Hospital Stay at Xiangya Hospital (in Days) Between 1985 and 2000



Changes in Nursing Practice

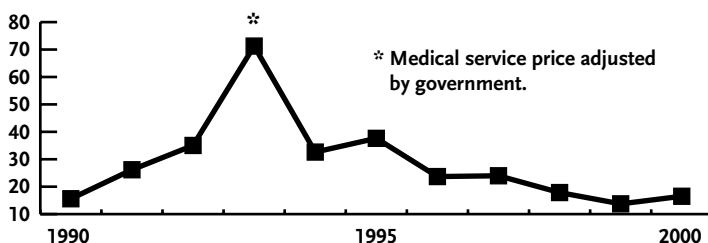
Holistic nursing is a model to provide high quality nursing care to patients based on their physical, psychological, social, and cultural needs. It is guided by the holistic nursing system and framed by the nursing process, which includes nursing programs, nursing philosophy, nurses' responsibility, manner of evaluation, estimation of patients at the time of both admission and discharge, standard plans about patients' medical services and health education, records of nursing, and the guarantee system of nursing quality. In the 1980s, a patient-centered nursing model was adopted at Xiangya Hospital. In 1996, the hospital joined the network of holistic nursing in China and was the first hospital in Hunan province to practice this nursing model. After five years' efforts, there are now 31 holistic nursing units, which cover 80% of the total units of the hospital. Since holistic nursing has been implemented, not only the quality of nursing care but also patient satisfaction has increased steadily. The effects of the holistic model have included shifts of emphasis in nursing care from the disease to the patient, from treating disease to preventing it, from merely physical to psychological health, from individuals to their families, and from health care in the hospital to health promotion in the community. Holistic nursing changes the knowledge structures of nurses, widens their views, and places greater importance upon theoretical, informational, and programmatic aspects of nursing care.

Changes in Supply and Cost of High-Tech Equipment

In the late 1990s, hospitals all over China vied with each other in buying expensive equipment. Almost all county hospitals bought CT scanners, and most city hospitals bought MR and automatic biochemistry analyzers. Over the past sev-

eral years, 13 sets of gamma knives have been purchased by individual hospitals (at a cost of more than 30 million RMB per set), in addition to several PET systems (at a total cost of hundreds of millions). One effect of this competition among hospitals in the acquisition of high-tech medical equipment has been the need for hospitals to increase their patient load. However, in some cases, this expensive equipment has been left unused, wasting precious medical resources. For example, in the 25 counties of Hunan province there are now 170 CT scanners, but in many hospitals fewer than five patients per day are examined by CT scan, and sometimes a CT scanner is not operated for a whole week.⁸ In order to inhibit increasing medical spending, to control the speed of the development of hospitals, and to lighten the patient load, a policy of “control the total income and adjust its origins” has been suggested by the Ministry of Health, which limits average outpatient spending, average spending per bed per day, and average length of hospital stay, as well as strictly limiting the percentage of hospital income from medical services and drugs. For example, at Xiangya Hospital, average outpatient spending is now limited to 135 RMB, the average per-bed spending per day is 410 RMB, the average length of hospital stay is 16 days, and the proportion of income from drugs is 48% of total income. Income over this proportion is appropriated by the state. Figure 7 shows that the growth rate of total income of Xiangya Hospital in 2000 was kept below 15%, owing to this regulation. The hospital attaches greater importance to lightening the patient load, to the reasonable and adequate use of medical resources, and to stabilization of hospital development.

Figure 7: Growth of Total Income of Xiangya Hospital per Year Between 1990 and 2000

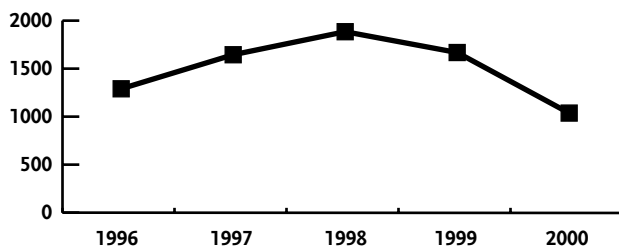


Changes in Medical Insurance

Since the founding of the P.R.C., all hospitals in China have belonged to the state, and their staff have enjoyed free medical treatment. This imposed a heavy financial load on the state and hindered the development of hospitals. Statistics from Xiangya Hospital between 1996 and 2000 show that free medical treatment cost up to 20.6 million RMB over five years, which equals the salaries earned by

the whole staff in four months. In order to reduce this, an employees' medical insurance system has been implemented in the cities. Its principle is "a partial grant taken from the beneficiary and a partial subsidized by the state," that is, 3% of one's salary is drawn out to be kept in a personal account and matched by a partial state subsidy of up to 8% of one's salary. A staff member who participates in the medical insurance system as an inpatient can receive health care worth up to 70,000 RMB in one year. Paying 60 RMB for insurance provides medical coverage up to 100,000 thousand annually to cover severe illness. Figure 8 indicates that the medical spending of all staff decreased markedly after the medical insurance system was implemented at Xiangya Hospital; the average personal spending decreased 600 RMB, and total spending of 1.2 million in 2000 is expected to have declined in 2001.⁹

Figure 8: Expenditure on Free Medical Treatment per Person in Xiangya Hoispital Between 1996 and 2000



Changes in Ownership

In the early 1990s, with the development of a socialist market economic system in China and recognition of a medical service market, China experimented with a variety of new non-public ownership forms such as joint-stock hospitals, cooperative hospitals, and private hospitals at the same time as the majority of hospitals remained state owned. In order to standardize the medical service market, to prescribe the operating rules for different kinds of hospitals, and to enhance the government's control of medical service institutions, in 2000 the government divided all hospitals into two groups, non-profit and for-profit medical institutions.¹⁰ Non-profit hospitals are charged with providing comprehensive health care, disease prevention, medical education, medical research, and the development of medical resources. They must share responsibility with the government for the people's health, must operate according to the regional medical plan, and must provide basic medical services and special-needs medical services to people in the region. For-profit hospitals, which can be set up outside the regional medical plan, practice industrial management and operate in order to make profits. Whereas for the former, any profit can be used only to subsidize its activities,

which serve the general population of a region, profit is the aim of the medical services of the latter, which serve people in a given region selectively.¹¹ The property of the public non-profit hospitals belongs to the public, is to be used by them, and cannot be treated by the hospitals as belonging to themselves or transferred to others. Xiangya Hospital has been formally subsumed by the health bureau of Hunan province. Because for-profit medical services cannot be allowed to exist in a public non-profit hospital, certain services run by other enterprises have had to be either separated from the hospital or only managed by the hospital. This has generally been accomplished over the past three years.

Changes in Inter-Hospital Relations

As a result of the many reforms since 1990, and especially with the new ownership and insurance programs since 2000, there is now fierce competition among Chinese hospitals for survival, each attempting to get a greater share of the medical market by fair or unfair means. The following aspects of this competition, those that provide hospitals the greatest challenge and thus should be addressed, are related to the survival and development of hospitals.

Introduction of medical high technology. In order to attract patients, hospitals purchase expensive medical equipment. But in some cases, patients are charged heavily for unnecessary examination with high-precision instruments. In 1995, Xiangya Hospital spent more than 10 million RMB on a gamma knife from Sweden. Initially there was high demand for this treatment, but subsequently the number of patients decreased because of operational advancements in neurosurgery. In a word, introducing medical high-tech equipment without considering the regional program resulted in a waste of health resources and increased medical expenditure.

Attracting and keeping medical personnel through preferential policies. In the 1990s, hospitals at all levels sought experts in all specialties and attempted to keep them with preferential treatment. Coastal cities offered the highest wages and many eminent staff migrated from the poorer areas and thus created an imbalance of personnel across the nation. Therefore it is important for personnel management and medical resource exchanges to encourage fair competition and classified management in temporary work by specialists and administrators.

Enhancing reputation. In order to enhance their reputation and attract more patients, many general hospitals promote themselves in various ways. The first is advertising: hospitals at all levels now introduce themselves in various media and post advertisements in buses, railway stations, and vital communication lines. The second is the reinforcement of relations with grassroots hospitals, enterprises units, and departments of government by means of reciprocal visits and interviews. The third is the strengthening of further health education in local districts. When experts from the panel of hospital health education give special lectures

on health care, they also enhance the hospital's reputation. The fourth method is to develop tele-medical care through the networks, directing the remote and lower-level hospitals in medical affairs. As a result of increased quality and standards of medical service, the number of outpatients treated by Xiangya Hospital in 2000 was over 800,000.

Conclusion

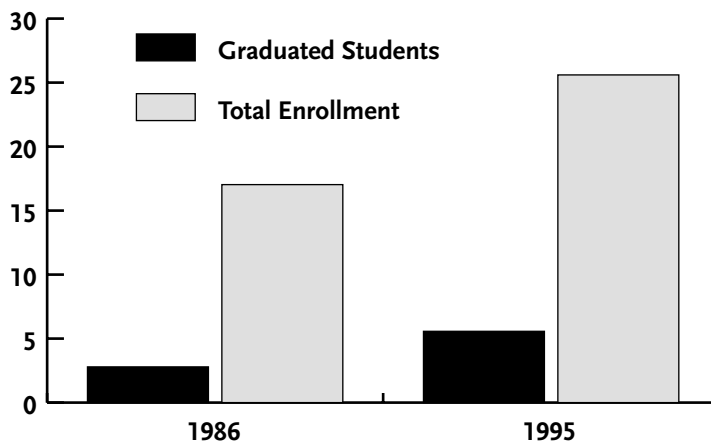
In 1906, the 29-year-old American doctor Edward Hume was sent to Hunan by the Yale Foreign Missionary Society, the precursor to today's Yale-China Association. He bought a small inn called Xi Pai Building on Cao Zhong Street in Changsha as a site on which to build the Yale Hospital, the first western medical institution in Hunan province and the predecessor of the modern Xiangya Hospital. The hospital made a deep impression on people, as indicated by the saying "In the south of China there is Xiangya and in the north, Peking Union."

Almost a century later, Xiangya Hospital, now directly under the leadership of the Ministry of Health, is again in the forefront of a new era of Chinese medical care, education, and scientific research. Like every large-scale general hospital in China, Xiangya is searching for development amidst reform, and for survival amidst competition. The challenges posed by multiple demands—the need for provision of basic medical services, prevention, research and education, and rural public health—are daunting. Decision makers and staff in hospitals at all levels must recognize these challenges if they are to develop their hospitals in China. Let's grasp the chance and face the challenges to advance the future of Chinese medicine and health care.

REFERENCES

- ¹ Zhang, W. Health care in China. Speech at the conference Health Care, East and West, Moving into the 21st Century, June 24–29, 2001.
- ² The data was taken from the online database of the P.R.C. Ministry of Public Health.
- ³ In addition, 56 use both TCM and modern medicine, 287 are TCM clinics, and 84 are some other type of hospital.
- ⁴ 2.78 TCM practitioners per 10,000 people on average.
- ⁵ Liu, B. The role of traditional Chinese medicine in China. Speech at the conference Health Care, East and West, Moving into the 21st Century, June 24–29, 2001.
- ⁶ Presently there are a total of 177 medical institutions of higher education. Of these, about 39%, called medical universities or colleges, are set up independently, while about 12% are part of comprehensive universities. About 15% are those teaching TCM, while only 2% are pharmaceutical universities or colleges. Eleven percent of Chinese medical institutions belong to the “high training school of medicine.”
- ⁷ Between 1986 and 1995, total enrollment grew 50.3% from 170,347 enrolled students in 1986 to 256,003 in 1995. Between 1990 and 2000 the number of medical science research papers doubled, from 216 to 477.

Figure 9: Number of Medical Students in China, 1986 and 1995 (10 thousands)



⁸ Zhou, L. et al. (2000). Unbalance and conformity. *Chinese Health Policy* 9.

⁹ In 1998, the sociology department of Shenzhen University investigated the situation of medical insurance system in Shenzhen. The study showed that the satisfaction rate for all medical reform policies that have been implemented and those being instituted were 74.6% and 84.8% respectively. Wu, Z. (2001). Discussing supervisory management. *Chinese Management of Hospitals*, 17, 281–83.

¹⁰ National Reform Office and seven other ministries and councils. (2000). *Guidelines for Reforming the Medical Service System*.

¹¹ Xiu, Z. (2000). Initial study of the definition of for-profit and non-profit hospitals. *Chinese Hospital Management*, 20, 17.

Websites consulted:

<http://www.moh.gov.cn/news>

<http://www.moh.gov.cn/news/worldreport>

<http://www.moh.gov.cn/jb98>

<http://www.moh.gov.cn/digest99>

<http://www.moh.gov.cn/jk98>

Changing Economics and Health Worker Training in Modern China

*Samantha Mei-che Pang, Thomas Kwok-shing Wong, and
Jacqueline Shuk-ching Ho*

Health Care for the Masses, Controlled by the Masses

After 50 years of political turmoil, continuous warfare, and natural disasters, health conditions in China in 1949 were abysmal. The majority of people suffered from poor health and had almost no access to modern medicine. It was estimated that the infant mortality rate was roughly 200 per 1,000 live births, and the average life expectancy was 39. Infectious disease and conditions complicated by malnutrition, such as tuberculosis, malaria, schistosomiasis (bilharzia), hookworm, and fungus diseases, were the main causes of death (Huang 1973; Banister 1987; Lampton 1977). Preventive medicine was almost non-existent in rural China, and Western-type hospital services served primarily an urban population. Rural residents relied mostly on traditional healers, including Chinese medical practitioners and women healers, who received no formal medical training (Pang).

