

AUGUST 2005

FOR GLOBAL BUSINESS AND MARKETING LEADERS

Pharmaceutical Executive



Docs of Shanghai, Beijing, Ningbo, and ...

They're short on status, pay, and respect, but China's young doctors hold keys to the world's fastest growing pharmaceutical market.

BY LENA CHOW

IN CHINA, ALMOST EVERY TRIP TO A DOCTOR INVOLVES WAITING in line at a hospital. Hospital lobbies stretch out like train station waiting rooms, filled with row upon row of benches for patients who arrive in the early morning, without an appointment, to see their doctor of choice. Large modern hospitals in Beijing and Shanghai list the names of the physicians on duty in giant LED displays on the wall, like so many travel destinations. It isn't always clear how many patients a doctor can see—doctors tell me that 50 in an eight-hour shift is common—but those who arrive at the appointment window late in the day may find their preferred physicians fully booked. Friendly hospital assistants walk the aisles between benches to check on the crowd periodically, but no referral is necessary. Anyone who thinks he or she needs to see a doctor in any specialty can get in line. Outside of the emergency room, the hospital performs little triage. More frustrating for those with chronic diseases, no patient who has seen a particular doctor before can be guaranteed another appointment with the same physician.

If the system seems a bit haphazard, it provides a democratic distribution of one of China's scarce resources: physicians. The country has less than two doctors for every one in the United States, and they serve a population close to five times as large. In the United States, 780,000 doctors treat a population of less than 300 million, which comes to around 265 doctors per 100,000 people. In China, there are about 12 doctors per 100,000 people—roughly 1.5 million doctors for a population of 1.3 billion. Even so, as China transitions into a market-driven healthcare system, challenges of economic disparity and sheer geographic size dwarf day-to-day problems like getting a doctor's appointment. But even as the system evolves, opportunities abound in this rapidly growing market. For pharma, the physician is the point of entry to this market, so tapping the enormous opportunity begins with understanding the practices and values of Chinese doctors.

A Brief History of Chinese Healthcare

A brief look back at history sheds light on the culture of medicine in China today. Western medicine was introduced to China at the turn of the 20th century, and many prominent medical schools today date back to that era. 1949 ushered in a new era. The People's Republic was a sprawling planned economy, in which the government owned and delivered all healthcare services. Most urban citizens received care from government hospitals, which offered inpatient, outpatient, and pharmacy services. As government employees, physicians earned a standard, uniform salary like every other worker. Private citizens paid a nominal fee (the equivalent of a few US pennies) to come to a hospital, see the doctor, undergo treatment, and receive medications from the hospital pharmacy. To improve healthcare in the rural areas, the state deployed hundreds of thousands of doctors and healthcare workers with various levels of train-

ing to work as "barefoot doctors" in free clinics. These rural outposts provided basic healthcare, educated the public on hygiene and delivering babies, and promoted birth control. Devoting resources to rural areas nearly doubled life expectancy in China, greatly reduced infant mortality, and controlled the most prevalent infectious diseases by 1975.

New economic reforms instituted in 1978 by Deng Xiaoping, the Communist Party Chairman who succeeded Mao Zedong, marked the beginning of a massive and dramatic shift to a market economy, bringing relative prosperity and modernization almost overnight, especially to the cities. A quarter century later, China has taken center stage in the world trade arena, promising vast opportunities as the world rushes to market to the most populated country on earth. Participation in the global economy has bred a new generation that is eager to learn from the West and embrace the explosive growth around them. Unfortunately, this thrust toward a brighter and better market economy has not produced favorable changes in the healthcare sector. In line with privatization, the government has started reducing financial subsidies for healthcare, and the safety net provided by the government has largely disappeared. At the same time, there has been little growth in the infrastructure necessary for a free-market healthcare system.

