CASE-STUDY

CHINA

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1 General background data

1.1 Preamble

China is divided into 22 provinces, five autonomous regions, four municipalities (Beijing, Shanghai, Tianjin and Chongqing), two special administrative regions (Hong Kong and Macao) and the Taiwan Province. In 2000, the population of China reached 1.275 billion persons, 68% of whom were from rural areas. Of the people enumerated in the 31 provinces, autonomous regions and municipalities and servicemen of the mainland of China, 1159.40 million persons or 91.9% of the population, were of Han nationality (National Bureau of Statistics).

Economic growth has speeded up, with enhanced comprehensive strength. According to preliminary estimates, the gross domestic product (GDP) in the year 2000 was 8940.4 billion yuan, up by 8% over the previous year at comparable prices. This growth rate was 0.9 percentage points higher than in 1999.

A growth of the elderly and disabled populations, the increasing public awareness of quality of life issues, and the competition in health care provision are expected to dramatically increase demand for long-term care in China. For example, of the total population in 2000, over 10% of the population were older than 60 (132 million people) and the average rate of growth of those age 60 and over was 3.2%, with an increase of more than 3.8 million people every year. Of the total population 6.96% are age 65 and over (88.11 million people), and by the year 2025 the percentage of those over 65 is expected to increase to 13.2%.

Particularly noteworthy is the growth of China's 'old-old' population (those over 80 years of age). Currently, China's old-old population is more than 5 million, or 6% of the total elderly population. However, the rate of growth of the old-old is 5.4%. This means that there will be an increase of 500 000 people over age 80 every year. By the middle of the 21st century, the old-old population will make up 6.8% of the population.

Another indicator of the growing need for government support for long-term care is the declining capacity of the informal system to provide care to the disabled elderly. Traditional Chinese culture has great respect for elders, and in the past elders' needs were taken care of by younger family members. However, the ageing of the Chinese population (especially those age 80+), caused in part by the one-child policy that is leading to a '4-2-1' family structure means that, in the future, fewer children will be available to care for their ageing parents. In other words, as the family structure is getting smaller, the informal care system is getting weaker: for every one couple, there are four or more older family members who may eventually need to be cared for.

The massive migration of individuals from rural to urban China is greatly affecting many health related issues in China, including long-term care. In 1960 about 16% of the population lived in urban areas as compared to about 32% in 2000. Many of those who have migrated to urban districts are not officially registered as local residents; as a result they do not have access to food subsidies and health insurance. Furthermore, this group often lives in densely populated, substandard living conditions, which pose threats to their health and place further demands on urban health facilities. Another implication of migration is that when working-age people leave villages to seek employment in the cities, they often leave behind elderly and other disabled relatives who they formerly were expected to care for.

Keeping these factors in mind, it is clear that China should continue preparing its long-term care system for future growth. With important economic developments occurring concurrently with these increased long-term care needs, the Chinese Government needs to be systematic in its response to the needs of its population, and in particular its elderly population, in order to have the resources and organizations ready to confront these needs.

This case-study describes the current and future needs for long-term care in more detail. It also details the current organization of the systems providing health and social services to the population (generally) and to those in need of long-term care. It is important to mention that the information provided in this case study on long-term care services generally refers to Shanghai and its environs, while the general information on China's health and social systems refers to the entire country. Presented on the following three pages are background data concerning China, derived from international data bases.[1] These data include demography, vital statistics and epidemiology, economic data, and health expenditure.

[1] For consistency reasons data used in this section are taken from international data sources: UN, World Population Prospect, the 2000 revision (median variant);
UNDP, Human Development Report 2001; US Government. The World Factbook 2002;
WHO, World Health Report 2002; World Bank, World Development Indicators Data Base;
ILO, Yearbook of Labour Statistics, 2000; UNAIDS/WHO Working Group on HIV/AIDS, 2002.

1.2 Background data from international data bases

Demography (year 2000)	
Population (thousands)	1 275 133
Land area (sq km)	9 326 410
Population density (per sq km)	133
Population growth rate (% 2000–2005)	1
Urban population (%)	32
Ethnic groups (%)	
Han Chinese	91.9
Other	8.1
Religions	
Daoist (Taoist), Buddhist	
Muslim (2%–3%), Christian (1%)	
Total adult literacy rate (% in 1997)	84
Age Structure (%):	
0–14	24.9
15–24	15.6
60+	10.1
65+	6.9
80+	0.9
Projections 65+ (%)	
2025	13.2
2050	22.7

Demography (continued)

Sex ratio (males per female)	
Total population	1.06
15–64	1.06
65+	0.89
Dependency Ratio:	
Elderly dependency ratio in 2000[2]	11.4
Elderly dependency ratio in 2025	21.3
Parent support ratio in 2000[3]	7.7
Parent support ratio in 2025	9.5

Vital statistics and epidemiology

Crude birth rate (per 1000 population) (2000)	14.3
Crude death rate (per 1000 population) (2000)	7.0
Mortality under age 5 (per 1000 births) (2001)	
males	34
females	40
Probability of dying between 15–59 (per 1000) (2001)	
males	157
females	106
Maternal mortality rate (per 100 000 live births) (1995)	60
Total fertility rate (children born/woman)	1.8

[2] Elderly dependency ratio: the ratio of those age 65 and over per 100 persons aged 20–64.

[3] Parent support ratio: the ratio of those age 80 and over per 100 persons aged 50–64.

Vital statistics and epidemiology (continued)

Estimated number of adults living with HIV/AIDS (2001)	850 000
HIV/AIDS adult prevalence rate (%)	0.1
Estimated number of children living with HIV/AIDS (2001)	2000
Estimated number of deaths due to AIDS (2001)	30 000
Life expectancy at birth (years) (2001)	
Total population	71.2
Male	69.8
Female	72.7
Life expectancy at 60 (years) (2000)	
Total population	18.0
Male	16.0
Female	20.0
Healthy life expectancy (HALE) at birth (years) (2001)	
Total population	63.2
Male	62.0
Female	64.3
Healthy life expectancy (HALE) at 60 (years) (2001)	
Total population	13.5
Male	12.7
Female	14.2

Economic data (year 2000)

GDP – composition by sector *(%)*	
Agriculture	15
Industry	50
Services	35
Gross national income (GNI) ($PPP)[4]	4951 billion
GNI – per capita ($PPP)	3920
GDP – per capita (US$)	840
GDP growth (annual %) (1995–2000)	7.9
Labour Force Participation (%):	
Male	63.8
Female	55.9

Health expenditure (year 2000)

% of GDP	5.3
Health expenditure per capita ($PPP)	205
Health expenditure per capita (US$)	45

[4] PPP=Purchasing power parity: the rates of currency conversion that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries

2 General health and social system

2.1 Basic income maintenance programmes

A minimum life guarantee system is established in all cities and towns – about 7.01 million urban and rural residents receive minimum life guarantee relief. The rural social security service network has been improved and now covers 18 855 towns, which accounts for 43.3% of the total. The basic retirement security programme, and unemployment insurance and rural social insurance are managed by the Ministry of Labour and Social Security.