OVERVIEW OF REFORMS OF MEDICAL AND NURSING EDUCATION

1966–70

No new students admitted to medical schools

1970

Medical schools reopen as three-year programs

1973

Nursing schools reopen as two-year practical training

1977

Restoration of Unified College Entrance Exam and post-graduate courses

1978

Ministry of Health formalizes establishment of medical education departments

1981

National academic degree established for MDs

1983

Tianjin establishes first five-year BA program in nursing

1987

Establishment of three-, five-, and seven-year medical programs for community health doctors, fully trained MDs, and MD/MA research doctors; number of medical specialties increased from 20 to 57

1990

Nursing program for secondary graduates extended from three to four years

1993

Medical specialties reduced from 57 to 37

1994

First three-year nursing MA started at Beijing Medical University

Registration ordinance for nurses

1996

Second three-year nursing MA started at Xi'an in partnership with Chiang Mai. Peking Union Medical College reduces nursing program from five to four years to emphasize human needs model

1997

Medical specialties reduced from 37 to 20, with traditional medicine as a specialty within clinical stream

1999

Political Study renamed as "humanities and social sciences"

Registration ordinance for physicians

2001

Fifth edition of clinical texts, with new electives in health law and family medicine

Nursing program for secondary graduates reduced from four to three years

In 1950, when the First National Conference on Health Care was held in Beijing, all types of health workers, including doctors and nurses, were represented. Four objectives for health care reform were formulated under Communist Party direction. First, medicine should serve the needs of the workers, peasants, and soldiers. Second, preventive medicine would take precedence over therapeutic medicine. Third, both Chinese and Western medicine would be practiced. Finally, health care work would be pursued in accordance with political directives. These objectives aimed to address the health care needs of the population at large in accordance with Mao Zedong's mandate that "all work done for the masses must start from their needs and not from the desire of any individual, however well-intentioned" (1972:124). To this end, recruitment and deployment of health care workers would henceforth be centrally controlled.

Reform in medical programs in the 1950s was modeled after patterns developed by the Chinese Red Army and the Soviet Union. All medical schools became or were set up as free-standing institutions (Lucas 1982) and a core curriculum was standardized by the Ministry of Health. Doctors and nurses studied the same subjects in common before turning to their own speciality areas. To strip away foreign influence, a new set of textbooks was written for the program by local experts (Zheng Hanxian 1995; Yang Hua 1995). In the 1950s, the medical education system consisted of three- and four-year secondary-level training

carried out in the secondary medical schools and five- or six-year upper-level training carried out in the medical universities. Five traditional Chinese medical colleges were also set up in 1956 (Huang Jiashi 1992).

During the Cultural Revolution, medical schools ceased their routine instructive functions and no new students were admitted between 1966 and 1970. Instead, more emphasis was placed on part-time health workers such as the “barefoot doctors” (*chizu yisheng*) in the countryside and “red medical workers” (*hongyi*) in the urban neighborhoods. Some have asserted that barefoot doctors contributed the bulk of basic medical care in the rural areas during the Cultural Revolution (Sidel and Sidel 1975; Rifkin 1973). When the medical schools reopened in 1970, entrance examinations were abolished, and the curriculum was reduced to three years in all medical universities (Gao Tongqiang et al. 1999). Nursing schools were reopened in 1973, but training was reduced to abbreviated, two-year programs emphasizing practice rather than theory (Wang Xiuying 1987).

Many, including official Party historians, would agree that the Cultural Revolution was a disaster for China in general and a tragedy for professional education in particular (Tianjin Nursing School 1980; Zeng Zhuping 1981; Zheng Hanxian 1995; Gao Tongqiang et al. 1999). Many highly trained physicians were assigned to serve in outpatient clinics or on mobile medical teams, where their advanced training was of minimal use (Lampton 1977). Even worse, the mandate for class struggle profoundly jeopardised the relationship between health workers and patients. Medical workers, who were supposed to cure the dying and heal the wounded, could not exercise professional autonomy to serve the best interests of patients if the act came in conflict with the policy line. Qiu Renzong (1991) narrated a typical case that occurred during the Cultural Revolution, when a prominent official was refused admission to a hospital because he was labelled a “capitalist-roader,” and subsequently died without receiving any medical treatment. Furthermore, professional oversight was essential for medical facilities to serve the greatest number of people in the most economical fashion, but health workers could not exercise this kind of control, particularly during the Cultural Revolution, for fear that others would attack them as counter-revolutionary and unwilling to serve the people (Lampton 1977). Indeed, health work was systematically undermined during the Maoist era as a result of political control taking precedence over professional autonomy.

The nursing profession was especially hard hit by this political turmoil. In comparison with other parts of the world, where the profession had taken great strides to redefine the nature of nursing as a unique discipline (commentaries by contemporary nursing leaders 1992) and articulate nursing theories that provided a base of knowledge for independent nursing practice, nursing in China fell far behind during the 1950s and 1960s. Moreover, while nursing was experienc-

ing a renaissance in other parts of the world, nurses in China were prohibited from any international exchange.

Yet, when one considers the entire period from 1949 to 1978, one observes that even in the context of political control—even repression—of professional autonomy, the Party leadership did create a medical system that trebled the numbers of trained health workers from 400,000 in 1949 to 1.44 million in 1978. Together with the mobilization of part-time workers as part of a co-operative medical system set up at the production brigade level, these efforts not only improved urban health but also brought affordable health care to the rural population. Overall health conditions significantly improved (Yang et al. 1991), the World Health Organization acknowledged China's achievements, and the World Bank (1975: 39) cited China's reliance on low levels of technology and community services as a model for other developing nations.

From Planned Economy to Market Economy

The reforms that began in 1978 to transform China's highly centralized economy into a socialist market economy were accompanied by reforms that put renewed emphasis on developing expertise and advancing modernization. The Maoist policy of devaluing professional achievement was reversed, and educational and management policies were instituted to strengthen the professionalism of doctors and nurses. After 1978, medicine and nursing were treated as different disciplines and each began to chart its own course of development. A multi-level, multi-specialty, and multi-form health professional education system has taken shape and is still in the process of evolving. What follows is an analysis of the educational restructuring that has been put in place for the training of doctors and nurses.

Training of Doctors

In 1978, medical education began an era characterized by energetic rehabilitation, readjustment, and an accelerated pace of reform. In the early 1970s, less than 10% of medical workers were college-trained doctors. Although training of doctors was resumed in 1971, programs varied widely from six months to five years. Students entered programs by recommendation rather than by competitive entrance examination, and shortages of teachers and textbooks and poor facilities hampered the quality of instruction (Stillman and Sawyer 1992; Wang and Lin 1995; Shen Jiquan 2000).

In 1977, the Unified National College Entrance Examination was resumed and the number of post-graduate students was increased. The following year, a national seminar on medical education planning hosted by the Ministry of Health formalized the establishment of Medical Education and Research Development units in medical schools as a means to improve medical education.

The first was set up in the former Shanghai First Medical College and more such units were then established in other medical schools (Huang Jianshi 1992; Gao et al. 1999). A national academic degree system was established in 1981. New standard curricula for medical colleges and secondary medical schools were designed, and unified textbooks for medical students were published. Key medical colleges of high research potential were identified for strategic development. (Huang Jianshi [1992] reported that 14 out of 129 medical schools belonged to this category in 1986.) International exchange was expanded with an explicit aim to align medical education development with international trends (Lee and Lee 1997). Overseas funding bodies such as the China Medical Board and Project HOPE provided support for innovation. The early recipients of this support included key medical universities that emphasize modern medicine as distinct from traditional medicine (Stillman and Sawyer 1992; Hesketh, Zhu and Zheng 1994). In sum, a normal order was gradually reestablished for enhancing quality medical education, particularly in the key universities that received special attention from the Ministry of Health, as well as overseas funding and expert support.

Under the direction of the Ministry of Health, a formal standardized system for post-graduate clinical training has taken shape. The training comprises two stages. The first stage, which aims at general practitioner training, lasts for three years, and the second, which focuses on specialty training, lasts for two. Medical scientists can directly enter the third year of the first stage of training. During the training period, residents are required to demonstrate correct political behavior and moral thinking, develop clinical expertise in selected specialties, and achieve mastery of medical English, research, and clinical teaching skills. Those who successfully pass the first stage assessment qualify to become chief resident doctors. The ones with excellent performance are eligible to apply for doctoral study. Only those who can successfully pass the second stage assessment can obtain the qualification of medical consultant. It is noteworthy that both “redness” and “expertness” are emphasized in the assessment criteria (Zhang Min 1999).

In 1987, a “3-5-7 plan” for standardizing medical training was instituted to address the issues of existing non-standardized training programs that ranged from two to eight years. A three-tiered system of training was seen as necessary in view of varied levels of economic development throughout the country and the shortage of health workers in rural areas. The numbers “3-5-7” refer to the number of years of training. These three programs aim to prepare three different kinds of doctors: practical community medical workers for rural areas (three-year secondary school program), qualified doctors (five-year undergraduate program), and medical scientists (seven-year MA/MD program) (Wang and Lin 1995). Other programs such as programs for retraining barefoot doctors to become qualified medical workers and self-study programs for medical workers to obtain

qualifications to become medical doctors were also put in place. As Mary Burris (1990) observed in her study of medical schooling in China, the three-year program is not just 60% of the five-year program. The former is more practice-oriented and based on local needs. Differences between the five- and seven-year programs are not so distinct. As shown in Table 1, the subject areas and their portions are similar, except that an additional two years in the seven-year program allows students to develop expertise in a specialty. It is worth noting that, although quality education comparable to international standards is high on the agenda of modernization, university education for health workers did not increase dramatically over past years. At present, 95% of nurses and 62% of doctors have prepared at the secondary level only (Shi Jun 2001).

Table 1: Comparison of Five- and Seven-Year Clinical Medicine Curricula (Source: Beijing Medical University, 1999)

Subject Area	Seven-Year Program	Five-Year Program
Humanities and Social Sciences	413 hours 8.1%	408 hours 9.4%
Physical Education	174 hours 3.4%	136 hours 3.1%
English (not including professional English)	333 hours 6.5%	204 hours 4.7%
Basic Sciences	831 hours 16.3%	529 hours 12.2%
Basic Medical Sciences	1395 hours 27.3%	1257 hours 28.9%
Clinical Medicine	1476.5 hours 28.9%	1476.5 hours 34%
Electives	482 hours 9.4%	335 hours 7.7%
Clinical Practice	36 weeks	36 weeks
Second-Level Specialty Study	100 weeks	16 weeks

At the college level, there are four main streams in training of medical doctors. They are clinical medicine, oral medicine, fundamental medicine, and preventive medicine. The first two streams have five- and seven-year programs, and the latter two have only five-year programs (Beijing Medical University 1999). These programs are further subdivided into different specialties. The early 1980s saw a proliferation in medical specialties from 20 to 57 by 1987. This could be taken as a positive sign of knowledge expansion in the field of medical science, yet too early specialization in undergraduate medical education does not benefit

students in expanding the knowledge required for adapting to changing environments. It was reported that some specialty graduates have had difficulty finding jobs. In 1993, readjustment was carried out, reducing the number of specialties from 57 to 37. The number was further reduced to 20 in 1997, with the less competitive specialties merged with other specialties (Wang Debing 2000). Of these 20 specialties, traditional Chinese medicine and integrated Chinese and Western medicine remain specialties under the clinical medicine stream.

Standard textbooks for medical education have undergone regular revision. The fifth version for clinical medicine, entitled “Textbook Series for the 21st Century,” was published in 2001. The objective of this series is to highlight the importance of “three fundamentals and five attributes” (*sanji wuxing*) in medical education. The three fundamentals are theory, knowledge, and skills, while the five attributes are thinking, science, advances, heuristics, and applicability. “Expertness” is much valued and the element of “redness” is not stated as explicitly as previously.

Today, the medical curriculum is criticized as being too curative-oriented, failing to prepare medical doctors to meet the future health needs of the country. Indeed, the main components in the medical curricula over the past ten years, as shown in Table 2, did not change much except in two respects. First, the number of contact hours has increased by 23% in the 1999 curriculum. Second, elective subjects are added, such as “General Medical Practice/Family Medicine” and “Health Law.” Both are new elective subjects in the “Textbook Series for the 21st Century.” Didactic teaching dominates, with students attending on average 30 hours of lectures every week; nurturing student ability in independent thinking and life-long learning is less emphasized. It is noteworthy that the subject area “Political Study” was renamed “Humanities and Social Sciences” in the 1999 curriculum, although the subject contents are similar. “Redness” appears to be thus disguised, while “expertness” is more emphasized.

