Caring More About Quality
— Japan-U.S. Health Care Comparison —

By Nobuo Koinuma

"The longer you live the greater the shame. Better to die at 40 at the latest. . ."

There is more where that came from in *Tsurezuregusa*, written by Kenko Hoshi in the 14th century. But while *Tsurezuregusa* remains one of the classics of Japanese literature, its lessons on old age belong to another time. Today, Japan is the longest-lived country in the world. The nation is on the verge of an era of 80-year life spans in fact as well as name. The coming "era of 80-year-olds" is the result of the unflagging efforts of the Japanese people, and is symbolic of the nation's economic and social development.

Only by taking full advantage of this splendid accomplishment can Japan build a bountiful, vigorous society in the 21st century. It is appropriate, then, to pause now to check the balance sheet of the nation's health and, through comparisons with the United States, get a bird's eye view of the health care infrastructure on which the life of the Japanese people depend.

The graying of Japan

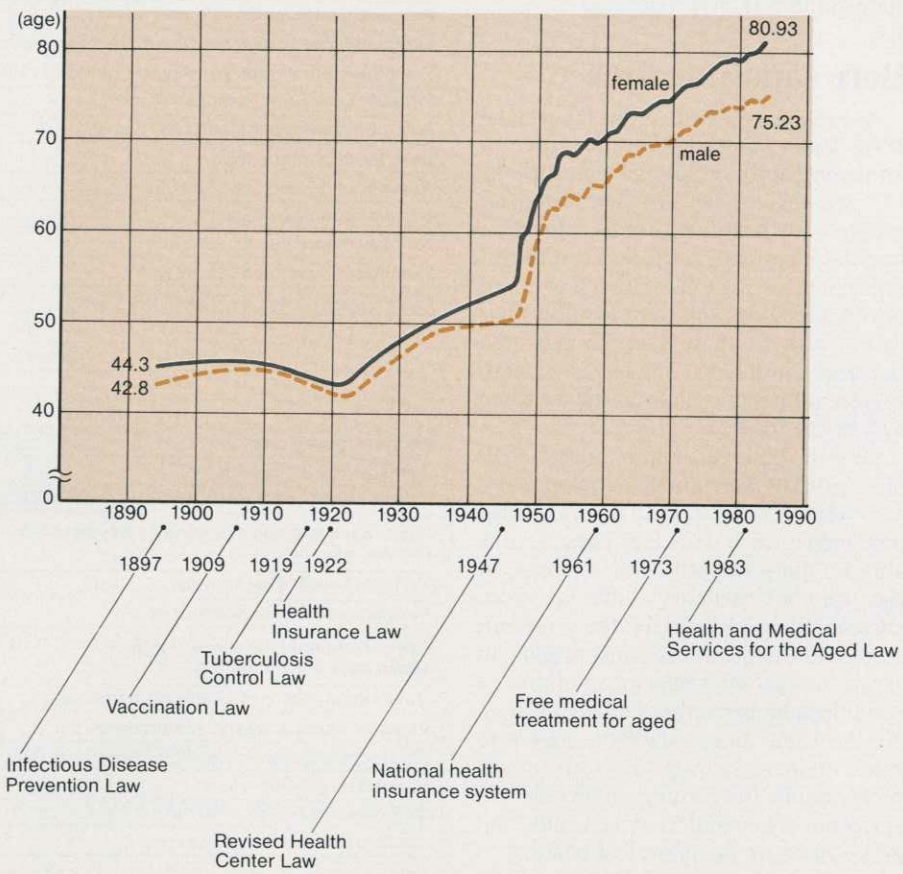
Over the 40 years since the end of World War II, the health of the Japanese people has improved tremendously. In most categories, health levels are in the top class by world standards. Average life expectancy at birth has increased by 50%. In 1986 the average life expectancy for a male Japanese was 75.2 years, and 80.93 years for a female. Japan has become the world's longest-lived nation, moving in less than half a century from an era of 50-year-olds to an era of 80-year-olds (Fig 1). The gap in average life expectancy between the sexes, meanwhile, has widened from 3.4 years in 1950 to 5.7 years in 1986.