By the end of 2001, 104.08 million staff and workers participated in the unemployment insurance programme, and a total of 1.37 million people received monthly unemployment insurance. Some 103.67 million staff and workers and over 31.73 million retirees participated in the basic retirement security programme.

A 1998 survey of 2000 elderly residents in Guangzhou and 1000 elderly residents in rural areas in Hunan province showed that the main source of income for elderly people in urban areas comes from pensions, while in rural areas they are more dependent on their children's financial support (see Table 1) (Ruolian Li, 2000; Weiwei Wang, 2001).

Table 1. Income sources of elderly people in 1998 (%)

Sources	Guangzhou	Hunan Province
Pension	73.5	3.8
Children support	17.7	67.4
Working income	6.5	25.8
Government aid	0.8	1.2
Others	1.5	1.8
Total	100.0	100.0

2.2 Organizational structure of decision-making

China has a strong vertical structure in health care delivery. The central Ministry of Health (MOH), which reports to the State Council, provides policy direction, technical leadership, and supervision of disease prevention and health care provision. The structure and responsibilities of the MOH are duplicated at the provincial level within the Health Bureaux (throughout China's 22 provinces, five autonomous regions, and four municipalities) and again in Health Bureaux at the regional or city level.

There are ten departments within the MOH, three for administrative functions and seven line departments with specific programme or functional authority. Three vertical public health services operate within the 'three-tier' health care system. The Epidemic Prevention Service (EPS) and the Maternal and Child Health Programme (MCH) are both under the administration of the MOH, and the Family Planning and Reproductive Health Programmes are under the Family Planning Commission. At the provincial, city and county level, EPS operates epidemic prevention stations/Centres for Disease Control (CDC).

A number of other health and social functions are controlled by other ministries within the Government. The Ministry of Finance controls the central Government's budget for health and the financing of the Government employee insurance system. The Ministry of Labour and Social Security sets policy for the entire insurance system.

A Central Price Commission sets prices for health services. Drug policy and inspection is conducted by the National Administration of Drugs. The State Pharmaceutical Agency (independent from the MOH) sets prices for drugs at the retail level. The Ministry of Civil Affairs has a Department of Social Welfare and Social Affairs, which has the function of making central governmental policies on social welfare and guiding the fulfilment of these policies.

There is some fragmentation between health and social services in terms of budget and structure, as well as between preventive and curative primary care, which are provided by different systems. The social and health systems (in general and in LTC services) at the local level are also slightly fragmented in terms of budget and structure.

LTC services are provided by both systems and integrated to different extents into the general health and social system of care. However, there is no special division for LTC as such – the social and health systems collaborate to provide LTC services, each with its own focus. Institutional LTC is provided by two different yet overlapping settings: the social system (senior citizen housing complexes which also accept disabled elderly people) and the health system (nursing homes, geriatric hospitals).

LTC facilities run by the social system are financially integrated into the national budget, and the Government allocates a certain amount of funds to support them. LTC services offered by the health system may also be integrated and costs are covered by medical insurance in some cities (such as Shanghai where some services are covered), while in other areas, they are paid almost exclusively out-of-pocket.

Traditional Chinese medicine is integrated into health care delivery at all levels, including primary care. Although the State Administration for Traditional Chinese Medicine is in charge of traditional Chinese medicine policies, it reports to the MOH. The People's Liberation Army has its own large network of health institutions, including medical schools and hospitals.

The role of nongovernmental organizations (NGOs) is limited in the field of health care, they operate only a small percentage of health care facilities. There are some NGOs, such as the Association of the Disabled, and volunteer teams in the community that play important roles. NGOs are usually established through local initiatives. With the reform of the health system, it is expected that they will play a more important role in the future.

Every year, there are many health regulations issued by the MOH. These regulations cover the areas of disease control, health surveillance, and health care management. Health care management involves such areas as management of medical facilities and pharmacies, maternal and child health care, epidemic disease control, research and education, planning and financing, manpower, traditional medicine, and foreign affairs.

Policy-making in health care in China, however, is moving towards a more decentralized model. While the objectives of health policy are centrally defined and most health policy and planning activities occur at the national level, plans for implementation are devised at the provincial level or lower, resulting in tremendous variation across the country. In recent years, the provincial level Health Bureaux have gained much more authority over the planning and implementation of their own health services. They report directly to their local governments, but still receive technical guidance and direction from the central government.

About 10% of provincial budgets are provided by the central government. (Since fiscal decentralization in the 1980s, local governments have gained greater autonomy to raise taxes and retain revenues.) Poorer provinces continue to receive subsidies from the central government, but these have declined in real terms. Moreover, because the central government provides a small financial contribution, township health centres feel less obligated to implement laws and regulations. In this way, the system has contributed to growing inequities between the provinces.

In the 1990s, the MOH introduced regional planning of resource allocation following recognition of existing inefficiencies due to the duplication of facilities and equipment and the over-supply of beds. This has enabled the central government to exercise some degree of control over health expenditures.

The Central Price Commission sets prices for health services. In most instances, fees have been less than costs. A separate State Pharmaceutical Agency sets prices for drugs at the retail level. In the case of drugs and high-tech treatments, prices are allowed to exceed costs, providing an incentive to over-prescribe high-cost diagnostic procedures and leading to rapid cost escalation.

Hospitals in China provide care on mainly a fee-for-service basis. Those owned by provinces, counties and townships have considerable authority over budgets, investment and fee collection, but not staffing.

The Government establishes basic salary scales, but hospitals provide bonuses, which can be up to two to three times regular salaries. While in governmental health facilities physicians are paid a salary, village doctors and private practitioners are paid primarily through fees from patients. Personnel are assigned to hospitals by the MOH or provincial Health Bureaux.

In December 1996, the State Council held its first National Health Policy Conference, attended by governors and representatives from relevant ministries, to discuss issues and options for the 21st century. Following the Conference, a 'Decision of the Central Committee of the Chinese Communist Party and the State Council on Health Reform and Development' was issued (WHO & Jianping Hu, 1999).

Since discussions of health policy reform in 1996 at the ministerial level, the MOH has emphasized the reform of Government employee and labour health insurance, the development of community health care, the establishment of a new health care framework, and the improvement of effectiveness and efficiency in health care facilities. These efforts, once implemented, will enable China to improve access, equity, and quality in health care.

In order to ensure the health system's responsiveness to the changing needs of the population, there is a formal information system that covers the entire health care system. Every month, health institutes submit data reports to the information and statistics units in Health Bureaux. Evaluation and decision-making is done using these and other data from surveys. However, this system still needs to be improved in order to generate more useful information.

2.3 Financing of health services

The Ministry of Finance controls the central government's budget for health and the financing of the Government employee insurance system (WHO & Jianping Hu, 1999). The Government at all levels provides financial subsidies for public health services and health care institutions in order to ensure the Government's role in the management and surveillance of health care, in assistance to the health care sectors in providing quality public health services, and in improving the conditions of essential health care services and the health status of the public. Subsidies are set according to the responsibilities of governmental health management affairs, health surveillance, public health services, basic health care services, need for health care development, and so on (Ministry of Finance, 2000).