In line with concerns that have been raised regarding the trend of medical education in the international arena, recent discussions of medical education reform in China revolve around two dimensions. First, the objective of medical education is affirmed as to train medical graduates who are well developed morally, intellectually and physically, possessing firm basic knowledge, strong working capability, and the potential to advance further in higher clinical medical practice (Zhang Chengjian 1998; Lai Yujian 2001; Wang Shicai 2000). Second, the global trend in medical education is acknowledged as no longer able to equip students with all the information they will need for a lifetime of practice. There is a recognition that the emphasis has to shift to encouraging students to learn how to study in order to keep abreast of the changing environment. There is a need to develop an active, community-oriented, student-centered, and problem-based learning curriculum which can strengthen students’ ability to continue learning on their own (An Yan 1998; Shun et al. 2000).

Table 2: Comparison of 1989 and 1999 Five-Year Clinical Medicine Curricula (Source: Beijing Medical University, 1999)

Subject Area	1989	Subject Area	1999
Political Study	392 hours 11.1%	Humanitis and Social Sciences	408 hours 9.4%
Physical Education	144 hours 4.1%	Physical Education	136 hours 3.1%
Foreign Language	288 hours 8.1%	English (not including professional English)	204 hours 4.7%
Basic Sciences	480 hours 13.5%	Basic Sciences	529 hours 12.2%
Basic Medical Sciences	1006 hours 28.4%	Basic Medical Sciences	1257 hours 28.9%
Clinical Medicine	1236 hours 32.8%	Clinical Medicine	1476.5 hours 34%
		Electives	335 hours 7.7%
Total Hours	3546 hours		4345 hours

Training of Nurses

A top priority since 1978 has been to reverse past disregard for nursing education and improve the quality and quantity of nurses by increasing the number of nursing schools and raising educational standards. Although most nursing programs are three-year courses for junior high school graduates, pilot nurse training programs for senior high school entrants commenced in 1999 in large cities such as Beijing, Shanghai, and Shenzhen by upgrading secondary nursing school programs to three-year college programs.

To train nursing educators and administrators, the Ministry of Health authorized a five-year baccalaureate nursing program in Tianjin (Davis, Gan, Lin and Oslen 1992) and, by 1996, there were 18 universities offering such programs. The first master's program started at Beijing Medical University in 1994; a second program offered by Xi'an University and Chiang Mai University (Thailand) and funded by the China Medical Board graduated its first class in 1996. As of 2001, there were 67 university nursing schools, with nine offering master's degree programs (Li 2001). Doctoral programs have not yet started. In addition to full-time programs, part-time and distance learning programs are offered to ensure that working nurses have opportunities to pursue further study.

While nursing specialization, in the form of advanced nursing practice, has been flourishing in the United States, the major concern of Chinese nurses remains to move nursing away from medical sciences to become an independent discipline. The nursing curriculum, which was primarily based on a medical

model, has been under review in the reform era. There is growing acceptance among nurses that nursing is an applied science, based not only on medical sciences, but also on the humanities and social sciences (Pei Xianjun 1990; Li Yulin 1990). For instance, an exchange program between the Hangzhou School of Nursing and Seton Hall University in the United States helped to develop the nursing curriculum in China in 1981, introducing subjects such as psychology and cultural studies into the curriculum.

In 1996, with funding from the China Medical Board, Peking Union Medical College (PUMC) took the radical step of changing its curriculum from a five-year to a four-year program based on a human needs model. The current five-year program offered in other universities shares a common curriculum with the medical program for the first two years of study (Table 3), with nursing subjects taught from the third year onwards (Beijing Medical University, 1999). The newly developed program at PUMC shares some common subjects with the medical program, but teaching of nursing subjects starts in year one. Compared with the conventional program, this new curriculum has three obvious differences. First, both humanistic sciences and medical sciences are emphasized as foundation subjects, with a health focus rather than disease focus. Second, study

of communication and social interaction is particularly emphasized in the first two years of the program. Third, critical thinking and problem-solving skills are emphasized throughout the four years of study. "Inquiry and Logical Reasoning" is offered in the first year, and subjects related to research skills, such as "Data Management," "Problem-Solving Skills and Strategies," and "Clinical Nursing Project" are offered from the second year onward. This initiative can be seen as a positive sign that nursing in China has been gaining increasing recognition as an independent discipline.

Similar to the discourse on curriculum reforms in other disciplines, recent discourses on nursing education focus on reconstruction of the curriculum with elements of creativity, critical thinking, broad knowledge base, state of the art technologies, student-centered learning and multidisciplinary and integrative studies (Shi Jun 2001; Dong Hongling 1999; Yan Shiping 2000; Lou Jianshi 2000; Liu Zongyang 2000). There have also been regular reports on initiatives to include new developments from North America, such as the nursing process and primary nursing, in nursing curricula, and innovative teaching methods have been undertaken to introduce these new concepts to students (Yang and Wang 1991; Zhang Fang 1991; Chen Mingjia and Li Helin 1994; Huang Jianqin 1994; Zhou Manying and Yang Yicheng 1994; She Mengping and Zhang Liming 1995; Ji Yun, Wu Bxian, Chang Quiqiu 1996; Gu Wei et al. 2001; Zhang Shaoru et al. 1998; Zeng Xiaoyun 2000; Luo Yulin 2001).

Table 3: Comparison of Five-Year Nursing and Clinical Medicine Curricula (Source: Beijing Medical University, 1999)

Subject Area	Nursing	Subject Area	Clinical Medicine
Political Study	239 hours 6.9%	Humanities and Social Sciences	408 hours 9.4%
Physical Education	136 hours 4%	Physical Education	136 hours 3.1%
English	258 hours 7.5%	English (not including professional English)	204 hours 4.7%
Basic Sciences	474 hours 13.8%	Basic Sciences	529 hours 12.2%
Basic Medical Sciences	849 hours 25%	Basic Medical Sciences	1257 hours 28.9%
Clinical Nursing	1474 hours 42.8	Clinical Medicine	1476.5 hours 34%
		Electives	335 hours 7.7%
Clinical Practice	68 weeks	Clinical Practice	52 weeks

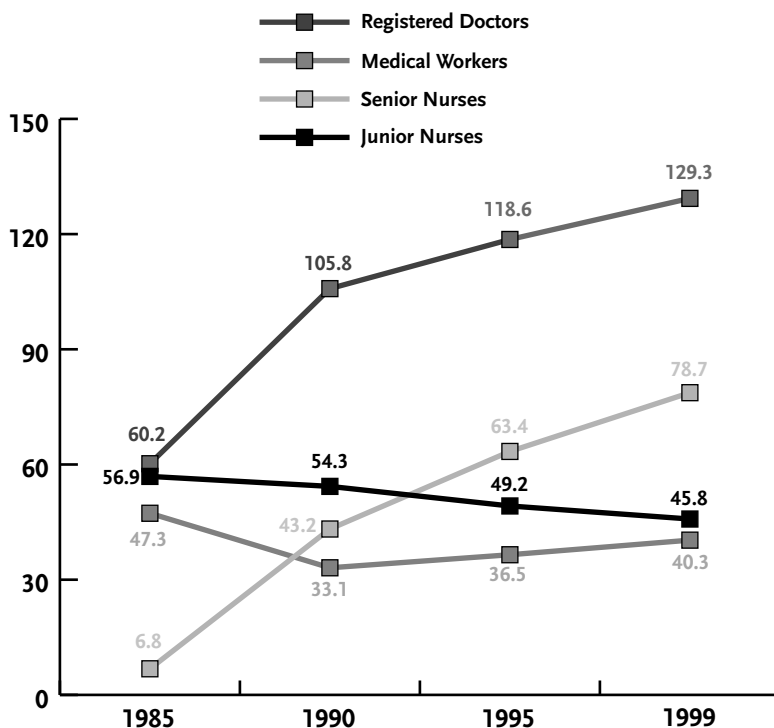
One obvious impression gathered from these reports is that nurses in China are receptive to new ideas and are enthusiastic to translate them into practice. They share a sense of urgency to lead Chinese nursing back to the international scene and to catch up with nursing developments in other parts of the world. However, it must be noted that many new initiatives are reforms instituted with funds and expert consultations from abroad. They represent the cream of nursing development in China only; indeed, there is strong evidence to indicate that nursing remains an unattractive profession in China today (Pang, Arthur, and Wong, 2000). A survey of occupational prestige ratings among Chinese urban residents (n=2599) revealed that nursing was rated 48 among 69 occupations, next to clerk in a foreign-invested enterprise and hotel cook (Xu Xinxin 2001). Anne Davis and associates (1998) conducted a survey of 248 nursing students in four colleges and found that 205 did not select nursing as their first choice of study. A majority of them (n=108) believed that people did not have a high regard for nursing, and 84 had mixed feelings. When they were asked what they would be doing ten years after graduation, only 32 thought that they would be engaged in clinical work.

Overall, in contrast to the situation in the United States, where over 30% of nurses hold baccalaureate or higher qualifications (Zhou Xiuhua 2001), few Chinese nurses have finished secondary school. Formal education for nurses has expanded steadily over the past two decades, yet, according to the Chinese

Nursing Association, in 1999 there were 500 secondary nursing schools for junior high school entrants, and 35 college nursing schools for senior high school entrants. Secondary school-prepared nurses account for 99% of the nursing workforce.

Another issue is the shortage of nurses. The ratio of doctors to nurses was 1:0.61 in 1999 (Fig. 1). Also in sharp contrast to Western countries, where nurses outnumber doctors by a factor of two to four, in urban China there is 0.98 nurse for every 1,000 people, and in rural areas, 0.5 for every 1,000 people.

Figure 1: Numbers of Doctors and Nurses Practicing Western Medicine in China, 1985–1999 (10 thousands)



As nursing education expands into the tertiary sector, one major issue today is the provision of qualified nursing teachers (Li 2001). Since higher education for nurses essentially ceased for 30 years, the number of qualified nursing teachers was not sufficient to meet the demand in the 1980s, and physicians were allocated to serve as nurse trainers. By having medically trained lecturers teach nursing, one may wonder about the extent to which nursing is taught as an independent discipline with a substantial distinction from medicine. Chen Lingyan (1990), a medically trained nurse teacher, believes that medical knowledge alone

is not enough to teach a student how to take care of patients. She says she had to study nursing, both in theory and in clinical practice, before she really knew how to teach nursing. She contends that only when nursing is taught by qualified nurse practitioners can nursing education be improved. The recent development of five-year BA and three-year MA programs will eventually improve this situation. But at present Chinese nursing remains in a transitional phase.

Quality Control in Professional Practice

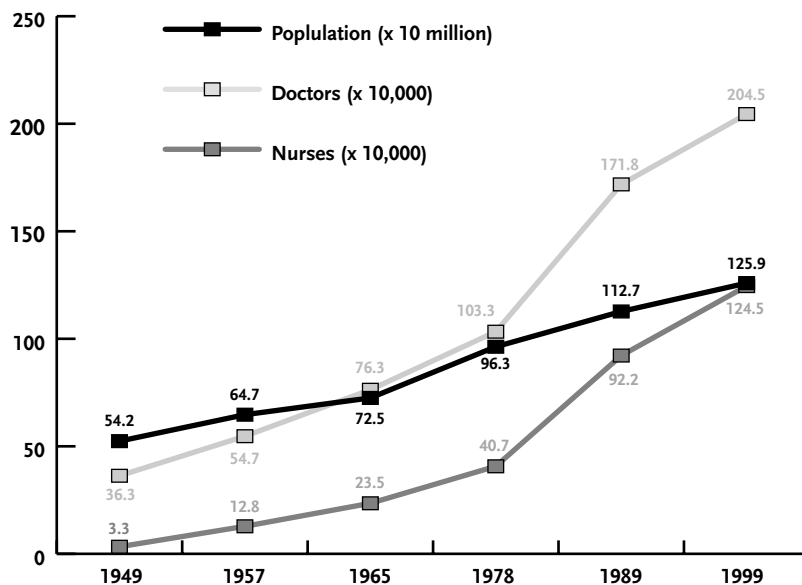
In the Maoist era, employment was centrally allocated and professional titles were abolished. Every person was addressed as “comrade” to promote egalitarian work relationships among different types of health workers. During the Cultural Revolution, in order to combat elitist tendencies, doctors and nurses were required to share many tasks with orderlies and janitorial staff, and the role responsibilities of nurses and doctors became diffused. Some nurses were given the title of doctor, and both doctors and nurses had similar duties in the hospital. Richard Garfield observed during a study tour in 1978 that the different job responsibilities of doctors and nurses were seen to be merely technical, with their different background knowledge determining the tasks performed. In their field observation in one Chinese hospital in the late 1970s, Gail Henderson and Myron Cohen (1984) found that some nurses still carried the title of doctor; similar observations were reported by Renee Fox and Judith Swazey (1984). Underlying this diffusion of roles was the belief that, if no job was monopolized by professionals, no one could look down on others and everyone would cooperate in accomplishing the common task of serving the people wholeheartedly. However, such practices largely compromised the motivation of health workers to increase productivity and improve service quality. As a result, post-1979 reforms reintroduced professional titles linked with career advancement and instituted licensure examinations.