At the same time, the age composition of Japan's population has shifted toward the upper end of the scale with a speed unprecedented anywhere else in the world. The number of Japanese aged 65 or over has tripled in just 40 years, while the share of elderly in the total population has doubled. This trend continues today, and it is now forecast that at the start of the 21st century, one in four of all Japanese will be 65 or over, forming an aged society unlike any ever seen before. It is expected to take 70 years for the share of elderly in the population of the United States to rise from 7% to 14%, while in Japan it is expected to be only 25 years.

At the same time, Japan's birth rate has been declining steadily for the past decade. In 1987 there were only 11.2 births per 1,000 population, a record low for Japan, and one of the lowest levels in the world.

There have also been significant changes in the most common illnesses in Japan. Over the past 40 years, the nation has gone from an era when communicable diseases were the cause of 40% of all deaths to an era when 70% of all deaths are due to cancer, heart disease, cerebrovascular disease and other so-called degenerative diseases. However, while the

Fig. 1 Average Life Span in Japan for Past 100 Years



Sources: 1st to 15th Complete Life Tables; Abridged Life Tables 1948–1986

leading causes of death in Japan have drawn closer to the American model, communicable diseases are still relatively higher than in the United States and Europe, and the ratio of degenerative diseases is somewhat lower.

The biggest reason for the relatively high rate of communicable disease is the lack of a complete solution to the problem of tuberculosis, a disease which between 1935–1950 was the leading cause of death in Japan and took so many lives it was dubbed the national disease. In 1985 there were approximately 150,000 active tuberculosis patients in Japan, and the ratio of tuberculosis-related deaths to total population in that year was six times higher than in the United States. Conversely, the ratio of degenerative diseases is low primarily because of the relatively low incidence of heart disease, with a death rate only a third that of the United States (Table 1).

More satisfying lives

According to a 1986 study, an average 287.8 Japanese per 1,000 were suffering from some form of illness when the survey was taken (the survey covered all people with health problems, including hospital inpatients, outpatients, and citizens not receiving treatment but aware of health difficulties sufficient to affect their daily lives). In short, 1 in 3.5 Japanese has health problems. The largest category were outpatients, accounting for some 80% of the total.

Overall, however, approximately half of all patients were under a doctor's care, and were not experiencing any special problems in their daily life. These results afford a glimpse both of the increase in the number patients suffering from chronic ailments, and of the excellent access to medical care institutions in Japan. Longer life spans mean improved conditions for living more satisfying lives. At the same time, however, they also mean an increase in age-related physical problems. In the coming era people will speak not of being in "perfect health," but rather of being in "imperfect health."