As they were in the time of Mao, hospitals continue to be the primary source of healthcare today, providing 80 percent of all inpatient and outpatient care. Most hospitals are owned and operated by a complex matrix of central and local governments, although a small number of private hospitals has emerged. Continuing the tradition of a very nominal fee for medical services, hospitals charge very little for patient visits. An outpatient visit to a hospital in Shanghai, for example, costs eight yuan, about one US dollar, or less than half the cost of a cup of coffee at the increasingly popular Starbucks coffee shops now dotting China's urban landscape. Ten years ago, a doctor visit cost one yuan, while a trip to the zoo cost two. Doctors joked that people paid more to see a monkey than a physician.

Doctors' low fees are offset by revenue from the hospital pharmacies, which dispense 85 percent of all prescription drugs. Although the government controls wholesale and retail drug prices, the system still allows for big mark-ups by the hospital pharmacy. Reports vary on the exact contribution of prescription drugs to hospital revenue. But students of the Chinese health system agree that hospitals would not be solvent without the income generated by pharmacies and high-tech diagnostic services. This financial model has far-reaching ramifications in pricing and resource allocation. Consumers complain frequently about overprescribing and high prices at hospital pharmacies. In July, a survey revealed that consumers paid about 300 percent more for amoxicillin at hospital pharmacies than retail pharmacies.

When almost everyone in China worked for the government, almost everyone had health insurance. As privatization



INTERNATIONAL TRAINING

Yao Qiang, MD

Nephrology, Renji Hospital,
Shanghai

The 36-year-old deputy head of the Nephrology Department at Renji was named Shanghai's Exemplary Young Teacher in 2003. The Shanghai Department of Health recognized her as the Healthcare Rising Star of 2000-2001. After medical school, she studied three more years to earn her doctoral degree, and received additional training in Sweden and Hong Kong. In addition to her teaching and research activities, Dr. Yao performs clinical duties at a dialysis clinic, where she sees about 30 to 40 patients on each half-day shift, the hospital's outpatient clinic, and the emergency room. She is also responsible for 10 to 15 inpatients at any given time. She thinks of patient care as the most rewarding component of her work.

in the cities first, but urban dwellers are still far more fortunate than their rural counterparts. In China's countryside and less developed areas, healthcare is often unavailable or unaffordable.

Low-Income Doctors

In a system where the sale of products and services, primarily pharmaceuticals and high-tech diagnostics, are the most important sources of revenue, physicians are paid low salaries and generate low fees. Physicians are employed by hospitals, which are still government-owned. As government employees, their compensation has not kept up with economic growth and, in fact, falls far below that of most other professions. A young doctor with five to six years of experience in a big city, for example, draws a monthly salary of about \$400 US. This is far above China's per capita income of about \$1,200 per year, but represents only a fraction of what many of their university-educated peers are earning in the new private sector. In a city like Shanghai, doctors earn less than the mean income. As a

result, many young doctors have left clinical practice to pursue other professions, and some medical schools report difficulties attracting students. To maintain their living standards, doctors in China rely on supplementary income from various sources, including pharmaceutical companies, which provide consulting fees and pay for travel and expenses to attend meetings.

reduced the number of state-owned businesses, many jobs left the public sector, but most of those did not take health coverage with them. Government workers are still covered, but many in the new private sector are not. According to some estimates, one in three non-government workers has at least limited health insurance. According to other estimates, the figure is one in 10. To address the need for health insurance, particularly in urban areas, local governments have instituted insurance programs calling for cost sharing by employers, employees, and the government. Such coverage typically includes outpatient and inpatient care, as well as prescription drugs, if purchased at the hospital pharmacy or at pharmacies authorized by the health plan.

Private insurance is also growing, despite a lack of uniform billing procedures and standardized costs. At the same time, increased insurance costs and reimbursements will drive healthcare expenditures higher. These problems are emerging

There are about 1.5 million licensed doctors in China. Only about one in 11 practices traditional Chinese medicine (TCM), which is based primarily on the use of natural therapeutic compounds, often derived from herbs, and on non-invasive interventions, such as acupuncture. The rest of China's physicians practice Western medicine. Internal medicine is the largest specialty, representing 20 percent of all doctors, followed by surgery (13 percent), obstetrics and gynecology (nine percent) and preventive medicine (nine percent). The general practitioner is a relative rarity (3.5 percent). About four in 10 doctors are women.