Professional Titles

In the 1980s, a system linking work performance with tangible rewards was introduced. Standards were specified for different job responsibilities, and a system of job titles and career advancement was instated. As shown in Figure 2, the shift of senior and junior staff in this period can be attributed to the positive effect of the career advancement system that has motivated health workers to continuously upgrade their professional qualifications. All health workers have two titles at work, one being a professional title that reflects their qualifications, and the other a job title, which defines their role responsibilities at work. Since 1982, job descriptions of all grades of nursing staff have been clearly defined by the Ministry of Health. Nursing titles include junior nurse (*hushi*), senior nurse (*hushi*), chief nurse (*zhuguan hushi*), vice nurse consultant (*fuzhuren hushi*), and

nurse consultant (*zhuren hushi*). In clinical nursing, job titles include staff nurse (*bingfang hushi*), ward head nurse (*bingfang hushizhang*), departmental head nurse (*kehushizhang*), deputy chief nursing officer (*hulibu fuzhuren*), and chief nursing officer (*hulibu zhuren*).

Figure 2: Population and Health Workers in China, 1949–1999



Since 1986, professional titles have been given based on various criteria. For instance, a senior nurse is required to be at least a diploma holder and to engage in clinical research, while a chief nurse is required to demonstrate extensive understanding of international trends and developments in her area of expertise, have extensive nursing experience, and be able to make a significant contribution to research. To be promoted, health personnel must be assessed in their professional knowledge, management skills, education level, and experience. They must also fulfill certain political criteria, as stipulated by the Ministry of Health (1986).

He or she must support the leadership of the Communist Party, love socialism, diligently study Marxism and Mao Zedong thought, have a high sense of political awareness, be red and expert, serve the people wholeheartedly, and endeavor to perfect his or her skills and make a contribution to society.

This is to ensure that those who are promoted into senior positions are loyal to the Party and are ready to identify their personal desires with the common

goal of “serving the people.” Conceivably, tension can arise between “redness” and “expertness,” particularly in patient-care situations where one’s professional judgment does not conform to directives from the Party leadership. Indeed, although promotion criteria were established by the Ministry of Health, it has been left to individual institutions to apply them (Wang Zhihong 1999). This has raised issues of fairness in cases complicated by interpersonal factors.

Practice Licensure

As the market economy began to have a significant effect on the health care system in the late 1980s, policies were instituted to address the problems of uncontrolled care standards and questionable staff quality. To this end, Registration Ordinances for nurses and doctors were enacted in 1994 and 1999, respectively.

To take account of the variety of levels of training for nurses in different regions, a national examination for nurses’ registration was introduced to monitor the standard of practicing nurses (Ministry of Health 1993). Holders of secondary school certificates would henceforth be required to sit for a national examination in order to obtain a practice certificate. Exemptions were permitted and certification granted to nurses who had received their nursing education at the college level, had graduated from nursing schools accredited by the Medical Administrative Department at the provincial level or above, or were working as nurses but had not obtained a professional title before the implementation of the regulation. Renewal of registration with the local Medical Administration Department is required every two years, with successful renewal granted to those with evidence of active practice and continuing education.

The ordinance for doctors’ registration was enacted in 1999. While the certification examination for nurses has only one level, standard assessments were instituted for promotion from the role of medical worker to registered assistant doctor, and then to registered doctor. Unlike the field of nursing, every person must sit for the national examination in order to obtain a medical practice certificate either in clinical medicine, traditional Chinese medicine or preventive medicine. Both college diploma-prepared and secondary school-prepared medical workers are eligible to sit for the assistant doctor registration examination after they have completed one year of clinical experience. Those who have not undergone any formal medical education can also sit for the certification examination upon recommendation. As with the nurses’ ordinance, only those who can successfully pass the certification examination are eligible to apply for a practice license that must be renewed every two years.

In sum, both ordinances serve to confer rights on those who are licensed to practice. Those who practice without registration are regarded as illegal and will be disciplined by the Medical Administrative Department. The ordinances also include a section on standards of professional practice, with malpractice leading

to disciplinary action and exemplary practices awarded. Five exemplary situations are listed in the doctors' ordinance. They are (1) demonstration of laudable moral behavior in clinical practice, (2) significant contributions to scientific and technological advances, (3) excellent performance in rescue work in catastrophes, (4) service in underdeveloped areas for a considerable period, and (5) other situations as stipulated by the State Council. Not only do these measures represent a positive move to safeguard professional standards in health care services, they also constitute the first time in Chinese history that formal regulation for the practice of traditional Chinese medicine has been enacted.

Market Mechanisms in Financing Health Care Education

Along with licensing reform have come far-reaching reforms in the systems of educational financing, student enrolment, and employment. Since 1978, the centralized and unified management system established in the early 1950s has been restructured to become more decentralized, and market mechanisms paralleling those being introduced in the larger economy have transformed health care education, with mixed results. Some contend that, among all the obstacles that need to be addressed in modernizing the educational system, inadequate expenditure on education is the greatest hurdle (Wang and Shi 1999). China's public expenditure per gross national product (GNP) is low in comparison to the 5.1% international average, which ranged from 5.3% in developed countries to 3.3% in underdeveloped countries; China, by contrast, has spent only around 2% of GNP on education in recent years. The percentage reached 3.1% in 1990, but gradually decreased from 2.76% in 1993 to 2.49% in 1997 (Guo Lulu 1999). The same phenomenon can be observed in health care expenditures, which actually decreased from 3.1% in 1965, to 2.3% in 1975 and 2.4% in 1993. This is well below the standard 5% recommended by the World Health Organization for developing countries (Jiang Anli 1995). Indeed, public expenditure on education and health care is in reverse proportion to the expansion in health care education over the past 10 years. This can be attributed to the introduction of market mechanisms to educational administration: as with other state-owned enterprises, government subsidies to educational institutions have been reduced to basic salaries and minimal administrative costs, and cost recovery has come to serve as the foundation of the financing system. Corresponding restructuring has been undertaken to allow flexibility in accepting funds from diversified sources and to encourage cost effectiveness.

Consistent with the transformation from a planned economy to a socialist market economy, the financing of education is no longer strictly a government function, giving way to a diversification of funding sources as institutions have needed to seek income to cover both operational costs and further educational development. Funding sources now include:

1. recurrent and capital educational expenditures listed in central and local budgets
 2. special subsidies from the central government
 3. additional educational fees levied by different levels of government
 4. educational funds from enterprises
 5. tax-free income from school-run businesses
 6. donations from community groups including educational foundations
 7. individual contributions, such as payment of tuition and other fees
- (Lewin et al. 1994)

The introduction of tuition as a source of income marks an important departure. Before 1986, recruitment of students to higher educational institutions was planned in line with state targets. University students not only enjoyed free education, they were given a stipend adequate for living modestly and jobs were guaranteed under the umbrella of the planned allocation system. With the implementation of the 1986 decisions on reform of the educational structure, a two-track (*shuanggui*) enrollment system was introduced. One track was for sponsored and self-financed students, who were required to pay full fees, either from their sponsoring work unit or by themselves. Second track included students who came from rural areas or underdeveloped economic zones. These students were not required to pay any school fees, but stipends were replaced by student loans, and students were required to return home to serve their own communities upon completion of the program.

In 1994, the State Council announced that the two-track system would be merged into one track (*binggui*) in all parts of China by 2000. All students are now treated equally in two respects: they need to compete for higher degree places under the same assessment criteria, and they are all required to pay full fees. On the other hand, the guaranteed job allocation system (*fenpei shanggang*) has given way to competitive job bidding (*jingzheng shanggang*) in an effort to foster opportunities for upward and horizontal job mobility that can energize workers' creative capability and productivity (1999).

Wong and Shi (1999) contend that the introduction of competition driven by market factors in student enrolment and deployment will lead manpower needs to be moderated according to market demand, in turn facilitating the flow of resources into academic disciplines with high market value and the neglect of disciplines with low market value. This system encourages the development of specialized training, cutting-edge science and technology, and a knowledge-based economy, with profit as the goal. However, it also raises the question of whether the health needs of the broader populace will be undermined. As noted earlier, medical services and health workers are already concentrated in urban areas and wealthier rural communities. According to the *Health Yearbook* of 1999,

medical cooperatives in rural areas covered 22.2% of the population of high-income areas, but only 1–3% of the population in less or underdeveloped areas. Medical fees were so high that people with no medical coverage could not afford to pay (Zhu Ling 2001). This issue was fully acknowledged in the Tenth Five-Year Plan, 2001–2005 (Chen Baorong 2000). Government intervention in regulating medical fees and establishing a universally accessible primary health care network that has broad coverage at minimal cost will be high on the agenda in the decade to come, and will undoubtedly have a significant impact on the competencies that are required of the health workforce.

Conclusion

A multi-level, multi-specialty, and multi-form health care education system has taken shape since the founding of the People's Republic of China. Expertness is highly valued and professional regulations are in force to assure the quality of practice. "Redness," or correct political thinking, is still emphasized in official addresses, but has much less impact on professional upward mobility than was previously true. Patterns of change in health worker statistics over the past 20 years suggest that reform measures have yet to address the questions of unequal distribution of health workers in rural and urban areas. Although more health workers have advanced to senior levels, the secondary school preparation of the majority of health workers also suggests the need for further expanding higher education in health worker training. At present, health care education places high emphasis on clinical competence confined to hospital practice. In order to prepare a health workforce that is adaptable to the ever-changing health care needs of the community, there is a need to transform the existing specialty-centered curriculum to become primary care-based.

In the decade to come, we envisage that the greatest challenge for health care education will be how to strike a balance between specialty and general practice training. Retraining programs for general practitioners and community health nurses are now being piloted in some large cities. Graduates of these programs will be granted certification to practice in community health centers, each of which will serve a local community of about 50,000 residents by providing preventive, rehabilitative and palliative care to all age groups in a system stressing low cost, broad coverage, efficiency, and convenience to the public. According to the national plan, the target is to have these centers established in all parts of China by 2010, creating a vast need to prepare qualified health workers for the task. At the same time, however, advances in medical science and technology in expert training cannot be undermined if China's health care system is to be modernized to a level comparable to international standards.

REFERENCES (in English)

- Banister, Judith. 1987. *China's Changing Population*. Stanford University Press, Stanford, California.
- Burris, Mary. 1990. *To Serve China: Medical Schooling and Modernization in the People's Republic*. Ph.D. diss., Univ. of Michigan, Ann Arbor, Michigan.
- Davis, Anne J, Gan Lan Jun, Lin Ju Yin, Olsen, Virginia L, 1992. "The young pioneers: first baccalaureate nursing students in the People's Republic of China", *Journal of Advanced Nursing*, 17: 1166–1170.
- Davis, Anne, Petrini, Marcia, Lin Juying, Olsen, Virginia, 1998. "Values and visions: academic nursing students in the People's Republic of China", *Asian Journal of Nursing Studies*. 4(2): 33–38.
- Fox, Renee C, Swazey, Judith P, 1984. "Medical morality is not bioethics—medical ethics in China and the United States", *Perspectives in Biology and Medicine*. 27(3): 336–360.
- Gamberg, Ruth. 1979. *Red and Expert: Education in the People's Republic of China*. Schocken Books, New York.
- Gao, Tongqiang, Kuninori Shiwaku, Tetsuhito Fukushima, Akio Isobe, Yosuke Yamane, 1999. *Medical education in China for the 21st century*, *Medical Education*. 33 : 768–773.
- Garfield, Richard, 1978. "China's nurses: redefining roles to improve health", *International Journal of Nursing Studies*. 15: 129–134.
- Henderson, Gail E, Cohen, Myron S. 1984. *The Chinese Hospital—A Socialist Work Unit*. Yale University Press, New Haven.
- Hesketh, T M, Zhu W X, Zheng K H, 1994. "Improvement of neonatal care in Zhejiang Province, China through a self-instructional continuing education programme", *Medical Education*. 28: 252–259.
- Huang, Jianshi, 1992. "Medical education and medical education research and development activities in modern China", *Medical Education*. 26: 333–339.
- Huang, Kuyen, 1973. "Infectious and parasitic diseases". In Joseph, R. Quinn (Ed.). *Medicine and Public Health in the People's Republic of China*. U.S. Department of Health, Education, and Welfare, Public Health Service: 241–64.

- Lampton, David M. 1977. *The Politics of Medicine in China: The Policy Process, 1949–1977*. Westview Press, Folkestone, Kent.
- Lee, S.H, Lee J.C., 1997. “Mainland China, Taiwan and the Hong Kong Region: the Second Medical Education Conference”, *Medical Education*. 31: 468–472.
- Lewin, Keith M, Xu Hui, Little, Angela W, Zheng Jiwei. 1994. *Educational Innovation in China: Tracing the Impact of the 1985 Reforms*. Longman, Burnt Hill, Harlow, Essex.
- Li, Shuzhen, “Today’s nursing education in the People’s Republic of China”, *Journal of Nursing Education*. 40(5): 217–221.
- Lucas, AnElissa. 1982. *Chinese Medical Modernization: Comparative Policy Continuities, 1930s–1980s*. Praeger Publications, New York.
- New Nursing Curriculum of Peking Union Medical College*. 1996. Beijing: Department of Nursing, Peking Union Medical College.
- Nightingale, Florence. 1992. *Notes on Nursing, (Commemorative edition)*. J.B. Lippincott, Philadelphia.
- “On question of Party history—resolution on certain questions in the history of our Party since the founding of the People’s Republic of China”, 1981. *Beijing Review*. 24(7 July): 20–21.
- Pang, Samantha, Arthur, David, Wong, Thomas. “Drawing a qualitative distinction of caring practices in a professional context: The case of Chinese nursing”, *Holistic Nursing Practice*. 15(1 October): 22–31.
- Pang, MCS. 2002(forthcoming). *Nursing Ethics in Modern China: Conflicting values and competing role requirements*, in *Value Inquiry Book Series*. Rodopi, Amsterdam, Atlanta.
- Qiu, Renzong, 1991. “The fiduciary relationship between professionals and clients: A Chinese perspective”. In Edmund, D, Pellegrino, Robert M, Veatch, John P, Langan. (Eds). *Ethics, Trust, and The Professions, Philosophical and Cultural Aspects*. Georgetown University Press, Washington DC: 247–259.
- Quotations from Chairman Mao Tse-Tung*. 1972. Foreign Language Press , Peking.
- Rifkin, Susan B, 1973. “Health care for rural areas”. In Joseph. R Quinn (Ed.). *Medicine and Public Health in the People’s Republic of China*. U.S. Department of Health, Education and Welfare, Public Health Service: 141–52.