In general, since the early 1980s, there has been less central government contribution to health care financing and lower 'society health payments', and a concomitant rise in reliance on user fees and out-of-pocket expenditures. The total health care expenditure for 1997 was 337.747 billion yuans (about 273.2 yuans per capita) or 4.52% of the GDP. Of the health care expenditure, governmental budgetary health payments were 52.21 billion yuans (15.46% of the total health care expenditure), society health payments (referring to all society payments other than governmental budgetary payments, including the Governmental Insurance Scheme (GIS), the Labour Insurance Scheme (LIS), community financing, and 'society financing') were 93.03 billion yuans (27.54% of the total health care expenditure), and residents' individual health payments were 192.51 billion yuans (57.00% of the total health care cost) (see Table 2) (Yuxin Zhao, 1997).

Table 2. Health financial pooling structure (%)

Item	1994	1995	1996	1997
Governmental budgetary health payments	19.14	16.97	16.15	15.46
Society health payments (GIS, LIS, community financing and 'society financing')	35.24	32.76	29.46	27.54
Residents' individual health payments	45.62	50.27	54.38	57.00

With the health care reimbursement system shifting from mainly governmental subsidies to market mechanisms, health care institutions now have three methods of reimbursement: governmental subsidies, fee-for-service, and the sale of prescription drugs. Government subsidies account for less than 10 % of the total income of health care institutions, while 90% of their total income comes from health care service provision and the sale of drugs.

For example, before economic reforms, public hospitals were financed largely by Government budgets and most physicians were salaried. After the reforms in 1978, hospital revenue from Government budgets declined. Government-owned hospitals today receive about 15%–25% of their revenues from central and/or local governments. Public hospitals are expected to cover the remainder with patient revenues.

As the health care financial pooling structure changes, the control of the Government over the health care will decrease. Instead, Government, social services, and individuals will share the responsibility for the cost of health care.

2.3.1 Pooled health care programmes

Overall about 20% of the general population in China has some form of health insurance (see Table 3) (Rao Keqin, Yi Li & Liu Yuan Li, 2000). Financing for health care differs for urban and rural areas; about half the population in urban areas, and 8% in rural areas are insured.

Because of the development of a new health insurance system in urban areas, residents are willing to share the risk with the rest of the urban population. In rural areas, the percentage of people covered by insurance (cooperatively-funded medical care) dropped from 90% in the late 1970s when the population was covered by the rural cooperative medical system (RCMS – a form of voluntary insurance that most farmers joined), to 8% in 1998.

As a result of changes from a collective to a household production system (part of the overall economic reforms), the financial basis of the RCMS began to erode. Currently, the cooperative medical system in rural areas does not cover all of the residents in these communities. There is now a renewed interest in re-establishing the RCMS system in many rural areas. In and around Shanghai, the RCMS covers a large proportion of rural residents (about 64% in 1999) (Department of Population, 2000). In other rural areas, health expenditures are mainly paid out-of pocket.

In urban areas, there were two major insurance programmes: the Government Health Insurance scheme (GHI) and the Labour Health Insurance scheme (LHI). Due to the escalation of health expenditures in 1998, the Government decided to establish basic medical insurance and to merge both schemes into a new urban employees' medical insurance programme (in order to increase risk pooling and to extend coverage).

This marked the beginning of an overall reform of Government employee and labour health insurance in China. Prior to the reform, about 100 million of the 400 million urban inhabitants of were covered by either the GHI or the LHI scheme.

Pilot experiments were initiated at the end of 1994 for implementing a three-tier financing system that included: (a) medical savings accounts (intended to provide consumers with incentives to be more cost-conscious in health care use); (b) out-of-pocket costs in the form of co-payments (intended to increase cost sharing by patients); and (c) social risk pooling (intended to protect persons against catastrophic expenses).

According to this new system, employers and employees share medical expenses. Employers contribute 6% of the entire staff's salaries each year to medical insurance. Of that total, 30% goes towards medical savings accounts. The rest is set aside as a social risk pooling fund.

Employees pay 2% of their annual salaries into their medical savings accounts. When medical costs for an employee are below 10% of their average annual income, the money is either subtracted from their medical savings account (first tier) or the out-of-pocket deductible comes from their annual salary (second tier).

The social risk pooling fund, created by the employer, begins contributing to medical expenses once they exceed 10% of the employee's average annual income (third tier). This fund does not cover expenses beyond four times the amount of the local annual average urban income (6470 yuans or US$780 in 1997) in case of serious illness, in which case patients must turn to commercial medical insurance.

Evidence from the pilot studies has shown that the three-tier finance reform has reduced cost inflation. Health spending per beneficiary decreased 27%, from 426 yuans in 1994 to 311 yuans in ZhenJiang in 1998 . Total health spending declined by 24.6% from 1994 to 1995, compared with a positive growth rate of 35–40% in two neighbouring cities not under reform. Because this preliminary experience shows promise for a viable model of urban health care financing with potential for cost-containment, the central government wants to expand it to all of urban China after the amendment.

Currently Shanghai is using this model, with a slight difference in the pooling and distribution of funds. This new system is expected to change life and health care for China's 400 million urban residents. Employees of non-publicly owned enterprises, mostly excluded from GHI and LHI, will now be covered under the new scheme and retirees will continue to enjoy the previous system of free medical care. The new urban employees' medical insurance will eventually be standardized at city and county levels, although no specific date for this step has been fixed (Jin Ma, 2000).

Other voluntary health insurance programmes in China include:

- health insurance for students in primary and secondary school, and in higher education mostly in urban areas; and
- 'systematic health insurance' for preventive and primary care services.

Table 3. Health insurance structure in 1998 (%)

Item	Total	Urban areas	Rural areas
Government Health Insurance Scheme	4.95	16.01	1.16
Labour Health Insurance	6.22	22.91	0.51
Dependent Health Insurance	1.62	5.78	0.20
Medical Insurance	1.88	3.27	1.41
Social Health Insurance	0.39	1.42	0.05
Cooperative Medical System	5.54	2.74	6.50
Self-payment	76.40	44.13	87.44
Others	2.98	3.73	2.73

2.3.2 Expenditure patterns

According to a National Health Accounts Study in 1993, governmental spending (excluding the Government Health Insurance scheme (GHI)) included: 28% for hospital inpatient and outpatient care; 21% for construction; 28% for preventive care, primary care, and family planning; and 23% for all other services.

As with many other health services, preventive programmes have been under pressure to raise more of their own revenues through user fees. Some LTC services are covered in part by the national budget or through medical insurance. Much of long-term care is paid out-of-pocket in both cities and rural areas.

About half of all health expenditure goes towards pharmaceuticals (85% of all sales take place in hospital inpatient or outpatient services) and is paid primarily out-of-pocket unless the patient has insurance coverage. This high level of expenditure on drugs has been associated with the inappropriate use of drugs attributed to the incentive to overprescribe (or prescribe more expensive) drugs – the sale of which is a major component of income in health facilities and for health workers. Overall governmental allocation of funds to the health sector in the 1990's is shown below (Table 4).

