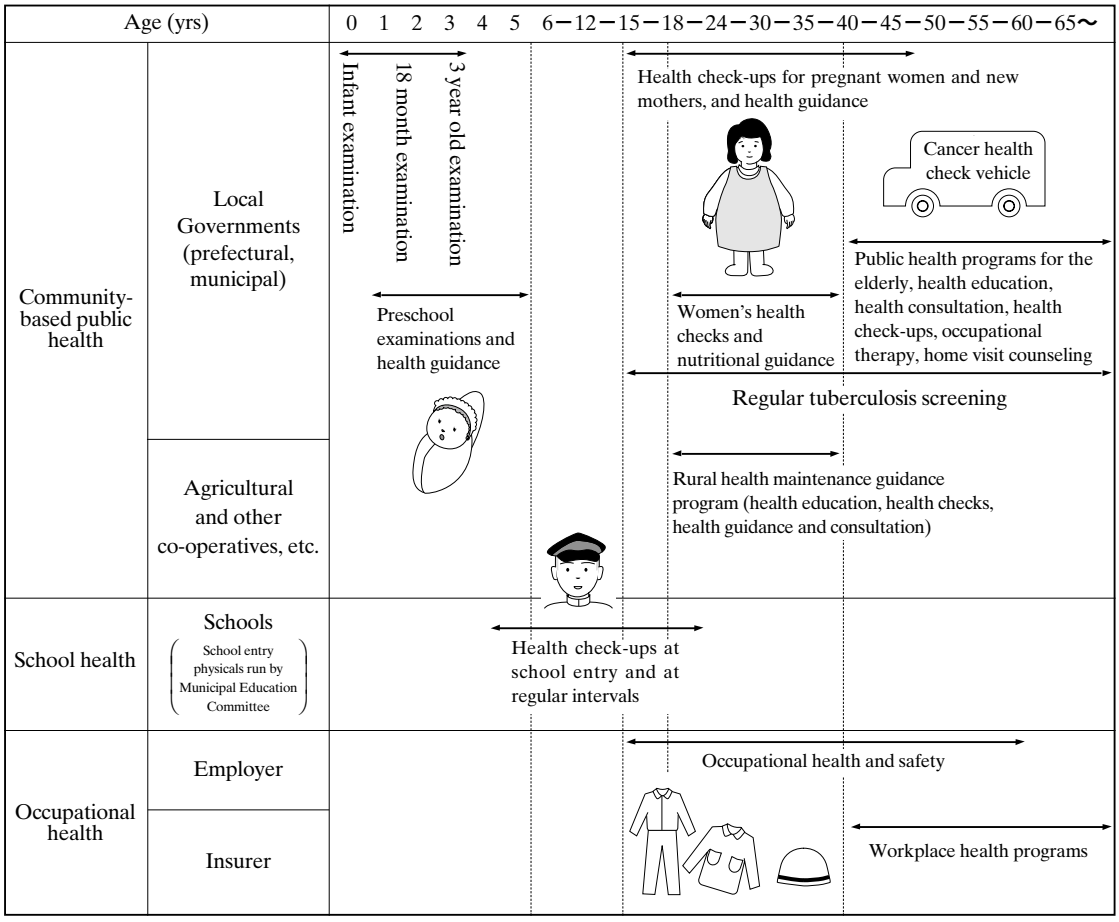
Chapter 2
Present State of Public Health and Medical Services

1. Overview

The Japanese public health and medical system is a comprehensive system that aims to assist people, over the entire lifecycle from birth to death, with all problems that might cause them anxiety, including disease, injury, disability, unemployment, old age and the need for care[1]. Such a system requires the provision of public health and medical services, including prevention, diagnosis, treatment and rehabilitation, within reach of where people live[2].

Lifestyle-related diseases now form a major health challenge in Japan, so the emphasis in prevention has moved from early detection and

Figure 2-1 Health Services in the Life Cycle



Source: Nakamura, Yoshio (1998) p. 92

[1] Ministry of Health and Welfare (1999) *Heisei 11 nen ban Kosei Hakusho* [Annual Report on Health and Welfare 1999], Gyosei. p. 43

[2] Nakamura, Yoshio (1998) *Kosei Gyosei* [Welfare Administration], Gyosei.

treatment of disease of secondary prevention, to prevention of disease and health promotion of primary prevention. As shown in Figure 2-1, the main preventive activities can be divided into school health, upon school entry, occupational health, upon entry into the workforce, and community-based health, providing health education, health checks, and health guidance. School health programs are run by the Ministry of Education, in collaboration with the Ministry of Health, Labour and Welfare.

As a primary prevention program, the Ministry of Health, Labour and Welfare has conducted a "National Health Promotion Movement in the 21st Century (Healthy Japan 21)" since 2000. With the agreement of the entire population, in July 2002 the "Health Promotion Law" was passed, setting the legislative framework for a strong nationwide campaign of disease prevention and health promotion[3].

Medical technologies are advancing in order to provide the accurate diagnosis of diseases and injuries, and allow the appropriate treatment to commence in the shortest possible time.

Due to changes in the pattern of disease resulting from the aging of the population and an increased level of chronic disease, the system of medical service provision, and the way treatment is given will need to be reformed. Initiatives have been launched in response to a number of new challenges, including improvements in the therapeutic environment, increased uptake of domiciliary treatment, the provision of terminal care, providing informed consent and involving them in therapeutic decisions, and closer collaboration with welfare services.

2. The Service Delivery System

2-1 Public Health Services

The present system of public health service provision was basically regulated by the 1947 "Revised Public Health Center Law." As the move towards decentralization gained speed during the 1990's, and in response to the aging society, in 1994 the Public Health Center Law was completely revised and renamed the "Community Health Law." This set up a new community-based public health system, with the local municipality placed as the main service provider, closer to the community (complete implementation by 1997).

The main revisions in the Community Health Law were: ① the municipality became the centralized provider of maternal and child health services; health and welfare services for the elderly, and other frequently utilized services; ② the "Municipal Public Health Center" became the base of delivery for public health services in the community; ③ the areas of responsibility of prefecture's public health centers broadened, and they functioned as the broad-based, specialized and technical base of public health; ④ at the same time, the Maternal and Child Health Law, Child Welfare Law, and Nutrition Improvement Law were revised, transferring these authorities from prefecture to municipality control (see Chapter 8). As the result, the responsibility, financial resources, and provision of public health and welfare services were all unified under the municipalities, placing them closer to the community. With these sweeping reforms, public health and welfare services were provided in a coordinated fashion, where they had previously been disjointed.

Following the above reforms local government bodies became the main providers of public health services, and also became responsible for planning and budgeting in this area. Outsourcing of some services, such as to local medical practitioners and clinics, has become common, so that clients can receive services, such as health check-up and vaccination, at a time and location convenient to them. Health promotion services are also available at health promotion centers and private members-only health centers.

---

[3] Ministry of Health, Labour and Welfare ed. (2002) *Heisei 14 nen ban Kousei Rodo Hakusho* [Annual Report on Health, Labour and Welfare 2002-2003] Gyosei. pp. 131-132

2-2 Medical Services

Medical services in Japan are regulated by the "Medical Service Law," promulgated in 1948. This Law has subsequently undergone four revisions, in response to such factors as the aging society, changes in the pattern of disease, and medical advances. Following the first revisions to the Medical Service Law in 1985, prefectures became responsible for planning and conducting medical services in each prefecture according to a "Medical Service Plan." Each prefecture was also directed to set up secondary and tertiary medical regions.