In 1986, there were 157 doctors and 1,493 hospital beds per 100,000 popula-

Table 1 **Japan-U.S. Comparison of Medical and Heath Indicators**

	Japan (1986)	U.S. (1985)	U.S./Japan
Area (1,000 square km.)	378	9,373	24.8
Population (million)	121.7	238.8	2.0
Per-capita GDP ($)	16,269	17,180[6]	1.1
Life expectancy (male)	75.2	71.2[4]	0.9
Life expectancy (female)	80.9	78.2[4]	1.0
Ratio of population 65 and over (%)	10.6	12.0	1.1
Birth rate (per 1,000)	11.4	15.7	1.4
Death rate (per 1,000)	6.2	8.7	1.4
Infant mortality rate (per 1,000)	5.2	10.5	2.0
Cancer death rate (per 100,000)	158.5	191.8	1.2
for stomach cancer (male)	51.5[5]	7.4[3]	0.1
for stomach cancer (female)	30.6[5]	4.8[3]	0.2
for lung cancer (male)	35.3[5]	70.7[3]	2.0
for lung cancer (female)	12.7[5]	28.8[3]	2.3
for breast cancer (female)	8.0[5]	31.6[3]	4.0
Heart disease death rate (per 100,000)	117.9	323.5	2.7
Stroke death rate (per 100,000)	106.9	65.3	0.6
Marriage rate (per 1,000)	5.9	10.5[4]	1.8
Divorce rate (per 1,000)	1.4	4.9[4]	3.5
Percentage of smokers (male adults)	62.5	32.6	0.5
Percentage of smokers (female adults)	12.6	27.8	2.2
Fat intake (per capita, per day, in grams) (male)	57[5]	98[1]	–
Fat intake (per capita, per day, in grams) (female)		64[1]	–
Rate of overweight persons (%) (male)	12.8[5]	24.0[1]	1.9
Rate of overweight persons (%) (female)	17.7[5]	26.5[1]	1.5
Number of doctors (total)	191,346	520,700	2.7
Number of doctors (per 100,000)	157	218	1.4
Number of nurses (total)	639,936	1,485,725[4]	2.3
Number of nurses (per 100,000)	526	629[4]	1.2
Number of hospital beds (total)	1,816,194	2,787,524[4]	1.5
" (per 100,000)	1,493	1,179[4]	0.8
" (short-term hospitals)	1,533,887	1,102,166[4]	–
" (long-term hospitals)		216,001[4]	–
" (clinics)	282,307	–	–
" (nursing homes)	–	1,469,357[2]	–
Bed occupancy rate (%)	85.7	69.5[7]	0.8
Average hospitalization (days)	54.0	7.5[7]	0.1
Number of hospitalized patients (per 100,000)	1,118[4]	261	0.2
Ratio of tax and social insurance payments to national income (%)	35.1[5]	36.1[3]	1.0
National health expenditures ($ billion)	67.6[5]	458.2[6]	6.8
Per-capita health expenditures ($)	554[5]	1,837[6]	3.3
Cost of appendicitis surgery with seven days in hospital ($)	1,200	5,500	4.6
Government share of health expenditures (%)	33.4[5]	39.6[6]	1.2
Patients' share of health expenditures (%)	12.0[5]	28.7[6]	2.4
Share of insurance in health expenditures (%)	54.6[5]	31.7[5]	0.6
Population growth rate(%)	0.6[5]	0.9[6]	1.5
GNP growth rate (%)	5.9[5]	5.2[6]	0.9
Health expenditures growth rate (%)	6.1[5]	8.4[6]	1.4

Notes: 1. [1] 1980 [2] 1982 [3] 1983 [4] 1984 [5] 1985 [6] 1986 [7] Short-term hospitals only
2. Conversion rates: ¥239/$ for 1985 and ¥169/$ for 1986
3. Final column indicates U.S. figure as a proportion of that for Japan.
Sources: Ministry of Health and Welfare statistics; Department of Health and Human Services statistics

tion in Japan. Clearly, the nation has met the quantitative side of the demand for health care. In future, the prime issues will be how to maintain appropriate levels of health care (that is, prevent oversupply), and even more importantly, to improve the quality of health care.

The situation as regards the number of doctors is relatively satisfactory. With the start of Japan's national health insurance in 1961, it was widely forecast that there would a rapid increase in demand for doctors. Over the next quarter-century, 17 new medical schools were established (today there are 80 such schools nationwide). These and other measures more than tripled the number of students in medical departments, doubling the number of working doctors in the space of 30 years. Today people are concerned rather about the coming of a doctor glut, as experts predict that the ratio of doctors to the population will double by the early 21st century. Today, lowering the enrollment ceilings at medical schools has become an important policy issue. The situation closely resembles that in the United States, where a serious shortage of doctors in the 1960s led to a doubling of medical department enrollments over the ensuing 20 years, and an overabundance of working doctors today.

Too many beds

The hospital bed situation, too, has improved almost too much for its own good. Over the past 30 years the number of beds has almost tripled, and there is now an oversupply in many regions of the country. This oversupply has become a serious issue, especially in relation to soaring medical costs, health care for the elderly and the problem of extended hospitalization.