Table 4. Government allocation of funds to the health sector

Year	Allocation of funds to health sector (Billion yuans)	State expenditure (Billion yuans)	As % of State expenditure
1991–1995	61.982	2 610.702	2.37
1994	14.697	579.260	2.54
1995	16.326	682.372	2.39
1996	18.757	793.755	2.36
1997	20.920	923.356	2.27
1998	28.280	1 079.818	2.62

It is important to note that health care consumption is mainly in urban areas and the ratio of health care costs per capita in urban areas over that in rural areas was 3.51:1. In 1999, the average health care cost per capita in urban areas was 245.59 yuans, while it was only 70.02 yuans in rural areas. The average health care cost per capita in urban areas and in rural areas accounted for 5.32% and 4.44%, respectively, of the average individual living expenditures (see Table 5).

Table 5. Annual health care cost per capita in urban/rural areas

Expenditures	1985 Urban	1990 Urban/ Rural	1995 Urban/ Rural	1999 Urban/ Rural
Annual health care cost per capita	16.71	25.67/ 19.02	110.11/ 42.48	245.59/ 70.02
Annual living expenditures for consumption	673.201	278.89/ 584.63	3537.57/ 1310.36	4615.91/ 1577.42
Health care cost/ living expenditures for consumption (%)	2.48	2.01/ 3.25	3.11/ 3.24	5.32/ 4.44

2.4 Services delivery system

2.4.1 Health care delivery

By the end of 2000, there were 325 000 health care institutions in China (including clinics), with a total of 3.18 million beds, 2.21 million of which were in hospitals and health care centres, and 4.49 million health workers, including 2.08 million doctors in hospitals and health care centres, and 1.27 million senior and junior nurses. China also had 5441 anti-epidemic and disease prevention stations employing 211 000 health workers, and 2598 maternal and child health care institutions employing 75 000 health workers.

There were 49 000 health care institutions at township level in rural areas, with 735 000 beds and 1.03 million health workers. Rural villages with health care posts made up 89.8% of all villages in China, employing 1.32 million rural doctors and health workers. It is important to note that traditional Chinese medicine is integrated into health care delivery at all levels, including primary care.

2.4.2 Three tiers of health services

Health services in China are divided into three tiers. Third tier services are provided by provincial or municipal/city level hospitals. In these hospitals, emergency care, outpatient, and inpatient services are provided to patients with more complex illnesses. Generally, the physicians in these facilities are specialists. Most of the hospitals are general hospitals, but there are also those that provide specialized care, such as mental health, maternal and child health, paediatrics and oral or thoracic surgical care. Almost all of these hospitals are teaching hospitals.

The secondary tier of health services is provided by mainly district level hospitals and clinics in urban areas or county level facilities. These facilities also provide emergency, outpatient, and inpatient care. However the quality and quantity of health services provided are not of the same level as those provided by the third tier. There are also some secondary tier facilities that provide primary preventive care, mental health care, maternal and child health care, oral care or geriatric care. In some areas, the second tier will merge into either the first or third tier facilities.

Primary health services are provided mainly by community health centres (and some health posts), township health centres, or village health posts with rural doctors. In these facilities, health services include ambulatory care, home bed care, home visits, health examinations, health consultations, health education, maternal and child health care, elder care, chronic disease care, mental health, injections, and other types of care. According to a survey conducted in Beijing's three community health centres, the top high-volume primary care services were ambulatory care, child care, and injections (Xiuyun Wu, Manchun Li & Zhenglai Wu, 2000).

The referral system between the three tiers is not enforced and has weakened with increased public awareness of their right of choice in medical care. This has led to high occupancy levels in tertiary care hospitals along with low occupancy levels in secondary hospitals and township health centres.

Traditional Chinese medicine is integrated into health care delivery at all levels, including primary care. China has hundreds of pharmaceutical manufacturers of both Western and traditional Chinese medicine, and relies minimally on imported drugs. It also has a very well developed system of drug distribution.

As in other industries in the country, formerly State-owned drug manufacturers and distributors now operate independently, resulting in increased competition in the drug market. Many people now purchase drugs without seeing a health professional at all, although most drugs are distributed by health facilites, pharmacies, or private physician practices.

The data on health expenditure by category mentioned previously indicates that about half of all health spending goes towards pharmaceuticals, with 85% of all sales occurring in hospital inpatient or outpatient settings. This high level of spending on drugs has been associated with the inappropriate use of drugs by some purchasers.

Health facilities and health workers have an incentive to over-prescribe or prescribe more expensive drugs, since they obtain much of their income from this source. Medical supplies can be bought in all drug stores and some supermarkets.

Three vertical public health services operate within the 'three-tier' health care system. The Epidemic Prevention Service (EPS) and the Maternal and Child Health Programme (MCH) are both under the administration of the MOH, and the Family Planning and Reproductive Health Programme, under the Family Planning Commission. At the provincial, city and county level, EPS operates epidemic prevention stations/CDC.

In rural areas, there are problems of access to medical services, especially since the decline of the collective pooling system (RCMS) and the widening gaps between urban and rural areas. Moreover, the ratio of doctors, nurses, and other health professionals is much higher in urban areas than in rural areas, and the more educated professionals tend to practice in urban areas.

Table 6. Demands for medical care

Survey instrument	Year 1993 Total/ Urban/ Rural	Year 1998 Total/ Urban/ Rural
Visits per 1000 inhabitants (in the preceding 2 weeks)	169.5/ 198.8/ 159.7	163.9/ 161.9/ 164.6
Self-treatment patients per 100 patients	– – –	28.5/ 43.6/ 21.5
Non-visits per 100 patients (in preceding 2 weeks)	36.4/ 42.4/ 33.7	38.5/ 49.9/ 33.2
Hospitalizations per 1000 inhabitants per year	35.6/ 50.4/ 30.6	35.4/ 48.3/ 31.0

The total number of hospital beds in China rose from 2.6 million in 1990 to 3.18 million in 2000 and the number of hospital beds per 1000 population also rose from 2.30 in 1990 to 2.39 in 1999. Yet, the utilization rate of beds declined significantly from 80.9% in 1990 to 59.8% in 1999, suggesting that the increased supply of beds led to more inefficiency (see Table 7) .

Table 7. Utilization of hospital beds at and above county level

Year	1990	1995	1999
Hospital beds (million)	1.85	2.05	2.14
Turnover of beds (time)	17.6	15.5	16.3
Average LOS (days)	15.9	14.7	12.6
Utilization rate of beds (%)	80.9	66.9	59.8

2.4.3 Social services

Social welfare work continues to develop. There were 1.12 million beds in social welfare institutions of various types in China in 2000, with 843 000 residents. Some 201 000 community service facilities were established in urban areas, including 8 101 community service centres.

A minimum life guarantee system had been established in all cities and towns; about 7.01 million urban and rural residents received minimum life guarantee relief. The rural social security service network has been improved and now covers 18 855 towns, which accounts for 43.3% of the total towns. In 2000, 6.89 billion yuan worth of social-welfare lottery tickets were issued, raising 1.43 billion yuan worth of social funds, and donations from society reached 3.27 billion yuan.