The Pharmacist in China: New Legislation and New Roles

Traditionally, the qualifications and responsibilities of pharmacists in China have been loosely regulated. In 1993, a long-term effort aimed at new training and licensing legislation was begun. These changes promise to elevate standards and raise the status of pharmacists. During the past decade, the number of pharmacists meeting government licensing requirements increased dramatically. By 2003, about one third of the 350,000 pharmacists were licensed. Even so, China must license

another one million pharmacists to reach the US benchmark of one pharmacist per 1,500 people. The Chinese Licensed Pharmacists Association, which holds its annual forum this September in Chengdu, was founded to support pharmacists' training and professional development.

The changing role of the retail pharmacy is an important component of the evolving healthcare system. Until recently, retail pharmacies sold only over-the-counter drugs and a few prescription medications, mostly antibiotics. Because the safety issues of uncontrolled antibiotic use were poorly understood, the requirement for a prescription was often overlooked, and antibiotics became a big revenue source for retail pharmacies. For the consumer, trips to the pharmacy saved hours waiting

at the hospital to see a doctor. Most consumers accepted a modest out-of-pocket expense, even when the hospital purchase was eligible for reimbursement.

In July 2004, when pharmacies were ordered, under penalty of law, to require proof of prescription before dispensing antibiotics, retail-pharmacy revenue plummeted, and consumers complained bitterly when pharmacies sent them home empty-handed. Today, some prescription drugs (e.g., antihypertensives) are still considered "gray area" drugs at retail pharmacies, where they are widely available. Since the sheer size of the market—the number of retail pharmacies—makes regulation and enforcement difficult, the retail pharmacist has an important role in enforcing prescription requirements and ensuring safety.

Doctors in China are a relatively young group, in part because their training period is short compared to doctors in Western countries. More than 70 percent of them are younger than 45 years old—the age of people who turned 18 when economic reform began in 1978—and close to five percent are 25 years old or younger. Two out of three doctors work in hospitals. The rest are spread among community clinics, public health clinics, and specialty clinics, including women's health, pediatrics, infectious disease, and emergency. Private practice is virtually nonexistent.

Currently, training varies greatly depending on geography and institution. Students are admitted into medical schools straight out of high school. After five years, young doctors graduate with a bachelor of medicine (MB) degree. Many graduates proceed directly to clinical practice, although in big cities, a one-year internship at a hospital is more typical. There is no formal residency training or certification of specialists. A small number of graduates with the MB degree pursue further education or research. About one in forty receives a master's degree, while fewer than one in 100 earn a doctorate in medicine. Around 500,000 doctors—one in three—do not have university degrees. They enter the medical profession by going to trade schools following the completion of junior high school. These less educated doctors are seldom found in the highest-ranking urban hospitals, known as Category III hospitals. Most of them practice in smaller communities.

The government has undertaken a long-term initiative to standardize the training and credentialing of doctors. This initiative focuses on postgraduate residency training and mandates a three-year residency program for 17 specialties, plus additional training for another 17 subspecialties, as well as lifelong continuing medical education (CME). The Chinese Medical Doctors Association (CMDA) recently developed a comprehensive blueprint detailing training objectives, facility requirements, curriculum, and assessment. Many teaching hospitals are already following these guidelines. This new initiative, a cornerstone of the evolving healthcare system in China, has strategic implications for pharmaceutical companies. For example, there may be opportunities for companies to partner with these training programs on a national or local level. In addition, pharma could support CME, which is gaining importance with new focus on lifelong learning.