Unlike the United States, in Japan there is no specialization of health care facilities into short-term hospitals, long-term hospitals and nursing homes. Rather, with the exception of psychiatric hospitals, both patients suffering from acute diseases and those with chronic diseases are cared for in the same labor intensive facilities. As a result, the average length of stay, 54 days, is as much as seven times longer than in American short-term hospitals. In this way, the emphasis in both health manpower and health facilities is shifting from the previous preoccupation with quantitative expansion to new concerns with qualitative improvement.

What is important now is to efficiently provide quality health care services. The questions of standardizing the contents of and setting quantitative parameters for health care are now the center of attention among professionals in the field.

One of the biggest differences to emerge from a comparison of health care in Japan and the United States is the coexistence of a wide variety of health care systems in America reflecting a basic commitment to freedom in the field. In Japan, in contrast, the historical realities of postwar reconstruction led to the concept of equality in health care, resulting ultimately in the institution of a national health insurance system in 1961.

In the United States, Medicare and Medicaid, launched as public health insurance programs in 1965, cover only some 20% of the population. The main underpinning of health care in the nation is its various private health insurance programs, including Health Maintenance Organizations (HMO).

In Japan, however, a compulsory public health insurance program covers each and every citizen, and the system is in place for all Japanese to get the health care they need whenever and wherever they need it. Private insurance policies in Japan play only a supplemental role, covering the portion of medical expenses not borne by national health, the excess portion of the bill for special hospital rooms and similar outlays.

There are presently three types of public health insurance in Japan: employees' health insurance, created under the Health Insurance Law, covers approximately 60% of the population; community health insurance, created under the National Health Insurance Law, provides medical care for self-employed workers and others, and covers some 30% of the population; the remaining 10% are covered under health care for the elderly, a program made into law by the Health and Medical Services for the Aged Law and targeted in principle on citizens aged 70 or older. The source of funds for these three insurance systems comes approximately two-thirds from insurance fees and one-third from the national coffers, and they are managed either by the government or by their respective health insurance unions.

Picking up the tab

The programs pick up the tab for the bulk of expenses resulting from medical examinations, treatment, nursing, medication, transport and other needs. In the case of employees' health insurance, 90% of medical expenses are covered for the insured person, 70% for dependents and 80% for hospitalization of dependents. Community health insurance covers 70% of the bill across the board, while health care for the aged covers virtually all expenses—the insured person pays only ¥800 a month for outpatient visits and ¥400 a day for hospitalization.

Payments are all made at the health care facility counter. If a patient with employees' health insurance incurs a ¥1,000 health care bill at the clinic, he or she need actually pay only ¥100 at the clinic. However, the insurance does not cover simple health examinations, nor such categories as cosmetic surgery, nonprescribed medicine or glasses. On the other hand, there is a ¥54,000 per month ceiling on the share of legitimate expenses to be paid by the insured; national health insurance picks up any bills exceeding that amount.

Under this comprehensive medical insurance system doctors are guaranteed the freedom to practice, and citizens are also guaranteed the freedom to choose to go to either private practices or national health care facilities for treatment. Medical expenses for both types of facilities are calculated under the fee-for-service system. The health care facility receives direct patient payments for a portion of the cost of medical care. The hospital then prepares a record of claims for medical care costs covering all the examinations, treatments, pharmaceutical costs and other expenses incurred each month (the

cost of respective medical care is fixed periodically by the government), and submits it to the fiscal intermediary. The claims are examined, and payment made to the hospital or clinic.

In addition to the medical insurance system described above, Japan's health care guarantees also include what is called the public expense health care system. Eligible patients receive health care free of charge so long as they meet certain specified conditions. There are three main categories of public expense health care. Some take the form of recompense for service to the state, such as treatment provided to wounded and ailing veterans and to victims of the atomic bombings of Hiroshima and Nagasaki, and patients suffering from any of 30 designated intractable diseases and nine designated chronic childhood illnesses. Other health care has the public welfare in mind, including treatment of tuberculosis patients, mental patients, victims of contagious diseases and venereal diseases, and drug addicts. Lastly, there is treatment of a social welfare nature, including health care for those on public assistance and the physically disabled.