- Selected Works of Deng Xiaoping (1975–1982). 1983. People's Publishing House, Beijing.
- Sidel, Victor W, Sidel, Ruth, 1975. "The health-care delivery system of the People's Republic of China". In Newell, Kenneth W (Ed.). Health by the People. World Health Organization, Geneva: 1–12.
- Stillman, Paula L, Sawyer, William D, 1992. "A new program to enhance the teaching and assessment of clinical skills in the People's Republic of China", *Academic Medicine*.67(8): 495–499.
- Wang, Lei, Lin Huiqing, 1995. "The present and the future of higher medical education in China", *Chinese Medical Journal*. 108(3): 163–168.
- World Bank. 1975. Health: Sector Policy Paper. World Bank, Washington DC.
- Wu, Jie, 1996. On Deng Xiaoping Thought. Foreign Languages Press, Beijing.
- Xu, Xinxin, 2001. "Changes in the Chinese social structure as seen from occupational prestige ratings and job preferences," *Social Sciences in China*. Summer 2001: 62–75.
- Zhou, Shulian, 2000. "A review of the reform in Chinese state-owned enterprises over the last twenty years", *Social Science in China*. Spring : 14–28.
- Zhu Ling, 2001. "Rural medical insurance and medical cooperatives", *Social Science in China*. Spring : 78–87.

REFERENCES (IN CHINESE)

- 柴瑞震、程延安、姜任華 (Chai, Ruizhen; Cheng, Yanan; Jiang, Shihua) 編。1995。全國醫院分級與疾病分類標準及醫院工作制度, 職責配備規範。成都科技大學出版社, 成都。
- 陳靈艷 (Chen Linyan), 1990。“談談 “醫教護” 和 “醫學護””, 中華護理雜誌。25(3):145-146。
- 顧美儀 (Gu Meiyi), 1992。“國際護士社節寄語”, 中華護理雜誌。27(5): 194。
- 楊惠芳 (Yang huifang), 1996。“全國整體護理研討會會議紀要”, 中華護理雜誌。31(11): 678-679。
- 金一鳴編。2000。中國社會主義教育的軌迹。華東師範大學出版社, 上海。
- 鄭韓生, 1995。“為護理事業奮鬥一生”, 中華護理雜誌。30(6): 383-384。
- 楊曄, 1995。“論護理教育的價值取向”, 中華護理雜誌。30(8): 476-477。
- 天津市護士學校, 1980。“認真總結經驗, 努力辦好護士學校”, 中華護理雜誌。5: 229-31。
- 曾竹平, 1981。“關於護理教育的討論”, 中華護理雜誌。3: 98-102。
- 王琇瑛。1987。護理發展簡史。上海科學技術出版社, 上海。
- 沈繼權、章敏、石軍, 2000。“新中國高等醫學教育改革發展的歷史回顧”, 醫學與社會。13(6): 59-60。
- 鄧小平文選: 第三卷。1993。人民出版社, 北京: 35。
- 于存雷, 2001。“論鄧小平的 “三個面向” 與加強素質教育”, 社會科學輯刊。2(133): 4-6。
- 裴顯俊 (Pei Xianjun), 1990。“醫學模式轉變與護理人員知識結構的優化”, 中華護理雜誌。25(2): 110-111。
- 李鈺霖 (li Yulin), 1990。“關於中等護士職業教育的改革”, 中華護理雜誌。25(3): 144-5。
- 面向 21 世紀課程教材。2001。人民衛生出版社, 北京。
- 王德炳、張成蘭、賴豫建。1999。住院醫師规范化培訓。北京醫科大學及中國協和醫科大學聯合出版社, 北京。
- 北京醫科大學本、專科教學計劃。1999。北京醫科大學教育處。

- 王士才，2001。“護理教育改革的若干思路及探討”，中華護理雜誌。36(2): 130。
- 劉淙陽，1999。發展高等護理教育必要性的調查分析”，護理學雜誌。14(6): 371-372。
- 邵越英，2000。“影響我國護理高等職業教育發展的因素及對策”，護理學雜誌。15(7): 436-437。
- 顧煒、張少茹，2000。“世紀護士發展方向”，護理學雜誌。15(11): 701-703。
- 曾小耘、駱郁林、周斌，2000。“展望 21 世紀的護理教育”，山西護理雜誌。14(3): 103-105。
- 楊以成、王偉智 (Yang & Wang)，1991。“如何在護理大專教育中貫穿 “護理程序” 教學”，中華護理雜誌。26(11): 523-524。
- 張芳 (Zhang Fang)，1991。“改進 “病人生活護理” 課的教學法”，中華護理雜誌。26(11): 524。
- 陳命家、李和林 (Chan and Li)，1994。“護士專業設公共關係課可行性探討”，中華護理雜誌。29(1): 51-52。
- 黃劍琴 (huang Jianqin)，1994。“為中專護生講授現代護理新概念的的做法和體會”，中華護理雜誌。29(5): 293-296。
- 周曼穎、楊以成 (Zhou and Yang)，1996。“關於中等護士專業增設護理程序課程的探討”，中華護理雜誌。29(1): 40-42。
- 余夢萍、張黎明 (She and Zhang)，1995。“應用護理巡診優化護理人員再教育”，中華護理雜誌。30(1): 33-35。
- 嵇芸、吳布生、常桂琴 (Ji, Wu, and Chang)，1996。“論護理學的研究對象”，中華護理雜誌。31(3): 185-187。
- 周秀華、王志紅、郭璐璐，2001。“護理學本科人才培養模式改革研究”，會議論文之一。2001: 1-5。
- 姜安麗、石琴、陳保榮、叶旭春，1998。“一種培養評判思維能力的護理教學方法 - 實踐反思想論法的研究及應用”，山西護理雜誌。12(3): 115-116。
- 孫玉璽、呂冬苗，2000。“護士在職教育與高護自學考試”，護理學雜誌。15(1): 51-53。
- 何莉，2001。“高等護理創新教育中若干問題的思考”，醫學教育。2: 15-17。
- 中華人民共和國衛生部，1999。“醫師資格考試暫行辦法”，中醫教育。18(5): 1-3。

中華人民共和國執業醫師法。1998。中國法制出版社，北京。

衛生部，1995。“中華人民共和國護士管理辦法”。柴瑞震、程延安、姜任華編。《全國醫院分級與疾病分類標準及醫院工作制度，職責配備規範》。成都科技大學出版社，成都：186。

衛生部，1995。“醫院工作人員職責 1982”。柴瑞震、程延安、姜任華編。《全國醫院分級與疾病分類標準及醫院工作制度，職責配備規範》。成都科技大學出版社，成都：115~117，119~122。

衛生部，1995。“病房管理制度，1986”。柴瑞震、程延安、姜任華編。《全國醫院分級與疾病分類標準及醫院工作制度，職責配備規範》。成都科技大學出版社，成都：141~142。

安燕，1998。“二十一世紀醫學教育改革的展望”，國外醫學。19(1): 1-6。

董虹凌、閻世平，2001。“知識的邊際性與高校人才培養方式的變革”，中國高等醫學教育。1: 19-21。

婁建石，2000。“試論 21 世紀我國醫學高等教育的創新與發展”，醫學與社會。13(4): 53-55。

黃才華、師全民編。1999。社會主義市場經濟與教育改革。軍事誼文出版社，北京。

馬旭。1995。簡言衛生事業與社會經濟全面協調發展。上海市中北醫院，上海：1-6。

蘇元林，1999。“談加強臨床醫師隊伍建設”，中華醫院管理雜誌。5(5): 274-276。

朱鎔基，2001。關於國民經濟和社會發展第十個五年計劃綱要報告。新華社，3月17日。

NOTE

This work was funded by a central research grant of the Hong Kong Polytechnic University.

Growing Pains: Mental Health Care in a Developing China

Doris F. Chang and Arthur Kleinman

Around the world, in high- and low-income countries alike, mental illness and high-risk behaviors contribute to profound suffering and loss at the level of the individual and the state. In the case of China as in other developing countries, gains made in the areas of economics, technology, education, and overall standard of living are being offset by a rise in mental and behavioral problems that suggest the human costs of economic development and rapid social change. Although most Chinese would agree that there has never been more opportunity or freedom to pursue one's capitalistic dreams, the process of adjusting to life in the new economy and its shifting demands and possibilities is adversely affecting the Chinese social world. Such social transformations include (1) an increase in numbers of individuals and families who suffer from major economic losses due to risky ventures or pathological gambling, (2) higher rates of extra-marital affairs, family violence, and divorce, (3) rising rates of substance use and abuse, (4) rapidly increasing costs of health care, which may lead to an inability to pay for necessary care and exacerbate chronic conditions, (5) weakening of traditional family/communal relationships resulting in a degradation of one's social support network, (6) increasing numbers of rural migrants seeking employment in urban areas, (7) the widening economic and social gap between the rich and the poor, which may produce feelings of dissatisfaction and social unrest, (8) increasing work-related stress due to more competition, and (9) in general, a "faster pace of life" (Phillips, Liu, and Zhang, 1999).

Within this social context, recently available statistics suggest that the country's disease burden due to mental and behavioral disorders is substantial and will likely escalate over time. For example, the increased longevity of Chinese citizens

(71.4 years in 2000 versus 40.8 years in 1950) due to improved public health programs is contributing to higher numbers of neuropsychiatric problems such as depression and dementia among the elderly. There is also renewed attention being paid to childhood problems such as attention-deficit-hyperactivity-disorder (ADHD) among China's first generation of only-children. Available data document a twenty-fold increase in alcohol-related problems since 1982 (Hao, Young, and He 1995; Hao, Young, Xiao, Li, and Zhang 1998). Perhaps most disturbing, the World Bank's Global Burden of Disease and Injury Series estimated that in 1990 there were 342,700 reported suicides in China, about three times the world average (Murray and Lopez 1996). Even a conservative estimate would indicate that China has the world's largest number of reported suicides by virtue of its large population (21.5% of the world's total), with 600–800 individuals killing themselves each day (Lee and Kleinman 2000). This figure accounts for somewhere between 25% and 33% of all suicides worldwide.

The story of China's efforts to meet the needs of her most vulnerable citizens mirrors, in a sense, the story of China's journey towards the modern age. Her enormous population, spread throughout a vast and geographically diverse space, presents specific challenges for both governance and economic development. For the estimated 16 million individuals impaired by psychological problems, significant geographic and economic disparities in availability and access to mental health services mean that many receive little or no care at all. For example, it is estimated that one-third of China's 7.8 million persons with schizophrenia and 95% of those with affective disorders have never received formal psychiatric diagnosis or treatment (Murray and Lopez 1996).

This article examines the current system of mental health care in China from its prosperous and cosmopolitan cities along the coast to its most remote, impoverished areas. We present some of the ways in which the state is attempting to meet the mental health needs of the populace and outline some of the challenges that confront China in this era of social and economic change.

Brief History of the Development of Mental Health Services

Unlike the situation in the West, where large proportions of persons with mental illness live on their own or in various institutional settings (e.g., hospitals, nursing homes, board-and-care facilities, shelters), over 90% of Chinese persons with major mental illness live with their families (Phillips 1993). In contrast, the same is true of only 40% of individuals in the United States (Torrey 1998). What is lacking in most regions of China however is affordable and accessible psychiatric treatment.

Efforts to develop a modern system of mental health care in China as elsewhere have been influenced by philosophical traditions as well as political and economic factors. Traditional Chinese theories of medicine did not consider

mental disorders separately from physical disorders, as their origins were also thought to be due to an imbalance of the internal organs. Thus, treatment of mental illness was largely somato-psychic in approach with the restoration of physiological function and balance as the primary goal. The designation of mental illness as a separate field of study and treatment did not occur until the late 1800s, when foreign missionaries began establishing asylums for the insane in China. However, widespread social disruption and war in the first part of the twentieth century halted further developments in mental health care.