Only a limited infrastructure supports CME curriculum. And only imperfect processes ensure that doctors actually complete course work for which they receive credit. Some hospitals impose their own CME requirements on staff members and develop their own tracking system for CME credits. The Chinese Medical Association (CMA), the primary accrediting body, subcontracts some of the curriculum development and program administration to outside providers. The primary media for CME are symposia, print, and audio-visual recordings. Doctors in rural areas and sparsely populated provinces take advantage of Web-based CME programs. As physician standards are raised, it seems reasonable to expect some changes in the CME system. One can speculate, for example, that other accrediting bodies may be added



BATTLING UNREALISTIC PATIENT EXPECTATIONS

Xi Zhimin, MD

Cardiologist, Fu Wai Hospital for Cardiovascular Medicine, Beijing

As the attending physician, Dr. Xi starts his day at 8 a.m. and sees his last patient at about 5:30 p.m., five days a week, at the busy specialty hospital that is a part of Beijing's 1,030-bed ChaoYang Hospital. On the weekends, the youthful 55-year-old returns phone calls, writes papers, and attends professional meetings. Dr. Xi has published 103 papers since 1991, and lists appointments to 10 different committees and editorial boards on his calling card. He shares his small and modestly furnished office with a colleague. The biggest challenge to today's doctor in China, as he sees it, is the public's unrealistic expectation that physicians can fix every health problem.



HEADING FOR A RESEARCH CAREER

Jin Yu, MM

Thoracic Surgeon, Xinhua Hospital, Shanghai

After medical school, Dr. Jin spent two years at the 1,200-bed Xinhua Hospital as a general surgeon. Three more years in the thoracic surgery department earned him a master's degree. Today, at age 30, he is a senior resident in thoracic surgery. Dr. Jin feels that an important missing component in China's clinical care is standardization. Every hospital has a different approach, so it is difficult to share results. On the upside, he believes his hospital's operating room can match any in the United States and is probably the biggest in Asia. Dr. Jin is typical of many young and ambitious doctors in China. He has eight publications to his credit and plans to pursue a doctoral degree and a career in research.

and/or that ultimately an equivalent to the Accrediting Council for Continuing Medical Education (ACCME) in the United States may be established.

The Doctor-Patient Relationship

While most doctors in China still enjoy a good relationship with most of their patients, the status of the healing profession has fallen over the past decades. Physicians in China enjoyed a brief resurgence in popularity during the SARS outbreak, when they were praised for their brave efforts to save lives while jeopardizing their own safety. As memory of the epidemic faded, the public returned to a critical, often disrespectful attitude toward doctors.

A general lack of patient education prevents patients from understanding their own diseases. Often they bring unrealistic expectations to the therapeutic intervention or try to manage their own care. Doctors are often confronted with questions such as, “Why am I not getting better sooner?”

More important, consumers resent bearing an increasing burden of healthcare costs. During the period from 1978 to 2002, the government’s share of healthcare expenditures decreased from 80 percent to just over 15 percent, while the consumer’s share rose from 20 percent to nearly 60 percent, according to the Ministry of Health. Even though Chinese citizens save 40 percent of their income, increases in healthcare costs may soon become burdensome. In the past five years, the average income in cities rose by nine percent, while healthcare costs increased by 14 percent. In rural areas, income has increased by just over two percent, while healthcare costs have gone up by nearly 12 percent.