Setting strict standards

A second framework exists in addition to national health insurance for ensuring that health care in Japan serves the public interest. This is the Medical Service Law, which establishes standards for hospitals and clinics. The law contains a number of strict provisions designed to limit the profit-making aspects of health care, including the requirement that hospital managers must themselves be doctors, preventing the distribution of surplus funds in the form of dividends by health care corporations, and banning advertisements listing a doctor's medical background, skills or treatments.

In this regard, Japan is strikingly different from the United States, where the coexistence alongside nonprofit hospitals of such profit-making ventures as hospital chains, HMO, home health care and ambulatory surgery centers has been permitted by law, leading to the formation of a vast medical-industrial complex. It has been pointed out in some quarters that the Medical Service Law has made it very difficult for foreign health care companies to enter the Japanese market. Within Japan, meanwhile, there has been criticism that the requirement that hospital managers be also doctors, while ensuring that medical care is not distorted by economic principles, also prevents the separation of treatment and management, with the result that hospital managers are often lacking in cost-consciousness, and hospital managements in efficiency.

As of the end of 1986, there were approximately 9,700 hospitals in Japan, of which roughly 70% were run either by *iryo-hojin* (medical corporations) or by individual doctors. Hospitals run by the government or other public organizations accounted for a bare 20% of the total. Hospitals run by medical corporations and individuals tend to be smaller, however, with many having only 50–100 beds. Thus, despite their large numbers, these facilities account for only half of the total 1,530,000 hospital beds in Japan.

While the ratio of medical-related income for all hospitals is 7:3 for inpatient and outpatient treatment respectively, in government-run hospitals the ratio rises to 8:2, while in private facilities with 49 beds or less it is 1:1. The biggest expense for general hospitals is personnel expenses, and especially salaries. These account for approximately half of all outlays. Among recent trends in the balance sheets of hospitals and other medical facilities is the rising income from health examinations and comprehensive physicals, and an apparent slowdown in wage escalation.

There are also smaller health care facilities in Japan. In all, there are some 79,000 general practitioner clinics, defined as medical facilities with fewer than 19 beds or no beds at all. Again, there are some 47,000 dental clinics nationwide. Recently, however, young doctors have shown a decided preference for working in large general hospitals, which now employ 60% of all doctors (university-affiliated hospitals alone account for 20% of all doctors). As a result, the average age of doctors at smaller clinics has been rising, and at the end of 1986 stood at 58.5 years.

Hospitals in Japan do not maintain ties with outside clinics, a sharp difference with their "open" counterparts in the United States, where private practitioners can contract to use hospital facilities. There has been little progress in dividing functions and roles between these institutions, with the result that most patients, regardless of the seriousness of their ailment, are increasingly taking themselves off to general hospitals with their superior facilities and abundant manpower (nor are letters of introduction always necessary as they often are at smaller clinics). While this does have the merit of helping guarantee citizens' right of access to the health care institution of their choice, it also means that hospitals which should be providing a higher order of health care instead are diverting much of their energy to meeting primary care needs.

Different for doctors

Another point on which Japan's health care system diverges widely from that in the United States is the lack of a formal system of specialization for doctors. Only very recently have academic associations in most fields of medicine established systems for specialization, and these have yet to win societal recognition. As things stand now, Japan's systems for medical specialization serve as little more than incentives for individual doctors' own lifetime education; specialist practitioners receive no special treatment in fees, and are not even allowed to advertise their specialties. In many cases, doctors opening their own clinics do so only after receiving years of training in one of the specialized medical classrooms in university-affiliated hospitals. Thus they do in fact have specialties of their own, and at the same time function as general practitioners or family physicians.

(This is the first of two articles on Japan's health care system. The second will appear in the May/June issue of the *Journal*.)

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