In general, medical services are provided at medical institutions such as hospitals and clinics. The second revision to the Medical Services Law in 1992 extended the definition of the site of provision of medical care to include the residence of the person receiving care. The Japanese system of medical service provision is essentially one of free practice, meaning that medical institutions can be operated by the nation, local government, public corporations, healthcare corporations, and individuals. Practicing medicine for profit is forbidden, however, so companies are unable to set up medical institutions. Instead, a unique system of the healthcare corporation was established for this purpose.

2-3 Allied Health Services

With recent advances in medical science, the need for efficient use of the medical budget, and the diversification of the needs of the population, medical institutions are outsourcing many allied health services, such as pathology services and hospitalized patient meals, to outside specialists. "Allied health services" includes various services closely related to medicine for effective and efficient services.

In a 1994 survey of hospitals, outsourcing was used for 95.9% of bedding, 92.7% of pathological investigations, 73.2% of hospital cleaning, 42.7% of maintenance of home medical equipment, 26.7% of hospitalized patient meals, and 11.4% of medical equipment sterilization. To ensure the quality of these services, they may only be outsourced to firms that meet the standards set out in the "Law Regarding Medical Technologist, etc." (1970) and other statutes[4].

3. Major Public Health Services

The framework of public health services will be examined in detail in Chapter 8, so here we will provide an overview of the major services.

3.1 Health Promotion

To maintain a healthy body, each individual needs to put in a certain amount of effort, such as keeping well-regulated habits, getting sufficient sleep, eating a balanced diet, and getting an appropriate amount of exercise. The Ministry of Health and Welfare began the "First-Phase Measures for National Health Promotion" in 1978. This campaign comprised the following: ① providing a life-long program of prevention and health checks through the addition of health care programs for the elderly to the existing programs of health checks for pregnant women, new mothers and infants, and housewives; ② promotion of municipal public health centers and other centers to host health promotion activities; and ③ promotion to raise health awareness activities. The "Second-Phase Measures for National Health Promotion (Active 80's Health Plan)" was launched in 1988, promoting the concept of disease prevention and health promotion through lifestyle improvement. Additional health promotion facilities were established, and personnel (e.g. fitness instructors) trained. The year 2000 saw the launch of the "National Health Promotion in the 21st Century (Healthy Japan 21)." Features of this campaign include an emphasis on quality of life, not just prolonging life-time; promotion of health

[4] Nakamura, Yoshio (1998) *Kousei Gyosei* [Welfare Administration], Gyosei.

throughout the life cycle; an emphasis on individual choice; and the introduction of goal-oriented management strategies[5].

Passed in July 2002, the "Health Promotion Law" sets goals and basic policy for the entire nation, directs local governments to formulate health promotion plan in response to the local circumstances, and sets common guidelines for occupational, community-based and school-based health checks[6]. In particular, this law directed the management of public facilities where smoking is permitted to take the necessary steps to prevent "passive smoking."

A further Japanese unique initiative has been in the area of dental health promotion. It is often said that "your mouth is the barometer of your health," and if your teeth become unhealthy the rest of the body becomes unhealthy. Based on this concept is the "8020 Campaign," with the stated aim of keeping at least 20 of one's own teeth upon reaching the age of 80. Along with an educational program to increase dental awareness, this campaign promotes tooth brushing to primary school children, and provides dental check-ups and advice to community residents.

3-2 Maternal and Child Health Services

Maternal and child health services in Japan are regulated by the "Maternal and Child Health Law." At the time of the comprehensive overhaul of community-based health services in 1994, maternal and child health services were also re-examined, and came under local government control from 1997. Maternal and child health check-ups are important for the early detection and appropriate treatment of conditions such as pre-eclampsia, disabilities and abnormalities. Another important aid for the health management of mother and child is the Maternal and Child Health (MCH) Handbook system. On registration of their pregnancy with their local municipality, each woman is issued with MCH Handbook, which is subsequently used to record all important details of pregnancy, delivery and childraising. From 1992, the right to issue MCH Handbooks was transferred from prefectural government to the municipalities, and each municipal government now issues its own characteristic version.

Other major services in the field of maternal and child health include free complete check-up at a medical institution, two during pregnancy, one early and one later in the pregnancy, and two during infancy. Pediatric health checks are also provided by the municipality at 18 months and 3 years of age. Health guidance is also provided regarding pregnancy, delivery and child raising, on a group, individual or home visit basis.

3-3 Health Services to the Middle-aged and Elderly

Disease prevention and health management during the prime of life are extremely important for the maintenance of health in later life. For this reason, under the system of health and medical services for the elderly, based on the Law for Health and Medical Services for the Elderly, municipalities conduct public health programs aimed at community residents aged 40 years and over. These programs include the issue of health cards, health education, health advice, medical check-ups, rehabilitation, and home-visit consultations.

In accordance with national standards that have been set for public health programs, municipalities formulate and put into practice a "Plan for Elderly Health and Welfare," based on demographics of the local community and the available facilities.

---

[5] Health and Welfare Statistics Association (2002) *Kokumin Eisei no Doko, Kosei no Shihyo* [Activities in National Health, Welfare Indicators] 2002 Vol. 49 No. 9.

[6] Ministry of Health, Labour and Welfare ed. (2002) *Heisei 14 nen ban Kousei Rodo Hakusho* [Annual Report on Health, Labour and Welfare 2002-2003], Gyosei. pp. 131-132

4. Medical Facilities

4-1 Overview

Medical facilities are regulated by the Medical Services Law and the Law for Health and Medical Services for the Elderly. In Japan, the principal medical facilities are hospitals, clinics, midwifery home, and "Rojin Hoken Shisetsu (Health Care Facilities for the Elderly)." A hospital is an institution with 20 or more beds, whereas clinics have up to 19 beds, and are further divided into general medical clinics and dental clinics. A midwifery home is the place where a midwife practices.

Almost all hospitals and clinics in Japan, whether public or private, are run within the framework of the public medical insurance system. Medical fees are standardized for all services, including diagnosis, medications, treatments, operations, admissions, nursing and dietary treatments. Medical costs are therefore the same for the same service at any facilities. The cost of hospital beds varies according to their ranking, however, and if a patient chooses a higher ranked bed than that determined by their

Table 2-1 Medical Facilities by Type

Total number	165,451
■ Hospital	9,266
○ Psychiatric hospital	1,058
○ Tuberculosis sanitarium	3
○ General hospital	8,205
• Hospitals with long-term care wards	3,167
■ Medical clinics	92,824
○ With admission facilities	17,853
• Medical clinics with long term care wards	
■ General hospital	2,508
○ With no admission beds	74,971
■ Dental clinics	63,361
○ With admission beds	46
○ With no admission beds	63,315

N.B. As of October 1st, 2000
Source: Ministry of Health, Labour and Welfare

Table 2-2 Hospital Bed Numbers by Type

Total number	1,864,178
■ Hospital	1,647,253
○ Psychiatric beds	358,153
○ Infectious disease beds	2,396
○ Tuberculosis beds	22,631
○ General beds	1,264,073
• Long-term care beds	241,160
○ General hospital	1,387,779
■ Medical clinics	216,755
• Long-term care beds	22,786
■ Dental clinics	170

N.B. As of October 1st, 2000
Source: Ministry of Health, Labour and Welfare

Table 2-3 Number of Institutions and Beds by Operator

	Number of facilities						Number of beds			
	Hospitals		Medical clinics		Dental clinics		Hospitals		Medical clinics	
	Number	% total	Number	% total	Number	% total	Number	% total	Number	% total
Total number	9,266	100.0	92,824	100.0	63,361	100.0	1,647,253	100.0	216,755	100.0
National Government	359	3.9	581	0.6	1	0.0	144,649	8.8	2,344	1.1
Public organization	1,373	14.8	4,237	4.6	331	0.5	356,100	21.6	4,024	1.9
Social insurance organization	131	1.4	840	0.9	17	0.0	38,522	2.3	38	0.0
Healthcare corporation	5,387	58.1	24,031	25.9	7,310	11.5	795,089	48.3	96,953	44.7
Individual	1,173	12.7	53,646	57.8	55,378	87.4	101,620	6.2	111,110	51.3
Other	843	9.1	9,489	10.2	324	0.5	211,273	12.8	2,286	1.1

N.B. As of October 1st, 2000
Source: Ministry of Health, Labour and Welfare

insurance coverage, they are liable for the difference in cost.