In general, it can be said that the living standards of urban and rural households have continued to improve. With the acceleration of economic growth, the 'three security system' (basic living expenses for urban laid-off workers, the unemployment insurance system, and the minimum living expense assurance system in urban areas) have been further consolidated and improved.

2.4.4 Auspices of health service providers

Service providers in the health care delivery system in China fall under the following auspices:

- Government (central, provincial and county);
- State-owned enterprises, which are quasi-governmental entities with substantial autonomy (SOES);
- collective economy organizations (NGOs) including township health centres and village health posts in rural areas, and health community centres in urban areas; and
- private-for-profit entities including individual providers and an increasing number of hospitals.

While the central government has established policies governing the financing and operation of all four types of auspices, it grants considerable autonomy to the latter three to raise funds and manage their own operations, in line with market-oriented reforms in the general economy. Even its own facilities are expected to raise a substantial portion of their own revenues (WHO & Jianping Hu, 1999).

The central government, in fact, owns and operates relatively few health facilities. For example in 1996, the MOH ran 62 hospitals, 8% of which were at and above the county level. Those owned by provinces, counties and townships have considerable authority over budgets, investment and fee collection, but not staffing.

The 1980s and 1990s saw the adoption of several key pieces of health legislation. One of the most important, which significantly influenced China's health system, was the State Council approval of the "Report on the Permission of Private Medical Practices" submitted by the MOH in 1980. In essence, it made private practice of medicine legal again.

Over the next 10 years, the percentage of village cooperative medical systems arranged through private practice increased from less than 5% to nearly 50%. By 1999, there were 163 private hospitals, an increase of 33% compared with 1995 (WHO & Jianping Hu, 1999). It was also estimated that 169 839 health practitioners worked in private practice. In Shanghai in 1999, there were 25 joint venture (Chinese–foreigner) partnership medical facilities, of which five were general hospitals, seven were hospitals with some specialty, five were multi-specialty clinics, and eight were speciality outpatient clinics. Of these 25 facilities, 15 (60%) were tertiary level and 10 (40%) were secondary level (We Zang, 2000).

2.5 Human resources and training

Since 1949 China has seen a considerable increase in the number of its health care workers. Health personnel include doctors of traditional Chinese medicine, doctors of western medicine, senior nurses, pharmacists, laboratory technicians, other technicians, paramedics of Chinese medicine, paramedics of western medicine, junior nurses, midwives, junior pharmacists, junior laboratory technicians, other junior technicians, other doctors of Chinese medicine, assistant nurses, assistant laboratory technicians, and other junior medical technical personnel.

The staff in health centres of urban areas includes doctors, nurses, officials and others. In general there are 50–100 staff members. The staff in village health posts includes a village doctor and one or two nurses.

Some posts have only one village doctor. Most provide acute medical care, and public health nurses are responsible for preventive services. There is great variation in the length and type of education received by doctors, nurses and other heath professionals (see Table 9).

More than half of all health professionals and workers in China are employed by the Government – the MOH or its provincial health bureaux, and 25% are employees of the State-operated enterprises (SOES). While there are not many private health care providers in China, the number is increasing.

Reasons for this increase may be:

- medical education reform, which creates incentives for private-paying medical students to seek private practice following graduation;
- development of a multi-ownership market, in which publicly-owned hospitals are transformed into joint-stock or partnership models.

Under joint-stock arrangements, private financing is obtained (commonly from hospital staff, but sometimes from other stockholders if publicly offered). Partnership models have also been developed with financing from foreign sources (WHO & Jianping Hu, 1999). By 1999, there were 63 private hospitals, an increase of 33% compared with 1995. Also it was estimated that 169 839 health practitioners work in private practice (WHO & Jianping Hu, 1999).

2.5.1 Doctors

In 1999, there were 1.67 doctors per 1000 inhabitants, including practitioners of Chinese medicine (see Table 8). In fact, about 20% of all doctors are practitioners of traditional Chinese medicine (TCM), both in general medical practices where they work side by side with western-trained professionals and in separate TCM institutions.

There is a much higher ratio of doctors in urban than in rural areas. As elsewhere, health professionals with more education and skills tend not to practise in rural and poorer areas since they can be better paid in health institutions in urban areas.

In 1999, there were 1.01 million village doctors and 315 000 health aides nationwide. On average, there were 1.82 village doctors or health aides per village. Seventy percent of village doctors have received formal middle-level medical education (Chang Min Li, 2001).

These village doctors and health aides play a key role in the rural health care delivery system, providing 'first-contact' care and referring residents to higher levels of health care if necessary. Aside from the care provided in health facilities, doctors also offer care in the homes of the disabled through a special 'home bed programme'.

Table 8. National hospital beds and health professionals per 1000 inhabitants

Items	1949	1957	1965	1975	1985	1990	1995	1999
Hospital beds	0.15	0.46	1.06	1.74	2.14	2.32	2.39	2.39
City	0.63	2.08	3.78	4.61	4.54	4.18	3.50	3.49
Country	0.05	0.14	0.51	1.23	1.53	1.55	1.59	1.52
Health professionals	0.93	1.61	2.11	2.24	3.28	3.45	3.59	3.64
City	1.87	3.60	5.37	6.92	7.92	6.59	5.36	5.24
Country	0.73	1.22	1.46	1.41	2.09	2.15	2.32	2.38
Doctors	0.67	0.84	1.05	0.95	1.36	1.56	1.62	1.67
City	0.70	1.30	2.22	2.66	3.35	2.95	2.39	2.33
Country	0.66	0.76	0.82	0.65	0.85	0.98	1.07	1.14
Nurses	0.06	0.20	0.32	0.41	0.61	0.86	0.95	1.02
City	0.25	0.94	1.45	1.74	1.85	1.91	1.59	1.64
Country	0.02	0.05	0.10	0.18	0.30	0.43	0.49	0.52

China does not currently have a shortage of officially classified 'doctors'. However, there is great variation in the length and type of training that they receive (see Table 9). Physicians practising medicine in China are required to have a medical licence whether they work in a hospital, clinic, community/township health centre, or public health facility.

Generally, after graduation from medical school (5–6 years) or medical college (3 years), one can work in a health care setting as a physician with a licence. A physician in private practice must have a licence from a Government Health Bureau.

Today, medical education in China is much closer to the international standard in terms of medical education, graduate medical education, and continuing medical education. Licensing and certification is becoming more and more formal.

In 1998, the Standing Committee of the National People's Congress passed a new 'Physicians Law' with the following key elements:

- a new licensing system for physicians based on examinations, which will also help monitor private practices; and
- the designation of 'titled doctor' reserved for those who complete three or more years of training at a medical university or college; paramedics of Chinese medicine or western medicine (or assistant doctors) will not be allowed to become 'titled doctors' through seniority, as was the case in the past.

Table 9. General education requirements for health professionals

Category	Type of health professional	Type of education and training	Length of time
I	Doctors of traditional Chinese medicine; doctors of western medicine; senior nurses; pharmacists; laboratory technicians;and other technicians.	Higher education (medical or nonmedical) in a University or College.	At or above three years (usually four to five years).
II	Paramedics of Chinese medicine; paramedics of western medicine; junior nurses; midwives; junior pharmacists; junior laboratory technicians;and other junior technicians.	Middle medical education in a middle hygiene school, a middle nursing school, a middle pharmacy school or other middle school.	Three to four years.
III	Other doctors of Chinese medicine; assistant nurses; assistant laboratory technicians;and other junior medical technical personnel.	Training in hospitals, clinics or middle medical school.	Three months to one year.