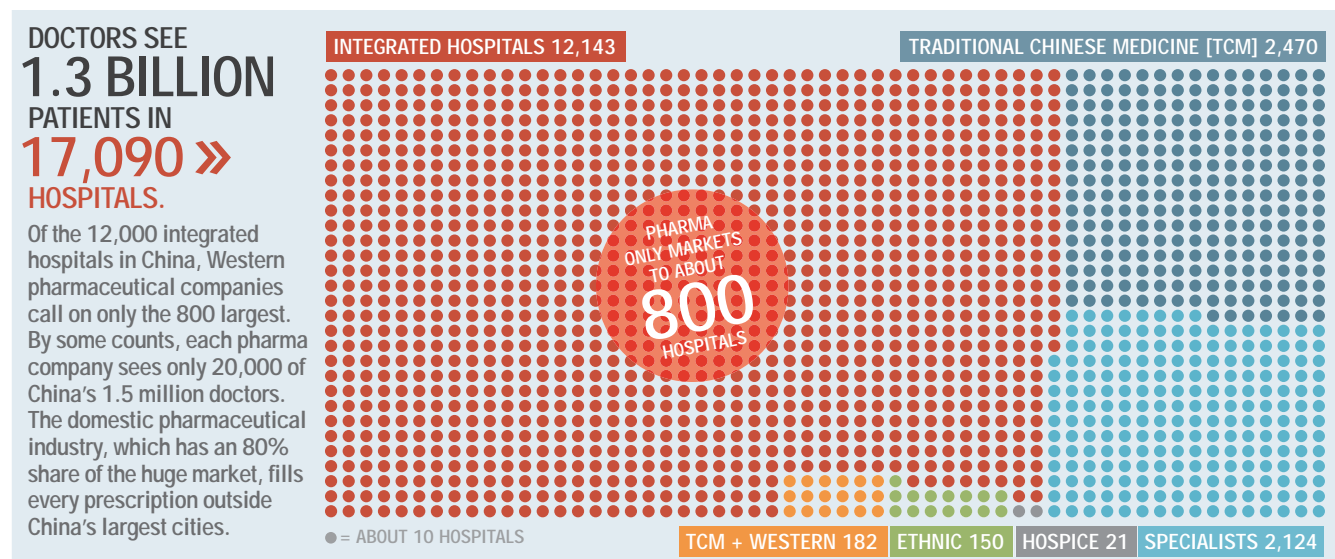
Although Chinese consumers do not sue their doctors for malpractice, as Americans are wont to do, they often yell at them in public, which is nearly unthinkable behavior in the United States. Patients waiting in the lobby to see a doctor may overhear, as I did on a recent trip to Beijing, the all-too-familiar scene of an angry patient, flanked by family members, screaming at a doctor in an exam room. In this case, the patient was disputing charges. Such outbursts by patients are not unusual.

Quite often, verbal abuse turns into physical assault when patients vent their frustration about healthcare costs, the slow progress of therapy, or a poor outcome following surgery. Hundreds of assaults on doctors are reported every year, some of which result in injuries requiring hospitalization.

Finally, the doctor’s low salary further jeopardizes professional authority by putting him or her in a position to receive additional compensation under the table, sometimes directly from patients. It is no secret that “red packets” containing cash, given before and/or after a procedure, are *de rigueur* for surgeons. Red packets have also changed hands to ensure an appointment with the doctor of choice. Clearly, such practices not only compromise the doctor’s position as a credible, authoritative figure, they help patients justify demands for good results.

Too few primary-care physicians serve as gatekeepers. “Many of the patients coming to our hospital have a simple case of hypertension, something that really does not require the attention of specialists,” says Dr. Xi Zhimin, a cardiologist at Fu Wai Hospital for Cardiovascular Medicine in Beijing. “Patients have no way of knowing when they need a specialist, so they, or more often their families, decide to see the specialist, thinking they will get better care.”

Until it is possible to reduce the patient’s share of healthcare costs and improve physician compensation, consumer education may help smooth the interaction between doctors and patients. Pharmaceutical companies can support the doctor through patient education materials that help set realistic expectations and engage patients in managing their health. A patient who is well-prepared for an appointment with the doctor, and one who knows what questions to ask, will make their brief interchange much more productive. Consumers will benefit as doctors’ pay rises and they are less tempted by red packets. A few departments are already turning them down. “We don’t accept them,” says Dr. Jin Yu, a thoracic surgeon at Xinhua Hospital in Shanghai. “Our department head does not accept them, so the rest of the staff follows suit.”