4-2 Facilities and Beds

As of October 1st, 2000, there were 165,451 medical facilities in all of Japan, and 1,864,178 beds (see Tables 2-1, 2-2). The most common operators of hospitals were healthcare corporations, running 53,387 (58.1%), whereas individuals are more likely to operate medical clinics, with 53,646 (57.8%), and dental clinics with 55,378 (87.4%) (see Table 2-3).

Hospitals account for 1,647,253 beds and general medical clinics for 216,755. Healthcare corporations are responsible for 48.3% of hospital beds (795,089), whereas individuals are responsible for 51.3% of medical clinic beds (111,110).

The number of beds per 100,000 population (hospital only) is 995.9, but there is a considerable gap between prefectures, with Kochi the highest at 1,960.4, and Saitama the lowest at 683.3[7].

4-3 Medical and Related Professional Employees

As of October 10th, 2000, the total number of medical and related professional employees was 1,640,000, including 167,000 doctors (137,000 full-time), 9,000 dentists (8,000 full-time), 41,000 pharmacists, 525,000 nurses, and 224,000 assistant nurses (see Table 2-4). There are 99.7 professional employees per 100 hospital beds, including 10.2 doctors, 0.5 dentists, 2.5 pharmacists, 31.9 nurses, and 13.6 assistant nurses[8].

4-4 State of Equipment

Technical advances in the field of medical equipment have been remarkable in recent years,

Table 2-4 Number of Professional Employees per 100 Beds and per Facility

Total	Hospitals*1			Medical clinics*2		Dental clinics*2	
	No. of employees	Per 100 beds	Per facilities	No. of employees	Per facilities	No. of employees	Per facilities
Doctors	1,641,418.5	99.7	177.3	751,092.0	8.2	310,989.3	5.0
Full-time	167,365.8	10.2	18.1	116,921.8	1.3	115.7	0.0
Part-time	137,487	8.4	14.9	97,153	1.1	86	0.0
Dentists	29,878.8	1.8	3.2	19,768.8	0.2	29.7	0.0
Full-time	8,950.7	0.5	1.0	1,865.2	0.0	86,980.3	1.4
Part-time	7,507	0.5	0.8	1,066	0.0	77,639	1.2
Pharmacists	1,443.7	0.1	0.2	799.2	0.0	9,341.3	0.1
Public health nurses	41,071	2.5	4.4	9,673	0.1	942	0.0
Midwives	2,012	0.1	0.2	6,238	0.1	−	−
Nurses	17,584	1.1	1.9	3,793	0.0	−	−
Assistant nurses	524,578	31.9	56.7	86,772	0.9	604	0.0
	223,633	13.6	24.2	149,445	1.6	456	0.0

N.B.*1 As of October 1st, 2000
*2 As of October 1st, 1999
Includes part-time doctors. Part-time doctors and dentists were converted to full-time equivalents (the proportion of the normal working hours of full-time doctors and dentists at the same institution). Other professions were not converted to full-time equivalents.
Source: Ministry of Health, Labour and Welfare

[7] Ministry of Health, Labour and Welfare ed. (2002) *Heisei 14 nen ban Kousei Rodo Hakusho* [Annual Report on Health, Labour and Welfare 2002-2003], Gyosei. pp. 131-132, p. 184
[8] *ibid.* p. 188

Table 2-5 Diagnostic Equipment in Hospitals (Multiple Counts)

	No. of hospitals	Rate possession (%)	No. machines
No. hospitals	9,286		—
Upper gastrointestinal endoscope	6,775	73.0	20,870
Bronchial endoscope	3,830	41.2	9,182
Colonoscope	5,669	61.0	11,646
Digital radiography systems	1,195	12.9	2,082
Digital angiography systems	2,554	27.5	3,223
CT scanner for total body	6,613	71.2	7,361
RI diagnostic unit	1,036	11.2	1,319
MRI	2,622	28.2	2,938
Single Photon Emission Computerized Tomography (SPECT)	755	8.1	1,003
Bone densitometry systems	3,064	33.0	3,154
Microsurgery equipment	981	10.6	2,297
Intraaortic Balloon Pump (IABP) equipment	765	8.2	1,274
Hyperthermia equipment	224	2.4	291
Linear accelerator (liniac), betatron, microtron	625	6.7	724
Hemodialysis equipment	2,218	23.9	39,992

N.B. As of October 1st. 1999
Source: Ministry of Health, Labour and Welfare

with the development and uptake of new and sophisticated diagnostic and therapeutic equipment (see Table 2-5). For example, more than 70 percent of hospitals have CT (computerized tomography) scanners for a whole body, and nearly 30 percent have magnetic resonance imaging (MRI) scanners, the next generation in diagnostic imaging.

In recent years, hospitals have expanded their rehabilitation facilities. The greatest increase has been in day care centers for the aged, with considerable increases also seen in psychiatric day care and night care facilities, as well as occupational therapy departments and psychiatric occupational therapy departments.[9]

4-5 Inpatient and Outpatient Medical Care

The average number of inpatients in Japanese hospitals each day was 1,401,399 for the year 2000. Of these, 1,057,606 occupied general medical beds, 333,712 psychiatric beds, and 10,036 tuberculosis beds. The number of patients occupying long term care beds has risen sharply in recent years; it was 215,448 in 2000, a 54.5% increase over the previous year. The average number of outpatients seen in Japanese hospitals each day was 1,810,990 for the year 2000, of which 1,768,619 were general medical hospitals.

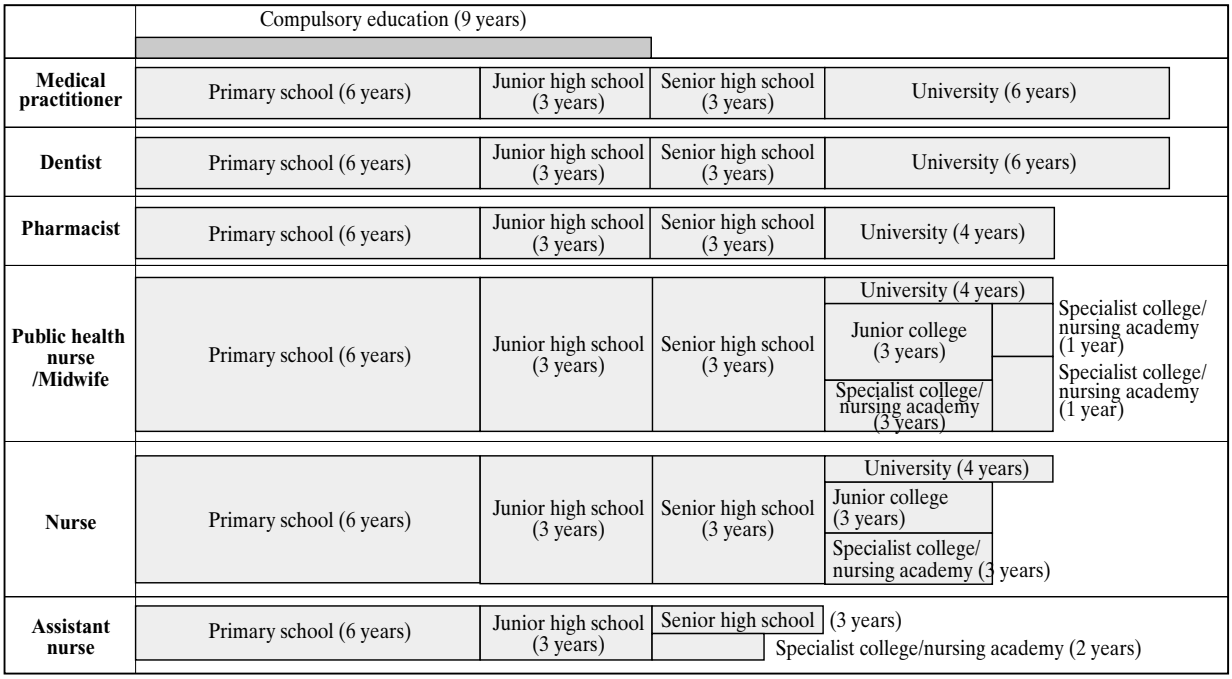
The number of inpatients in Japanese medical clinics on September 30, 1999 was 90,735. The number of outpatients seen in medical clinics for the month of September 1999 was 88,418,023, whereas 24,475,107 outpatients were seen in dental clinics over the same period.