2.5.2 Nurses

There are 1.02 nurses per 1000 inhabitants. This rate is much higher in urban than in rural areas. Levels of nurses include: senior nurses (4–5 years of training at a university or college); junior nurses (3–4 years at a middle nursing school); assistant nurses (3 months to a year training in hospitals, clinics, or middle school).

In addition to providing care in health facilities, nurses also offer care in the homes of the disabled through a special 'home bed programmme'.

2.5.3 Social workers

'Social workers' in China are nonprofessionals. Some social workers are employed by family members to provide assistance to the disabled, and others are volunteers organized by the community.

2.5.4 Traditional healers

As mentioned earlier, traditional Chinese medicine is integrated into the health system at all levels. 20% of doctors practise traditional Chinese medicine, and there are also other lower levels of doctors of traditional Chinese medicine who trained for a period of 3 months to one year in a hospital or clinic.

2.5.5 Paraprofessionals

Nonprofessional home care workers are usually privately hired by families through a personnel exchange service centre. For these workers, the educational requirements are not strict and depend on the family's preferences.

2.5.6 Volunteers

At the community level, volunteers are organized to provide services to the elderly and the disabled. In Shanghai for example, there are 3000 teams totalling one million volunteers working in the communities to help improve the quality of life of the elderly and disabled. These teams provide services such as food, escort services to hospital, and shopping.

3 Summary of LTC provision

The Chinese central government is in charge of establishing policy and regulations of LTC services, including financing of services, educational requirements for LTC staff, etc. Local governments are responsible for the administration of LTC facilities based on the policy and regulations issued by the central government. With the supervision of the central government, they may shape LTC services according to local needs and economic levels.

Enterprise-run and private LTC facilities play an important role in sharing the burden of the Government to provide care. Moreover, the increasing needs of the disabled may be better met with multiple parties involved in service provision. Nongovernmental organizations, such as the Association of the Disabled and volunteer teams in the community, also help to improve the quality of LTC services.

The social welfare and medical care systems collaborate to provide LTC services, each with its own focus, and these services are integrated into the general health and social systems to different extents. LTC facilities run by the social welfare system are financially integrated into the national budget, and the government allocates a certain amount of funds to support them. The LTC services offered by the medical care system may be integrated structurally or functionally.

Taking the ‘home bed medical service’ as an example, costs are covered by medical insurance in some cities and paid out-of-pocket in others. The central government encourages non-governmental organizations to set up social welfare services for the elderly, and has established policies for their benefit.

As mentioned previously, LTC expenses are covered in part by the national budget, and the rest is paid through medical insurance, retirement income, or family support. To help patients with serious diseases pay for costly medical expenses, various forms of supplementary medical security have emerged and commercial medical insurance and social donations have been developing.

3.1 Shanghai City

Shanghai City was chosen as the specific locality to illustrate LTC services in China. However, its services, while reflective of many urban areas, should not be considered to be representative of all areas in China. In 1979, Shanghai became the first city of an ageing society in China, with 1.15 million people aged above 60, accounting for 10.2% of the city's population.

By the end of 2000, there were 2.418 million people aged above 60, accounting for 18.3% of the total population of 13.216 million. In rural areas in and near Shanghai, the population aged above 60 exceeded 15% of the total in 2000. Among the yearly increase in numbers of this ageing population, two-thirds are aged above 80.

As female elderly have more years of life expectancy (80.8 years) than males (76.4 years), the proportion of elderly females is higher, representing 55% of the population aged above 60, 63% of that aged above 80, and 86% of that aged above 100.

A population survey conducted by the Shanghai Municipal Health Bureau in 1995 showed that 74% of those over age 60 suffered from various chronic diseases. A study of physical and mental disability among 3745 persons aged 65 and older in Shanghai indicated that the prevalence of disability (the definition refers to the inability to perform independently at least one of the following five activities – eating, dressing, transferring, using the toilet, and bathing) was 8.3% (Zhang, 2001).

3.1.1 Home care (home health, personal care, home-making, family education and training)

Because of China's traditional respect for the elderly and economic inability to provide strictly professional services for them, LTC services are mainly undertaken by the disabled person's family at home. According to a comprehensive survey in 1998, elderly individuals prefer to depend on their own family members whenever possible. Their second choice is to employ a carer. Only 5.6% of people choose supportive nursing care facilities.

In Shanghai, over 90% of dementia sufferers are cared for by their family at home. As family size becomes smaller, however, every couple must provide home care for an increasing number of elderly dependents – a task that is beyond their ability. The Government has developed a community-based social service system to take care of the elderly. With the emphasis on community-based health services, home care systems have been established to offer home-based LTC.

Home-based care is still the main LTC service provided in China, although again it is worthwhile to remind the reader that service provision varies between urban and rural areas and among different Government districts. The disabled being cared for at home may receive services from paid staff in addition to family caregivers. Such paid staff may include doctors and nurses from community health service centres (formerly community hospitals) and home care workers.

The typical service provided by the community health service centre is the 'home- bed medical service', which is defined as an inpatient service provided at patients' homes. Home-bed doctors provide in-home examinations and written prescriptions. Acupuncture and other rehabilitation services can be prescribed as well.

'Home-bed' nurses are in charge of basic nursing tasks such as injections. Educational requirements for 'home-bed' doctors and nurses are the same as national regulations for medical staff. The Government has drafted a series of criteria to qualify individuals to receive the 'home-bed medical service' (it is intended for those who are permanently homebound due to physical or mental disability, and is available for younger as well as older disabled individuals).

The local community health service centre determines whether the condition of the patient warrants such service. An ideal, but not yet available, 'home- bed medical service' would include medical care, rehabilitation and psychiatric consultation.

Financial support for home care services differs by city. In Shanghai, the home-bed fee is included in the medical insurance coverage, which may cover family members through supplemental insurance packages. In some cases, NGOs may also provide funding for the service. Those who hire home care workers for assistance with daily living usually pay out-of-pocket.

Home care workers mainly provide the disabled with assistance with daily living and are usually hired by the family with private funds through a personnel exchange service centre. For these workers, the educational requirements are not very strict and depend on the preferences of the family. In addition alarm systems ('bells for help') are installed in the homes of single old people in Shanghai, and there are teams of volunteers who provide assistance to the disabled within Shanghai.

As noted above, the family provides the vast majority of care for the disabled. Family members provide assistance with activities and are the link to doctors and specialists. To date, there are no formal education/training programmes for family caregivers, but in Shanghai they may seek help through consultant hotlines or professional lectures.

3.1.2 Other services in the community

At the community level, volunteers are organized for service to the elderly and the disabled. In Shanghai, as mentioned, there are 3000 teams comprising one million volunteers working in the communities to help improve quality of life for disabled individuals.

