

# Health Systems in Transition

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## Japan

Health system review

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Editors: Sara Allin • Ryozo Matsuda

European

**Observatory**



on Health Systems and Policies

# Health Systems in Transition

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## Japan: Health System Review

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# Preface

**T**he Health Systems in Transition (HiT) profiles are country-based reports that provide a detailed description of a health system and of reform and policy initiatives in progress or under development in a specific country. Each profile is produced by country experts in collaboration with the Observatory's research directors and staff. In order to facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a profile.

HiT profiles seek to provide relevant information to support policy-makers and analysts in the development of health systems in Europe. They are building blocks that can be used:

- to learn in detail about different approaches to the organization, financing and delivery of health services and the role of the main actors in health systems;
- to describe the institutional framework, the process, content and implementation of health care reform programmes;
- to highlight challenges and areas that require more in-depth analysis;
- to provide a tool for the dissemination of information on health systems and the exchange of experiences of reform strategies between policy-makers and analysts in different countries.

Compiling the profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health system and the impact of reforms. Because of the lack of a uniform data source, quantitative data on health services are based on a number of different sources, including the World Health Organization (WHO) Regional Office

for Europe Health for All database, national statistical offices, Eurostat, the Organisation for Economic Co-operation and Development (OECD) Health Data, the International Monetary Fund (IMF), the World Bank, and any other relevant sources considered useful by the authors. Data collection methods and definitions sometimes vary but typically are consistent within each separate series.

A standardized profile has certain disadvantages because the financing and delivery of health care differ across countries. However, it also offers advantages, because it raises similar issues and questions. The HiT profiles can be used to inform policy-makers about experiences in other countries that may be relevant to their own national situation. They can also be used to inform comparative analysis of health systems. This series is an ongoing initiative and material is updated at regular intervals.

Comments and suggestions for the further development and improvement of the HiT series are most welcome and can be sent to: [info@obs.euro.who.int](mailto:info@obs.euro.who.int). HiT profiles and HiT summaries are available on the Observatory's web site at [www.euro.who.int/observatory](http://www.euro.who.int/observatory). A glossary of terms used in the profiles can be found at the following web page: [www.euro.who.int/observatory/glossary/toppage](http://www.euro.who.int/observatory/glossary/toppage).

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The Health Systems in Transition (HiT) profile on Japan was written by Kozo Tataru (Open University of Japan, Chiba City) and Etsuji Okamoto (Department of Management Sciences, National Institute of Public Health, Saitama). It was edited by Sara Allin (European Observatory on Health Systems and Policies, LSE) and Ryoza Matsuda (Ritsumeikan University, Kyoto, Japan). The authors would like to express their deep thanks to Professor Walter Holland (LSE) for giving them the invaluable opportunity to write this report. The authors would finally like to thank Dr Takashi Toguchi, director of the Health Policy Bureau at the Ministry of Health, Labour and Welfare, and Dr Keiko Yamamoto (Ministry of Health, Labour and Welfare, Japan) for reviewing this report and for providing many useful comments.

The current series of HiT profiles has been prepared by the staff of the European Observatory on Health Systems and Policies. The European Observatory on Health Systems and Policies is a partnership between the WHO Regional Office for Europe, the Governments of Belgium, Finland, Norway, Slovenia, Spain and Sweden, the Veneto Region of Italy, the European Investment Bank, the World Bank, the London School of Economics and Political Science, and the London School of Hygiene & Tropical Medicine.

The Observatory team is led by Josep Figueras, Director, and Elias Mossialos, Co-director, and by Martin McKee, Richard Saltman and Reinhard Busse, heads of the research hubs. Jonathan North managed the production of the profile, with the support of Jane Ward (copy-editing), Peter Powell (layout) and Aki Hedigan (proofreading). Administrative support for preparing the HiT profile on Japan was undertaken by Caroline White.



Special thanks are extended to the OECD for the data on health services in OECD countries and to the World Bank for the data on health expenditure in central and eastern European countries. Thanks are also due to national statistical offices, which have provided national data. The data used in this report are based on information publicly available in January 2008.

# List of abbreviations

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AIDS	Acquired immunodeficiency syndrome
BCG	Bacillus Calmette-Guérin
CAM	Complementary and alternative medicines
CHI	Citizens' Health Insurance
DOTS	Directly Observed Treatment, Short-course
DPC	Diagnosis procedure combination
DRG	Diagnosis-related group
EMT	Emergency Medical Technician
EU	European Union
GDP	Gross domestic product
GMHI	Government-managed Health Insurance (system)
GP	General practitioner
HIV	Human immunodeficiency virus
HLA	Human leukocyte antigen
HTA	Health technology assessment
ICD	(WHO) International Classification of Diseases
IMF	International Monetary Fund
IT	Information technology
JCQHC	Japan Council for Quality Health Care
JHIA	Japan Health Insurance Association
MAS	Mutual Aid Society
MPH	Master of Public Health
NHI	National Health Insurance
NIHS	National Institute of Hygiene Sciences
OECD	Organisation for Economic Co-operation and Development
PPD	Purified protein derivative
PPP	Purchasing power parity
SHA	(OECD) System of Health Accounts
SMHI	Society-managed Health Insurance (system)
TB	Tuberculosis
VHI	Voluntary health insurance
WHO	World Health Organization

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## Abstract

**T**he Health Systems in Transition (HiT) profiles are country-based reports that provide a detailed description of a health system and of policy initiatives in progress or under development. HiTs examine different approaches to the organization, financing and delivery of health services and the role of the main actors in health systems; describe the institutional framework, process, content and implementation of health and health care policies; and highlight challenges and areas that require more in-depth analysis.

Japan's health system provides universal coverage of the population through health insurance system for employees and their families (60% of the population) and National Health Insurance (NHI) system for the self-employed, retired and unemployed (40%). Annual expenditure is around 8% of gross domestic product (GDP) according to OECD estimates, and the main funding mechanisms are health insurance (50% of total spending), taxation (36%) and out-of-pocket payments (14%). Population health in Japan is among the best in the world, with the longest life expectancy and lowest infant mortality. The population has aged considerably, with over 21% aged 65 years or older. Recent health system reforms are related in large part to this demographic challenge, such as the introduction of an independent financing system for the oldest-old population cross-subsidized by all health insurers, better integration of preventive services into the insurance system, reforming the methods of paying hospitals and the introduction of a new system of long-term care financed through insurance and administered by municipal governments.

## Executive summary

Japan is located at the eastern edge of the Asian continent. Japan has a constitutional monarchy with a parliamentary government. It has 47 prefectures and 1844 municipalities as local administrative authorities. Japan reached its peak population of 127.8 million in 2005. In this year, for the first time in history, the population declined in absolute numbers. The declining population will inevitably have a profound influence on society and industry in Japan, particularly in the field of social security. The population is ageing significantly; the proportion of the population aged 65 and over reached 21% in 2005.

Approximately 140 years have passed since Japan implemented a policy in 1868 to create a new society by promoting relationships with foreign countries. After studying in Germany, the Chief Medical Officer at that time submitted a Workers' Sickness Insurance Bill to the prime minister in 1898. In 1922, the first Health Insurance Act was passed and in 1961 Japan established a universal health insurance system. The Health Services for the Elderly Act was passed in 1982 with the aim of building the basis for promoting population health, and in 2000, the Long-term Care Act was set up to offer care services to the frail elderly organized as an insurance system. Through these steps, Japan endeavoured throughout the 20th century to establish systems for health care, public health and welfare for its residents by learning from the experiences of other countries. These systems have supported and improved the health of Japanese people and contributed to a population with a long life expectancy. In 2006, life expectancy at birth was 79 years for men and 86 years for women. Japan also now boasts the world's lowest infant mortality, with a rate of only 2.6 per 1000 live births in 2006. The leading cause of death was malignant neoplasm for men and circulatory disease for women.

Japan's annual health care spending is estimated to be 32.1 trillion yen in 2005, or 259 300 yen per capita (approximately US\$2600), accounting for 6.6% of gross domestic product (GDP) according to national estimates and 8% from estimates of the Organisation for Economic Co-operation and Development (OECD), which include private payments. The three major methods of financing are health insurance (49.2% of total health spending), provided by more than 3500 separate insurance funds, general taxation (36.4%) and out-of-pocket payments (14.4%).

Japan's statutory health insurance system is administered by a multitude of insurers: the government (from October 2008, a quasi-governmental body, the Japan Health Insurance Association) for employees of small to medium-sized firms and their dependants, 1584 Society-managed Health Insurance funds for employees of large firms and their dependants, 76 Mutual Aid Society (MAS) funds for government employees and dependants, 1835 municipal National Health Insurance funds for the self-employed, retired and unemployed, and 166 National Health Insurance Society funds for some occupational groups such as doctors and lawyers, each with different premium contribution rates. The contribution rate of Government-managed Health Insurance is 8.2% of monthly gross salary equally shared between employers and employees. The contribution rates of Society-managed Health Insurance vary from as low as 3% to as high as 10%, with an average of 7.4%. The ceiling of the monthly gross salary used for contributions is 1.21 million yen. All employees also pay contributions for pension (13.6%) and employees aged 40 or over are also required to pay a contribution for the Long-term Care Insurance (1.2%). Overall, salaried workers over 40 years of age will see 11.5% (half of a total of 23%) of their monthly pay cheques withheld for insurance, in addition to taxes.

Japan has a heavy reliance on hospital care, with a large number of hospital beds, long average length of stay and high utilization rates. The total number of hospitals was 9077 in 2004, of which 5644 were established by non-profit medical corporations, 760 by private organizations as sole proprietors, 1377 by public institutions (such as prefecture or municipal governments), 304 by government agencies, 129 by social insurance groups and 863 by others, including non-profit public corporations, non-profit school corporations and private medical schools. The number of hospitals has declined by more than 1000 since its peak of 10 096 in 1990, a trend that reflects mergers and acquisitions in recent years. The number of clinics was 97 051 in 2004, of which 14 765 had beds and 82 286 did not. The number of dental clinics was 66 557 in 2004, of which 54 had beds. Health care in Japan was staffed in 2006 with 277 927 doctors (217.5 per 100 000 population), 97 198 dentists (76.1), 252 533 pharmacists (197.6) and 1.2 million nurses (934.5).

Recent health care reforms aim to control costs and improve the integration of acute and preventive care to address the challenges associated with a large elderly population. Among the changes include revisions to the mechanisms of financing health and long-term care for older people.



# 1 Introduction

## 1.1 Geography and sociodemography

Japan is located at the eastern edge of the Asian continent. It covers an area of 377 835 km<sup>2</sup> and has a coastline of 29 751 km. Terrain is mostly rugged and mountainous. Japan borders Korea to the west through the Sea of Japan, China to the southwest through the East China Sea and Russia to the north through the Sea of Okhotsk (Fig. 1.1). The climate varies from tropical in summer in the southern area to cold temperate with deep snow in winter in the northern area. Japan had approximately 127.8 million inhabitants in 2005, approximately 2.1% of the world's population. The capital city is Tokyo, with 8.4 million inhabitants. Other big cities are Osaka, Yokohama, Nagoya, Sapporo and Kobe, each with more than 1.5 million inhabitants.

In 2003, Japan ranked ninth in the world in terms of population, but it slipped to tenth by 2007 through stagnating population growth. The population is ageing significantly: the proportion of the population 65 years of age and over reached 21.0% in 2005, up from 7.1% in 1970. It is estimated that this proportion will reach 29.6% in 2030 (National Institute of Population and Social Security Research, 2002). At the same time, the proportion of the younger population aged 0–14 years continues to decrease, reaching 13.8% in 2005 (Table 1.1).

In 2005, for the first time in recorded history, the population declined in absolute numbers (one year earlier than originally forecasted). According to the vital statistics published by the Ministry of Health, Labour and Welfare (2006d), the number of deaths in 2005 surpassed that of births (1.08 million versus 1.06 million), corresponding to a population decline of 21 408 in a year. This population is the total for Japan, which includes 1.56 million foreigners. The declining population will inevitably have a profound influence on society and industry in Japan, particularly in the field of social security.

**Fig. 1.1** Map of Japan

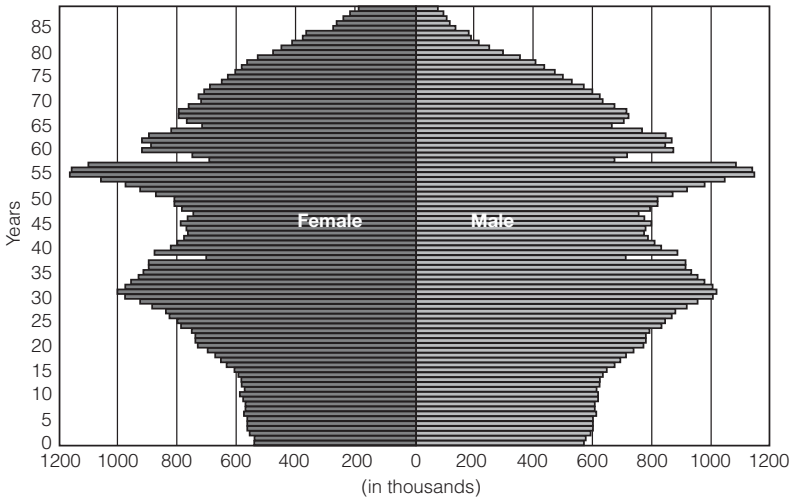


Source: United Nations Cartographic Section (retrieved 20 August 2008)

**Table 1.1** Population indicators, 1970–2005 (selected years)

	1970	1980	1990	2000	2005
Total population (in thousands)	103 720	117 060	123 611	126 926	127 756
Population (% female of total)	50.9	50.8	50.9	51.0	51.4
Population (% of total)					
0–14 years	23.9	23.5	18.2	14.6	13.6
≤ 65 years	7.1	9.1	12.0	17.4	21.0
≤ 80 years	0.9	1.4	2.4	3.8	5.2
Annual population growth (%)	1.1	0.9	0.4	0.2	0.1
Population density (per km <sup>2</sup> )	280	314	332	340	-
Crude birth rate (per 1000 people)	18.8	13.6	10.0	9.5	8.3
Total fertility rate	2.13	1.75	1.54	1.36	1.26
Crude death rate (per 1000 people)	6.9	6.2	6.7	7.7	8.5
Age-dependency ratio: population (0–14 & 65+)/(15–64)	44.9	48.4	43.5	46.9	53.0
Proportion of single person households (% of total)	18.5	18.1	21.0	24.1(2001)	-

Source: Health and Welfare Statistics Association, 2005

**Fig. 1.2** Population pyramid at 1 October 2004 from data in National Census 2005

Source: Ministry of Home Affairs, 2005

Because of the sharp decline in the birth rate, the population demographic shape is no longer a pyramid; rather it is shaped as a mushroom (Fig. 1.2). The two protrusions represent two baby booms: the first shortly after the Second World War (1947–1950) and second in early 1970s. A sharp decline in those aged 39 years results from a superstition about women born in that particular year. Japan will face an unprecedented ageing society when the first baby boomers (now over 50 years of age) retire.

Japan reached its peak population in 2005. According to the future population forecast, in 2050 the population in Japan will shrink to 100.6 million, the proportion of the population aged 0–14 years will decrease to 10.8% and the proportion of population aged 65 years and over will increase to 35.7% (Table 1.2).

There has been a consistent improvement in mortality rates over the years, with the greatest improvement seen in infant mortality (Section 1.4.5). Improvements in mortality have prolonged the lifespan to the longest in the world: 78.53 years for men and 85.49 years for women (in 2005). This prolonged lifespan coupled with a declining birth rate will inevitably lead to the ageing of the entire population structure. Reflecting the world's longest life expectancy, Japan also boasts one of the highest concentrations of centenarians. According to a report of the Ministry of Health, Labour and Welfare, there were 25 606 centenarians nationwide as of 15 September 2005, with the number increasing by approximately 10% every year.

Population ageing is attributable not only to the prolonged lifespan but also to the sharp decline in the birth rate. Japan has moved from being amongst

Table 1.2 Population projections (mid-level forecasts)

Year	Population (× 1000) by age groups					Dependency ratios <sup>a</sup> (%)			Ageing index <sup>b</sup>
	Total	≥65	0–14	15–64	≥65	Child	Old age	Child + old age	
2000	126 926	22 041	14.6	68.1	17.4	21.4	25.5	46.9	119.2
2010	127 473	28 735	13.4	64.1	22.5	20.9	35.1	56.0	167.9
2020	124 107	34 559	12.2	60.0	27.8	20.3	46.3	66.7	227.9
2030	117 580	34 770	11.3	59.2	29.6	19.1	50.0	69.1	261.9
2040	109 338	36 332	11.0	55.8	33.2	19.7	59.5	79.2	301.8
2050	100 593	35 863	10.8	53.6	35.7	20.1	66.6	86.8	330.6

Source: National Institute of Population and Social Security Research, 2002

Notes: <sup>a</sup>Populations by age: child,  $[(0-14)/(15-64)] \times 100$ ; old age,  $[(65+)/(15-64)] \times 100$ ; child + old age,  $[(0-14) + (65+)/(15-64)] \times 100$ ; <sup>b</sup>Population  $[(65+)/(0-14)] \times 100$

the countries with high fertility rates (1947–1949, total fertility rate of 4) to amongst those with the lowest rates (1.25 in 2005), far below the replacement level, though rates did increase to 1.32 in 2006. This figure is lower than the Organisation for Economic Co-operation and Development (OECD) average of 1.65 and the averages for most other developed countries: 1.33 in Germany, 1.38 in Spain, 1.98 in France, 1.85 in Sweden and 1.84 in the United Kingdom. The figure for Korea (1.13) is lower than that for Japan (OECD, 2008).