The overall bed occupancy rate was 85.2%, with the highest by specialty that of 93.1% for psychiatric beds, followed by 83.8% for general

[9] *ibid.* p. 189

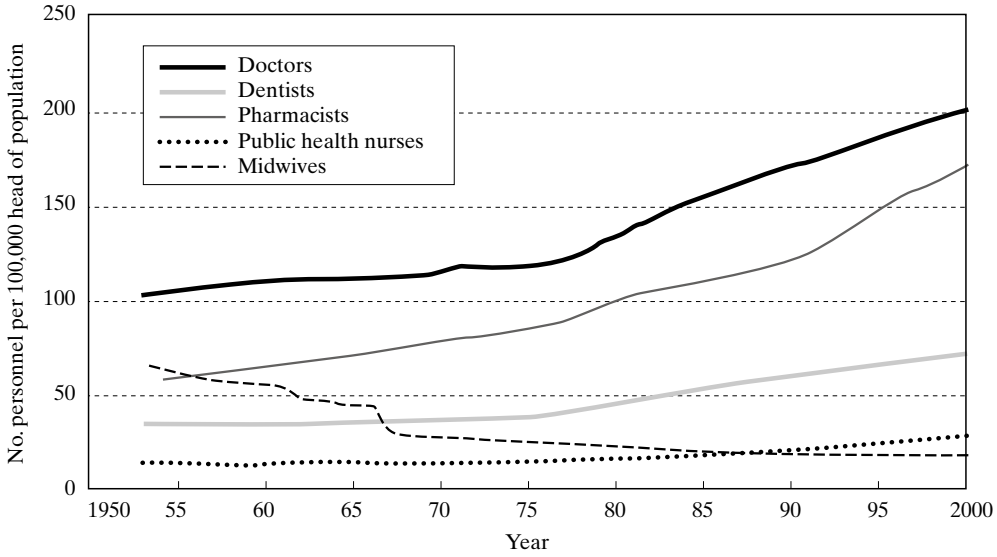
medical beds. The average hospital stays by specialty were 30.4 days for psychiatric patients, 96.2 days for tuberculosis patients, and 30.4 days for general medical patients. The longest average hospital stay for general medical patients (excluding long term care patients) for any prefecture was 30.6

Figure 2-2 Summary of Education System for Medical and Allied Professional



N.B. As of April 2004. There is a system whereby a nursing qualification can be obtained after becoming an assistant nurse, but this was omitted.
Source: Medical Professions Division, Health Policy Bureau, Ministry of Health, Labour and Welfare

Figure 2-3 Trends in the Medical Workforce



Source: Ministry of Health, Labour and Welfare

days for Saga, and the shortest 18.8 days for Nagano.[10]

4-6 Provision of Medical Services by National Institution

As of April 1st, 2002, the national institution administered by the Ministry of Health, Labour and Welfare comprise 5 national high-level medical centers (national centers), 65 national hospitals, 116 national sanitaria, and 13 leprosaria (Hansen's Disease sanitaria). A specialized network, the National Hospital Information Network System (HOSPnet), connects these institutions, the Ministry of Health, Labour and Welfare, and Regional Bureaus of Health and Welfare.

5. Medical Service Personnel

5-1 Overview

There is a high degree of specialization in providers of medical services, with more than 20 different professions and more likely to appear as the demand increases for further specialization. Almost all of these professions have a system of national certifications. As shown in Figure 2-2, medical service personnel undertake a course at a specialist training institution following graduation from senior high school. After graduation from the training institutions, candidates take a national qualification examination. On passing, they receive their license to practice and obtain their certification. Unlike many developing countries, in Japan public health nurses and midwives are highly ranked professionals who must complete a minimum of 4 years' further study after graduating from senior high school.

Medical service personnel need to undertake continuing education in order to keep up with the rapid rate of advancement in medical science. The Japan Medical Association launched a system of continuing medical education for medical doctors in April 1989, and encourages its members to continue to learn and update their skills throughout their working life. The Ministry of Health, Labour and Welfare also supports continuing medical education by providing local medical centers for local doctors to attend educational activities. The expectation is that doctors training at these centers will collaborate with local public health facilities and medical institutions, leading to more efficient provision of medical services to the community[11]. Continuing education for pharmacists is conducted in each occupational center and in each region by the Japan Pharmaceutical Association and other groups[12].

The number of medical service personnel in Japan rose sharply in the post-war period, in particular after the achievement of universal health insurance coverage. The numbers of medical doctors and nurses continue to rise (see Figure 2-3).

Table 2-6 shows a summary of the numbers of medical service personnel in Japan in the year 2000.

5-2 Medical Services Professionals

(1) Medical Practitioner

To become a medical practitioner, after graduating from senior high school one must complete a 6 year university medical course, and then pass a national qualification examination to obtain a license to practice medicine. After obtaining the national qualification, it is recommended that medical graduates take at least 2 years of clinical training at a university or designated hospitals, and in practice 9 out of 10 complete this clinical training. In recent years, the overspecialized system of medical training has undergone review. The emphasis has been shifted to primary care, with the aim of producing medical

[10] *ibid.* p. 190
[11] *ibid.* p. 177
[12] *ibid.* p. 179

Table 2-6 Registered Health Service Providers and Ratio (per 100,000 population)

	Numbers	Ratio (per 100,000 population)
Medical practitioners	255,792	201.5
Dentists	90,857	71.6
Pharmacists	217,477	171.3
Public health nurses	36,781	29.0
Midwives	24,511	19.3
Nurses, assistant nurses	1,042,468	821.4

N.B. As of December 31st, 2000. Numbers are those employed in that profession, except for medical professionals, dentists and pharmacists.
Source: Ministry of Health, Labour and Welfare

Table 2-7 Medical Practitioners by Institution Type

	Numbers	Proportion of total (%)
Total	255,792	100.0
■ Employees of medical facilities	243,201	95.1
○ Hospital employees	154,588	60.4
○ Clinic employees	88,613	34.6
■ Employees of elderly care institutions	2,114	0.8
■ Employees other than medical institutions or elderly care institutions	8,154	3.2
■ Others	2,148	0.8
■ Indeterminate	175	0.1

N.B. As of December 31st, 2000. The term "medical facilities" refers to hospitals and clinics as defined in Clause 3 of the Medical Facilities Survey Regulations (1953 Ministry of Health and Welfare Directive No. 25). This excludes public health centers.
Source: Ministry of Health, Labour and Welfare

practitioners capable of treating patients in a holistic fashion. The postgraduate-2 year's clinical training will be made compulsory from April 2004.