The development of many community services in China is still in its infancy. At present, day care services for the disabled are provided in many communities. These day care services fall under the responsibility of the social system and are provided by the Government (residential care services) and for-profit companies.

Payment for these services comes largely from private, out-of-pocket expenditure, although some Government money is available. Eligibility for Government money is determined by the level of family care available to the individual in need. Transportation to and from these service providers is the responsibility of the family.

'Meals on wheels' is a second programme provided in the community. This programme falls under the responsibility of the social system and is paid for by a combination of public and private funds. Similar to the day care services, access to Government money is determined by the level of family care available to the individual in need. Governmental and for-profit providers supply the 'meals on wheels' programme.

In general, it can be said that, in Shanghai, community services including hostels, welfare houses, rehabilitation houses, nursing homes, day care centres, and entertainment activity centres are being gradually popularized. 'Bells for help', as mentioned previously, are installed for single old people. Care teams are set up for the poor elderly to provide services such as providing food, escorting people to the hospital, shopping and prescription dispensing, etc. It has been said that elderly people can "have minor obstacles handled within the house, common services offered by the neighbourhood and big difficulties resolved within the community".

The Ministry of Civil Affairs announced on 8 June, 2001 that the 'Starlight Plan' for community elderly welfare services will address the challenge of an ageing society. The tasks of the Plan are that departments of Civil Affairs at the central and local government level will support the building of elderly welfare facilities and activity places in the communities in urban areas and the building of township elderly houses in rural areas in the next three years (Ministry of Civil Affairs, 2001). This will have a great influence on the whole elderly care system in China.

3.1.3 Institutional care

Currently, there are two interconnected networks that together provide institutional care: the social welfare system, which operates senior citizen housing facilities and some psychiatric service centres; and the medical care system, which manages nursing homes, geriatric hospitals, and rehabilitation wards in general and psychiatric hospitals.

The social welfare system manages the State-owned senior citizen housing complexes at various local levels. These facilities guarantee free LTC to those who are in need and cannot afford it. Their cost depends on the financial support of the Government. The senior citizen housing complexes also accept disabled elderly who can pay in 1998 out-of-pocket.

In recent years, some enterprise-run and private senior citizen complexes have been set up to supplement the public facilities. Although these facilities charge the residents, they are basically non-profit, and their income must be invested in the maintenance of the facilities. The staff of such facilities must be licensed and provide care according to their skill level and experience.

In the medical care setting, nursing homes, geriatric hospitals and rehabilitation wards in general hospitals constitute the LTC service system. Professional and specialized LTC services for the disabled are provided in these facilities, and costs are covered to varying degrees by medical insurance. By the end of 1999, there were 47 nursing homes with 3900 beds in Shanghai alone.

These nursing homes are run by the Government and NGOs (principally the Government), and the staff in these facilities includes doctors and nurses with professional training. In a survey of 22 of these nursing homes in 1998, there were 1262 health workers (57 health workers per nursing home on average) (Xiongxiong Chen, Fei Yab & Yue Li, 2000). Adding four geriatric hospitals to the 47 nursing homes and 18 000 home beds (‘home-bed medical service’ mentioned above) in communities, about 40 000 to 45 000 elderly people with diseases are treated in these locations.

For the mentally disabled, psychiatric services are offered by the social welfare service or by psychiatric hospitals. The Government will pay for the cost of care for those who are unable to afford it. Otherwise, costs are covered by medical insurance to varying degrees. In some areas there is little palliative and terminal care.

4 General questions pertinent to LTC development

4.1 Present and future needs for long-term care and gaps between needs and provision of services

In keeping with traditional Chinese values, in the past younger family members had always cared for the elderly. As Table 10 below demonstrates, daughters and spouses still provide the majority of 'daily life' and 'illness care' for the elderly.

Unfortunately, the one-child policy means that, in the future, fewer younger family members will be available to care for their older family members (Keqin Rao, Li Yi & Yuan Liu, 2000). Furthermore, the growth of the elderly population in China has outpaced the present rate of economic development. With such a low GDP per capita, it is difficult for individuals and families to cope financially with caretaking issues. Moreover, the social security system in China is not well developed. With the development of the economic and social system, the system of family care will be weakened further. This challenge to the health care system must be addressed.

Table 10. Availability of caregivers for the elderly (%, n=502)

Caregivers	Daily life care	Illness care	Chatting
Daughter	88.8	88.2	48.6
Spouse	71.9	74.3	65.3
Old friend	17.1	11.8	36.9
Neighbour	13.1	3.8	11.6
Relative	12.9	7.4	5.4
Working unit	8.2	3.2	2.0
Neighbourhood committee	1.8	0.4	0.2
Paid caregiver	1.2	1.4	0.8
Community service	0.6	0.2	–
Social Welfare facility	0.4	0.4	–
Volunteer	0.2	0.2	0.2

Between 60% and 80% of the elderly have noncommunicable chronic diseases. In 1999, the five leading causes of death in semi-urban areas were malignant tumours, cerebrovascular diseases, heart troubles, respiratory diseases, and trauma and toxicosis.

Among these diseases, the first three account for 62.34% of all causes of death. The five leading causes of death in partial rural areas were respiratory diseases, malignant tumours, cerebrovascular diseases, heart troubles, and trauma and poisoning. The first three account for 58.84% of the total causes. In 1998, a national household survey showed that the majority of the disabled are elderly (over 65 years old) and make up 60% of the total disabled population. In one survey in Wuhan, 10.7% of the elderly (about 97 000 individuals) were ill and dependent on others for daily living.

Tables 11 and 12 indicate the health care needs of the elderly. Table 13 shows financial loss to individuals due to disability and premature death (Keqin Rao, Li Yi & Yuan Liu, 2000).

Table 11. Forecast of the GDP, ageing population, and disease prevalence

Year	GDP (billion yuans)	60+ years (%)	Illness prevalence in preceding two weeks (%)	Chronic disease prevalence (%)	Prevalence of major diseases (in 10 000s)				
					Athletic diseases	Chronic bronchitis	Diabetes	Cancer	Circulation
1990	18 54.5	8.52	140.82	114.72	3307	187	267	1115	2075
1995	57 49.5	9.39	143.10	122.51	3766	212	304	1267	2358
2000	90 16.0	10.20	147.25	132.32	4327	242	348	1447	2707
2005	12 943.6	10.91	151.15	142.20	4952	272	400	1642	3065
2010	18 582.2	12.34	156.00	154.45	5744	304	471	1878	3473
2015	26 677.1	14.89	161.36	166.78	6553	336	542	2127	3880
Rate of increase (%)	1.96	0.46	0.10	0.26	0.51	0.39	0.56	0.47	0.43

Table 12. Medical care needs (survey results in 1993 & 1998)

Survey Items	1993 Total/ Urban/ Rural	1998 Total/ Urban/ Rural
Illness prevalence in preceding 2 weeks (%)	140.1/ I75.2/ 128.2	149.8/ 187.2/ 137.1
Chronic disease prevalence (%)		
By individual	124.1/ 192.7/ 102.0	128.2/ 200.9/ 103.6
By case	155.0/ 270.0/ 116.0	157.5/ 273.3/ 118.4
Prevalence of disability (%)	– – –	33.9/ 42.0/ 31.1
Prevalence of handicapped (%)	– – –	12.5/ 16.8/ 11.0

Table 13. Financial loss due to disability, handicap, and premature death (calculated according to 1993 prices)

Annual financial loss due to disease (billion yuans)	1993	1998	Rate of increase (%)
Sick leave	561	756	34.75
Premature death	1206	1273	5.60
Disability	1060	1119	5.57
Total	2761	3148	14.00
% of GDP	8.0	8.2	–

The need for LTC services outside the home is growing rapidly and health care facilities, specifically for long term care services, are limited. While such services as home beds, home visits, emergency calls, hotlines, BP calls, nursing homes, day care centres, elderly apartments, elderly houses, and rehabilitation hospitals exist, they are few in number.