The composition of Japanese households has changed since the 1980s, with a decline in the proportion of three-generation households alongside an increase in the proportion of individuals living alone. According to the *National Household Survey* in June 2006 (Ministry of Health, Labour and Welfare, 2007a), a sampling survey conducted every three years, there were estimated to be 475.3 million households with 2.65 members per household. The proportion of single-person households was 22.4%, a sharp increase from 13.1% in 1986, whereas the proportion of three-generation households had declined dramatically from 44.8% in 1986 to 20.5% in 2006. The family diversity, combined with an increase in labour market participation by women, has led to an increasing requirement for extra familial care, which is partly provided through the Long-term Care Insurance system.

Immigration of foreign nationals in Japan is increasing. In 1990, foreigners living in Japan made up only 0.7 % of the total population (*Census 1990*). By the end of 2006, 2.08 million foreigners (1.63% of the total population) were residing in the country. The most common nationalities of foreign residents in 2006 were Korean (28.7%), Chinese (26.9% including from Taiwan and Hong

Kong) and Brazilian (15.0%) (data from the Ministry of Justice, Bureau of Immigration). Of 2.08 million foreigners, 451 909 were permanent residents.

## 1.2 Economic context

Japan is a member of the G8 group of leading industrial countries. The gross domestic product (GDP) was US\$4088.92 billion (current prices, purchasing power parity) in 2006 and US\$1045.5 billion in 1980. Japan's GDP increased almost 4 times in these 26 years (Table 1.3). The value added by industry was 29% of GDP (down from 38.5% in 1990), and by services 69.3% (up from 59% in 1990), with a very small role for agriculture (1.6%, compared with 2.5% in 1990) (OECD, 2007).

Table 1.3 Trends in gross domestic product (GDP) 1980–2006

GDP	1980	1990	2000	2002	2003	2004	2005	2006
Total (trillion yen)	241.0	440.1	511.5	497.9	497.5	504.8	498.3	508.9
Total (billion US\$, PPP)	1 045.5	2 325.7	3 303.5	3 465.7	3 575.4	3 787.8	3 709.8	4 088.9
Per capita (1000 yen)	2 063	3 564	4 030	3 907	3 898	3 954	3 903	3 983
Per capita (US\$, PPP)	8 951	18 826	26 027	27 198	28 016	29 664	29 054	32 002

Source: OECD, 2006b; OECD, 2008

Note: PPP: Purchasing power parity.

Since the 1960s, Japan has advanced rapidly to become one of the most industrialized countries in the world. During this time, real economic growth was significant, with a 10% average growth rate in the 1960s, 5% in the 1970s and 4% in the 1980s. Growth slowed markedly in the 1990s, averaging 1.7%, largely because of the overinvestment in the late 1980s. In 2004 and 2005, growth improved and the lingering fears of deflation in prices and economic activity lessened (Table 1.4).

To measure the effects of tax and social security on income redistribution, the government since 1962 has conducted the *Income Redistribution Survey*, which is a national sampling survey conducted every three years. Gini coefficients quantifying income inequality declined (meaning income was distributed more equally) continuously from 1962 to 1981. Japan at that time was widely viewed as the most equitable country in the world, popularly referred to as “all the nation in a middle class”. However, the Gini coefficient has increased since then (increased income disparity). In 2005, the Gini

**Table 1.4 Annual gross domestic product (GDP) growth since the mid-1990s**

	1994	1996	1998	2000	2002	2003	2004	2005	2006
GDP (current prices, trillion yen)	487	508	503	504	490	494	499	504	512
Annual growth rate: year-to-year increase (%)	1.2	2.4	-1.9	0.9	-0.8	0.8	1.0	1.1	1.6

Source: Government Cabinet Office, (1978–present)

coefficient of original income reached the record high of 0.53 (Table 1.5). There is a growing concern among social epidemiologists about the negative impact of the increasing income inequality on health (Kondo, 2005; Kawakami et al., 2006). After adjustment by tax and social security contribution, as well as social security benefit, the Gini coefficient was reduced to 0.39, which is a 26.4% reduction. The continuously increasing improvement rate indicates an increasing role of social security in income redistribution and, arguably, in population health.

**Table 1.5 Income inequality trends (Gini coefficient), 1981–2005**

	1981	1984	1987	1990	1993	1996	1999	2002	2005
Gini coefficient (A)	0.35	0.40	0.41	0.43	0.44	0.44	0.47	0.50	0.53
Adjusted Gini coefficient (B) <sup>a</sup>	0.32	0.35	0.34	0.36	0.36	0.36	0.38	0.38	0.39
Improvement rate by adjustment: (A–B)/A (%)	9.6	13.8	16.5	15.9	17.0	18.3	19.2	23.5	26.4

Source: Ministry of Health, Labour and Welfare, (1981–present)

Note: <sup>a</sup>Adjusted by income and social service benefits

Total labour force participation (average per year) in 2006 was 66.6 million: 39.0 million men and 27.6 million women (Table 1.6). Activity in the labour force among the population aged 15 years and over was 60.4 million. The total standardized unemployment rate has increased since the 1990s but remains relatively low at 4.1% of the labour force, with 4.3% men and 3.9% women in 2006. Japan's labour management in the 1980s was characterized by lifetime employment to nurture corporate loyalty; this has changed dramatically since the bubble economy burst in the early 1990s. The proportion of part-time and contingent workers increased from 20.2% in 1990 to 33.2% in 2006 according to the *Labour Force Survey* conducted by the Statistical Bureau every year.

**Table 1.6 Labour force participation, 1994–2006**

	1994	1996	1998	2000	2002	2004	2006
Total (million)	104.44	105.71	107.28	108.36	109.27	109.90	110.20
Labour force							
Total (million)	66.45	67.11	67.93	67.66	66.89	66.42	66.57
Employed (million)	64.53	64.86	65.14	64.46	63.30	63.29	63.82
Unemployed (million)	1.92	2.25	2.79	3.20	3.59	3.13	2.75
Rate of unemployed (%)	2.9	3.4	4.1	4.7	5.4	4.7	4.1
Women (% total)	40.5	40.5	40.7	40.7	40.9	41.2	41.4
Not in labour force							
Total (million)	37.91	38.52	39.24	40.57	42.29	43.36	43.55
House-keeping (million)	16.31	16.85	17.00	17.75	17.58	17.28	-
Attending school (million)	9.31	8.79	8.36	8.15	7.88	7.72	-

Source: Ministry of Home Affairs, 1947–present

### 1.3 Political context

Japan has a constitutional monarchy with a parliamentary government consisting of 47 prefectures and 1844 municipalities (including 23 wards in Tokyo) as local administrative authorities (as of March 2006). The constitution was decreed on 3 May 1947. The symbol of the state is Emperor Akihito (since 7 January 1989), the head of government is the prime minister, and the cabinet is appointed by the prime minister. Suffrage is 20 years of age. Parliament (*Kokkai*) consists of the Upper and Lower Houses. Parliament designates the prime minister; the constitution requires that the prime minister commands a parliamentary majority. Following legislative elections, the leader of the majority party or majority coalition in the Lower House (*Shugi-in*) usually becomes the prime minister. The Upper House (*Sangi-in*) has 242 seats with members elected for six-year terms, half of whom are re-elected every three years, 146 members in multi-seat constituencies and 96 by proportional representation. The Lower House has 480 seats, with members elected for four-year terms: 300 are in single-seat constituencies and 180 members are placed by proportional representation in 11 regional blocks.

As in other areas of policy, the parliament sets the basic structure while detailed policies are decided by ministries such as the Ministry of Health, Labour and Welfare. Policies are influenced also by lobbying groups such as the Federation of Health Insurance Funds, in addition to the National Industry

Association (*Keidanren*), the Labour Union (*Rengo, Zenroren*), and the Japan Medical Association.

Most policies are then endorsed by the parliament when it approves the annual budget. Japan's fiscal year begins in April and ends in March. Ministries submit budget plans for the next fiscal year to the Ministry of Finance by the end of August. The Ministry of Finance reviews the budget plans and compiles them into a cabinet bill by the end of December. The cabinet bills must then be reviewed and enacted by the parliament. The regular session of parliament is convened in January and continues for 150 days (usually ending in June) and the first half is spent in reviewing the budget bill because it must be enacted by the end of March so that the new fiscal year budget can be executed from April. The latter half is spent reviewing bills for laws. For example, the 2006 Health Care Structural Reform Bill prepared by the Ministry of Health, Labour and Welfare was submitted by the cabinet to the 164th regular session (20 January through 18 June 2006) of the parliament on 10 February. However, the review of the bill did not start until April because the parliament was busy reviewing the budget bill until the end of March. After the Minister of Health, Labour and Welfare explained the bill at the plenary meeting of the Lower House on 6 April, the bill was reviewed by the Subcommittee of Health, Labour and Welfare and was voted to pass the Lower House on 18 May with no revision, after spending 34 hours in review. The bill was then sent to the Upper House and was voted to pass on 14 June 2006 (four days before the end of the session). The law was passed and took effect in April 2008.

The system of local governments in Japan has two levels: prefectures, the large-area local governing units, and municipalities, the basic local-level governing units. Japan is divided into 47 prefectures and each is further divided into municipalities. The role of local governments has become increasingly important in organizing and providing health care and social services in the community. However, the Ministry of Health, Labour and Welfare retains considerable control in the form of the fee schedule under the universal health insurance system. To increase the autonomy of the local authorities, the central government has promoted the merger of municipal governments since April 1999; as a result, the number of municipal governments decreased from 3229 in 1999 to 1844 in 2005.

Traditionally, Japan has an immigration policy that does not accept immigrants for unskilled manual labour (Yamanaka, 1993). However, in response to internationalization of the labour market as well as a growing need for care workers, Japan is beginning to open its doors to foreign nurses and care workers. First, the Philippines proposed Japan should accept their care workers in a negotiation in the bilateral Free Trade Agreement in November 2004. In September 2006, Prime Minister Koizumi and President Arroyo agreed the Economic Partnership Agreement to accept up to 400 nurses and



600 care workers once the agreement was ratified by the Philippine Senate. The treaty had not taken effect as of early 2008 because of the delay in ratification by the Philippine Senate. However, Japan and Indonesia ratified an Economic Partnership Agreement with the same provision in the summer of 2007 and Indonesia became the first country to “export” nurses and care workers to Japan. One condition of a working visa is that applicants must possess sufficient communication skills in Japanese.

## 1.4 Health status

Life expectancy at birth for Japanese people was 46.92 years for males and 49.63 years for females in 1935–1936 and it became 50.06 years and 53.96 years, respectively, in 1947. Those were very short compared with expectancies in industrial countries at the time. However, life expectancy increased to 60 years for females in 1950 and for males in 1951. During the past 57 years, life expectancy has increased by approximately 29 years for males and 32 years for females. Changes to life expectancy at birth in the period from 1970 to 2006 are shown in Table 1.7.

Table 1.7 Trends in life expectancy, 1970–2006

	Life expectancy (years)				
	1970	1990	2000	2002	2006
Men	69.31	75.92	77.72	78.32 (72.3 <sup>a</sup> )	79.00
Women	74.66	81.90	84.60	85.23 (77.7 <sup>a</sup> )	85.81

Source: Ministry of Health, Labour and Welfare, *Life Tables*

Note: <sup>a</sup>Healthy life expectancy according to the *World Health Report 2004* (WHO, 2004b)

### 1.4.1 Healthy life expectancy

Healthy life expectancy at birth (the equivalent number of years in full health that a newborn can expect to live based on current rates of ill health and mortality) was 72.3 years for males and 77.7 years for females in 2002. Both the healthy life expectancy and the disability-adjusted life expectancy measures were developed in order to provide summary measures of population health (Murray et al., 2002). Japan drew world attention because it was ranked highest in the summary measures of the World Health Organization’s (WHO) *World Health Report 2000* (WHO, 2000). However, the validity and appropriateness of such summary measures have been widely criticized (e.g. Hori, 2006).

### 1.4.2 Avoidable mortality

There has been no formal national statistics on avoidable mortality in Japan. An international study indicated that Japan had the second lowest mortality amenable to health care among 19 industrialized countries in 1997–1998 and 2002–2003 (Nolte and McKee, 2008).

### 1.4.3 Mortality

Trends in mortality by main causes of death from 1900 to 2000 show that deaths from pneumonia and tuberculosis (TB) have dramatically decreased, while deaths from malignant neoplasm have increased. The number of deaths and crude mortality rates are shown in Table 1.8, which shows a gradual increase since approximately 1980, reflecting the ageing of population. However, when the mortality rate is adjusted for age, it has consistently declined to become one of the lowest among the developed countries.

Table 1.8 Trends in crude and age-adjusted death rates, 1970–2005

Death rate (per 1000 population)	1970	1980	1990	2000	2005
Crude					
Total	6.9	6.2	6.7	7.7	8.6
Males	7.7	6.8	7.4	8.6	9.5
Females	6.2	5.6	6.0	6.8	7.8
Age-adjusted					
Males	12.3	9.2	7.5	6.3	5.9
Females	8.2	5.8	4.2	3.0	3.0

Source: Ministry of Health, Labour and Welfare, 1899–present

The trends of deaths and death rates by causes of death are shown in Table 1.9. The leading cause of death was malignant neoplasm for males and circulatory diseases for females. The number of deaths from malignant neoplasm was 193 096 for males and 127 262 for females (320 358 in total) in 2004. For malignant neoplasms, there was a large difference between males and females in both the total number of deaths and the mortality rates for specific neoplasms. The number of deaths from circulatory diseases was 149 913 for males and 160 981 for females (310 894 in total) in 2004. The number of deaths from cardiovascular and cerebrovascular diseases were 159 625 and 129 055, respectively. The number of deaths from respiratory diseases was

149 293. These top three leading causes of death account for approximately 59% of the total deaths.

**Table 1.9** Number of deaths and death rates by sex and main causes of death (ICD-10 classification) in 2004

	Number of deaths			Death rates (per 100 000 population)		
	Total	Men	Women	Total	Men	Women
All causes	1 028 602	557 097	471 505	815.2	904.4	730.0
I Communicable and parasitic diseases	21 623	11 463	10 160	17.1	18.6	15.7
Tuberculosis	2 330	1 555	775	1.8	2.5	1.0
II Non communicable conditions						
Circulatory diseases (I00–I99)	310 894	149 913	160 981	246.4	243.4	249.3
Cardiovascular diseases	159 625	77 465	82 160	126.5	125.8	127.2
Cerebrovascular diseases	129 055	61 547	67 508	102.3	99.9	104.3
Malignant neoplasms (C00–C97)	320 358	193 096	127 262	253.9	313.5	197.1
Mental and behavioural disorders	4 267	1 585	2 682	3.4	2.6	4.2
Respiratory diseases	149 293	83 381	65 912	118.3	135.4	102.1
Digestive diseases	40 241	22 123	18 118	31.9	35.9	28.1
III External causes*	73 425	48 596	24 829	58.2	78.9	38.4
Traffic accidents	10 551	7 355	3 196	8.4	11.9	4.9
Suicide	30 247	21 955	8 292	24.0	35.6	12.8

Sources: WHO, 1994 (for ICD-10); Ministry of Health, Labour and Welfare, 2006d.

Note: ICD: International Classification of Diseases

Trends in the number of deaths by the main types of malignant neoplasm are shown in Table 1.10. For males, the most prevalent cancer deaths are from trachea, bronchus and lung cancers (41 189 deaths) in 2005, and for females from colon cancer (18 684 deaths in 2005). The number of trachea, bronchus and lung cancer deaths for males increased 6 times from 1970 to 2005, and the number of colon cancer deaths for females increased 4.5 times.

Japan had relatively low mortality in 2005 from ischaemic heart disease for both males (43.4 deaths per 100 000 males) and females (20 deaths per 100 000 females), similar to Korea but very low compared with the OECD average (137 for males, 72 for females). Japan had relatively high mortality from cerebrovascular diseases (65 deaths per 100 000 males compared with the OECD average of 63.4), and relatively low rates of mortality from cancer among females (97 deaths per 100 000 females compared with the OECD

Table 1.10 Trends in numbers of deaths by main malignant neoplasms, 1970–2005

	Number of deaths (% of total)				
	1970	1980	1990	2000	2005
Malignant neoplasms (C00-C97) of men	67074	93501	130395	179140	196 603
Stomach	44.21	32.99	22.94	18.31	16.60
Colon	6.42	8.26	10.19	11.09	11.26
Liver and intrahepatic bile ducts	8.75	10.42	13.64	13.18	11.80
Gall-bladder and other biliary tract	2.00	2.98	3.89	3.86	3.99
Trachea, bronchus and lung	11.18	16.51	20.61	21.8	22.98
Others	27.44	28.84	28.74	31.77	33.36
Malignant neoplasms (C00-C97) of women	52903	68263	87018	116344	129 338
Stomach	36.24	28.71	20.18	15.34	13.66
Colon	7.93	10.28	13.04	13.82	14.45
Liver and intrahepatic bile ducts	6.76	6.19	7.41	8.92	8.56
Gall-bladder and other biliary tract	3.33	5.58	7.82	7.08	6.76
Trachea, bronchus and lung	5.65	8.58	11.05	12.61	13.05
Breast	4.70	6.07	6.72	7.88	8.29
Uterus	12.05	8.01	5.29	4.47	4.16
Others	23.35	26.59	28.5	29.87	31.08

Source: Ministry of health, Labour and Welfare, 1899–present

average of 125) but not among males (203 deaths per 100 000 males compared with the OECD average of 218) (OECD, 2008). The low rate of mortality from trachea, bronchus and lung cancer among females may be explained by low smoking rates (11.3%), although smoking prevalence is very high for males (46.8%) (Section 1.4.6). However, the gradual changes in lifestyles and dietary habits are shifting morbidity and mortality patterns closer to those found in other industrialized countries.