As of the end of the year 2000, there were 255,792 medical practitioners in Japan. This corresponds to 201.5 doctors per 100,000 head of population, or 496 people per doctor. The number of doctors has risen steadily since the introduction of the present national examinations for medical practitioners in 1946[13].

The overwhelming majority of medical practitioners, or 243,201 (95.1%), are employed by medical institutions (see Table 2-7). Of the medical practitioners working in medical institutions, 154,588 (60.4%) work in hospitals, and 88,613 (34.6%) work in clinics. The highest proportion of hospital medical personnel work in non-teaching hospitals (106,845, or 41.8%), although a considerable proportion do work in teaching hospitals (41,845, or 16.4%)[14].

Considerable variation is seen between prefectures in the distribution of doctors working in medical institutions per 100,000 population with the highest in Tokyo (253.4), Kyoto (251.7) and Kochi (250.8), and the lowest in Saitama (117.3), Ibaragi (135.4) and Chiba (136.4). In general, the ratio of doctors to population tends to be higher in Western Japan and lower in the East and North[15].

[13] *ibid.* p. 170
[14] *ibid.*
[15] *ibid.* p. 171

(2) Dentists

To become a dental practitioner, after graduating from senior high school one must complete a 6 year university dental course, and then pass a national qualification examination to obtain a license to practice dentistry. To improve the skills of dental practitioners, a compulsory system of at least 1 year of clinical training after obtaining the national qualification will be introduced. Preparations are underway for the commencement of the dental clinical postgraduate training program in 2006, increasing the number of training institutions and upgrading the skills of the clinical supervisors[16]. The national examination for dentists is also undergoing a process of revision and improvement, and will include questions regarding medical ethics and social problems related to dental services.

As of the end of the year 2000, there were 90,857 dental practitioners in Japan. This corresponds to 71.6 dentists per 100,000 population, or 1,397 people per dentist[17].

The overwhelming majority of dental practitioners, or 88,410 (97.3%), work in medical facilities (see Table 2-8). Of these, the greatest proportion work in dental clinics, and most are in private practice[18].

A large gap is seen between prefectures in the distribution of dentists working in medical facilities per 100,000 population with the highest in Tokyo (118.6), Tokushima (89.6) and Fukuoka (89.6), and the lowest in Fukui (43.3), Ishikawa (47.7) and Aomori (48.0)[19].

(3) Pharmacists

To become a licensed pharmacist, after graduating from senior high school one must complete a 4 year university pharmacy course, and then pass a national pharmacy qualification examination. A compulsory year of work experience at a hospital or pharmacy after obtaining the national qualification was introduced in 1997. The Ministry of Health, Labour and Welfare is examining a proposal to increase the university pharmacy course to six years in response to advances in medical science and pharmaceutical development, and the proliferation of new pharmaceuticals[20].

Table 2-8 Number of Dental Practitioners by Institution

	Numbers	Proportion of total (%)
Total	90,857	100.0
■ Employees of medical facilities	88,410	97.3
○ Hospital employees	11,526	12.7
○ Clinic employees	76,884	84.6
■ Employees of elderly care institutions	6	0.0
■ Employees other than medical institutions or elderly care institutions	1,252	1.4
■ Others	1,137	1.3
■ Indeterminate	52	0.1

N.B. As of December 31st, 2000. The term "medical facilities" refers to hospitals and clinics as defined in Clause 3 of the Medical Facilities Survey Regulations (1953 Ministry of Health and Welfare Directive No. 25). This excludes public health centers.

Source: Ministry of Health, Labour and Welfare

[16] *ibid.* p. 177
[17] *ibid.* p. 171
[18] *ibid.* p. 171
[19] *ibid.* p. 172
[20] Ministry of Health, Labour and Welfare ed. (2002) *Heisei 14-nen ban Kosei Rodo Hakusho* [Annual Report on Health, Labour and Welfare 2002-2003], Gyosei. p. 127

As of the end of the year 2002, there were 217,477 pharmacists in Japan. This corresponds to 171.3 pharmacists per 100,000 population, or 584 people per pharmacist[21].

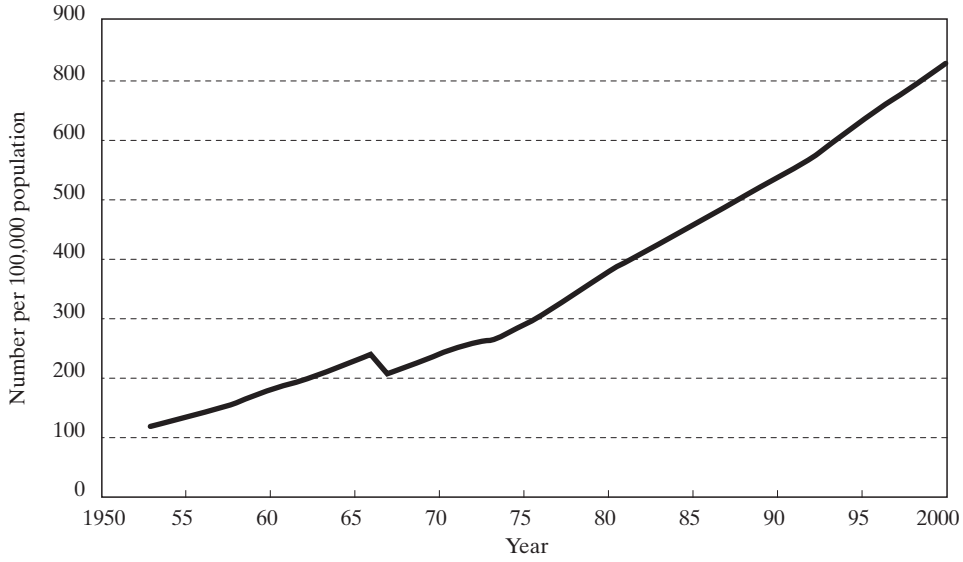
The most common workplaces for pharmacists are pharmacies, accounting for 94,760 (43.6%), followed by 48,150 (22.1%) working in hospitals and clinics, and 44,803 (20.6%) in companies in the medical field[22].

(4) Nursing Staff (Public Health Nurses, Midwives, Nurses and Assistant Nurses)[23]

Nursing staff may hold a qualification in public health nursing, midwifery, nursing or assistant nursing. These qualifications can be acquired in a variety of ways, including the following: on completion of senior high school, graduate from a nursing school and become a nurse; after becoming an assistant nurse; do a further 2 years at a nursing school and become a nurse; after becoming a nurse, complete further training at a public health nursing (midwifery) school and become a public health nurse (midwives); and gain a combined qualification in nursing, public health nursing and midwifery on completion of a 4 year university-based nursing course[24].

The number of nurses and midwives has risen steadily since the 1950's (see Figure 2-4). There were 36,781 public health nurses in Japan as of the end of the year 2000, only a slight increase on the 1950 figure (see Figure 2-3). Almost all public health nurses work in public health centers or municipal government (see Table 2-9). There are 29.0 public health nurses per 100,000 population (3,451 people per public health nurse), and recent modest increases in their numbers are unlikely to be sufficient to cope with the increasing demand for public health services associated with health and

Figure 2-4 Trends in Number of Nurses and Assistant Nurses (Nursing Assistants)



Source: Ministry of Health, Labour and Welfare

[21] Health and Welfare Statistics Association (2002) *Kokumin Eisei no Doko, Kosei no Shihyo* [Activities in National Health, Welfare Indicators] 2002 Vol. 49 No. 9., p. 172

[22] *ibid.* p. 172

[23] After the "Law concerning Public Health Nurses, Midwives and Nurses" was revised in March 2003, gender neutral terms in Japanese are now used for public health nurses, midwives and nurses.