By 1948, China had only around 60 psychiatrists and five psychiatric hospitals with a total of 1,100 beds for a population of nearly 500 million people. The founding of the People's Republic of China ushered in a period of growth and advancements in health services, as part of the official plan to transform the social system. By the end of 1959, the number of psychiatric beds throughout the country grew to 19 times that of the pre-liberation period. However, severe shortages in trained staff, inadequate medical facilities especially in the rural and mountainous regions, and limited financial resources demanded stop-gap measures that could be widely and inexpensively implemented. In fact, the bulk of treatment during these years was provided via wide-scale mobilization of non-professional treatment teams with minimal education and training.

In the 1950s, Russian neuropsychiatric models dominated professional discourse, and political priorities focused on maintaining public order. During the Cultural Revolution, the biological orientation of Chinese psychiatry provided some protection from political accusations. Nevertheless, psychiatry was disrupted more than any other medical specialty, in that mental illness and other forms of deviance were cast as problems of wrong political thinking to be addressed through re-education, rather than psychiatric care (Pearson 1995).

Recent Developments in Mental Health Care

The end of the Cultural Revolution in 1976 led to a revitalization of psychiatry and the extension of state-run services for the mentally ill. Currently, there are less than 1,000 psychiatric institutions, 150,000 psychiatric beds and 13,000 mental health professionals (of whom perhaps 2,000 are fully trained psychiatrists), with most resources still concentrated in urban areas under the jurisdiction of the Ministries of Public Health, Civil Affairs, Defense, Industry and Mining, Public Security, and the People's Liberation Army (Cohen 2001; Zhang, Yan, and Phillips 1994). While these figures represent a substantial increase since 1948, there is still only one bed per 10,000 population and less than one mental health professional per 100,000. Despite this low bed/population ratio, it is striking to note that an estimated 30% of inpatient hospital beds remain empty because families simply cannot afford treatment under the fee-for-service conditions of today.

The concentration of mental health facilities in urban areas alongside the decline of rural social welfare services in the 1980s have produced a situation of alarming disparity in access and quality of care along the urban-rural divide. For example, 80% of the country's total health budget goes to funding hospital-based treatment in the urban areas, despite the fact that urban residents account for just 30% of the country's population (Zhang 2001). In addition, novel experiments in community-based rehabilitation have yielded favorable results in urban areas, while such models have not been implemented in rural areas or more remote areas of the country (Phillips and Pearson 1994). In recognition of the diversity represented in these different "Chinas", we now turn to a more detailed description of the current state of mental health care within each geographic and economic locale.

Urban Mental Health Care

Discussions of urban mental health typically refer to China's prosperous coastal edge and its 250 million inhabitants. The enormous economic growth of cities such as Shanghai, Guangzhou, and Shenzhen, has made them laboratories of social and cultural development. Shanghai, the largest city in China, is recognized as having the most comprehensive mental health system in the country.

The so-called Shanghai Model, developed during the 1970s and 80s, was designed as a sophisticated three-tiered scheme that focused limited resources on the three main disability concerns of the state, psychosis, epilepsy, and mental retardation. Increasing levels of care were provided through grass-roots services at the community level, the district level (primary care hospitals), and the municipal level (provincial mental health hospitals). As reviewed elsewhere in greater detail (see Tian, Pearson, Wang, and Phillips 1994), this model of psychiatric rehabilitation was largely successful through the 1980s and 1990s. Innovations in family-based skills training programs, the creation of home "sick beds", and the development of guardianship networks for the maintenance of public security relieved some of the burden of care from the hospitals and allowed patients to return to their communities and families. The development of welfare factories and occupational therapy programs provided culturally relevant opportunities for rehabilitation, improved functioning and quality of life, and provided a source of income for the mentally disabled. Basic maintenance and follow-up treatment was provided by primary care workers who received basic psychiatric training and supervision, reserving the small number of inpatient hospital beds for the most acute cases.

Although this system was successfully carried out in Shanghai and other select cities through the 1980s and early 1990s, widespread dissemination is practically impossible, given the scarce facilities and lack of well-trained mental health professionals in other parts of the country. Furthermore, massive transfor-

mations in China's economic system have deeply undermined the social and economic conditions that have sustained the Shanghai Model and other innovative programs over the past two decades (Chang, Xu, Kleinman, and Kleinman 2002; Gu and Tang 1995). These transformations include the rising costs of hospitalization and treatment, changes in health insurance coverage, declining community involvement in guardianship networks, weakening of the welfare safety net for the disabled, and fewer economic incentives to employ disabled workers. Furthermore, the introduction of the "contract responsibility system" in the early 1980s has created strong incentives for hospital-based physicians to recommend unnecessary procedures, longer hospitalization, and expensive medications. These added costs to the consumer translate into more take-home pay for the physician, as bonuses are computed on the basis of their income-generating power (Pearson and Phillips 1994). For the poor and chronically ill patients however, these changes mean that many can no longer afford the treatments they need. A recent study found that among those in the lowest income bracket who reported illness, 70% did not obtain treatment because of financial difficulty (Gao, Tang, Tolhurst, and Rao 2001).

At the same time, the demand for mental health services to address psychosocial problems appears to be on the rise among an emerging sector of Chinese urbanites. This demand is evidenced by higher numbers of outpatient psychiatry visits, the growth in popularity of mental health hotlines and radio call-in programs, and the increasing utilization of newly available pharmaceutical agents and psychological consulting services among the educated and wealthy elite. For example, the Shanghai Mental Health Centre provided various forms of psychological consulting and psychotherapy to an average of 120 patients per day in 2001, an increase of 60% from a decade before. The most common reasons for seeking help included education or school-related problems, family and relationship difficulties, mental distress, frustration, and insomnia ("Mental Health Care Widens in China," *China Daily*, May 23, 2001).

This brief discussion of mental health care in urban areas reveals a tension between the development of professional services on the one hand, and growing inequities in the financing and access to those services on the other. Under these current conditions, those in greatest need are the least likely to be able to afford treatment.

Rural Mental Health Care

Individuals living in rural areas comprise 70% of the total population but receive poor mental health care compared to those living in urban areas. The uneven pace of economic development across the country means that rural and other remote areas are significantly disadvantaged with regard to the availability, scope, and quality of services. In the absence of psychiatric services within the local

community, acutely ill persons must frequently travel long distances to the nearest large urban center to obtain expensive inpatient care (Wang et al. 1994). As a result, the majority of rural patients with severe and persistent mental illness receive no professional care at all.

In addition, the collapse of the cooperative medical care scheme in most rural areas has severely impacted patients' ability to pay for the minimal services that are available. By 1989, only 5% of the rural population were covered by the system of cooperative health insurance, compared to 84.5% in 1975 (Gu et al. 1993). For the hundreds of millions of rural Chinese who remain poor despite the economic developments occurring elsewhere in the country, the self-pay system has impacted patients in much the same way as their poor urban counterparts. Even when care is available, it may simply be unaffordable.

Another aspect of economic reform that is impacting the rural areas is that health workers are now able to have some choice in their placements instead of being assigned to a work unit as before. Because larger and better-equipped facilities can generate more profits and thus pay out more bonuses, there is a strong financial incentive for qualified personnel in district hospitals to leave for larger city hospitals, and for trained health workers in rural areas to seek employment to county or city hospitals (Li Ming, personal communication, April 18, 2002). A recent report cited that during the 1980s, more than 80% of qualified doctors sampled from eight Chinese provinces left poor counties for more lucrative positions in urban facilities (Gong, Wilkes, and Bloom 1997). This trend has contributed to an even greater scarcity of trained mental health professionals in the countryside, leaving the responsibility of treatment in the hands of less qualified personnel.

Without a cadre of committed and knowledgeable mental health professionals, the few successful experiments in rural psychiatric care will not be sustainable in the long-term. For example, the well-documented and highly-praised Yantai model of rural mental health care relies on the enthusiastic efforts of hospital-based psychiatrists who are charged with the training and supervision of community providers (Wang, Gong, and Niu 1994). In addition, the same economic incentives that are drawing physicians into the bonus-system of urban hospitals are also operating at the county- and township-levels. The ability of community-based rehabilitation and primary-care services to be sustained in this climate will depend on the establishment of health care financing schemes that will redistribute government funds back into township hospitals.

Recent years have seen a rebirth of popular religion in rural China. This includes religious healers such as shamans in the folk religions, Buddhist adepts, Taoist priests, and in areas with sizable Christian populations, priests and ministers. Whereas their activities may be useful in handling certain stress-related conditions, family problems and community tensions, there is no evidence that reli-

gious healing of any kind is effective in healing serious mental illnesses like schizophrenia, bipolar disorder, and major depression. Nonetheless, religious healers, itinerant herbalists, and qi gong masters do provide a certain level of support services, which may be all that many mentally ill individuals have available to them.

The Challenge of Mental Health Reform

President Jiang Zemin, Minister of Health Zhang Wenkang and other public officials have recently issued public statements that mental health is now a top public health priority. These endorsements have provided a tremendous boost to the field of Chinese psychiatry and encouraged innovations in mental health service delivery. As has been suggested by many experts in the field, what are likely to be most successful are programs that combine the knowledge and experience of other countries with recognition of the specific conditions in China. The particularities of China's history and developmental trajectory will undoubtedly necessitate creative strategies for mental health reform.

Political and Ethical Considerations

Nothing in China under Communism has resisted politicization, and psychiatry is no exception. The fledgling profession in the 1950s was dominated by Russian neuropsychiatric and Pavlovian behavioral paradigms much as the rest of Chinese intellectual and professional life was infused with Russian influence. During the Anti-Rightist Campaign in the late 1950s, psychoanalysis was anathematized as a Western bourgeois science. The staff of Nanjing Psychiatric Hospital were labeled rightists and punished because of their well-known interest in Freudian theories. In the disastrous aftermath of the Great Leap Forward (1958–60), when as many as 30 million Chinese, largely peasants, died of starvation, psychiatrists were, like their colleagues in other fields of medicine, forbidden to investigate or write about this massive trauma. As mentioned, during the Cultural Revolution (1966–76), psychiatrists were coerced into accepting the notion that most mental illness was not disease but wrong political thinking. Those few who resisted (and also those who acquiesced) were beaten and imprisoned or sent to remote villages to practice as general doctors. They were encouraged to hype the usefulness of traditional Chinese medicine's herbal remedies, because of the ideological emphasis the radical Maoists placed on indigenous treatments. In some instances, this policy resulted in the falsification of research data. Psychiatrists also had to hide their Western training and contacts in order to avoid the dangerous label of a foreign problem. And for the most part, as in the rest of biomedicine, these years were terrible ones in which training, research, and, to a considerable degree, even clinical practice were disrupted and curtailed.

The era of economic reforms has been a much better time for psychiatry and psychiatrists. The profession in effect reconstituted itself. New physicians were sent for training (there was no voluntary selection of a specialty). Research started up again. Clinics functioned, and a new diagnostic system was developed to bring Chinese psychiatric practices in line with international standards. The policy of openness to the West greatly benefited psychiatry. Psychiatrists traveled to Europe, Japan and most prominently to the U.S., where they caught up with the huge developments that had taken place in diagnosis, treatment and prevention. Foreign periodicals and textbooks unavailable for 20 years were popularized.

During the 1990s allegations began to appear about the political abuse of psychiatry. Charges have been leveled particularly against the police-run Ankang system of psychiatric hospitals for confining dissidents and members of outlawed groups, such as the Falun Gong. China's fledgling psychiatric profession has vigorously protested some of this international criticism which it has perceived as a witch hunt meant to tar Chinese psychiatry with the same brush that tarred Soviet psychiatry in the 1970s and 80s. While to a certain degree such criticism may appropriately target individual psychiatrists and psychiatric institutions that have been suborned by the public security services, there is little evidence to substantiate claims for widespread abuse (Lee and Kleinman 2002).

A much more widespread problem is the quality of psychiatric care in hospitals and clinics which, while improving year by year, still has serious deficiencies in technical competence and in respect for patient rights. The chief cultural and political influence on psychiatric care is the primacy of concern for public safety and social control over concern for patient rights. This manifests itself in everyday practices in the psychiatric hospital which are often paternalistic if not infantilizing, and in the failure to enact mental health legislation that adequately protects patient rights. Most psychiatric wards remain locked, and their patients confined without a clear policy about how to guard against such abuses as involuntary commitment in the absence of compelling reason, forced use of ECT and medications, and prolonged psychiatric evaluations even when mental illness is not indicated.

In recent years, economic factors have begun to supplant political factors as major influences on the profession, albeit the structural status of the Chinese Psychiatric Association as a dependent of the Ministry of Health makes it clear that psychiatry remains part, even if a distant part, of the state apparatus. Nowadays, psychiatrists are increasingly influenced by the pharmaceutical industry (foreign and local) which actively markets drugs through such means as giving gifts, providing free travel to meetings, sponsoring professional activities, luring outstanding young psychiatrists away from academia and clinical practice with salaries several times greater than what hospitals can offer, and providing

free samples—all practices found in established market economies like the U.S. As a result, as in the West, conflict of interest is a problem, and economic and business issues are coming to be more central to what psychiatry is about.

Economic Constraints

With the breakdown of both the rural health care systems and medical insurance systems, the situation for rural China is dire. But even the urban setting is beset by a transformation of health policies away from a solidarity based insurance system and toward an individual fee-for-service model. Economic constraints have also weakened research programs and public health psychiatry.