While Japan enjoys the world's longest life expectancy, suicide is increasingly becoming a public health threat. Japan has the highest suicide rate amongst industrialized countries. Records indicate that a total of 32 552 people, or 24.2 per 100 000 population, committed suicide in 2005. The long period of economic difficulties may well have played a role in the 48% increase in the suicide rate since 1990, when it was 16.4 per 100 000 population. This sharp increase in suicide is a serious public health threat because suicide consumes as much as 16.2% and 10.6% of potential years of life lost for males and females, respectively, compared with 5% and 2.2% for ischaemic heart

disease, 6% and 5.5% for cerebrovascular diseases and 23.2% and 32.1% for cancer, respectively (OECD, 2005a).

#### **1.4.4 Infectious diseases**

Japan used to be plagued with epidemics of infectious diseases, which also claimed a high number of lives. The number of reported cases of major traditional infectious diseases has declined significantly since the late 1960s, but so-called emerging and re-emerging infectious diseases began to pose renewed public health threats. In 1999, the new Infectious Diseases Prevention Act was enacted, incorporating a separate law concerning the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) (Section 6.1.6). Under this new Act, infectious diseases were classified into four categories, which became five categories with the revision of the Act in 2003, the categories depending on their severity and societal risks.

##### **Human immunodeficiency virus and acquired immunodeficiency syndrome**

The HIV/AIDS epidemic in Japan can be summed up as follows. The number of reported cases of HIV infection and AIDS was 7536 and 3715, respectively, by March 2006. The number of infections is still growing among Japanese men, with transmission mainly through homosexual intercourse. The number of reported cases involving foreign nationals in 2005 was approximately 28% for HIV and 24% for AIDS. Sexual intercourse forms the major transmission route, with intravenous drug use and maternal infection accounting for less than 1%. However, cases with unknown transmission route account for nearly half of the infected foreign nationals and are also increasing among Japanese. HIV/AIDS is largely concentrated in the Tokyo area, although the incidence in the Kinki block (the area around Osaka, Kyoto and Kobe) is increasing.

##### **Tuberculosis**

Japan suffers from a high mortality rate for TB compared with other major developed countries, with 2296 deaths in 2005, or 1.8 per 100 000 population. TB used to be the leading cause of death until as late as 1950, but then declined and was only 25th in a list of causes in 2005. Around 1950, the age-specific mortality of TB was highest among the young population: nearly 300 per 100 000 population in their twenties, which led to considerable public and media attention.

Under the TB Prevention Act (the TB Prevention Act was incorporated into this Act in December 2006), doctors who diagnose TB are required to report

the patient's details to the nearest public health centre to prompt the centre to keep track of the patient. These public health centres have been serving at the forefront for TB control and prevention. Approximately 31 638 new patients were reported in 2003; this translates into 24.8 per 100 000 population. The year 1997 was remarkable because the hitherto declining incidence rate turned upward for the first time in 43 years, from 33.7 in 1996 to 33.9 in 1997. In particular, the number of patients with active TB, who are capable of infecting others, had not declined very much since 1975 and was 15 038 in 1996 and 15 967 in 1997.

Once a patient has been identified by the public health centres, the centres keep track of the patients until they have been diagnosed as free of TB for three years. The cumulative number of patients being tracked by public health centres was 121 762 in December 1997, of whom 55 409 had active TB. Because the long-lasting trend of declining incidence and prevalence of TB showed signs of disease resurgence in 1977 and the numbers of patients under surveillance by the Public Health Committee of the Ministry, the Ministry announced the TB Emergency Declaration. Occurrence of TB is concentrating in and around large cities, and so a "Directly Observed Treatment, Short-course" (DOTS) regimen was actively pursued in these areas. The effort bore fruit and the number of patients under surveillance by the Public Health Commission of the Ministry declined to 77 211 by March 2003. The incidence rate was 24.8 per 100 000 population in 2003, which was very high compared with rates in many other countries: in 2002 it was 4.2 in Sweden, 5.2 in Australia, 5.2 in the United States, 11.7 in the United Kingdom and 9.5 in France (WHO, 2004a).

The TB Prevention Act requires all babies aged 0 to 4 years old to be checked with a skin test (purified protein derivative (PPD)) and to receive immunization (Bacillus Calmette-Guérin (BCG)) until 2004 if they have a negative result (hence no immunity). Since then, screening by PPD skin tests was abolished and all babies were required to receive BCG by six months old; all of this is publicly funded. If the BCG immunization is successful, immunity against TB will develop as evidenced by a subsequent positive PPD test. This use of an iatrogenically induced positive PPD skin test is sometimes puzzling to western doctors, who naturally interpret the positive skin test as indication of TB infection. In Japan, mildly positive PPD skin test results are interpreted as evidence of immunity developed by BCG vaccination and are usually not interpreted as TB infection unless other findings suggest otherwise. Immunity endowed by BCG is not entirely lifelong nor does it provide full protection against TB, as evidenced by sporadic outbreaks among young people. Therefore, the PPD skin test is repeated in elementary and junior high schools and BCG may be repeated for those students who failed to show a positive result and hence lack immunity.

In 1991, the Public Health Commission issued a recommendation for a targeted eradication of TB by the 2030s. In 1993, the mass chest X-ray examinations conducted on all schoolchildren in elementary and junior high schools were abolished to reduce unnecessary radioactive exposure, and those with strongly positive PPD skin tests were asked to undergo thorough examination at hospitals or clinics. In 1999, the Public Health Committee issued a recommendation for a targeted eradication of TB by the 2030s.

### **Viral hepatitis**

Viral hepatitis is one of the major public health threats in modern Japan. There are estimated to be 1.2 to 1.4 million (more than 1% of population) carriers of hepatitis B virus and nearly 2 million (1.6% of population) carriers of hepatitis C virus. The hepatitis viruses are a known cause of liver cancer. More than 70% of the annual 44 000 deaths from liver cancer/cirrhosis is attributed to hepatitis C. The number of liver cancer deaths per 100 000 population has steadily increased from 12.0 in 1980 to 27.4 in 2004 and the increase is mainly attributable to hepatitis C.

One of the major transmission routes of hepatitis C virus is thought to be iatrogenic. The considerable geographic variance in its prevalence might support this hypothesis: some hospitals and clinics used to provide intravenous treatment without adequate sterilization, and mass immunization programmes in the past were occasionally conducted without changing syringes and needles. Also there was the possibility of transmission at one time during treatment with acupuncture for diseases or symptoms (Nakajima et al., 1997). Post-transfusion hepatitis was largely eradicated by the introduction of screening for hepatitis C virus in November 1989. Introduction of interferon treatment for both hepatitis B and C under health insurance benefits also contributed to effective treatment of carriers.

### **Leprosy**

Japan's Leprosy Prevention Act was abolished in 1996. The law confined the infected patients to national sanatoriums located in isolated places and continued its practices even after effective treatment became available. Though the law was abolished, it was hard for most patients to return to society and to build the stable basis for living because most of them were old. The government now provides public assistance to support those who had been confined to the sanatoriums for a long time.

### 1.4.5 Maternal and child health

In 1975, Japan had achieved almost the lowest reported infant mortality rate in the world, when it was 10.0 per 1000 live births and it has remained the lowest. In 2006, infant mortality rate in Japan was 2.6 per 1000 live births, lower than the average across OECD countries (5.2) and that in Sweden (2.8), Germany (3.8), France (3.8) and the United Kingdom (5.0) (OECD, 2008). Reductions in infant mortality were achieved through concerted efforts in providing effective maternal and child health services (Section 6.1.1). Maternal mortality rates per 100 000 live births also significantly decreased, from 176.1 in 1950 to 6.6 in 2000 (Table 1.11) and further to 4.9 in 2006 (OECD, 2008). National postnatal mortality statistics are available from 1930 to 2005 and are shown in Table 1.11.

**Table 1.11 Trends in mortality rates for infant, neonatal baby, early neonatal baby and mothers, 1930–2005**

	1930	1940	1950	1970	1990	2000	2005
Child (per 1000 live births)							
Infant (under 1 year of age)	124.1	90.0	60.1	13.1	4.6	3.2	2.6
Neonatal baby (under 4 weeks of age)	49.9	38.7	27.4	8.7	2.6	1.8	1.3
Early neonatal baby (under 1 week of age)	–	–	15.1	6.6	1.9	1.3	1.0
Maternal mortality rate (per 100 000 live births)	–	–	176.1	52.1	8.6	6.6	5.7

*Source:* Ministry of Health, Labour and Welfare, 1899–present

Congenital anomalies accounted for 34.7% of infant mortality in 2005 and constituted by far the largest cause of death (Table 1.12). Since congenital anomalies are hard to prevent from a public health perspective, preventing sudden infant death syndrome and accidents will be the next challenges for public health in the field of maternal and child health.

The death rate in pregnant women in Japan is relatively high considering the low infant mortality rate. Also Japan is facing the problem of an increase in adolescent pregnancies. The artificial abortion (termination of pregnancy) rate in adolescent women has been increasing in recent years; it was 13.0 per 1000 women aged from 15 to 19 years in 2001, a sharp increase from 2.4 in 1964. This increasing trend has reversed since then, and the figure declined to 7.9 in 2006.



**Table 1.12 Number of infant deaths by main causes, 1970–2005**

	1970	1980	1990	2000	2005
Total	25 412	11 841	5 616	3 830	2 958
Intestinal infectious diseases	909	108	15	11	18
Pneumonia	3 102	553	136	73	48
Acute bronchitis	193	35	12	8	5
Congenital malformations, deformations and chromosomal abnormalities	3 914	3 131	2 028	1 385	1 025
Respiratory and cardiovascular disorders specific to the perinatal period	3 757	3 397	987	603	414
Sudden infant death syndrome	–	108	323	317	174
Accidents	1 142	659	346	217	174

Source: Ministry of Health, Labour and Welfare, 1899–present

### 1.4.6 Lifestyle factors affecting health

The proportion of smokers among persons aged 15 years or older was reported to be 41.3% for men and 12.4% for women in 2006, in comparison with proportions for men and women, respectively, of 19% and 14.5% in the United States, 23% and 21% in the United Kingdom and 27.9% and 18.8% in Germany (OECD, 2008). The proportion of the population classified as obese (with body mass index greater than 25) was 27.0% for males and 21.4% for females in 2003 and this reflects a steady increase for males in every age group since 1983. The number of heavy drinkers, defined as drinking 150 ml pure alcohol per day, is also increasing (Ministry of Health, Labour and Welfare, 2003b).

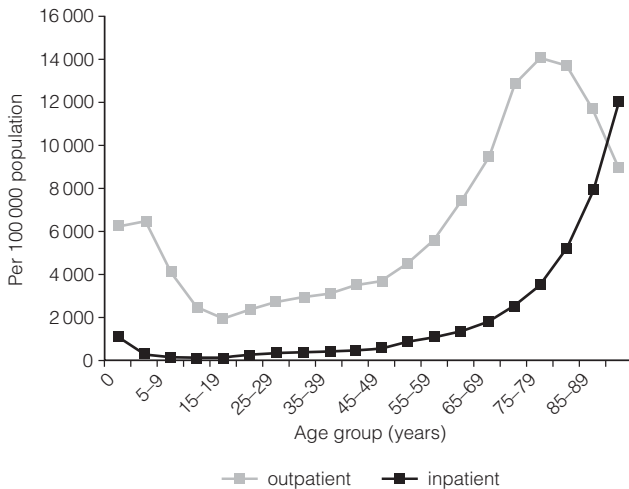
### 1.4.7 Perceived health status and health care use

To understand patterns of health status and health care use, the government conducts regular national surveys. One is a questionnaire survey on households (*National Household Survey*) and the other is a survey of patients at hospitals and clinics (*Patient Survey*). According to the *National Household Survey* conducted in June 2004 (Ministry of Health, Labour and Welfare, 2004b), 317.1 per 1000 population have at least one physical complaint. The proportion of those who express at least one physical complaint increases with age in both sexes. The figure was 281.4 for males and 350.5 for females. It was 461.3 for men aged 65 years or over and 517.4 for women aged 65 years or over

(Ministry of Health, Labour and Welfare, 2004b). To the question of “how do you perceive your health status?”, 41.3% of the population aged 6 years or over answered in 2004 that their health was “good” or “fair”, while 11.9% answered “not good” or “bad” and the remaining 40.4% assessed their health as “moderate”. The health of the elderly has been gradually improving since the mid-1980s (Ministry of Health, Labour and Welfare, 2004b).

Utilization of health care is estimated by the *Patient Survey*, which is conducted every three years. The *Patient Survey* is a nation-wide sampling survey on inpatients and outpatients at hospitals and clinics, and is conducted on one day in the middle of October. The total number of patients who received health care at hospitals and clinics on the survey day in October 2005 was 1.46 million inpatients and 7.09 million outpatients. According to the survey, 95.1% of inpatients were admitted at hospitals and 4.9% at clinics; 26.3% of outpatients visited hospitals, 55.7% general clinics and 18.0% dental clinics. Patients aged 65 years or over account for approximately 60% of the inpatients and 40% of the outpatients. Age- and sex-specific utilization expressed as the estimated number of patients per 100 000 population is displayed in Fig. 1.3.

Fig. 1.3 Utilization rate of health care by age group in the Patient Survey of 2005



Source: Ministry of Health, Labour and Welfare, 2006a

## 2 Organizational structure

### 2.1 Overview of the health system

Japan's health system is organized according to the model of social health insurance. The health insurance system for the employed population was enacted in 1922 (implementation was delayed to 1927 owing mainly to the large earthquake that hit Tokyo in 1923) and the health insurance system for the self-employed population in 1938; universal coverage was achieved in 1961. Japan's curative medicine and preventive services have been effectively separated;<sup>1</sup> the former is funded by insurance and provided by private and public practitioners while the latter is funded by general tax and delivered mainly by local public health authorities.

The Japanese public health system is closely connected with local governments. Most public health services, except quarantine, are administered by local governments (prefecture and municipal) and delivered by public health centres at the prefecture level and municipal health centres at the municipal level.

There is universal coverage of the population by statutory health insurance. However, as noted above, the health insurance system is organized around the treatment of diseases and does not generally reimburse preventive medical activities (Section 20 of the *Practicing Rules for Panel Doctors* states that "health screenings shall not be provided to be reimbursed"). The provision dictates that doctors shall order examinations and laboratory tests only to the extent that a patient's symptoms warrant. The health insurance system's emphasis on treatment makes it difficult to address the health challenges that

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<sup>1</sup> This is in sharp contrast to the British National Health Service model founded on the principles espoused by Lord Dawson of Penn: preventive services and curative services should not be separated, and primary and secondary health centres should be established to attain collaboration between those two services (UK Ministry of Health, 1920).

are associated with lifestyle-related diseases. While significant achievements have been made in population health, further improvements arguably require a health care system that better integrates preventive and curative care services. The recent reform in 2008 aimed to integrate prevention into the insurance systems by requiring all health insurers to provide health check-ups to detect lifestyle-related diseases (e.g. hypertension, hyperlipidaemia and diabetes mellitus) for those it covers aged 40 or over and to provide appropriate guidance for those who are at elevated risk of developing diseases (Chapter 7).

## 2.2 Historical background

The origins of Japan's health system can be traced back to 25 August 1543 when people from the West first visited Japan; a ship came ashore on the southernmost island of the country with approximately 100 passengers led by two people from Portugal. This was also the year when Andreas Vesalius (1514–1564) published *De Humani Corporis Fabrica*, placing the science of anatomy on a firm basis. Following this, some limited communications between Japan and Western countries began. In 1555, a Portuguese surgeon, Luis de Almeida (1552–1583), visited Japan, first opening an orphanage in Oita, and then, in 1557, building a hospital, which is thought to be the first Western-style hospital in Japan (Tatara, 1997).

In 1639, the central government in Edo (now Tokyo) decided to close the country's doors to the rest of the world except for one specified place called Dejima in Nagasaki, where Dutch merchants were allowed to continue trading. At about the same time, William Harvey (1578–1657) performed an experiment to show that the action of the heart circulates blood through the arteries. This finding had a great impact on medical science and represented the beginning of a new approach to medicine in the Western world. However, from this time until 1853, when four American gunboats under the command of Commodore MC Perry (1794–1858) visited Uraga, a small village near Edo, the Japanese people continued generally practising and taking traditional medicine. However, even during these 220 years, visiting physicians and surgeons at Dejima had an invaluable influence on the history of medicine and science of Japan by introducing knowledge in anatomy, medical care, surgery, obstetrics, ophthalmology, pharmacy and chemistry that was available at the time in Western countries.<sup>2</sup>

<sup>2</sup> There were about 150 visitors by 1850; the most influential were C Schamberger, who spent the years 1649–1650 in Japan, W ten Rhyne 1674–1676, E Kaempfer 1690–1692, CP Thunberg 1775–1776, J von Siebold 1823–1829 and 1859–1862, O Mohnike 1848–1851, J Pompe van Meerdervoort 1857–1862, AF Bauduin 1862–1870 and KW Gratama 1866–1871.