[24] Medical Laws and Regulations Research Group ed. (1999) *Zusetsu Nihon no Iryo* [Medical Services in Japan], Gyosei. p. 85

welfare programs for the elderly, and other changes in recent years[25].

As of the end of the year 2000, there were 24,511 working midwives in Japan. Their numbers have declined since the trend towards hospital birth, and away from home birth began around 1960. The present number is less than half of the 52,337 in 1960. In accordance with the trend towards institutional delivery, the most common workplaces for midwives are hospitals (73.1%), followed by medical clinics (11.7%), and midwifery home (7.6%) (Table 2-9)[26]. The largest single age group for midwives is the over 60's, but the number of new students has risen in recent years, increasing the proportion of younger

Table 2-9 Number of Public Health Nurses and Midwives by Workplace

	Numbers		Proportion of total (%)	
	Public health nurses	Midwives	Public health nurses	Midwives
Total	36,781	24,511	100.0	100.0
■ Public health centers	7,630	249	20.7	1.0
■ Midwifery home	−	1,858	−	7.6
■ Municipalities	20,646	−	56.1	−
■ Hospitals	1,770	17,914	4.8	73.1
■ Clinics	1,388	2,864	3.8	11.7
■ Home visiting nursing station	638	−	1.7	−
■ Elderly care institutions	52	−	0.1	−
■ Social welfare institution	627	30	1.7	0.1
■ Private businesses	1,672	−	4.5	−
■ Public health/midwifery schools or training centers	641	638	1.7	2.6
■ Others	1,717	958	4.7	3.9

N.B. As of December 31st, 2000
Source: Ministry of Health, Labour and Welfare

Table 2-10 Number of Nurses by Workplace

	Numbers	Proportion of total (%)
Total	1,042,468	100.0
■ Hospitals	736,646	70.7
■ Clinics	196,506	18.9
■ Home visiting nursing station	21,667	2.1
■ Elderly care institutions	26,749	2.6
■ Social welfare institution	31,363	3.0
■ Schools	1,265	0.1
■ Public health centers	1,323	0.1
■ Nursing schools	10,102	1.0
■ Others	16,847	1.6

N.B. As of 31 December 31st, 2000
Source: Ministry of Health, Labour and Welfare

[25] Health and Welfare Statistics Association (2002) *Kokumin Eisei no Doko, Kosei no Shihyo* [Activities in National Health, Welfare Indicators] 2002 Vol. 49 No. 9., p. 173
[26] *ibid.*

age groups[27]. The total of young working nurses and assistant nurses in Japan at the end of the year 2000 was 1,042,168. As shown in Table 2-10, the most common workplaces for nurses are hospitals (70.7%), followed by clinics (18.9%)[28].

As the working age population shrinks in proportion to the total population, we expect increasing difficulty in securing new professional graduates. Great emphasis is therefore being placed on preventing nurses leaving the workforce, and encouraging former nurses to re-enter the profession. As part of the program to stop nurses retiring, more childcare services are being provided within hospitals. Central and prefectural Nurse Centers were established in 1992, as centers for the promotion of former nurses re-entering the workforce. In the year 2000, 26,681 were re-employed as nurses and in the same year approximately 89,000 were registered in the Nurse Bank[29].

(5) Other Medical Services Personnel

With advances in medical science have come a number of new professions and specialties. Some of the more important ones will be introduced here.

The qualification of medical technologist was introduced in 1958. Under a medical practitioner's supervision, the medical technologist performs serological, hematological, biochemical and pathological investigations. The qualification of clinical technologist was introduced in 1970. In addition to the tests performed by medical technologist, the clinical technologist also performs physiological tests, such as electrocardiography, electroencephalography and respiratory function testing.

The radiological technologist performs diagnostic and therapeutic radiography under medical or dental practitioner's supervision. This profession was established in Japan in 1951.

Qualifications introduced to meet medical rehabilitation needs are those of the physiotherapist and occupational therapist (both established in 1965), orthoptist (1971), and the prosthetist and orthotist (1987). The clinical engineer (established in 1987) operates and maintains life-support equipment (respirators, hemodialysis equipment, etc.).

In the dental area are found the dental hygienist (established in 1948) and the dental technician (1955). The dental hygienist works under dental supervision, assisting in dental treatment and providing advice about dental health. The dental technician makes, repairs and adjusts dental prostheses and other appliances required for the treatment of specific patients, under dental supervision.

The qualification of emergency medical technician was established in 1991, to conduct emergency procedures (obtaining an airway, restoring a heartbeat, etc.) during emergency transport (see Chapter 10 "Emergency Medical Care" for details). Other paramedical professions include therapeutic massage, acupuncture and moxibustion (all legally recognized in 1947) and judo therapy (legally recognized in 1970).

Qualifications related to diet and nutrition include dietitians (established in 1947, licensed by the prefectural governor) and registered dietitians (registered by the Minister of Health, Labour and Welfare), and licensed chefs (licensed by the prefectural governor).

5-3 Issues on Medical Service Provision

Japan presently offers, under universal health insurance coverage, a public health and medical system with standards at the highest level in the world. As shown in Table 2-11, however, in comparison to other developed nations, Japan is experiencing a shortage of medical services

---

[27] Medical Laws and Regulations Research Group ed. (1999) *Zusetsu Nihon no Iryo* [Medical Services in Japan], Gyosei, p. 91

[28] Health and Welfare Statistics Association (2002) *Kokumin Eisei no Doko, Kosei no Shihyo* [Activitiries in National Health, Welfare Indicators] 2002 Vol. 49 No. 9., p. 173

[29] *ibid.* p. 181

Table 2-11 Comparison of Medical Service Provision in Developed Countries

	Hospital beds per 1,000 population	No. doctors per 100 beds	No. nursing staff per 100 beds	Average length of hospital stay
Japan	13.1	12.5	43.5	31.8
Germany	9.3	37.6	99.8	12.0
France	8.5	35.2	69.7 (1997)	10.8 (1997)
England	4.2	40.7	120.0	9.8 (1996)
U.S.	3.7	71.6	221.0	7.5 (1996)

Source: Japanese figures from Ministry of Health and Welfare, overseas figures from OECD Health Data 2000

personnel, and soaring medical costs associated with lengthening hospital stays. In recent years, factors such as the low birth rate and aging population, advances in medical science, and attitudinal changes in the population have produced the following challenges:[30]

1) In comparison to other developed nations, Japan has more hospital beds per capita, but medical service personnel for each bed are fewer, and the average hospital stay is longer.
2) Due to insufficient functional differentiation, accumulation of skills related to specialist treatments is difficult for each institution. The challenge is to achieve a concentration of skills as well as efficiency overall.
3) In the present situation, it is difficult for patients to choose a medical institution due to insufficient objective information. This leads to a lack of competition between institutions through patient choice.
4) There is an increasing level of demand for medical services that can be accessed with confidence, in particular in the areas of emergency medicine.

The Ministry of Health, Labour and Welfare has indicated that, in order for Japan to meet such a variety of challenges, and provide a high quality and efficient medical system, it is necessary to develop a comprehensive future blue-print that the entire population can share. To this end the "Shape of Medical Service Provision in the 21st Century" was announced in September 2001, giving the schedule and details of programs to be implemented in the near future.