One survey of nursing homes in Shanghai in 1997 and 1998 shows an occupancy rate of more than 100% (see Table 14) (Fei Yan, Yue Li & Youlong Gong, 2000). The greatest need for development are for day care centres, elderly apartments, elderly houses, and nursing homes.

Furthermore, there is a need for the development of urban community health care that will offer an alternative to the inappropriate use of tertiary hospitals providing preventive and primary care. Preventive services are more difficult to finance from user fees and therefore have declined. They are currently under pressure to raise their own revenues.

Table 14. Nursing home occupancy in Shanghai

Index	*1996*	*1997*	*Jan-June 1998*
Occupancy (%)	84.7	103.6	113.2
Duration (days)	108.5	110.5	22.7
Bed turnover	2.4	2.5	1.4

4.1.1 Major education and training needs for long-term care provision

In order to develop community health care for the elderly, doctors and nurses working in community health centres should be trained in general medicine, rehabilitation and community nursing respectively, focusing on elderly care. For medical students, general medicine, rehabilitation, and community care should be included in the core curriculum.

4.2 What resources (structures, manpower, organizations) at the national and local levels may be utilized to promote LTC provision?

The programme for medical home care ('home beds'), which includes the provision of care by doctors and nurses in homes, is integrated into primary care and is covered by social insurance in some cities such as Shanghai. Elsewhere, payment is out-of-pocket. With governmental emphasis on these types of community-based health services, home care and community-based systems will hopefully continue to develop.

4.3 Developments in LTC

Long-term care has existed in China for a long time, but rapid development has occurred in recent years. The authors believe that long-term care in China will develop at a speed higher than at any other time in the next 10–20 years. By the year 2020, the long-term care system will become more adapted to meet society's needs.

Overall reforms in health care in recent years have, in addition to benefitting the general public, also helped to improve the life of the elderly in China. Such reforms have followed three major trends:

- revival of community financing schemes in rural areas, to alleviate problems of financial access to care and to encourage primary care delivery in villages and townships;
- encouragement of private sector investments in health care; and
- efforts to contain the costs of health insurance coverage in the two major insurance programmes, Government Health Insurance Scheme (GHI) and the Labour Health Insurance (LHI) Scheme.

The first reform mentioned above targets the vast majority of people who reside in rural areas. The other two reforms are directed at the urban population that comprises the majority of health expenditures.

Furthermore, the growing economy and reform of the economic system have laid a favourable economic foundation for the development of health and social welfare. In order to focus more attention on the health status and quality of life of senior citizens and keep pace with health care needs, the municipal government has been stepping up its support in areas of institutional structure, laws, and policies, financial investment, infrastructure construction, and technical services.

One important strategy in the effort to adapt to the health needs of the community, is to promote the delivery of high-quality health care through a community-based health services approach. In the past few years, the community health service – promoted as one of the priority projects – has made steady progress.

Community health service centres and community-based comprehensive health service posts have been set up to offer an integrated comprehensive health service and most importantly to guarantee the elderly access to basic health care. In the future, community-based facilities will be the main provider of long-term care services. With the reform of the health system, it is also expected that NGOs will play a more important role in health care and social services.

Meanwhile, in Shanghai the municipal government has placed the development of health and social care for senior citizens as a priority and has already implemented reforms that benefit the elderly. The medical insurance system covers retirees' expenses for outpatient treatment, emergency services, inpatient care and home beds under the social security system. The system regulates that individuals pay a small percentage (15%) of the medical cost. For elderly persons, the percentage is cut in half.

To help patients with serious diseases to cover high medical expenses, various forms of supplementary medical security have emerged. For example, the General Labour Union offers supplemental insurance for employees and the elderly. Commercial medical insurance and social donations are also organized. Shanghai exemplifies the ageing and health care trends in China.

At present, however, the family continues to provide the majority of care for the elderly and disabled, and is the preferred choice among caregiving options when help is needed. Home care volunteers are not popular in China. Considering the importance of the traditional family in China and the presence of the '4–2–1' family structure, there will be a painful transition from predominantly family care to community care for those needing long-term care. In recent years, central and local governments have become aware of this imminent transition.

As mentioned above, many efforts have been made to reinforce health care facilities based in communities. Physicians and managers in the health care field have also called for the development of community-based care to meet long-term care needs, particularly for the elderly.

However, long-term care services are underused because there is insufficient investment, a shortage of qualified general practitioners and community nurses, a lack of confidence in the quality of the community-based health care, and an inability by many to pay the cost of care. The Government will need to make a significant financial commitment to long-term care provision in order to offset the economic status and needs of the elderly and their families.

In considering the future development of long-term care, the following measures should be taken:

- ***Establishment of a long-term care network***

The central and local government should take a leading role in establishing a long-term care network. This network should combine central and local government efforts; social welfare services, community services and health care services; inpatient care, outpatient care, and home care; and all caregivers' work.

- ***Improvement of the security system for the elderly and the poor***

Improvement of the basic retirement security programme and the minimum living expense assurance system will help the elderly and the poor to live in a better way and to have the financial capabilities to get basic long-term care if they need it.

The social aid system should be built using the community as the base of the communities. Long-term care, including assisred living and medical care, should be mainly provided by community service centres and community health centres.

■ *Development of social and health facilities for long-term care*

Social and health facilities for long-term care should be developed to meet future needs, in which nursing homes, home beds, home care, day care centres, elderly apartments, and elderly houses should be on top of the list. According to the development of the market economy, these social and health facilities for long-term care can be operated by private organizations, collective economy organizations, government organizations and others, but the Government gives some financial subsidies, licenses the facilities, and monitors the quality of care.

■ *Education and training of community health workers and caregivers*

According to the characteristics of long-term care, community health workers and caregivers should be reoriented through education and training programmes. Medical universities or colleges, medical associations, and community health centres can play active roles in transmitting the attitudes, knowledge and skills needed for long-term care. For medical students, education on long-term care should be more heavily emphasized, especially involving skills for rehabilitation.

■ *Evaluation of long-term care services*

Evaluation of long-term care services, including needs assessment, process evaluation, and outcome evaluation, should be made in order to make sure that long-term care services are provided in the right places, with the right contents, the right amounts, and the right qualities, and by the right caregivers. Evaluation can be made by persons from government, social and health care facilities, and by long-term care receivers.

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