Rhyne is believed to be the first person who reported to Europe on health care in Japan. Von Siebold (1796–1866) published *Nippon, Fauna Japonica* and *Flora Japonica*, which described the life of people, animals and plants in Japan and introduced them to the West. Pompe van Meedervoort (1829–1908) systematically instituted Western medical education for the first time in Nagasaki in 1857. In 1774, G Sugita (1733–1817), a Japanese scholar, published the first Western-style anatomical textbook in Japan, *Kaitaishinsho*, a translation from the Dutch edition of *Anatomische Tabellen* (published in 1732) by JA Kulumus (1689–1745) with the help of R Maeno (1723–1803) and J Nakagawa (1739–1786). In 1793, the first textbook on Western medicine, entitled *Seisetsu Naika Senyo*, was published in Japan. This was a translation by G Udagawa (1755–1797) of *Gezuiverde Geneeskunst* (published in 1744) by J de Gorter (1689–1762).

It is of particular interest in the history of public health that the idea of a smallpox vaccination, initially conceived by Jenner (1749–1823), had already reached Japan by around 1803, only five years after the publication in 1798 of Jenner's paper on the first successful vaccination. Mohnike (1814–1887) introduced the practice of vaccination and used a cowpox vaccine imported by using the crust of cowpox vaccine inoculation from Batavia in Java in 1849. Up to that time, the only inoculation that had been tried used fluid from human pox, the original method for which was introduced by a Chinese scientist in Nagasaki in 1744. In October 1849, a place for vaccination for smallpox, called the *Jotokan*, was founded in Kyoto, and in November a similar *Jotokan* was opened in Osaka by Koan Ogata (1810–1863). Ogata had already founded a school that became famous for the teaching of Dutch culture and medicine, the *Tekijuku*, in Osaka in 1838. Vaccination for smallpox based on strict and scientific methods was widely introduced across the country, mainly being carried out by many students who had studied at the *Tekijuku* under the guidance of Ogata. This vaccination movement was important in familiarizing the Japanese people with the styles and standards of Western medicine as practised at that time.

In 1858, an official place for vaccination for smallpox, called the *Shutosho*, was built at Otamagaike in Kanda, Edo, with government approval. In 1860, this *Shutosho* became the property of the government, with administration by a chancellor, S Otsuki (1803–1862). The *Shutosho* was renamed the *Seiyo Igakusho*, meaning “the place for learning Western medicine” in 1861. The *Seiyo Igakusho* became a medical school after the army hospital in Yokohama was annexed to it in 1869, and was renamed the *Daigaku Toko* in the same year. It became the *Tokyo Igakko*, or Tokyo Medical School, the origin of the Faculty of Medicine of the University of Tokyo, in 1874. In 1868, the *Seitokukan* in Nagasaki, which had its origin in the *Yojosho*, the

medical institution founded by Pompe (1829–1908) in 1861, was renamed the Nagasaki Medical School, and in 1869 the Osaka Medical School was established.

### 2.2.1 Evolution of public health

The first legislation on health care, *Isei* (Medical Act), was decreed in 1874. This legislation included a wide range of areas, from the administrative structure of public health to pharmaceutical affairs and medical education. At that time, the most urgent purpose of public health was infectious disease prevention. In 1875, the Bureau of Hygiene was established in the Home Office, which had responsibility over local authorities. To enforce the preventive measures, the public health administration was incorporated into the police system in 1893.

The first Public Health Centre Act was passed in 1937, mainly to prepare the country for the war that had just started in China and to tackle TB, which had killed approximately 132 000 people in 1935 and which later killed 153 000 people in 1940. A plan was formulated for the construction of 550 public health centres in the following 10 years for the purposes of health education and counselling, mainly to fight the national threat of TB. The staff of each centre consisted of two doctors, one pharmacist, one clerk, three hygienic instructors and three public health nurses. In the Act's regulations, the position of the public health nurse was formally recognized for the first time, with requirements that they be women and at least 18 years of age. Two model health centres had been built in Tokyo and Saitama with the financial support of the Rockefeller Foundation by 1935. In 1937, 49 public health centres had been built throughout the country, and by 1944 the number had risen to 770.

The Public Health Centre Act was amended in 1947 to promote the activities of the centres including not just personal services but also regulatory functions over pharmaceutical affairs, food sanitation and environmental health. According to this Act, public health centres expanded their functions to include promoting the planning of health services for residents in the area, collecting information on the residents' health, implementing projects for the prevention of public nuisance, evaluating environmental health and conducting hygienic laboratory examinations. In the subsequent 60 years, there has been shift in emphasis from public health initiatives focusing on collective efforts towards more individual-based services to improve healthy lifestyles, culminating in the new Community Health Act, which was passed in 1994 (Section 2.4).

To cater for the growing need for long-term care, the hitherto separate policies for the health services and the welfare services for the elderly needed to be effectively integrated at municipal level. In 1990, both laws concerning

health and welfare of the elderly were amended to require all municipal governments to develop comprehensive action plans based on objective need assessment and the service levels to be achieved. Under this initiative, all municipal governments conducted a survey assessing need for long-term care in a community setting in and around 1993. This survey was unprecedented in that it covered the entire population of disabled elderly dwelling in home settings and served as a baseline for the later development of the Long-term Care Insurance system (Section 6.8).

### 2.2.2 Evolution of the health care system

The oldest places in Japan to be provided with staff and facilities to take care of and shelter the sick and poor were the *Seyaku-in* and *Hiden-in*, built at the Kofukuji Temple in Nara in 723 with the support of the Empress Komyo-Kogo. In 1722, the Koishikawa *Yojosho* was built to offer hospital care to the poor in Edo. In 1861, the western-style hospital *Yojosho*, was built in Nagasaki. It had eight rooms with 15 beds each, four rooms for isolation and operations and a preparatory room. In 1874, the total number of hospitals in the country had reached 52, and by 1882 this had increased to 626. In 1879, a hospital for cholera patients was founded; by 1911, the number of hospitals for infectious diseases in Japan was 1532. A mental hospital attached to the Kyoto Prefectural Hospital was founded in Kyoto in 1868, and another was founded in Tokyo in 1879.

In the first year of the Meiji period (1868–1912), the new government proclaimed that Western medicine was to be adopted, and that a medical licensing system should be established. The largest institution to adopt Western medicine was the army. From the end of the Edo period, Dutch medicine had a particularly strong influence. However, the new government first thought of introducing British medicine with the help of W Willis (1861–1881), who had already gained a wide reputation from his work during the wars of the Meiji Restoration. However, the government decided in 1869 to adopt the German model of medicine instead, and L Mueller (1871–1875), a teacher of surgery, and TE Hoffmann (1871–1875), a teacher of medicine, arrived in Tokyo in August 1871 from Germany to lecture at the *Daigaku Toko* until 1875. E Baelz (1876–1905) contributed to medical education during its formative years in Japan.

The Tokyo Medical School was reorganized and renamed the Faculty of Medicine of the University of Tokyo in 1877, and had 23 departments in 1893. The professors of these departments were all Japanese. The first Professor of Hygiene was M Ogata (1853–1919), who had studied under Professor M von Pettenkofer (1818–1901) in the Department of Hygiene of the University of Munich.

## 2.2.3 Evolution of health professionals

### Doctors

In 1875, an examination system for issuing licences to practise medicine was introduced in Tokyo, Kyoto and Osaka. However, under this system, practitioners who had already been practising were allowed to continue without having to sit the examination. In 1878, the examination system was extended to cover almost the entire country. The establishment of an examination system that adopted Western medicine and excluded traditional Chinese-style medicine was the basis for the Western medical doctors to establish the hierarchy of medical education and medical practice in Japan. The total number of doctors in 1874 was 28 262, of whom 23 015 were traditional-style doctors and 5247 were Western style.

The long-standing practice of traditional Chinese-style medicine in Japan created difficulties for doctors to adopt Western medicine and put it into practice. At first, the doctors practising Western medicine tried to separate dispensing from medical practice, as was the custom in European countries, and as was set down in the *Isei* (the first Medical Act). However, this separation was not acceptable to patients, who expected their doctors to dispense medicine as would a doctor practising traditional medicine. It was suggested that doctors practising traditional medicine should be prevented from dispensing drugs, but this would have amounted to recognizing traditional medicine as a formal science. Hence there was a sudden change in policy, and Western medical practice became competitive with traditional medical practice by giving those practising Western medicine permission to dispense drugs, although this did not include traditional Chinese-style drugs. This policy has had lasting repercussions on health care in Japan (see below) (Tatara, 2003).

Medical doctors gradually converted from Chinese-style medicine to Western medicine. The number of medical practitioners who had studied modern Western medicine increased from 9.5% of a total of 40 880 practitioners in 1884 to 55.3% of 35 289 in 1904 and to 99.5% of 64 234 in 1939. During this period, many Japanese doctors received international acclaim in medical research.<sup>3</sup> Numerous medical societies were formed alongside this growth in Western medicine: the Japan Medical Society was founded in 1890, the Japan

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<sup>3</sup> S Kitasato (1852–1931) succeeded in culturing the tetanus bacillus under the auspices of Robert Koch in 1889 and developed serum therapy with EA von Behring (1854–1917) in 1890. K Shiga (1870–1957) discovered *Shigella dysenteriae* in Tokyo in 1897. J Takamine (1854–1922) purified adrenaline (epinephrine) in New York in 1900. S Tawara (1873–1952) discovered the atrioventricular node. S Hata (1873–1938) prepared arsphenamine in cooperation with P Ehrlich (1854–1915) in 1910. H Noguchi (1876–1928) made pure culture of *Spirochaeta pallida* in 1911.



Anatomical Society in 1893, the Japan Surgical Society in 1898, the Japanese Society of Internal Medicine in 1903 and the Japanese Society for Hygiene in 1904. At the suggestion of the General Headquarters of the Occupying Army, the Council for Medical Education was founded in the Ministry of Education and Science in 1946. There was substantial growth in the number of medical professionals trained after around 1970. In 1970 there were 50 medical schools; the number rose to 80 by 1981. The number of doctors has also been gradually increasing and the number of practising doctors was 277 927 in 2006. The number of doctors per 100 000 population increased from 111.3 in 1965 to 217.5 in 2006.<sup>4</sup> Today, Western medicine is predominant in the Japanese health care system in terms of the number of physicians, although some doctors learn and practise Chinese-style medicine in addition to, or instead of, Western medicine.

### Dentists

Dentistry was introduced in Japan in 1860 by the American dentist WC Eastlake who worked in Japan from 1860–1869; modern dental practice was initiated by E Obata (1850–1909) in 1875. The term dental practice appeared formally for the first time in the Regulations of Examination for Medical Practice in 1879. In 1883, the examination for the dentistry licence was separated from that for medical practice, and the Dentists Act was passed in 1906 at the same time as the Medical Act. The number of dentists was 1125 in 1910 and their number per 100 000 population was 2.3. These figures grew, respectively, to 9983 and 17.0 in 1924 and 23 311 and 32.7 in 1939. In 2006, about 70 years later, the number had increased significantly to 97 198, which was 76.1 per 100 000 population.

### Pharmacists

In 1874, the first Medical Act (*Isei*) set out qualification requirements for pharmacists for the first time. The *Japanese Pharmacopoeia* was established in 1886, and a regulatory system for pharmacists and their dispensaries was established by the Regulations for Drug Trade and Drug Management in 1889. Since 1890, it has been compulsory for those owning a pharmacy to take the pharmacists' examination. The Pharmacists Act was passed in 1925. The number of pharmacists was 4643 in 1910, corresponding to 9.4 per 100 000 population. These figures, respectively, were 12 267 and 20.8 in 1924

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<sup>4</sup> The number of practising doctors, dentists and pharmacists are calculated from statistics of the National Survey of Doctors, Dentists and Pharmacists (Ministry of Health, Labour and Welfare, 2006c) and population data of the census.

and 29 833 and 41.8 in 1939. The number of pharmacists greatly increased from 68 674 in 1965 to 252 533 in 2006, or 35.8 per 100 000 population in 1965 to 197.6 in 2006.

## Nurses

Nursing education in Japan began in Tokyo in 1884, when the Tokyo Voluntary Hospital Nursing School was founded with the help of the American nurse E Read (1884–1887). In 1886, with the help of the American physician JC Berry (1872–1893) and the American nurse L Richards (1886–1890), the Kyoto Nursing School was founded. These facilities gradually appeared throughout the country, all following the educational system of the Nightingale Nursing School in London. In 1915, Regulations for Nurses introduced national standards for nursing qualifications. The number of nurses was 11 574 in 1910, representing 23.5 per 100 000 population. These figures, respectively, were 42 367 and 72.0 in 1924, and 127 466 and 78.6 in 1939. The first nursing department in national university was established in 1975. A significant growth in nursing workforce can be seen since then. Indeed there was a 4-fold increase in the number of nurses from 1970 to 2004.

### 2.2.4 Non-separation of prescribing and dispensing

One of the fundamental principles of modern health systems in Western countries is that doctors prescribe and pharmacists dispense drugs according to the doctor's prescription. The advocates of the introduction of Western medicine to Japan were convinced that it was essential that the same principle would be embraced. The first Medical Act (*Isei*) was decreed according to this belief in 1874. The first *Japanese Pharmacopoeia* published in 1886 eliminated almost all the traditional medications from its list. The advantages of Western medicine were absorbed rapidly by popular medical treatment. Even so, traditional medicine practitioners continued to see and treat their patients using their own style of medicine, which had provided the health care for the Japanese people for more than 1000 years. In 1884, the total number of doctors nationwide was 40 881; of these, 35 319 were actually practising at the time, 3313 had obtained a licence, 1640 had a personal history of apprenticeship, 580 had graduated from universities or medical schools, 21 were allowed to practise in the designated area and 8 had graduated from foreign medical schools (Ministry of Health and Welfare, 1956). If Western-style practitioners can be assumed to have made up from the graduates of universities or medical schools, their total number was 588 and a mere 1.4%

of all registered doctors. Traditional practitioners used to see their patients, prescribe and dispense drugs all in the same place. It was only natural that practitioners in the new era tried both to prescribe and to dispense according to the traditional practice. If some practitioners chose not to dispense drugs in these situations, people were unlikely to visit them. This meant that Western medicine practitioners who only prescribed and did not dispense could not compete with traditional medicine practitioners in a given community. In the face of 1000 years of established traditional medicine, the advocates of the separation policy had to change their original principles. In an about turn, they urged the non-separation policy to help to establish their hegemony over traditional medicine practitioners in the new society.

In this they succeeded. Another Act was passed in 1887, according to which practitioners were permitted to dispense drugs listed in the new *Pharmacopoeia* only for their own patients (Tatara, 1997). Naturally, from this time on, pharmacists began to oppose the non-separation policy and a long history of controversy regarding the non-separation of the prescriptive and dispensing aspects of treatment began.

The advocates of the non-separation policy needed a strong argument to counter those of the pharmacists. One of the strongest advocates was Dr Yasushi Hasegawa, who was a high-profile doctor as well as a bureaucrat and a politician. He was formerly an opponent of the non-separation policy, insisting on the necessity of the separation of prescribing and dispensing functions in health care to help to establish the hegemony of Western medicine in the new society. However, disregarding his original thinking, he gave a speech at the Fifth Imperial Parliament in 1893 to support the non-separation policy. He said, "Of all medical practitioners in entire country, 30 000 are traditional medicine practitioners. As long as the separation policy is implemented according to the Japanese pharmacopoeia, it cannot be applied to traditional practitioners who dispense traditional medicaments, so that these traditional practitioners will not adopt this policy." (House of Representatives, 1980a). At the 13th Imperial Parliament in 1899, Dr Hasegawa, this time as Chief Medical Officer of the Government, stated that "If the separation policy is to be applied to traditional practitioners as well, we must accept the restoration of traditional medicine and revise the Japanese pharmacopoeia. We cannot accept the restoration of traditional medicine. Therefore, I believe the separation policy cannot be introduced in this country." (House of Representatives, 1980b). The shift in policy from the 1874 Medical Act (*Isei*) decreeing the separation of prescribing and dispensing services in medical practice to then making Western medical practice competitive with traditional

medical practice by giving Western-style doctors permission to dispense drugs echoes the history of apothecaries in England.<sup>5</sup>

Finally, the government was forced to give up the implementation of the separation system in Japan. However, during the changes, they succeeded in eradicating almost all traditional drugs from the field of standard health care. In view of this, it can be said that practitioners of Western medicine, similar to the physicians in England, established their hegemony over practitioners of traditional medicine, who resemble the English apothecaries, by getting them to give up their own traditional drugs at the birth of the modern medical system. The non-separation system has ensured the strong autonomy of the medical practitioner especially in financial terms and has also secured the place of comprehensive treatment power in primary health care in Japan.