The "Shape of Medical Service Provision in the 21st Century" presents the following 3 aspects:

1) Respect for patient choices based on patient awareness and responsibility and provision of information
2) A system providing high quality and efficient medical care, able to respond to patient choices
3) Provision of a full range of regional medical services (within secondary medical region), implementation of medical safety and emergency medicine programs, and introduction of IT systems for information provision.

This blueprint shows detailed programs with numerical goals, and schedules have been produced for the achievement of the above 3 aims.

6. Medical Pharmaceuticals

6-1 Pharmaceutical Industry

In the 21st century, with remarkable advances in the life sciences, we will see the development of new medical treatments in the fields of reproductive medicine and nanotechnology, and revolutionary new medical pharmaceuticals based on genetic information (so-called "genome medicines"). The

[30] Ministry of Health, Labour and Welfare ed. (2002) *Heisei 14-nen ban Kosei Rodo Hakusho* [Annual Report on Health, Labour and Welfare 2002-2003], Gyosei. pp. 119-120

local pharmaceutical industry is expected to be a leading industry, and play a vital role in the economic development of Japan in the 21st century[31].

The pharmaceutical market is undergoing a process of globalization on a massive scale, and the late 1980's saw a merger and acquisition (M&A) boom in Western countries. In recent years, medical reforms in many countries have triggered a further M&A boom. Each pharmaceutical company has undergone restructuring and retrenchments, increased productivity in research and development (R&D) and marketing, and the Japanese industry has been forced to undergo market rationalization, as well as mergers, acquisitions and capital investment with Western-based companies.

Global competition between companies in the field of research and development of new pharmaceuticals is also becoming ever fiercer. The Japanese drug discovery environment is not, however, internationally attractive. With this background in mind, Japanese pharmaceutical industry representatives and the government collaborated to produce the "Pharmaceutical Industry Vision" in August 2002, with the aims of improving the international competitiveness of the medical pharmaceutical industry, and making the Japanese pharmaceutical development environment more attractive. This document set out the present situation and challenges facing the industry, as well as a vision for the future. It then proposed the 5 year period commencing in 2002 for a concentrated effort in the promotion of innovation, and detailed an action plan for improvement of the environment for drug discovery. The future development of the Japanese pharmaceutical industry will require the steady implementation of this action plan[32].

6-2 Special Considerations Related to Separation of Dispensary from Medical Practice

Japan is said to be the only developed country in the world where medical practice and dispensing are not generally separated[33]. This anomaly dates back to the custom in the premodern era, the Edo Era, where traditional and Chinese medicine predominated, whereby physician/apothecaries earned their living by dispensing medicines. From this historical background, the concept that the cost of medications (the cost of medical care) is paid by the patient was firmly established even before the Edo Era, and in this respect Japan is very much different from developing countries today. A number of trial programs of separation of dispensary from medial practice have been attempted over the years. The number of prescriptions filled outside the hospital increased sharply in 1974, so this is counted as "year 1 of separation of dispensary from medical practice"[34]. The proportion of prescriptions filled outside hospital has subsequently risen steadily, reaching 44.5% in 2001.

There remain a number of problems with effecting separation of prescribing and dispensing, in particular differences between regions are great, and because of the prevalence of "gate-front pharmacies" located next to hospitals or medical clinics, that concentrate on filling prescriptions from those institutions.

The merits for patients of the separation of dispensary from medical practice are improved safety through the appropriate use of medications, prevention of duplication and drug interactions, and advice from the pharmacist about the correct way to take medication. The ideal way to get the full benefit of this system is for the local family pharmacy to be allowed to dispense prescriptions from multiple hospitals and medical clinics,

---

[31] *ibid.* p. 129
[32] *ibid.* p. 130
[33] Health and Welfare Statistics Association (2002) *Kokumin Eisei no Doko, Kosei no Shihyo* [Activities in National Health, Welfare Indicators] 2002 Vol. 49 No. 9., p. 238
[34] Amano, Hiroshi (2002) *Gaisetsu Kusuri no Rekishi* [Historical Summary of Medicines], Yakuji Nippo Sha. p. 177

maintain patient medication profiles, including over-the-counter drugs, and give detailed advice about taking medication. This is also known as the "focused pharmacy" system. To promote appropriate separation of dispensary from medical practice, the Ministry of Health, Labour and Welfare considers it necessary to strengthen the system of community pharmacies filling prescriptions, to obtain the understanding of the community and the cooperation of local service providers, and to upgrade the skills of the pharmacists themselves. A number of programs will be implemented to fulfill these objectives[35].

7. System for Collection and Dissemination of Health Information

7-1 Collection of Health Statistics

The detail in Japanese health statistics is unrivalled anywhere in the world. Japan has a long history of statistics collection, with family registers, Resident Register Book for Taxation and Tax Revenue Book dating back to the Nara Era (AD. 7c). Entering the Edo Era, "Buddhism sect reforming register book" was kept from 1671, and the first national population survey was conducted in 1721[36]. In this way, a form of demographic statistics was collected in Japan even before the Meiji Era (1868).

A feature of Japanese health statistics is that they were commenced as a registration system, (notification of pregnancy, tuberculosis, etc.) not for the purpose of statistics collection, and efforts to utilize the benefits of the registration system produced a detailed collection of statistical information system. The first modern Population Census was not conducted until 1920; much later in Japan than in other western countries. Since then, a full Population Census has been conducted every 5 years (with the exception of the immediate post-war period).

Various statistical surveys are conducted on a regular basis, from the "Designated Statistical Surveys" specified in the Statistics Law to "Approved Statistics" and "Notified Statistics." Designated Statistical Surveys include the "Population Census of Japan," as well as "Vital Statistics," and health-related surveys including the "Comprehensive Survey of Living Conditions," "Reports of Health Administration," "Patient Survey," "National Health Survey," "Survey of Medical Facilities" and "Survey on Time Use and Leisure Activities." The main Approved Statistical Surveys in the health field are the "Comprehensive Survey of Public Health" and "National Nutrition Survey." Together these surveys provide detailed information regarding indices of public health and medical services in Japan.

7-2 Utilization of Communication Technologies

In recent years, it has become widely recognized that the provision of effective and high quality public health and medical services requires the utilization of up to date communication technologies. Remarkable advances have been reflected in the development, promotion and widespread uptake of medical information technology systems.

In December 2001, the Ministry of Health, Labour and Welfare announced the "Grand Design for Health Information," outlining the roles of government and private enterprise in achieving the uptake of information technology across the public health and medical field within the 5 year period commencing in 2002. This grand design contained the following predictions, from the viewpoint of

---

[35] Health and Welfare Statistics Association (2002) in *Kokumin Eisei no Doko, Kosei no Shihyo* [Activities in National Health, Welfare Indicators] 2002 Vol. 49 No. 9., p. 238

[36] Yamaguchi, Kiichi (2000) "*Jinkou Shiryou to Jinkou Tokei* [Historical Materials and Statistics of Population]" Population Association of Japan ed. *Jinkou Dai Jiten* [Encyclopedia of Population], Baifukan Co., Ltd.

patients and the general population, of how utilization of information technology will change the way to deliver medical services in the 21st century.

1) Making it easy to choose, the appropriate medical institution to attend in advance, and information regarding medical services is readily available.
2) Waiting times will be reduced, easily understandable explanations will be given during the consultation, and the most appropriate treatment given based on the best and most recent medical evidence.
3) When at home, the burden of attending hospital is lessened, and medical information is readily obtained and easily understood.
4) In case of an emergency, prompt and appropriate emergency medical care is available, and no matter where or when there is a sudden change in the patient's condition the emergency medical service provider is able to contact the patient's family doctor.
5) The overall Japanese medical system offers an environment of ready access to high quality and accurate information, and patient can choose based on this information, where high quality and efficient medical services are offered.