As already described, the major challenge to mental health reform is the development of financing schemes that can contain costs on the supply side and assist the poor and mentally disabled who cannot otherwise afford the services that they need. Recent years have seen a drastic increase in medical expenses. Phillips (1998) estimates that consumer costs for health care have increased two to three times over the past decade as the reduction of subsidies from the government has forced hospitals to rely increasingly on their own income-generating abilities, such as increasing the use of unnecessary drugs and high-tech procedures. A second problem is the inadequacy of resources devoted to health during this period of economic and social transition. Total health expenditures make up only 5% of China's GDP, compared to 13% in the United States, and 7% in Japan and Thailand (Zhang 2001). This translates to 1% of the world's total health expenditures allocated to the care of 21% of the world's population. And as mentioned earlier, 80% of the total health budget in China goes to funding hospital-based treatment in the urban areas, despite the fact that urban residents account for 30% of the country's population.

The limited government budget for health care calls for the development of inexpensive yet effective strategies for meeting the increasing public demand for mental health services. In development are proposals that aim to reduce reliance on specialized psychiatric facilities and develop more cost-effective modes of care that may be implemented in diverse geographical areas. Yet government subsidies will be necessary to sustain such programs in the face of fierce competition from hospitals for patients' fees. The creation of a flexible insurance system will be important to address inequities in access to services in both rural and urban areas.

Education and Training Needs

Advancements in mental health service delivery and the development of psychiatric knowledge require a broad base of trained mental health practitioners, clinical researchers, and educators. Yet China's reliance on psychiatrists and general medical doctors and nurses for mental health care has yielded a one-sided

approach to the treatment and management of the mentally ill, one focused on symptom reduction, rather than the enhancement of quality of life and functional status. The lack of psychological and sociological perspectives on caring for the mentally ill has severely restricted the development of indigenous models of biopsychosocial care that are grounded in scientific principles and rigorous research (Pearson 1995). Moreover, in the absence of specialized training programs for nurses engaged in psychiatric work, misperceptions and fears about mental illness and the mentally ill are common and may adversely affect treatment and rehabilitation outcomes (Sévigney et al. 1999).

Whereas the community is becoming increasingly responsible for prevention, public education, maintenance, and rehabilitation, the role of hospitals is being reduced to conducting diagnosis and initial treatment. Because the majority of Chinese with psychological problems resist seeking treatment in psychiatric hospitals (which are few in number anyway), general medical settings act as *de facto* mental health centers. Yet, general medical physicians frequently fail to correctly identify and diagnose mental disorders in their patients. For example, in a study conducted by Xiao (1990, unpublished study), 390 Chinese outpatients from two general hospitals were assessed with the General Health Questionnaire and the Structured Clinical Interview for DSM-III-R disorders. Results showed that 15.7% of the patients suffered from psychological disorders. However, only 46.7% were identified by the physicians and the specificity of identification was 31.5%.

To address this problem, mental health professionals are needed to provide training and supervision to medical school students and current nonpsychiatric health workers in the recognition and treatment of psychiatric disorders from a biopsychosocial rather than a biomedical perspective. In particular, general medical staff in both rural and urban settings should be supervised in the application of psychosocial interventions in their clinical practice, which are associated with improved treatment adherence and outcome over pharmacological treatment alone. In a review of WHO demonstration projects regarding the treatment of mental illness in primary care, Cohen (2001) concluded that the most successful programs were those that provided regular supervision of health workers and continuing education, both of which require a source of ongoing funding and a stable workforce. At present, the feasibility of such a program has yet to be empirically evaluated in China.

Outside of China, mental health specialties such as psychiatric nursing, psychiatric social work, and clinical psychology enhance psychiatric knowledge through research and the provision of services as psychoeducation, skills training, psychotherapy, case management, discharge planning, family support, training and consultation. As the needs of mentally ill people and their families in China are similar to those elsewhere, the development of training and degree programs

in these specialties (or some alternate form) would increase and diversify the mental health services available to the public.

Conclusion

China's rush towards a market economy has radically transformed social life over the last two decades. Along with the expansion of economic opportunity, the burden of mental and behavior-related problems appears to be growing due to increasing longevity and a weakening in traditional communal structures, among other factors. The social welfare net which China had constructed during the socialist era is being rapidly dismantled, transforming the health sector into a fee-for-service system. The immense size of the country and the significant regional economic disparities have contributed to marked geographic variations in the standard and quality of mental health services. Although there is only minimal psychiatric care available in the poorest regions, China has also developed some of the most innovative and effective treatment models in the world.

The problem of equity is a troubling matter across the health care system, but is particularly pronounced within the mental health sector. Since 1949, political priorities and public security concerns have exercised decisive influence over the medical definition, social perception, and treatment of mental illnesses in China. Only in the last several decades has psychiatry in China re-emerged as an important scientific enterprise. Nevertheless the longstanding stigma of mental illness and the low status of psychiatry within the medical profession have made it especially difficult to recruit and retain well-trained staff in rural areas. Lucrative prospects in the growing pharmaceutical industry as well as a higher earning potential in city hospitals are contributing to staffing problems in rural hospitals and urban-rural disparities in the quality of care that is available.

Criticisms of China's mental health care system however must be tempered by the fact that China is still a poor, developing country overall. Compared to other developing countries, the standard of psychiatric treatment in China is adequate and showing signs of improvement (Lee and Kleinman 2002). In urban areas in particular, diagnostic practices and treatment guidelines are gradually meeting international standards of care. Research publications in both Chinese and international journals are increasingly of a higher standard than in the past. The content and orientation to research reflects Chinese psychiatrists' engagement in a global scientific community as well as a commitment to developing culturally meaningful clinical models (see Zhang et al. 2002). Public education campaigns and exposure to Western cultural values and practices are improving the public's perception of psychiatry in some areas ("Psychiatrist's Couch No Longer Shunned," *Beijing Review*, Nov. 30, 1998; "Psychological Consulting on the Increase," *Beijing Review*, May 8, 1995).

The central government's prioritization of mental health as a key public health issue marks a promising turn of events in the story of psychiatry in China. In the upcoming years, it is hoped that the government's verbal commitment to reform the mental health system will translate into concrete changes that will improve the lives of the millions suffering from mental health problems.

REFERENCES

- Chang, D.F., Xu, Y., Kleinman, A., and Kleinman, J. (2002). Rehabilitation of schizophrenia patients in China: The Shanghai Model. In A. Cohen, A. Kleinman, and B. Saraceno (Eds.), *The World Mental Health Casebook* (pp. 27–50). New York: Kluwer.
- Cohen, A. (2001). The effectiveness of mental health services in primary care: The view from the developing world. *Mental Health Policy and Service Department, World Health Organization*.
- Gao, J., Tang S., Tolhurst, R., and Rao, K. (2001). Changing access to health services in urban China: Implications for equity. *Health Policy and Planning*, 12(4): 302–312.
- Gong, Y., Wilkes, A., and Bloom, G. (1997). Health and human resource development in rural China. *Health Policy and Planning*, 12(4): 320–328.
- Gu, X.Y., and Tang S.L. (1995). Reform of the Chinese health care financing system. *Health Policy*, 32: 181–191.
- Hao, W., Young, D.S., and He, M. (1995). Drinking in China: Present situation, trends and counter-measurement. *Chinese Journal of Clinical Psychology*, 3: 243–248. (in Chinese)
- Hao, W., Young, D.S., Xiao, S.Y., Li, L.J., and Zhang, Y.L. (1999). Alcohol consumption and alcohol-related problems: Chinese experience from six area samples, 1994. *Addiction*, 94: 1467–1476.
- Murray, C.J.L., and Lopez, A.D. (1996) *The global burden of disease*. Cambridge: Harvard University Press.
- Lee, S., and Kleinman, A. (2000). Suicide as resistance in Chinese society. In E.J. Perry and Mark Seldon (Eds.), *Chinese society: Change, conflict and resistance* (pp. 221–240). Routledge, New York and London.
- Lee, S., and Kleinman, A. (2002). Psychiatry in its political and professional contexts: A response to Robin Munro. *The Journal of the American Academy of Psychiatry and the Law*, 30(1): 1–6.
- Pearson, V. (1995). *Mental health care in China: state policies, professional services, and family responsibilities*. London: Gaskell.
- Phillips, M. R. (1993). Strategies used by Chinese families coping with schizophrenia. In D. Davis and S. Harrell (Eds.), *Chinese families in the post-Mao era* (pp. 277–306). Berkeley: University of California Press.

- Phillips, M. R. (1998). The transformation of China's mental health services. *The China Journal*, 39, 1–36.
- Phillips, M.R., and Pearson, V. (1994). Editors' introduction to Section III: Rehabilitation interventions in urban communities. *British Journal of Psychiatry*, 165(suppl. 24): 66–69.
- Phillips, M., Liu, H., and Zhang, Y. (1999). Suicide and social change in China. *Culture, Medicine and Psychiatry*, 23: 25–50.
- Sévigney, R., Yang, W., Zhang, P., Marleau, J.D., Yang, Z., Su, L., Li, G., Xu, D., Wang, Y., and Wang, H. (1999). Attitudes towards the mentally ill in a sample of professionals working in a psychiatric hospital in Beijing. *International Journal of Social Psychiatry*, 45(1): 41–55.
- Tian, W., Pearson, V., Wang, R., and Phillips, M. R. (1994). A brief history of the development of rehabilitative services in China. *British Journal of Psychiatry*, 165(suppl. 24): 19–27.
- Torrey, E. F. (1988). *Surviving schizophrenia: A family manual* (3rd ed.). New York: Harper and Row.
- Wang, Q., Gong, Y., and Niu, K. (1994). The Yantai model of community care for rural psychiatric patients. *British Journal of Psychiatry*, 165(suppl. 24): 107–113.
- Xiao, S. (2001). "Culture and suicide in Chinese societies." (unpublished manuscript).
- Zhang, M., Yan, H., and Phillips, M. R. (1994). Community-based psychiatric rehabilitation in Shanghai: facilities, services, outcome, and culture-specific characteristics. *British Journal of Psychiatry*, 165(suppl. 24), 70–79.
- Zhang, W. (2001, June). Building for the future: The social and financial structures needed to provide effective and affordable care. Symposium at the Health Care, East and West, Moving into the 21st Century Conference, Boston, MA.

Conversation with P. C. Leung

Interview by Nancy E. Chapman



Dr. Leung Ping-chung is a distinguished surgeon, educator, and public figure in Hong Kong. Educated in Hong Kong and the United Kingdom, he has held a wide range of professional positions, serving most recently as Professor of Orthopaedics and Traumatology at the School of Medicine of the Chinese University of Hong Kong and chairman of the management committee of the university's Institution of Chinese Medicine. He is a founder and active participant in Operation Concern, a medical charity based in Hong Kong which provides medical care and training in China, and stepped down this year after ten years as Head of New Asia College. Dr. Leung contributed two papers to the July 2001 conference at Yale. Nancy E. Chapman spoke with him last December about his work and his views about health issues affecting China.

NEC: Dr. Leung, how did you come to choose medicine as your profession?

PCL: Nowadays it is not common to find university students who have already decided what they want to do, but in our day, I think more young people really felt a sort of vocational calling. I had looked forward to a medical career since my early adolescence.

Perhaps the fact that my father was an herbal physician influenced me. He was an herbalist in a strict sense, but he didn't rely on this art of healing to gain his bread and butter. I am one of the offspring of a huge Chinese family: a big family of something like seven brothers and sisters, each of whom in turn had a huge family. My father had five children and some of his elder brothers and sisters had more than ten. You can imagine the number of people! My father was the herbalist for all of these people. I would think the number was somewhere

between two and three hundred. In those days, there was only one hospital in Hong Kong, so you can imagine how busy he was with them, whether they had minor or serious problems. He was a real healer. I used to see him taking pulses and writing his prescriptions, and it was a lot of fun. But then he put it to me very openly and said, “Don’t become an herbalist. You’d better be someone who is more capable and relies more on scientific measures.”

I think the real influence came from reading books, though. I read a lot of novels. That’s how I spent all my time until matriculation, when you really have to fight for admission. Otherwise, I think only the last month before examinations would I study seriously. Otherwise I spent all of my time reading novels.

NEC: What kind of novels did you enjoy?

PCL: Translations and novels from the May Fourth period, writers like Lu Xun and Ba Jin. And then the classics, of course—*Shuizhuan* (The Water Margin), *Xiyouji* (Journey to the West). I just loved French and Russian translations, too. I still remember one book about Christian healers doing a lot of work for lepers—how much hardship they endured and how much they achieved. The book emphasized the spiritual dimension, rather than talking too much about the healing itself. Then of course Albert Schweitzer also had some influence on me, on my life and thought, although that was a little later, before I entered the university.

My love of nature, insects, and animals was also a very genuine influence. I did my biology extremely well: I did badly with long questions on examinations, but I did superbly with my dissections. I think my examination dissections could be kept in a museum!

So that’s how it came about: first I had some romantic thoughts about healers before high school, then I read more in high school, and then biology class more or less confirmed the commitment. I was going to work for the life sciences and then the healing science.

NEC: When was it that you became interested in traditional Chinese medicine?