After the Second World War, under the occupation of the Allies, separation between prescribing and dispensing was formally introduced. However, until the mid-1970s, most clinics dispensed pharmaceuticals themselves. The proportion of clinics that had prescribing but not dispensing function gradually increased in the 1980s and in 1990, only 12% of prescriptions were estimated to be dispensed from community pharmacists. From the early 1990s, physicians began to write prescriptions to be dispensed outside their clinics or hospitals more and more, with the result that 54% of prescriptions were dispensed from community pharmacists in 2005 (Ministry of Health, Labour and Welfare, 2007b).

### 2.2.5 Foundation of the Ministry of Health and Welfare

In 1916, a Council for the Investigation of Health and Hygiene was set up and its 34 members were appointed under the chairmanship of the Vice-Minister of the Home Office. The subjects for investigation were babies, infants,

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<sup>5</sup> England has a long history of conflicts between physicians and apothecaries concerning their prescribing and dispensing functions. With regard to physicians wishing to dispense medicaments, Sir George Clark (1972) reported a following episode. At the quarterly *comitia* in June 1664, Dr Timothy Clarke asked leave for himself and his associates to practise pharmacy, to prepare useful medicaments and to prescribe them. However, for the physician to become his own dispenser was to depart from the immemorably accepted division of functions. It was resolved unanimously that it would reflect adversely on the honour of the College, on the reputation and trust of the art and on the health and welfare of the public if every candidate and licentiate prepared and compounded his own medicines. Regarding apothecaries having practised medicine, Loudon (1986) reported the Rose case. A patient received treatment by a London apothecary named Rose and was annoyed when presented with a bill for £50. He sought redress through the College of Physicians and Rose was prosecuted. The Society of Apothecaries appealed against this judgement to the House of Lords. Their Lordships heard the case on 15 March 1704. It was argued that the poor, unable to afford physicians, would be oppressed, and so would sick persons, knowing that a physician would not attend “if at dinner or abed”. The House of Lords reversed the judgement.

schoolchildren and juveniles; TB; sexually transmitted diseases; leprosy; mental illness; food, clothing and housing; sanitary conditions in rural areas; and statistics. The Council was established following discussions on population growth in Western countries, where death rates of infants, children and young people had already decreased, while those in Japan had been rapidly increasing. The recommendations of the Council had strong effects on government policies thereafter. In particular, it was decided that reports on the health conditions of people in local areas were to be provided annually to the Home Office. Thus, a central administrative system for public health was gradually strengthened. In 1921, the number of departments in the Bureau of Hygiene of the Home Office was raised to five: health, prevention, quarantine, medicine and investigation.

In 1938, the same year as the National Health Insurance (NHI) system was founded (see below), the Ministry of Health and Welfare was also established, unifying the various responsibilities under the Home Office, the Ministry of Education and the Ministry of Trade and Industry. The new Ministry had bureaus in five areas: physical activity, hygiene, prevention, society and labour. The Relief for the Poor Act was passed in 1929, the Workers Impairments Assistance Act in 1931 and the Maternity and Child Protection Act in 1937. In 1946, three Bureaus – Public Health, Medical Affairs and Prevention – were established within the Ministry of Health and Welfare to assume responsibilities related to public health and medical affairs. The Local Government Act of 1947 made it compulsory for the local government to establish bureaus of hygiene and welfare in prefectures. In 1947, a new Public Health Centre Act was passed, and public health centres became the basis for local governments to promote public health policies founded on the needs of local residents. The Medical Care Act and the Act on Public Health Nurses, Midwives and Nurses were passed in 1948. Since then there have been many organizational changes in the central administration, and in 2001 the Ministry of Health and Welfare merged with the Ministry of Labour to become the Ministry of Health, Labour and Welfare.

### **2.2.6 Foundation of health insurance**

The Japanese had various kinds of mutual aid system even during the Edo period,<sup>6</sup> but a new social insurance system was developed for the protection of workers during the rapid growth of industry that followed the wars with China in 1894 and with Russia in 1904. With the Factory Act of 1911, employers were obliged to help their workers if they became ill or were injured, provided that the injury arose when the worker was working in the factory.

<sup>6</sup> The Edo period lasted around 250 years, 1603 to 1868.

The social insurance system that was set up by Bismarck in Germany in 1883 was widely discussed in Japanese academic societies. The most influential proponent of a social insurance system was S Goto (1857–1929), a Chief Medical Officer at the Home Office from 1892 to 1893 and from 1895 to 1898, who, after studying in Germany in 1892, argued that an insurance system for workers' sickness was needed. In 1898, he submitted a Workers' Sickness Insurance Bill to the Prime Minister, H Ito (1841–1909). In 1905, one private textile company employing 12 000 workers organized a mutual aid system to provide financial help at times of illness, injury and bereavement. All workers contributed 2% of their salary to the scheme. In the same year, a similar system was organized for workers at a public iron factory.

Although Japan's economic strength was largely established by the time of the First World War, inflation eroded the quality of the workers' lives and prompted movements for the creation of a welfare system for the labour force. In particular, various reports and recommendations published by the International Labour Organization (founded in 1919) had a great impact on the discussion and implementation of the measures advocated in these movements.

### **Health insurance for employees**

The Health Insurance Act was passed in 1922 and came into effect in 1927 to secure health care services for employed workers. This initial health insurance system covered only blue-collared workers, who made up 3.2% of the Japanese population, with the aims to improve industrial productivity and prevent labour unrest (Ikegami and Campbell 2008). The health insurance for employees system established by the Health Insurance Act had the following characteristics.

- It covered sickness, injury and death (i.e. funeral costs) whether from an occupational cause or not, and also the costs of giving birth.
- Workers who were employed in factories under the Factory Act or the Mining Industry Act and who were paid 1200 yen per year or less had to be insured.
- The insurer was either the government (in the case of small firms who did not have the management capability or sufficiently large risk pools) or self-managed health insurance societies; industries that employed more than 300 workers were permitted to organize health insurance societies.
- The benefits were restricted to the insured person.
- It should promote preventive health services within health facilities.
- The insurance contribution was shared by the insurer and the insured.

After the implementation of the system in 1927, 1.14 million workers were insured by the Government-managed Health Insurance (GMHI) system and 800581 by the Society-managed Health Insurance (SMHI) system for employees of large firm, which consisted of 316 societies. In 1926, the number of doctors contracting with the GMHI or SMHI was 32 155, which was approximately 70% of all doctors. There were a total of 1.64 million claims, with a cost of 7.08 million yen.<sup>7</sup> Doctors usually allocated a small part of their working time to give consultations with patients using statutory health insurance. Remuneration of doctors in the GMHI system was paid through the Japan Medical Association on a capitation basis until 1943. Remuneration in the SMHI system was paid by various methods up to the same year. The capitation system in both insurance systems was then abolished, and each doctor was remunerated on a fee-for-service basis.

The number of people insured by the GMHI or SMHI rose from 3.37 million in 1936 to 5.63 million in 1941. Since self-employed people such as farmers and fishermen were not included in the GMHI and small companies were excluded from the GMHI at that time, less than 8% of the total population was enrolled in the statutory health insurance. However, the insurance for employees gradually expanded. The Seamen's Health Insurance Act was passed in 1939, insuring 102 140 people in 1940. The Mutual Aid Society for Central Government Officers Act was passed in 1948 and Health Insurance Amendment Act was also passed to include officers of central and local governments in the health insurance system (Tatara, 1997).

### **Health insurance for the self-employed**

The global economic crisis in 1929 left the rural society severely damaged in Japan. The National Health Insurance Act was passed in 1938 to protect the health and welfare of mainly farmers. This Act gave municipal authorities the power to organize their own health insurance system for their residents (municipal NHI). This system for the self-employed<sup>8</sup> differed from that for the employed in the following ways.

- Insurance was managed by insurance management committees at the municipal level.
- Establishing an insurance system was not compulsory for each municipal government.
- Each household in the district could be a member of the insurance but it was not compulsory to join.

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<sup>7</sup> These figures include claims for health services as well as sickness compensations and other benefits.

<sup>8</sup> This insurance system can also be translated as Citizens' Health Insurance (CHI).

- Members and their dependants were covered by the system.
- Legally provided benefits were health care services, including optional benefits such as obstetric care, funeral costs and maternity allowances.
- Health care services provided as benefits were governed by contracts between the insurer and the medical profession.

The number of insurers and insured were 168 and 578 759, respectively, in 1938, and 10 158 and 37.3 million in 1943. In 1944, 68.5% of the total population of 73.06 million in Japan was covered by some kind of health insurance (Tatara, 1997).

### **Universal health insurance**

On 3 November 1946, a new Constitution was decreed and on 3 May 1947 it was executed. Article 25 of the Constitution stated that “all people shall have the right to maintain a certain standard of healthy and cultured life, and to achieve this purpose, the state shall try to promote and improve the conditions of social welfare, social security and public health”. After the Second World War, policies for health care and public health in Japan were based on this statement.

During the Occupation (1945–1952), General Headquarters invited an American Mission for an Investigation of Social Services in Japan, which published a report in July 1948. The report advised the establishment of a commission on social services to have the role of recommending policies to be promoted by the government. Following this advice, the Japanese Government established the Commission on Social Services as a consultative body to the prime minister in 1949. The Council published *Recommendations on the System of Social Services*, in which the unification of policies for social services and the compulsory establishment of NHI by local authorities were advocated. The recommendations had a great impact on the promotion of social services in Japan during the period after the Second World War.

The Commission on Social Services published its recommendations on the health system in 1956, including the promotion of an insurance system to cover the entire population. A new National Health Insurance Act was passed in 1958 making it compulsory for all municipal governments to establish their own insurance system in fiscal year 1960, with a reimbursement rate of 50%. All persons in Japan were covered by some kind of insurance by April 1961.

### **2.2.7 Medical Care Act**

Health services are currently organized according to the Medical Care Act. The first Medical Care Act was passed in 1948 (Section 6.4). Its origin can be traced back to the *Isei* decree in 1874. The Act was passed under strong



guidance of the then United States occupation army and did not undergo substantial revision until 1985. Essentially, the Act allowed for a relaxed stance in controlling health care facilities, resulting in a large geographical imbalance in the distribution of such facilities. In the first major revision in 1985, regional planning for controlling hospital beds was introduced. The Act was subsequently revised again in 1993 to identify hospitals with special functions of high level and bed groups for long-term geriatric patients. The third revision was made in 1997, introducing hospitals to support the community health care services and regulations to make health care providers promote the appropriate explanations to allow patients to understand their treatment. This was revised further in the fourth revision in 2000. The latest major revision in 2006 proposed policies to let patients have information about the health care facilities in a prefecture level and to establish the medical safety support centre to promote the safety and confidence of health care among the population (Chapter 7).

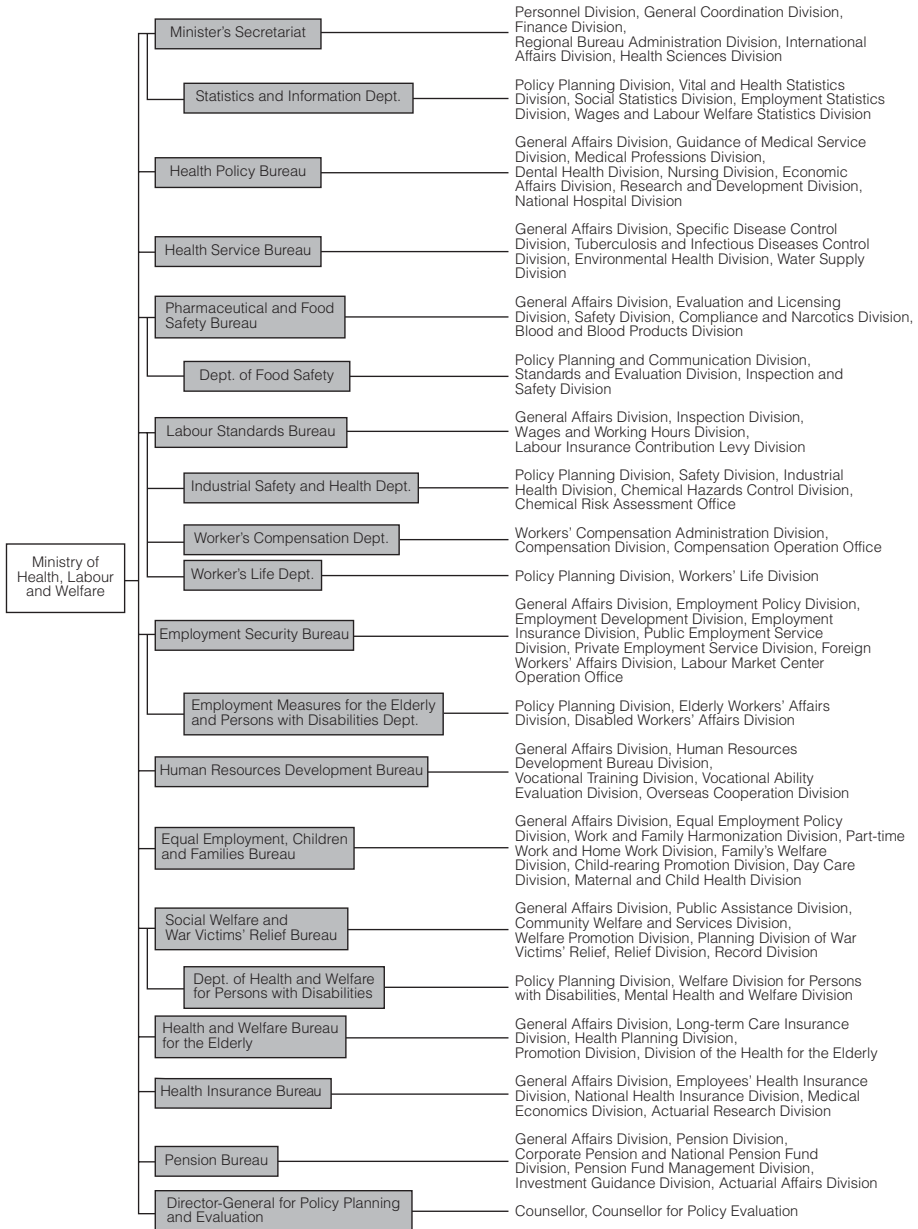
## **2.3 Organizational overview**

### **2.3.1 Administrative system**

The administrative structure of the Ministry of Health, Labour and Welfare in Japan is shown in Fig. 2.1. The main bureaus involved in population health and health care are Health Policy, Health Service, Pharmaceutical and Food Safety, Labour Standards, Social Welfare and War Victims' Relief, Health and Welfare for the Elderly, Health Insurance and Pension.

The Health Policy Bureau is responsible for the administrative and strategic management of the health care system, including health economy, research development and information. The Health Services Bureau plans and supervises the prevention of lifestyle-related diseases, cancer and infectious diseases; it coordinates organ transplantation and also regulates the promotion of environmental health. The Pharmaceutical and Food Safety Bureau directs the safety of pharmaceutical products, foods, chemical substances and medical equipment, promotes the provision of safe blood products and orchestrates the anti-drug abuse campaign. The Labour Standards Bureau is responsible for the safety and sanitation of factories, compensation for labour-related injuries and the life of employees. The Social Welfare and War Victims' Relief Bureau is in charge of welfare services for indigent people, community welfare, welfare for the disabled people and war victims' relief. The Health and Welfare for the Elderly Bureau regulates and supervises long-term care insurance, elderly dementia and the health of the elderly. The Health Insurance Bureau also

**Fig. 2.1 Organization of Ministry of Health, Labour and Welfare with main selected divisions**



Source: Ministry of Health, Labour and Welfare, 2008

regulates and supervises health care insurance and provides plans to improve the insurance system. The Pension Bureau is responsible for national and industrial pensions.

The Ministry of Finance plays an important role in health policy by making an annual budget plan for both public health and health insurance for the Cabinet. In addition, the Cabinet Office and other central governing bodies, such as the Council on Economic and Fiscal Policy, have significant power, sometimes to change the direction of policies.

### **2.3.2 Public health system**

Public health activities are divided into two categories: personal services and regulatory activities (law enforcement). The latter includes regulation of hospitals or clinics, food sanitation (detection and investigation of food poisoning) and forced isolation of patients with infectious diseases. Public health centres established by prefecture governments as well as major cities are endowed with regulatory power by a variety of public health laws such as the Medical Care Act, the Food Sanitation Act and the Infectious Disease Act. Public health centres are authorized to conduct law-enforcement activities where there are suspected law infringements, a crucial difference from municipal health centres although both are formulated by the Community Health Act. Both public health centres and municipal health centres provide personal services; the former more specialized services such as for psychiatric diseases, TB, HIV/AIDS and intractable diseases (certain subsidized diseases such as systemic lupus erythematosus, amyotrophic lateral sclerosis, Parkinson's disease and ulcerative colitis), while the latter provides more general services emphasized by Health Services for the Elderly Act and Health Promotion Act, such as lifestyle-related diseases or cancer screening.