INTELLECTUAL CHALLENGES IN THE ICU

Xin Gan, MB

Internal Medicine, Chinzhou People's Hospital, Ningbo

Dr. Xin grew up in the seaport of Ningbo and attended medical school in Shanghai. After graduation, he returned to the low-key lifestyle offered by his hometown, a "midsized" city of five million people. The stylishly dressed 30-year-old enjoys his work at the 12-bed Intensive Care Unit, which is staffed by five doctors and 12 nurses. He feels that he can spend more time with his patients, and likes caring for a patient from admission through discharge. He also enjoys the intellectual challenge of the more complex and diverse cases in an ICU. Every year, the hospital hosts a reunion of past ICU patients, an event that, for Dr. Xin, makes up for the long hours and inappropriately low income and status. Dr. Xin is quick to point out that the surroundings are pleasant, the hospital is well-equipped, and his income has increased steadily, if only gradually.

Selling to the Doctor

Despite the reluctance of some doctors to take red packets from patients, the first and foremost priority of pharmaceutical representatives is to address the material needs of doctors: Meals, travel, honoraria, and consulting fees are all expected and accepted. Sometimes things go too far. Some sales reps give outright kickbacks or purchase CME credits as a "convenience" to the doctor. The latter practices are commonplace in smaller hospitals and on the outskirts of cities. These are generally the roaming ground of local pharmaceutical companies, which have an estimated 80 percent market share in China's current market. In these settings, there is little, if any, clinical content in the sales call.

At leading hospitals within big cities, the sales process is similar to that in the United States, but only after reps meet a doctor's demand for travel, entertainment, and consulting fees.

International publications are readily available in these larger hospitals, and doctors in major medical centers are conversant with new developments. These doctors have the same affinity for good clinical data as their counterparts in other parts of the world. Most global pharmaceutical companies are well-regarded for the credibility of their sales detail. "However, when we see data in a brochure from a pharmaceutical company, we often look at it very closely and read the footnotes before we believe what we are told," says Dr. Xin Gan, an internist at Chinzhou People's Hospital in Ningbo.

Unlike Dr. Xin, most Chinese doctors rarely see a sales rep from a Western pharma company. Pharma calls on the Category III hospitals—roughly the largest 800 of the 12,143 integrated hospitals. Most of the remaining hospitals—close to 93 percent—purchase medications from the domestic pharmaceutical companies that control the lion's share of the market. By some estimates, each Western pharma company calls on only 20,000 doctors in China.

Formulary decisions are made at both the hospital and the insurer level. Adherence to formularies is strict. The process for securing formulary acceptance is similar to that of the United States. This applies to both Western medicine and TCM. Both are offered in the hospital pharmacy.

A Look into the Future

While China's healthcare system has lagged behind the rest of the economy in the rush to free markets, changes are taking place. In the next five to 10 years, expect a market-driven healthcare economy to begin responding to patients' demands. China's membership in the World Trade Organization (WTO) will, over time, mean better protection of intellectual property, lower tariffs for imported pharmaceutical products and, overall, fewer regulatory hurdles. One example is a change in the definition of new drugs, from "drugs not previously manufactured in China" to "drugs not previously marketed in China," which in effect, eases the application process for new drug registration. Such changes will, in turn, benefit China's healthcare system by bringing the latest advances in medicine to a country that aspires to a world-class healthcare system. Most important, growth is inevitable. China's national healthcare expenditure per capita was \$55 per year in 2002, as compared to \$5440 per year in the United States. China accounts for 20 percent of the world's population, but only three percent of the total global health expenditure. But at the current annual growth rate of 15 to 20 percent, China's pharmaceutical market will reach the top-five in total expenditures by 2010. These changes portend a bright future for China's doctors, and for the companies eager to harness their prescribing power. ☐

Acknowledgement The author gratefully acknowledges the input and insight of her colleagues, Dr. Feiyan Shen, who introduced her to the Chinese healthcare market, and Dr. Jin Ming, who endured the eight-hour roundtrip bus ride from Shanghai to Ningbo with her.