PCL: In fact, the interest was there from a very early time, even before I had real contact with modern medicine. My father was a real practitioner of integrated medicine. But even he would say: “This is too backward, there are not even X-rays available.” I became convinced of the need for modern scientific input for the healing arts because of my father’s and my brother’s illness. That was in the 1950s, when Hong Kong had a very bad epidemic of tuberculosis. I was of course in early primary school and I still remember how maybe a third of the school was put into a big truck, which had no seats. All the kids, standing in a

huge truck and holding on to something, were transported to Queen Mary Hospital, which was the only hospital in Hong Kong where you could have an X-ray done.

About ten years ago, I began to fully realize the value of Chinese medicine. I realized that you had to compensate for some of modern medicine's shortcomings. The logic is very simple: when the cause of disease is simple and straightforward, the basic science of modern medicine is so strong that it usually succeeds in getting rid of that simple problem. It might be a difficult cause, a very nasty cause, but once it is defined, modern medicine can get rid of it. But, when the cause of a disease is complex, modern medicine sometimes fails to get rid of it effectively. This is the general formula that I use. Psychiatric illnesses, chronic problems, and back pain are so common and yet can be so complex, not to mention the psychosocial aspects of disease. I think that in all those areas where we have difficulty, we should look for an alternative. I think we shouldn't be biased and only apply Chinese medicine.

NEC: How is traditional Chinese medicine generally regarded here in Hong Kong today?

PCL: Well, practitioners and patients use Chinese medicine for various reasons: anthropological reasons (there's a certain amount of mythical attachment), social reasons, and custom, as was the case in my family, where one person in the family, my father, influenced hundreds of others. On the whole, it is cheaper, too, though the cost of herbs is increasing.

As for the health authorities, there's been a real change. The way I see it, the major change is because of political correctness. Since 1997, the Hong Kong authorities have had to try to bring things into line with China. The authorities thought that Chinese medicine—herbal medicine—was held in such high esteem in China, so they decided to try to make things equivalent in Hong Kong. Of course, they were wrong. Up to today, very few seem to realize that, in fact, herbal medicine in China is on the decline.

Once the authorities started registering traditional practitioners, it initiated a real, genuine change. The whole thing is very much reflected in the change of core practice, which I'm also responsible for, because I am the chairman of the Ethics Committee. Previously, doctors took the old form of the Hippocratic Oath, which said that practitioners shouldn't get involved with "healers" who don't belong to the same medical stream, and they would be criticized if they received referrals from or referred a patient to a practitioner of traditional medicine. This has now been removed. Instead, physicians can now be involved in alternative medical practice as long as they know that what is being practiced is safe, there is consent from all parties, they know how to apply the practice, and

any program, any practice, is open to peer review at any time. This shouldn't be routine practice, but should be conducted as a trial. So, since then—this core practice was changed in 1999, only two years ago—now we have legitimate physicians applying this practice.

I started my own studies of traditional medicine with one project, and it invited a lot of criticism and reaction from the hospital, to the point that they wanted to kick me out! I was considered a black sheep, but I stood firm, and I think I was helped by my seniority and my general status in the medical field: I'm one of the two eldest and most experienced professors. They couldn't ignore that, and what is more important, I happen to be a member of the ethics committee of the hospital. Within that same committee, there is one clergyman and one barrister who stood up in my defense. So they allowed me to continue with the trial, and from one project, now I have 32. There will soon be seven hospitals with a specialist in Chinese medicine. When I'm feeling euphoric, I could say I've led this trend. If I want to be modest, I'm just happy enough to live in this changing era.

NEC: To what extent is traditional Chinese medicine an evolving science and to what extent is it a traditional practice that is fixed and codified?

PCL: Traditional medicine emphasizes individual cases and individualized treatment. This approach hinders the objectivity and generalization that is an inseparable part of scientific research. Traditional healers naturally object to the scientific approach and have no interest in the Western way of trials and research. Scientists and modern healers must persuade traditional healers to try to generalize their method of treatment before any proper research in the modern scientific sense can be started. It therefore should come as no surprise that reports about scientific research on traditional medicine were rare before the 1970s.

The Hong Kong Institute for the Promotion of Chinese Culture launched a scientific contest in 1991–92. The subscribers came from China, Taiwan, Hong Kong, and the U.S.A. Over 10,000 articles were collected, screened and studied separately in China and Hong Kong, using standard objective methods of assessment for scientific papers. There are a lot of active scientists and clinicians involved in Chinese medicinal studies, but basic science research is limited, and the manuscripts of the best quality belonged to the category of traditional classical writings. Using Western methods of assessment, though, the quality of the manuscripts and the research methodology were low.

With the modernization of the economy, China is showing immense changes in all areas, including medicine. As a convergence of the two streams of medical practice proceeds, diligent workers in Chinese medicine will have to demonstrate their ability and expertise by engaging more actively in research.

The appearance of more journals on Chinese medicine and, notably, those specially created to serve the “integrated approach” will significantly contribute to this.

The direction I really try to push hard would lead traditional medicine to become a profitable science, profitable in both an academic and economic sense. The approach we are applying now is so different from that of the 50 years of efforts by scientists in China, Japan, and Germany. In that half-century, scientists tried to extract ingredients from herbs and then, from the extracts, get the pharmaceutical component or formula that would be convertible to a drug, which would in turn provide very efficient and very effective treatment. That was the old direction and very little has come of it—one can count only a handful of successful examples, such as qinhao for malaria. And it’s so very expensive and so time-consuming.

We shouldn’t be overly optimistic, but we may be able to enjoy some of the “French successes.” A flower from Madagascar, a former French colony, is a very good example of luck in herbal research. From that single flower, periwinkle, they made 17 pharmaceutical drugs, two of which are cancer drugs. They were so successful that this flower has been made into a national hero!

NEC: What do you see as some of the most pressing health problems in China?

PCL: The system. With the elimination of subsidies from the central and provincial governments, the system is in a state of total collapse. It’s going to have terrible consequences! As for problems in the delivery system, our colleagues in China tell us a serious problem is litigation, because the patients often have genuine grievances, where practitioners are really doing bad things out of either ignorance or ruthlessness.

NEC: And greed?

PCL: Greed, yes, and it also goes in the other direction: clients and patients make use of small mistakes, minor mistakes, which are then blown up either through misunderstandings or ignorance or sometimes intentionally to get compensation.

NEC: Given the serious situation you describe, what do you see as the areas where international collaborations can play a useful role? I suspect that international health professionals probably cannot make much of a contribution to a system that has collapsed, but are there specific clinical areas where you think that international collaboration could be helpful?

PCL: I see two things. One is education. Medical education in China is provided at both the undergraduate and postgraduate level. We have an annual educational meeting with big medical universities in China and Taiwan. Whenever I am involved, I always try to convince them of the need for professional training. And they always ignore it; professional training in China today is done only by the universities in the form of graduate programs. This is totally out of context: professional training everywhere in the world is done by professional bodies, associations, jointly with universities. We can't rely on degrees alone. Chinese universities do not want to break this tradition because to them, a degree means a lot, and they hold the keys to training. Their master's and doctorate degrees are awarded largely on the basis of classroom work and research in a narrow area, say the healing of stem cells in the marrow. Once you get the degree, you become a specialist. In my view professional training should be an all-around thing: specialists should still be expected to master a whole range of knowledge and skills. This never happens in Ph.D. programs. They are totally different categories.

The second thing that needs to be done is to show once more the merit and the spiritual esteem one gets from work in the medical service that is above and beyond material rewards. It can be reflected in voluntary work, it can be reflected in day-to-day work. A lot of people just don't know about it any more.

NEC: As concerns medical ethics, an area of special interest to you, I wonder if you could give me your assessment of the state of the medical profession in China today.

PCL: Though moving toward a market-driven economy, China still lingers in socialist ideology. By definition, socialist ideology and morality, in the context of the nation, is egalitarian, whereas at the level of the individual, it is what Mao described as "socialist humanism": this refers to a selfless moral temperament which always puts the nation and community ahead of the self. There were many heroes who were highly praised for their admirable socialistic ethical behavior. Within the medical circles in China, it is still common to find new and old (mostly old) banners and plaques carrying the same slogans: "Emulate Norman Bethune" and "Emulate Lei Feng." Behind these open expressions, there lie many diversions of behavior among the medical personnel. This is not at all dissimilar from the situation in the West: in general, selfless practice is giving way to a pragmatic compromise.

Rising costs and increasing demands from patients have directly led to a substantial reduction in the supply of modern services in all national health coverage in developed countries. The problem China is facing in the ethical area is much more complex and the results are expected to be more grave. While

affluent countries worry about “proper” management, China can hardly yet give all her people fundamental treatment. Hospitals struggle to survive and attempt to keep their staff happy by paying them more bonuses. Individual workers “moonlight” as much as possible to gain a more decent income. Socialistic humanism has to share its influence with market attraction, and the climate is not at all favorable for selflessness. The logic that “when a small number of people get rich first, the rest will gradually follow” may work, but only slowly.

Things were taken for granted in the past: every hospital had its own documents kept in the drawer which usually originated from the day of liberation in 1949. Newcomers were required to answer questions and cite from classical books and so on, but these were all concerned with basic responsibility, and a strong taste of the Communist Party. So, instead of expressing the law of benevolence, which is very simple, instead of expressing the need to have confidentiality, which is also very simple, you would say on behalf of the Party: I will do this and that, and it became a Party rule rather than a basic human ethical commitment. With the downfall of the communist teachings, those are also gone, because they are links for bad reasoning.

When we look at the Hippocratic Oath, we see that it never dealt with specialized areas. New issues have become very important: things like organ donation, things like patient records and contagious diseases. These are never observed. That’s why, in spite of embarrassing reports of prisoners’ organ removal, these things are still practiced very, very widely.

Things have been this way for 50 years, and people took things for granted. With the loss of ideology, the service ethic has become even weaker. Some local groups are very energetic in trying to modernize, but it’s not a general phenomenon. So, before people were able to become more serious about and committed to medical ethics, there came the consumer madness. Now, everybody is doing moonlighting and nearly every surgeon is bargaining with the providers: “If you give me a 30% kickback, I’ll use your drugs and use your instruments.” It’s very widely practiced.

NEC: Merely the fact that the hospitals rely on drug sales for such a significant part of their income is problematic.

PCL: Seventy percent of hospital income comes from drugs—and not from the local drugs, but from the imported drugs. One caplet of Panadol (acetaminophen) which costs 20 or 50 cents in Hong Kong, can be sold for 200 RMB in China. Anything new, with a new name—it could be aspirin with a new imported name on it—can be sold at exorbitant prices. It’s like the craziness of a gold rush.

NEC: Looking to the future, Dr. Leung, what are your plans?

PCL: I'm starting a project with Qian Mu's son who has a group in China now to study traditional Chinese culture. They are going into the countryside to teach teachers to convey the message of Confucius and Mencius, including principles such as responsibility to parents and responsibility to one's countrymen. It's a very simple form of ethics. I'm supporting that, I'm going to mobilize the governors of New Asia College and the teachers and, most importantly, the alumni to join that project. Without New Asia College, I wouldn't have been able to do that sort of thing, and I wouldn't have engaged in Chinese medicine at all. So I think I've gained a lot more than I have contributed.

CONTRIBUTORS

Doris F. Chang is Assistant Professor in the Department of Psychology at Ohio University.

Nancy E. Chapman is Executive Director of the Yale-China Association.

Alice I. Chen, MD has worked with the Shanxi Evergreen Service in Taiyuan since 1995.

Deborah S. Davis is Professor of Sociology at Yale University.

Jacqueline Shukching Ho is Lecturer in the School of Nursing at The Hong Kong Polytechnic University.

Bing Jiang is a member of the Department of Neurosurgery at Xiangya Hospital, Xiangya School of Medicine, Central South University in Changsha, Hunan.

Arthur Kleinman, MD is the Maude and Lillian Presley Professor of Medical Anthropology at Harvard University and Professor of Psychiatry at The Cambridge Hospital.

Peter Nan-shong Lee is Professor of Political Science at National Chung Cheng University in Taiwan.

Samantha Mei-che Pang is Associate Professor in the School of Nursing at The Hong Kong Polytechnic University.

Mark Strand is studying for a Ph.D. in Health and Behavioral Science at the University of Colorado at Denver.

Yongquan Tian is Dean of Xiang-ya School of Medicine, Central South University.

Thomas Kwok-shing Wong is Professor in the School of Nursing at The Hong Kong Polytechnic University.

The *Yale-China Health Journal* is published by the Yale-China Association, Inc., a non-profit organization with offices in Hong Kong and New Haven, Connecticut. Although based at Yale University, Yale-China is incorporated independently and administered separately from the University. The views expressed herein by individual authors do not necessarily represent the views of the Yale-China Association or its members. Additional copies of the *Yale-China Health Journal* are available for \$5.00 each.

Yale-China Association

442 Temple Street Box 208223 New Haven Connecticut 06520-8223

Tel (203) 432 0880 Fax (203) 432 7246 e-mail: yale-china@yale.edu <http://www.yale.edu/yalechina>

Yale-China Association

442 Temple Street Box 208223 New Haven Connecticut 06520-8223

Tel (203) 432 0880 Fax (203) 432 7246 e-mail: yale-china@yale.edu

<http://www.yale.edu/yalechina>