#### **Public health centres**

Public health centres were set up according to the Public Health Center Act of 1937 (amended in 1947). In 2005, there were 411 public health centres built by prefectures, 115 by designated cities and 23 by special wards in Tokyo (totalling 549). Public health centres are required to be staffed by a doctor, dentist, pharmacist, veterinarian, clinical X-ray specialist, registered dietician<sup>9</sup> and a public health nurse. The total number of health professionals who worked in public health centres was 28 719 in March 2005. The law

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<sup>9</sup> Registered dietitians are qualified by the government in terms of providing educational and consultative services on food intake for patients and managing food supply in institutions such as schools, nursing homes and hospitals.

was further amended in 1994 and changed its name to the Community Health Act to incorporate municipal health centres. In response to the massive health hazards of the subway sarin terrorism and the great Kobe–Osaka earthquake, the new directive was set to make public health centres bastions for serious health hazard control.

### **Municipal health centres**

The declaration of “Health for all by the year 2000” at the *International Conference on Primary Health Care* at Alma Ata in 1978 (WHO and United Nations Children’s Fund, 1978) had a significant impact on public health policy in Japan. In 1978, the National Health Promotion Movement was published by the government (Section 6.1). The main purpose of this publication was to promote bottom-up health policies using all social resources in a community by establishing a community health promotion committee in each municipality to discuss the health plan; developing municipal health centres closely linked with people; and integrating public health nurses employed by municipal NHI into municipal authorities. Municipal health centres were established by municipal authorities as the key facilities for personal health services implemented at the municipal level. The number of municipal health centres was 2692 in 2005. The Community Health Act of 1994 extended the functions and responsibilities of these centres in order to meet the needs of the community better.

### **Local research institutes of hygiene**

Local research institutes of hygiene were established to promote and improve public health conditions by conducting research surveys and laboratory examinations, and by training hygiene specialists in each prefecture and large city approved by the Act. There were 77 institutes in 2007.

### **Main national research institutes for public health**

The main national institutes established for public health are:

National Institute of Hygiene Sciences (NIHS), established in 1874

National Institute of Public Health, established in 1938

Institute of Population Problems, established in 1939 (now the Institute of Population and Social Security Research)

National Institute of Nutrition, established in 1947 (now the National Institute of Health and Nutrition)

National Institute of Health, established in 1947 (now the National Institute of Infectious Diseases)

National Institute of Hospital Administration, established in 1949 (merged with the National Institute of Public Health in 2002)

National Institute of Mental Health, established in 1952

National Institute of Leprosy Research, established in 1954.

### **2.3.3 Health insurance system**

The health insurance system in Japan covers the entire population. As described above, the system mainly consists of the following three statutory health insurance schemes: the SMHI, the GMHI, and the NHI for the self-employed.<sup>10</sup> Historically, those three insurance schemes developed separately, as described above, and consisted of a total of 3662 insurance funds in 2005 (SMHI, 1584 funds; municipal NHI, 1835 funds; NHI society, 166 funds; MAS, 76 funds; and GMHI, 1 fund).

The central government decides the basket of health services covered by health insurance and a fee-schedule for providers every two years. Co-payment rates at the point of services have been regulated by the relevant acts. Management of health insurance, including other issues such as setting contributions, varies between insurance as follows.

First, under the Health Insurance Act, a large company can establish a society with consent of the majority of their employees for providing health insurance to them and their dependants. This type of statutory health insurance is the SMHI. Each health insurance fund manages and is responsible for itself but is subject to rules and standards provided by the act and ordinances of the government. For example, a health insurer can decide its premium rate between the limitations set by the Health Insurance Act. The premium rate of societies ranges from 3 to 10% of monthly wages (with a ceiling), shared equally by employees and employers. Half of the members of the governing body of a health insurance fund are elected from the employers; the others from the employees. In addition to the SMHI, there are MAS funds organized for national and local government employees and their dependants.

Second is the GMHI, which is managed directly by the government and covers employees working for small to medium-sized corporations and their dependants. The GMHI was operated by the Social Insurance Agency until October 2008 when it was separated off to be operated by the Japan Health Insurance Association (JHIA). The premium rate is 8.2% of wages (with a ceiling), shared equally between employers and employees. Similarly, the Seamen's Health Insurance is directly managed by the government and covers mariners.

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<sup>10</sup> Ikegami and Campbell (1999) translated the same insurance as CHI.

The third group is the NHI for the self-employed. Municipal governments, consisting of 800 cities and 1035 towns/villages as of March 2006, provide statutory health insurance to residents who are not eligible for employment-based health insurance such as GMHI and SMHI. Insured residents include farmers, self-employed people, the retired, and unemployed individuals. A municipal government provides health insurance to all eligible persons living in their jurisdiction (i.e. those who are not eligible for employment-based statutory health insurance), but some individuals who have particular occupations also opt to be enrolled in an NHI Society.<sup>11</sup>

Local governments set premiums for their health insurance schemes according to a set of complex rules provided by the Ministry of Health, Labour and Welfare. Rules for deciding premiums vary between local governments. Put simply, however, the rules direct that premiums shall be a mixture of income- and asset-proportional parts and community-rated parts. Since municipal governments are responsible for managing their municipal NHI plans, they usually allocate funds from general budgets to fill deficits.

There are two large national lobbying bodies of insurers. One is the Central Federation of National Health Insurance, which represents 47 Prefectural Federations of National Health Insurance. Prefectural National Health Insurance Federations are organized pursuant to the National Health Insurance Act (Section 83) and are also important in that they function as clearing houses to review health insurance claims submitted by hospitals, clinics and pharmacies. The other is the Federation of Health Insurance Societies, organized pursuant to the Health Insurance Act (Section 184) and representing corporate-based health insurance funds. It is also known as an active advocate of insurers, occasionally confronting organizations of medical care professionals over fee schedule negotiations.

Although insurance contributions constitute the main financial source of the insurance system, they are supplemented by a varying level of the government subsidy. Because of the higher costs and lower revenue potential of the GMHI and the NHI for the self-employed, 13% of the costs of the GMHI and an average of 43% of total costs of the NHI for the self-employed are covered through general tax revenues. The SMHI and the MAS funds do not receive any subsidies (except those with financial difficulties). Also a pooling fund for the elderly subsidizes funds with a higher elderly enrolment than the national average (see below and Section 3.4).

In response to population ageing, the Welfare Services for the Elderly

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<sup>11</sup> The NHI Societies were established as mutual aid societies among occupational associations such as doctors, dentists, lawyers and self-employed construction workers. There are 166 NHI Societies as of April 2006.

Act was passed in 1963. This Act was revised to subsidize the payment by the elderly for health care insurance in 1973. However, as noted above, the elimination of cost sharing for the population aged over 70 years led to drastically increased health care costs for the elderly and financially stressed the NHI system run by municipal governments because of disproportional distribution of elderly enrolled among different insurance systems. There was a strong call for total unification of the fragmented health insurance system for sharing the health care cost, but such solutions were not likely to be achieved because of strong opposition from large companies. As an alternative, the Health Services for the Elderly Act was passed in 1982 to introduce a financial redistribution mechanism among different health insurance systems facing the disparity of elderly enrolment; this Act took effect in 1983.

After the implementation of the Health Services for the Elderly Act in 1983, health care costs for those aged 70 years or over were financed in a different manner to those of the general population. All health insurers contributed to the newly created financial pool managed by a public corporation and the amount of contribution for individual insurers was calculated to adjust for the disparity of the elderly enrolment; the insurers with lower/higher than national average elderly enrolment had to contribute more/less than they would otherwise (Section 3.4).

## **2.4 Decentralization and centralization**

### **2.4.1 Decentralization and centralization of health care**

The Japanese health care system is governed by a complex mixture of central and local control. At the central level, rules for regulating statutory health insurance are provided by the Ministry of Health, Labour and Welfare. These rules limit local discretion in setting premiums. The payment system across statutory health insurance is determined by the government and “prices” for health care in health insurance is uniform to all hospitals or clinics.<sup>12</sup> Also, the government sets standards for health care facilities in terms of levels of human resources, buildings, necessary equipment and other detailed items pursuant to the Medical Care Act. From 1985, the government provided a guideline for regional health planning at prefecture and sub-prefecture levels.

Prefectures are responsible for developing regional health plans, licensing hospitals and monitoring legal compliance of providers in line with guidelines

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<sup>12</sup> Differences have been introduced for the initial consultation fee between hospitals and clinics in 1992 but these differences are the same across the whole country.

given by the Ministry. Certain large cities are authorized to license clinics and pharmacies.

Health care providers have discretion over their management, except for the payment systems, standards and guidelines dictated by the government. At the managerial level, therefore, the Japanese health care system is quite decentralized and diversified.

#### **2.4.2 Decentralization of public health**

In 1995, the central government set up a Committee on the Promotion of Autonomy of Local Governments to discuss and submit a report on the decentralization of power in order to reform the bureaucratic structure of general administration at the local government level. The background of this movement was the general opinion among policy-makers that as Japan had attained the longest life expectancy in the world, strong central control of local government services such as public health and social care was no longer necessary or desirable, and public health in this country should have a more decentralized system with greater local autonomy.

The Committee provoked a debate among public health doctors when they issued an interim report in 1996 proposing that the requirement of medical doctors as a qualification of the directors of public health centres should be abolished. Each of Japan's 47 prefectures were legally bound to build as a rule one public health centre per 100 000 population. The Committee discussed the ideological justification for this compulsory establishment of public health centres by prefectures with medical doctors as directors. The Committee held a heated debate centred on the following questions: what is the role of public health in a rapidly ageing society? Will decentralization have a positive or negative impact on public health? What is important for public health in the 21st century?

Approximately 850 public health centres existed in Japan in 1995. Under the new Community Health Act, municipal governments were requested to publish plans to promote community health intensively by constructing municipal health centres and by increasing the number of public health nurses. Reflecting these improvements of function in municipalities, and the new situation of municipalities being generated by the recent decentralization movement towards strengthening municipal autonomy in establishing their own policies, many prefectures have decided to consolidate the function of public health centres, occasionally merging these with their social welfare offices. Consequently, the number of public health centres gradually decreased to 535 in 2006. At the same time, the requirement that directors of public health



centres must be medical doctors was increasingly viewed as a hindrance for their mergers with social welfare offices.

In response to the proposal by the Committee, the Ministry of Health, Labour and Welfare set up a study group to review the debated questions on the legal requirement of public health centres, which came up with a “partial” deregulation in 2004 of the requirement for directors of public health centres to be public health doctors. Section 4 of the revised Cabinet Order of the Community Health Act admits an exception of non medical doctor directors of public health centres “when securing medical doctors is extremely difficult”. Such non medical doctor directors must possess equivalent knowledge of public health medicine as doctors and must have at least five years of public health practice as well as completion of a professional training course provided by National Institute of Public Health.

## 2.5 Patient empowerment

The doctor–patient relationship has traditionally been paternalistic, with patients leaving decisions largely in the hands of doctors and seldom challenging their professional judgement. This culture can partially be explained by the national characteristics, which have historically valued dependence on parents and seniors according to the Confucianism philosophy developed in China. Recently, more attention has been paid to patient’s rights such as informed consent and shared decision-making.

### 2.5.1 Information for patients

Until the Personal Data Protection Act was enacted in 2003, patients’ access to medical records had not been acknowledged in law<sup>13</sup> or in court rulings.<sup>14</sup> Transferring a patient’s medical record to another doctor upon the patient’s request was not commonly practised. As to health insurance claims, in which details of treatments and their billings are described, the government instructed insurers not to disclose such information to the patients.<sup>15</sup> Citizen groups and

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<sup>13</sup> The Medical Act specifies that doctors cannot refuse to issue medical certificates upon a patient’s request (Section 19) but fails to specify that doctors cannot refuse disclosure of medical records.

<sup>14</sup> The Tokyo High Court ruled that “contracts between doctors and patients cannot be interpreted to give patients unconditional access to their medical records” (Medical Malpractice 100 Cases, 1989).

<sup>15</sup> Ministry of Health, Labour and Welfare, National Health Insurance Division National Health Insurance Q and A: “Health insurance claims or copies thereof shall not be disclosed even to the patients because they contain professional secrets of doctors”.

lawyers advocated disclosure of health insurance claims and, after lengthy negotiation,<sup>16</sup> the Ministry altered its non-disclosure policy in July 1997 and published its view that health insurers can and shall disclose insurance claims to an insured person provided they had confirmation that the disclosure will not cause clinical interference.<sup>17</sup> Health insurance claims are administrative data held by insurers and their disclosure was a matter of the policy. Disclosure of medical records was more difficult because they are the property of doctors and hospitals. It appeared that a revision of the Medical Act or Medical Care Act would be necessary to require doctors and hospitals to disclose medical records. Then, the Ministry launched a blue-ribbon committee with an aim of enacting mandatory disclosure of medical records. The revision of the Act was eventually hampered by the medical and dental associations. The Japan Medical Association proposed instead their own guideline to encourage their members to disclose medical records in April 1999, but it was open to criticism because it contained some loopholes.

Changes were seen when the Personal Data Protection Act was proposed, and this triggered a nationwide debate over how to reconcile privacy protection and public interest such as freedom of the press or academic research. The Act was based on the OECD eight principles (Kaihara and Higuchi, 2003) of privacy protection established as early as 1980. These principles were recommendations for OECD Member States for their enactment of privacy protection laws, but Japan did not adopt such legislation because one of the principles, namely access by the concerned person, seemed not to be compatible with the health care system.

The Personal Data Protection Act was passed in April 2003 and took effect from April 2005. In response, the Ministry issued a guideline on disclosure of medical information (including medical records) in September 2004. The guideline was advanced from the previous Japan Medical Association guideline in some respects. For example, the new guideline ensured the portability of medical records by authorizing the second doctor to request disclosure of medical records of a patient from the first doctor. This portability of records is a prerequisite for second opinions.

Availability of information on providers is limited, particularly with respect to quality and performance measures. In 1995, the Japan Council for Quality Health Care (JCQHC) was established and an accreditation programme for good hospital management, supported by the government, was introduced. However, the accreditation is voluntary and only 2213 hospitals out of 9077

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<sup>16</sup> The then Health Minister, Junichiro Koizumi (later prime minister) expressed his intention to acknowledge disclosure of health insurance claims at a congressional committee in February 1997 (reported in the newspaper *Yomiuri* 5 February 1997, p. 4).

<sup>17</sup> Health Insurance Practice Rules. Section 5.2.2.

were accredited as of October 2006. Also the survey items are concerned more with managerial aspects, such as overall patient satisfaction, and less with quantitative measures of quality or performance such as post-operative mortality.

### **2.5.2 Patient rights**

Some citizen's and lawyers' groups advocate the enactment of a Patient Rights Act. Such a law has not yet been passed, though the opposition Democratic Party did propose a Patient Rights Bill mainly to counter the governmental bill. However, patient rights advocacy is gaining steady ground in the health care system. A cornerstone of health policy in terms of patient rights came in 1996, when the Minister of Health and Welfare defied the bureaucracy and achieved what his predecessors had never even imagined: he disclosed the confidential files revealing the government's responsibility in the iatrogenic AIDS tragedies in mid-1980s, which resulted in the criminal prosecution of a medical officer. Patient rights are not defined yet in any way through civil or penal code.

The issue of patient rights in Japan cannot be discussed without referring to the history of Hansen Disease (Leprosy; see Section 1.4.4 Infectious diseases). Following the abolition of the Leprosy Prevention Act in 1996, many of the patients had become too old to return to normal social lives. Also, the patients as well as their relatives were subject to social prejudice and stigma, mostly due to ignorance and misunderstanding. Patients who were released from sanatoriums sued the government on the basis that their human rights had been violated due to the negligence of the government; the court upheld their claims in May 2001. The government decided to settle the dispute by passing a special law for the compensation of the people with Hansen Disease. Following this, the Ministry of Health, Labour and Welfare set up a fact-finding committee to investigate and evaluate the tragedy. The committee submitted a recommendation for public health policy to prevent the recurrence of the Hansen Disease tragedy on March 2005. The recommendation advocated the legislation of patients' right and development of a system for effective patients advocacy. In March 2006, a experts study group was set up to discuss how to realize the recommendation, i.e. how a new law should be enacted to enhance patient rights and how the system should be developed to assure and protect such rights. Patient rights are contemporary issues, but the lessons from the past will continue to provide an important lesson for modern health care in Japan.”

### 2.5.3 Patient choice

People usually do not choose their insurance scheme because it is determined by employment type. However, the health insurance system entitles patients almost unlimited choice of providers. “Free access” is a keyword that is most respected in the health care system. There is neither a mechanism of registration of primary care physicians (general practitioners (GPs)) nor gate-keeping by GPs. However, there is a form of financial disincentive for patients who go directly to a highly specialized hospital such as a teaching hospital in that the patient is charged more than the usual consultation fee charged by other health care providers.<sup>18</sup> The concept of managed care, or selective contracting between insurers and providers, has not been permitted in spite of two lobbies: a call for its implementation from health insurance funds based at large companies, who believe that health care can be rationalized through market mechanisms, and a call from insurers, who demand bargaining power with providers. In May 2003, deregulation permitted selective contracting between insurers and providers over discounted pricing within limitations set by the Ministry. However, no cases of selective contracting have yet been implemented.

The health insurance system has a nearly uniform benefits package covering almost all drugs and treatment except experimental treatment (Section 3.2). There are few restrictions on choice of treatment within the health insurance benefits package: no preauthorization or second opinions are required. Although the benefits package is generous and no limitations are imposed on the use of services, patients usually do not have access to information regarding the range of services given, costs and quality of provider when they are choosing their provider of health care. This is changing somewhat with the latest revision of the Medical Care Act (Section 2.5.6). Also fees for doctors and hospitals are not separated: the doctor’s consultation fee is billed by the hospital and bundled with hospital charges; in health insurance practice, patients usually face a 30% co-insurance (Section 3.3.4).