Action plans were formulated to meet a number of specific goals, such as the promotion of electronic medical records (EMR) in order to active community-based medical services: "EMR to be introduced into more than 60% of hospitals with 400 or more beds and medical clinics by the year 2006"; and electronic reception accounts systems: "to be introduced into more than 70% of hospital reception desks by the year 2006." Strategic initiatives have been set in motion to achieve goals set in the action plan[37].

8. Finances in Medical Services

8-1 Trends in Medical Expenditure

The public health and medical system in Japan is based on universal health insurance coverage, where all Japanese people subscribe to either National Health Insurance or Public Health Insurance, and are able to receive any medical care at any time. This system, along with improvements in living conditions and nutrition levels associated with economic growth, has contributed to Japan achieving the highest life expectancy of any nation, and a high level of public health and medical services. The Japanese medical system is therefore well regarded internationally.

In recent years, however, the financial situation of the health insurance system has become extremely tight due to the rapidly aging population, to a degree unparalleled elsewhere in the world, increased medical costs contributed to in part by the cost of medical care for the elderly, and the economic downturn commencing in the 1990's. As shown in Figure 2-5, national health expenditure continues to climb, outstripping the growth of the national economy. National medical expenditure was ¥2,400 per capita in 1954, exceeding ¥100,000 by 1980, ¥200,000 by 1994, and reached ¥226,600 in 1996.

The increase in the cost of medical care for the elderly has been particularly dramatic, now accounting for one-third of national health expenditure, and 8% of the national income. If we look at the yearly rate of increase in the cost of medical care for the elderly, we can see just how precipitate the growth has been (see Table 2-12).

In the future, further increases in the cost of medical care for the elderly will be inevitable. If the growth rate in medical expenditure continues to outstrip increases in the national income, however, the burden on the supporting population will

[37] Ministry of Health, Labour and Welfare ed. (2002) *Heisei 14 nen ban Kousei Roudou Hakusho* [Annual Report on Health, Labour and Welfare 2002-2003], Gyosei. pp. 201-202

become excessive, particularly on the younger generations who will be responsible for most of the insurance premiums[38].

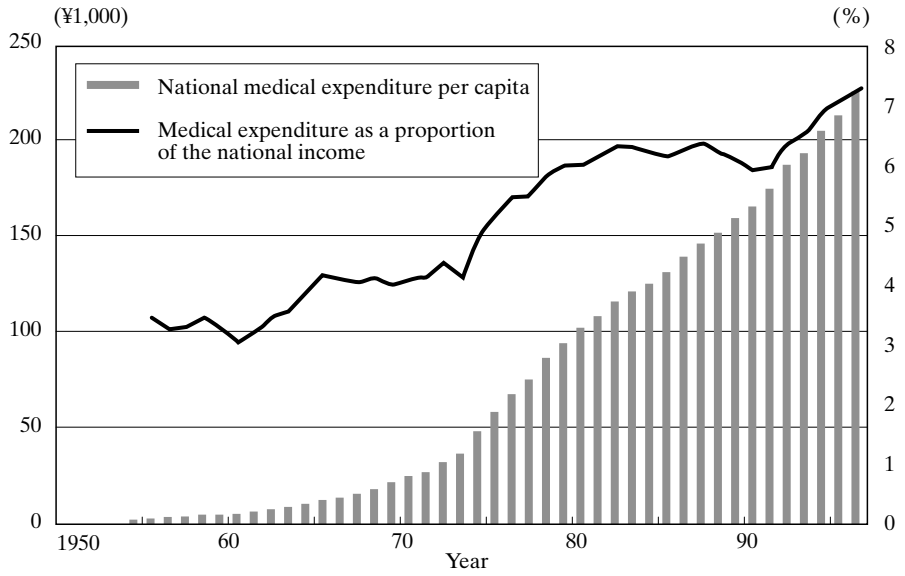
In considering the future of the medical system, the major challenges are to bring the growth rate in medical expenditure back to a reasonable level, and to equally share the increasing burden between generations in a fair manner.

8-2 Budget of Health Sector

(1) National Government Budget

As shown in Table 2-13, the Ministry of Health, Labour and Welfare budget for the 2002 financial year (FY) was ¥18,668.4 billion, or some 23% of the total national budget. Of this total, approximately ¥14,000 billion was set aside for

Figure 2-5 Trends in Per Capita Medical Expenditure and as a Proportion of the National Income



Source: National income from the Economic Planning Agency (December 1997 announcement)
Total population from the Latest Demographic Statistics (2001/2002 edition), National Institute of Population and Social Security Research
Medical expenditure from Ministry of Health, Labour and Welfare

Table 2-12 Yearly Growth Rate in Medical Expenditure (%)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
National medical expenditure	5.9	7.6	3.8	5.9	4.5	5.8	1.9	2.6	3.7	–1.9
Cost of medical care for the elderly	8.1	8.2	7.4	9.5	9.3	9.1	5.7	6.0	8.4	–5.1
National income	5.9	–0.1	0.0	0.9	1.1	2.6	0.8	–2.8	0.3	–0.3

Source: Ministry of Health, Labour and Welfare

[38] *ibid.*

social insurance expenditure. The budget for public health programs was ¥523.6 billion. Also in the field of public health administration, the Ministry of the Environment set aside ¥264.4 billion for planning for environmental management, and the establishment of a "Sound Material-Cycle Society" (budget for FY 2002), and the Ministry of Education set aside approximately ¥2.5 billion for planning for healthy childhood development, and planning in the area of child health and safety (budget for FY 2002).

(2) Regional and Local Government Budget

In Japan, for the budget of public health, in addition to the national budget, each regional and local government body sets its own budget. Basically, the finances of each prefecture and municipality is different, but they can be roughly divided into the areas of expenditure on public health, public welfare, civil engineering, education, agriculture, forestry, fisheries and police. Of these, public health expenditure corresponds to the field of public health and medical services.

The total annual budget of all regional and local government bodies in Japan for FY 2002 was ¥97,616.4 billion, of which public health expenditure accounted for ¥6,519.7 billion, or 6.7% of the total (3.1% for prefectures, 9.9% for municipalities). Decentralization is also progressing in the field of public health and medical services, in accordance with the "Community Health Law" and other directives, and a handover of resources is progressing, albeit slowly.

Table 2-13 Major Items in Ministry of Health, Labour and Welfare Budgets

	FY 2002 (¥million)	FY 2001 (¥million)
● Daily life security payments	1,383,728	1,309,113
● Social welfare payments	1,721,755	1,694,410
● Social insurance payments	13,995,224	13,497,780
● Public health program expenditures	523,691	528,139
• Public health general expenditures	85,925	77,120
• Public health facilities expenditures	31,563	36,268
• Atomic bomb survivor health management allowances	155,449	156,789
• Equipment costs for Peace Memorial Halls for the Atomic Bomb Victims	2,940	3,892
• Tuberculosis medical costs	8,365	8,919
• Running costs for National Hospitals and Sanitaria	115,862	124,378
• Equipment costs for National Hospitals and Sanitaria	6,300	6,635
• Mental health expenditures	67,593	64,583
• Quarantine stations	8,054	8,180
• National leprosaria	41,640	41,374
● Unemployment program expenditures	487,235	429,093
● Other	556,729	583,542
General Accounts Budget Total, Ministry of Health, Labour and Welware	18,668,363	18,042,077
General Accounts Budget Total	81,229,993	82,652,379

N.B.: The sum of the individual entries may not equal the total amount due to rounding off.
Source: Finance Division, Minister's Secretariat, Ministry of Health, Labour and Welfare