According to the *One-year Survey on Health Insurance Beneficiaries 1997* (Health Insurance Bureau, 1997), “83% of the beneficiaries of all ages visited hospital outpatient clinics or doctors’ office at least once during the whole year, and 10% of them visited 50 times or more during one year”. The survey does not provide information on the reasons for the visits.

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<sup>18</sup> Hospitals with 200 or more beds are permitted to levy a charge to patients without referrals in addition to the regulated initial consultation fee (for details refer to 3.3.4).

**Table 2.1** Classification of complaints brought to medical safety support centres in 2004

Complaint	Number (%)
Treatment	10 960 (43.6)
Attitude of providers	5 367 (21.4)
Facilities	665 (2.6)
Disclosure of records	404 (1.6)
Charges	3 420 (13.6)
Second opinion	510 (2.0)
Others	3 793 (15.1)
Total	25 119 (100.0)

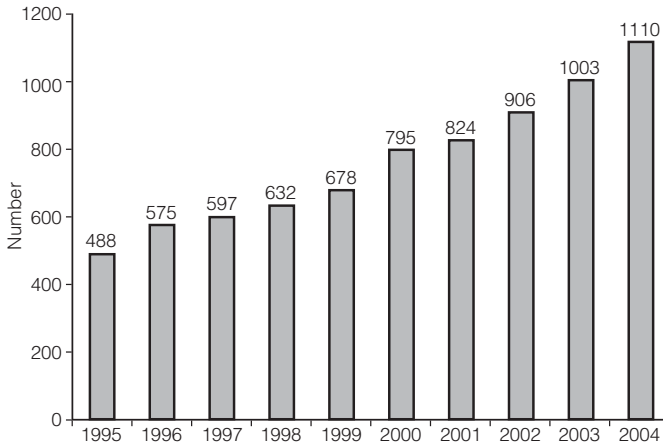
Source: Japan Council for Quality in Health Care, 2004

### 2.5.4 Complaint procedures

Official complaints procedures were first introduced with Long-term Care Insurance that started in April 2000, not in health care sector (Section 6.8). Pursuant to the Act, the Prefectural Federations of National Health Insurance responsible for processing insurance claims are endowed with “complaint resolution” from beneficiaries relating to home care for frail older people (The Long-term Care Insurance Act, Section 176). In 2004, the Prefectural Federations of National Health Insurance nationwide received 6116 contacts from their beneficiaries, of which 432 cases were acknowledged as complaints. This is a small number given that approximately 3.2 million beneficiaries received care in 2004. It is believed that far more complaints have been brought to municipal governments that serve as insurers, but statistics are not available.

In health care, an official complaints resolution system was first introduced in 2003. As part of the health care system reform, medical safety support centres were established in every prefecture government and can be consulted by the general public on a variety of topics, ranging from medical malpractice to simple health consultations. The JCQHC tallies the number of complaints received by the centres. There were a total of 25 119 complaints brought to the centres in 2004; Table 2.1 contains a breakdown of the nature of these complaints.

The original plan for health care reform, which was enacted in 2002, contained a more radical proposal: establishing standing out-of-court arbitration mechanism specializing in settling medical malpractice claims. This ambitious proposal was, however, met with opposition from politicians representing medical societies, who feared that such a mechanism might

**Fig. 2.2 Trends in number of malpractice litigation, 1995–2004**

Source: Supreme Court, 2005

provoke frivolous claims, and was compromised to “establishing complaint resolution mechanism by experts to handle medical malpractice cases in a proper and timely manner” in the revision of the Health Insurance Act. The creation of medical safety support centres in each prefecture was a response to such a call and these are expected to improve quality of care and patients’ satisfaction.

### 2.5.5 Patient safety and medical malpractice

Safety in health care is increasingly drawing public attention, almost in parallel with patients’ awareness of their rights. Japan has long been considered as a non-litigious society, but an alarming increase in the amount of litigation concerning medical malpractice filed every year suggests a rapid change of both societal atmosphere and patients’ attitudes (Fig. 2.2).

It was not until recently that medical malpractice and negligence in general have become political issues in Japan. Traditionally, the concern has been mainly with legal procedures. The Ministry has long taken a “hands-off” stance about medical malpractice and negligence, on the basis that they are essentially civil disputes and should be settled among concerned parties. However, a series of serious accidents disclosed at major medical institutions have prompted the government to intervene as a precautionary measure.

In April 2002, the Committee on Safety in Health Care published a report that showed the basic measures required to keep and promote safety in health

care. According to this report, the Ministry should have a policy that all hospitals, as well as clinics with inpatient beds, should take the necessary precautions to secure safety, to have a reporting system for staff regarding any potentially dangerous “near miss” cases and to have a monitoring system for accidents. Particularly, academic medical institutions were required to appoint a full-time risk manager both for prevention of accidents and for initiating appropriate actions regarding any claims brought by patients. The Medical Act mandates that when a patient dies of unexpected causes (Section 21) the doctor should report the incident to the police, but there is no mandatory reporting of incidences that fall short of death. The Medical Care Act was revised in June 2006 to mandate the establishment of a system to confirm safety in health care at all medical institutions and to set up medical safety support centres at all prefectures and cities with public health centres.

### **2.5.6 Patient participation**

Patient direct participation and involvement in health policy decision-making has been somewhat limited. However, the revision of the Medical Care Act that took effect in April 2007 was intended to widen the scope of patient choice and to encourage participation. The new Medical Care Act devotes one chapter to encouraging patient choice. The newly added chapter 2 is titled “Promotion of patient choice” and requires all health care providers to report their performance indicators, such as the number of surgeries, to the prefecture government, and the prefecture governments are requested to publish information from the providers. The chapter also includes the regulations on advertisement.

The majority of providers are in the private sector, and administrators (e.g. president of hospitals, not necessarily an owner) are strictly limited to doctors pursuant to the Medical Care Act and thereby restricted patient participation. However, the 2006 Medical Care Act defines a new type of medical corporation to be known as a “social medical corporation”, in which personal ownership is limited and representatives of patients can be appointed as board members (Article 49-4 of the 2006 Medical Care Act). The social medical corporations will also be permitted to issue “hospital bonds” as a means of corporate financing. Those who purchase hospital bonds, including private funds, organize the creditors’ meeting. The creditors’ meeting is not the shareholders’ meeting in that it cannot exert direct control over the operation of medical corporations, but it is expected to facilitate the transparency of the operation of medical corporations.

To measure the level of patient satisfaction, national sampling surveys have been conducted every three years since 1996 (*Patient Survey*) as a form of

interview survey on outpatients and inpatients of randomly selected hospitals and clinics. The result shows that 53.8% of outpatients and 61.1% of inpatients replied that they were satisfied with the care they received in 2005.



### 3 Financing

Since the early 1970s, social spending in Japan has increased dramatically. As a proportion of national income, there was a 4-fold increase in social spending (including health, pensions and welfare) between 1970 and 2005 (Table 3.1). The top priorities of Japan’s social policy are to promote population health and contain costs of health and social care, in particular for older people.

Table 3.1 Trends in public expenditure on pension, health and welfare, 1970–2005

	1970		1980		1990		2000		2005	
	Trillion yen	% GDP	Trillion yen	% GDP	Trillion yen	% GDP	Trillion yen	% GDP	Trillion yen	% GDP
GDP	73	100	241	100	440.1	100	504.1	100	503.4	100
Total cost	3.5	4.8	24.8	10.3	47.2	10.7	78.1	15.5	84.3	16.7
Pension	0.9	1.2	10.5	4.4	24.0	5.5	41.2	8.2	46.3	9.2
Health care	2.1	2.9	10.7	4.4	18.4	4.2	26.0	5.2	28.1	5.6
Welfare services and others	0.6	0.8	3.6	1.5	4.8	1.1	10.9	2.2	13.5	2.7

Source: National Institute of Population and Social Security Research, 2005

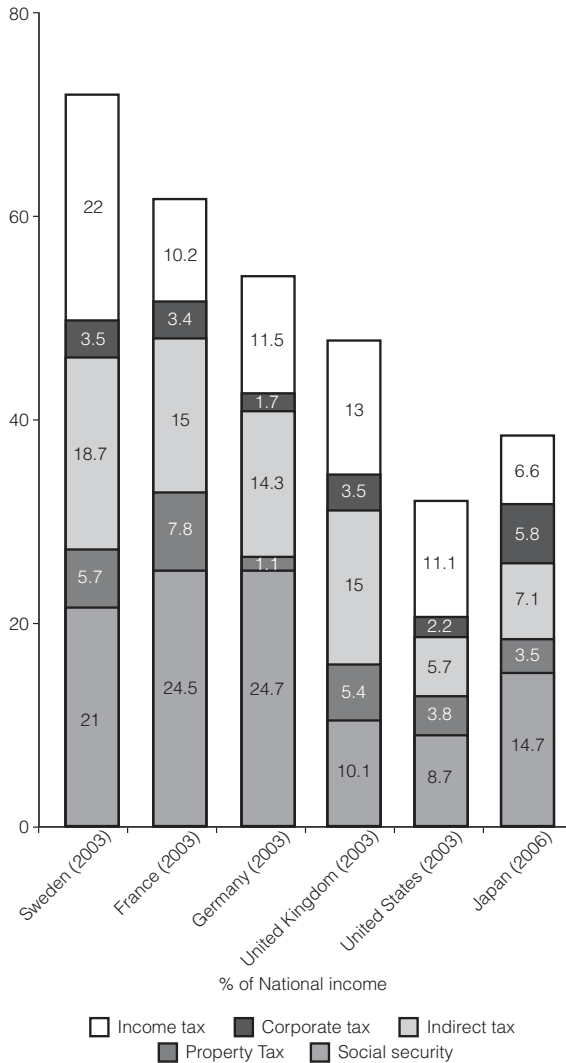
Notes: GDP: Gross domestic product; Patient cost sharing (14% of the national health care expenditure) and private practices outside the health insurance system are excluded from these figures for health care

The Commission on Social Services in 1950 defined social security as “economic assurance against potential causes of poverty either by way of insurance or public subsidy, but for those who fall below poverty level, the public subsidy shall guarantee the minimum livelihood as declared in the Constitution”. Social security is funded largely by insurance premiums and government subsidy (taxation). The total amount paid by Japanese people in

2005 in the form of a social insurance premium was 54.7 trillion yen, which was more than the tax (national and local tax), constituting 30.1 trillion yen (25.6 % of total revenue).

The national burden rate refers to the proportion of taxes and social insurance premium to national income, in other words the proportion of national income that is levied for taxes and premium. (The opposite of the national burden rate is the rate of disposable income.) As shown in Fig. 3.1, the national burden

**Fig. 3.1 International comparison of “national burden”**



Sources: Data on Japan is estimated from the budget of 2006; other countries from OECD's *National Accounts* from 1992 to 2003 and OECD, 2005b

**Table 3.2 Trends in national public health expenditure and gross domestic product (GDP), 1955–2005**

	1955	1975	1990	1995	2000	2005
National health expenditure (billion yen)	239	6 478	20 607	26 958	30 141	33 129
Annual growth rate (%)	11.0	20.4	4.5	4.5	-1.8	3.2
Health expenditure per capita (thousand yen)	2.7	57.9	166.7	214.7	237.5	259.3
GDP (in trillion yen)	NA	149	440	470	504	503
National health expenditure/GDP (%)	NA	4.3	4.7	5.7	5.9	6.6

Source: Ministry of Health, Labour and Welfare, 2006b

Note: NA: Not available

rate was 37.7% for Japan in 2006, which is low in comparison with other high-income countries: 47.0% in the United Kingdom, 53.3% in Germany and 60.9% in France. This reflects low tax rates in Japan (Section 3.3).

Japan's total annual health care spending is estimated to have been 33.1 trillion yen in 2005, or 259 300 yen per person (approximately US\$2600), accounting for 6.6% of GDP (503.4 trillion yen). Table 3.2 shows the trends in health care spending for the period 1955 to 2005. The three major methods of financing health care are health insurance (49.2% of total health spending), general tax (36.4%) and out-of-pocket payments (15.4%).<sup>19</sup> Health insurance is funded by compulsory premiums divided equally between employees and employers, but it is heavily supplemented by government subsidies, in particular for the municipal governments, which insure predominantly the non-employed population including those on a low income and older people.<sup>20</sup>

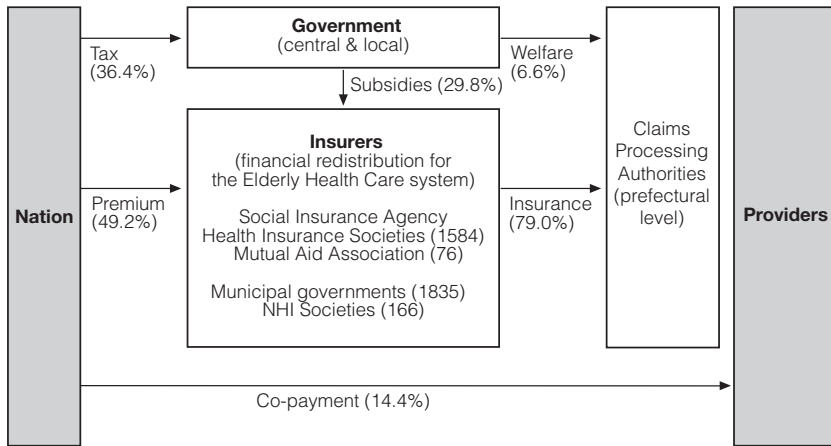
Figure 3.2 shows the financial flows in Japan's health system in 2005. It is important to note that the estimate of total health care costs is narrowly defined: it does not include surcharges for private hospital beds, normal delivery, preventive medical activities, eye glasses, over-the-counter drugs and other expenses not directly related to treatment (see Section 3.1). Also, health care provided as part of the Long-term Care Insurance, which is estimated at

<sup>19</sup> These figures are concerned with health insurance. Although private payments outside the health insurance system exist, they have not been estimated.

<sup>20</sup> An employed pensioner pays a payroll insurance. Unemployed pensioners do not have to pay premiums themselves if they are dependants of their families, but they do have to pay if they are not dependants. There has been an exemption system for low-income households enrolled in the municipal NHI. From 2008, all citizens aged 75 years and over have to pay premiums individually according to their income, including pension.

The government has introduced (unpopular) direct prepayment from pension. Hence pensioners now receive pensions from which premiums for health insurance have already been deducted. The situation for those aged between 65 and 75 years has not been changed.

Fig. 3.2 Financial flow chart for 2005



5 trillion yen (1% of GDP), has been removed from the national health care expenditure figures since 2000.

### 3.1 Health expenditure

Government estimates of total health care costs are narrowly defined: it is the sum of reimbursement to hospitals, clinics and pharmacies by health insurance but does not include private payments or charges not covered by health insurance, such as for glasses and contact lenses, over-the-counter drugs, normal delivery and additional amenity charges. According to the calculations of the Institute of Health Economics and Policy (Hori, 2006), national health expenditure is underestimated by approximately 25% from the more broadly defined OECD’s System of Health Accounts (SHA), which includes all public and private expenditures. The OECD estimate of Japan’s total health expenditure was 8.2% GDP in 2005 compared with the national estimate of 6.6%.

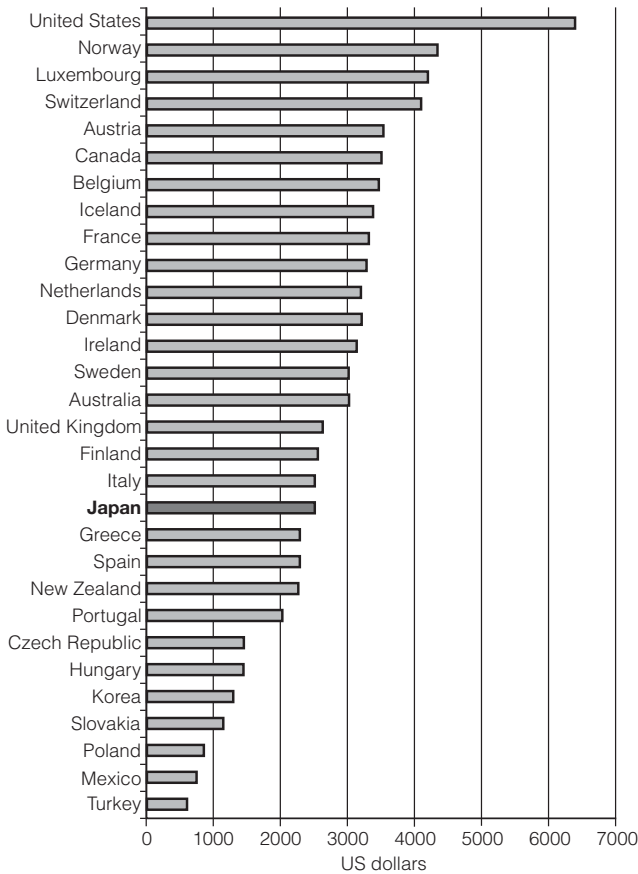
National health expenditure increased significantly after 1961 with the establishment of the NHI system for the entire population. Health expenditure in 2002 declined by 0.5% from the previous year, mainly because of increased cost sharing for salaried workers (from 20% to 30% of all insured services; Section 3.3.4) and a price cut in the national fee schedule (down by 2.7%) (Section 3.6).

The government has set a policy goal of controlling the growth of health expenditure in parallel with national economic growth in order to reduce the

financial burden on the population. In 1990, at a time of economic boom, national health expenditure as a proportion of GDP was almost 5%. Since then, economic growth has stagnated and, therefore, health care costs as a percentage of national income has increased steadily (Table 3.2). Given the long-lasting economic recession, coupled with the rapidly ageing population, the burden of health care costs is expected to grow in the foreseeable future.

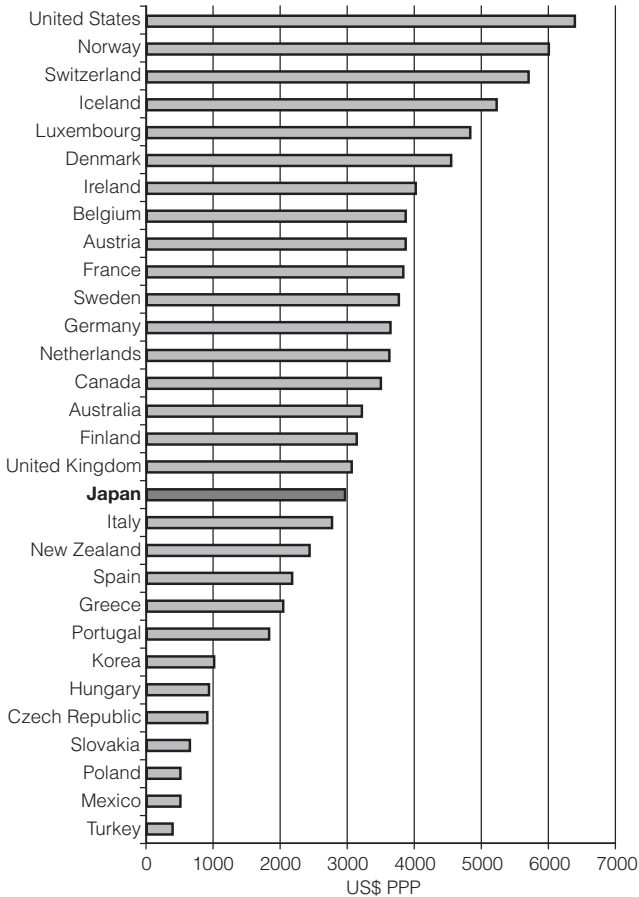
When converted to US dollars, national health expenditure per capita in Japan is ranked 13th among 30 OECD countries in 2005 (Fig. 3.3). Japan falls to 19th (below Italy and the United Kingdom) when expenditure is transformed into PPP, adjusted by the consumer price index (Fig. 3.4). This reflects the high consumer price index in Japan. Health expenditure as a share of GDP in Japan was 8.2% according to OECD estimates in 2005

**Fig. 3.3 International comparison of per capita health expenditure in US dollars in 2005**



Source: OECD, 2008

**Fig. 3.4 International comparison of per capita health expenditure in US dollars purchasing power parity (PPP) in 2005**

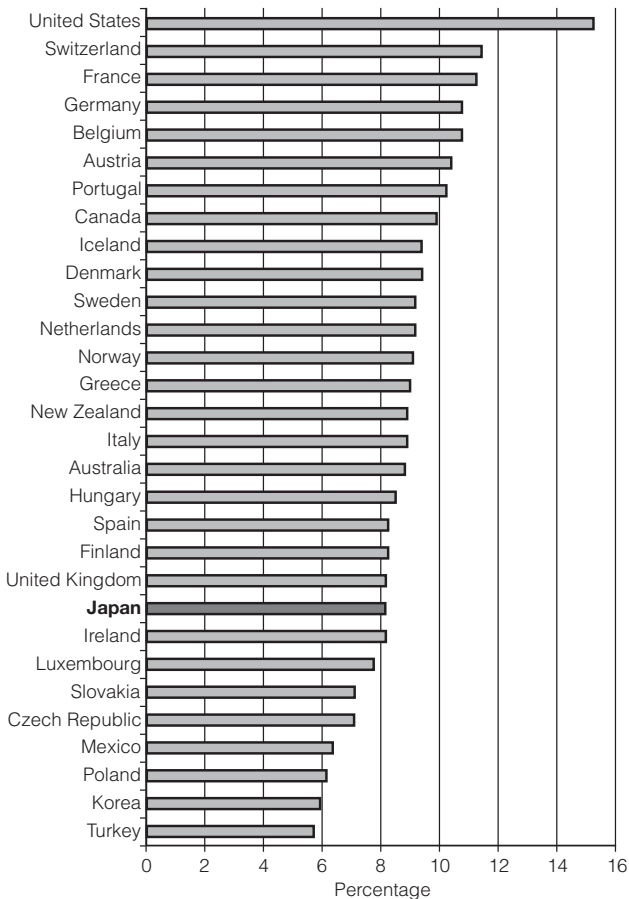


Source: OECD, 2008

(OECD, 2008), placing it 22nd among 30 OECD countries (Fig. 3.5). This suggests that long life expectancy has been attained at a comparatively low health cost. In a comparison of trends in health expenditure as a percentage of GDP since 1990 in five major countries, the United States has shown the highest percentage while the trend in Japan has been very similar to that in the United Kingdom (Fig. 3.6).

General medical care in 2005 accounted for 24 967.7 billion yen (75.4% of total expenditure): 12 117.8 billion yen (36.6%) being spent on inpatient care and 12 849.9 billion yen (38.8%) on outpatient care (Table 3.3). That same year, dental care accounted for 2576.6 billion yen (7.8%) and pharmaceutical care for 4560.8 billion yen (13.8%). Noteworthy is the proportional increase

**Fig. 3.5 Total health expenditure as a percentage of gross domestic product, 2005**



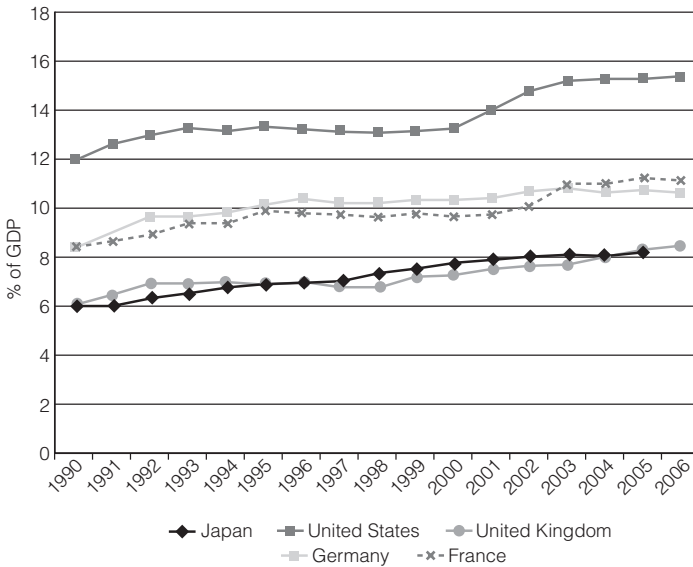
Source: OECD, 2008

in spending on pharmaceutical care, which rose from 4.7% in 1995 to 13.8% 10 years later.

Age-specific per capita health expenditure shows an increase in health expenditure with increasing age (Table 3.4). Health expenditure for individuals aged 65 years or over totalled 16.89 trillion yen, or 655 700 yen per capita, which represented 51% of total expenditure.

When disaggregating health expenditure by disease category, the largest share of medical care costs is taken up by cardiovascular diseases (5.38 trillion yen). This was followed by malignant neoplasm (2.57 trillion yen), genito-urinary disorders (2.0 trillion yen), respiratory disorders (2.13 trillion yen) and psychiatric disorders (1.89 trillion yen).

**Fig. 3.6 Trends in health expenditure as a percentage of gross domestic product (GDP) in Japan and selected countries, 1990–2006**



Source: OECD, 2008

### 3.2 Population coverage and basis for entitlement

The health insurance system offers comprehensive and universal coverage. Benefits packages for health services are principally uniform across different health insurance schemes because the benefits packages and fee schedule of providers are controlled by the government. Comprehensive coverage is based on Article 25 of the Constitution, which states: “All people shall have the right to maintain the minimum standards of wholesome and cultured living. In all spheres of life, the State shall use its endeavours for the promotion and extension of social welfare and security, and of public health.” The National Health Insurance Act defines the role of NHI to provide coverage for those not covered by other schemes. Benefits packages cover the costs of prescription drugs, dental care and unlimited hospital stay (this may, in part, explain the unusually long lengths of stays in hospitals; Section 6.4). However, there is co-insurance for all health care services, with a maximum out-of-pocket payment of 30% of the total costs with the exception of children and older people; Section 3.3.4).

Services covered by health insurance are included in the national fee schedule; therefore, coverage is determined by a positive list of services.



**Table 3.3 National health expenditure by health sector**

	Total (billion yen (%))			
	1975	1995	2000	2005
National health expenditure	6 477.9 (100.0)	26 957.7 (100)	30 358.3 (100.0)	33 128.9 (100.0)
Medical expenditure	5 910.2 (91.2)	21 868.3 (81.1)	23 960.8 (78.9)	24 967.7 (75.4)
Hospital	3 299.6 (50.9)	14 854.3 (55.1)	16 258.1 (53.6)	16 795.5 (50.7)
Clinic	2 610.6 (40.3)	7 014.0 (26.0)	7 702.7 (25.3)	8 172.2 (24.7)
Inpatient expenditure	2 542.7 (39.3)	9 922.9 (36.8)	11 342.5 (37.5)	12 117.8 (36.6)
Hospital	2 264.0 (34.9)	9 454.5 (35.1)	10 903.3 (36.0)	11 662.4 (35.2)
Clinic	278.7 (4.3)	468.4 (1.7)	439.1 (1.5)	455.5 (1.4)
Outpatient expenditure	3 367.5 (52.0)	11 945.4 (44.3)	12 618.3 (41.5)	12 849.9 (38.8)
Hospital	1 035.6 (16.0)	5 399.7 (20.0)	5 354.7 (17.6)	5 133.1 (15.5)
Clinic	2 331.9 (36.0)	6 545.6 (24.3)	7 263.6 (23.9)	7 716.7 (23.3)
Dental expenditure	567.7 (8.8)	2 383.7 (8.8)	2 557.5 (8.5)	2 576.6 (7.8)
Pharmaceutical expenditure	–	1 266.2 (4.7)	2 808.1 (9.2)	4 560.8 (13.8)
Food expenditure for inpatients	–	1 080.1 (4.0)	1 002.9 (3.3)	980.7 (3) (3.0)
Expenditure for care at health care home for elderly	–	338.5 (1.3)	Moved to the Long-term Care Insurance	
Expenditure for home visit health care	–	21.0 (0.1)	29.1 (0.1)	43.1 (0.1)

Source: Ministry of Health, Labour and Welfare, 2006b

There is also a positive list for pharmaceuticals (Section 6.7). Services and goods not covered by the health insurance include surcharges for private beds at hospitals, eye glasses and contact lenses, and new technology medicine not yet adopted in the fee schedule (Section 4.2.2). Some restrictions are also applied to dental care in terms of what materials can be used.

Although the scope of benefit is uniform, some health insurance funds (within the SMHI) with favourable financial conditions may provide additional benefits to those enrolled. Such additional benefits are in the form of reduced patient cost sharing, which is refunded upon a patient's request (e.g. some health insurance funds will refund some part of the 30% co-insurance paid to providers). The Federation of Health Insurance Societies conducts and publishes annual surveys on such additional benefits. In 2004, 1363 out of 1584 health insurance funds provided such additional benefits, which accounted for 2.8% of the total benefit reimbursement.

58 Table 3.4 Age-specific health expenditure, 2005

	Overall health expenditure		Inpatient		Outpatient		Dental		Pharmacy	
	Total (billion yen, %)	Per capita (thousand yen)	Total (billion yen, %)	Per capita (thousand yen)	Total (billion yen, %)	Per capita (thousand yen)	Total (billion yen, %)	Per capita (thousand yen)	Total (billion yen, %)	Per capita (thousand yen)
All ages	33 128.9 (100.0)	259.3	12 117.8 (100.0)	94.8	12 849.9 (100.0)	100.6	2 576.6 (100.0)	20.2	4 560.8 (100.0)	35.7
0-14	2 276.7 (6.9)	129.5	491.4 (4.1)	27.9	1 159.2 (9.0)	65.9	197.9 (7.7)	11.3	413.0 (9.1)	23.5
15-44	5 066.5 (15.3)	103.5	1 322.7 (10.9)	27.0	2 171.3 (16.9)	44.3	743.2 (28.8)	15.2	747.3 (16.4)	15.3
45-64	8 895.1 (26.8)	250.9	2 952.8 (24.4)	83.3	3 534.6 (27.5)	99.7	869.0 (33.7)	24.5	1 302.0 (28.5)	36.7
65+	16 890.6 (51.0)	655.7	7 350.9 (60.7)	285.3	5 984.7 (46.6)	232.3	766.5 (29.7)	29.8	2 098.5 (46.0)	81.5

Source: Ministry of Health, Labour and Welfare, 2006b

Enrolment in the health insurance system is compulsory and applies to all residents including foreigners (short-period visitors are excluded) on condition that they are legally residing in the country. Illegal immigrants are not covered by the health insurance system.<sup>21</sup> However, a recent court ruling entitling illegal foreigners to health insurance stirred much debate. Immigrants, refugees and asylum seekers are entitled to be covered by the municipal NHI system.

An individual can only be enrolled in one health insurance scheme according to first their employment status and second their residency. For example, an employee of Toyota Ltd would be enrolled in the Toyota Health Insurance fund. But upon retiring from the company, she or he is then transferred to a municipal NHI managed by the municipal government based on his or her place of residence (e.g. Toyota City government). This is an important feature of the insurance system in Japan since companies are not liable for the health costs of their retired employees.

A considerable number of people (approximately 10%) evade the compulsory insurance premium contribution. Municipal governments refuse to issue insurance cards to malevolent defaulters. Since a health insurance card is required when patients present to seek care from providers, withholding of insurance cards may deter patients from seeking care promptly.

The non-employed population, including part-time workers and pensioners, are automatically enrolled to the municipal NHI scheme for the self-employed run by the municipal government for the area in which they reside (some self-employed professionals organize their own societies, called NHI societies). Those non-employed people will have to pay an income-adjusted premium to the insuring municipal governments. Since the income level of the non-employed population tends to be lower than that of the employed population, and the municipal NHI tends to insure more elderly than the NHI for employees, the premium contribution from the insured alone is not enough to cover the health care costs. To supplement the deficit, government subsidies account for almost half of the operating revenue of municipal NHIs. The average annual contribution per household for municipal NHIs was 151 770 yen (78 959 yen per capita) in 2004. The indigent population receiving social assistance (roughly 1% of the population but with wide geographical variation) is covered by the means-tested welfare system called the Livelihood Protection Scheme. Although the means-tested welfare system is by no means similar to the insurance system, they are entitled to the same benefits package as the insured.

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<sup>21</sup> Immigration Bureau Japan estimated there were approximately 194 000 illegal foreign residents in Japan at the end of 2005.

The number of the people covered by health insurance in the different insurance types since 1970 is shown in Table 3.5. Total number of people covered by NHI for employees (including SMHI, GMHI) and by NHI for the self-employed (both municipal NHI and NHI societies) was 75.55 million (59.4% of the population) and 51.63 million (40.6%), respectively, in 2005. Consequently, NHI covers 99.5% of the population; the remaining 0.5% is covered by the means-tested welfare system.

**Table 3.5 Trends in proportion of people covered by health insurance by the kind of insurance, 1970–2005**

	1970	1980	1990	2000	2005
Number (thousands)					
Population	105 338	117 415	124 533	127 040	127 768
Total insured population	103 635	117 037	124 260	126 351	127 176
Health Insurance for employees					
GMHI	27 212	31 807	36 821	36 805	35 677
SMHI	21 236	27 502	32 009	31 677	30 119
MAS	11 093	12 520	11 952	10 017	10 978
Seamen	741	672	409	228	168
National Health Insurance	43 364	44 536	43 069	47 628	51 627
Proportion (%)					
Population	100.0	100.0	100.0	100.0	100.0
Total insured population	98.4	99.7	99.8	99.5	99.5
Health Insurance for employees					
GMHI	25.8	27.1	29.6	29.0	27.9
SMHI	20.2	23.4	25.7	24.9	23.6
MAS	10.5	10.7	9.6	7.9	8.6
Seamen	0.7	0.6	0.3	0.2	0.1
National Health Insurance	41.2	37.9	34.6	37.5	39.3

*Source:* Health and Welfare Statistics Association, 2005

*Notes:* GMHI: Government-managed Health Insurance; SMHI: Society-managed Health Insurance; MAS: Mutual Aid Societies

### 3.3 Sources of funds

National health expenditure was financed by tax (36.4%), insurance premiums (49.2%) and patient cost sharing (14.4%) in 2005. The payments made directly

by patients were approximately 4.9 trillion yen in the same year. As shown in Table 3.6, the level of cost sharing by patients has steadily declined from 1955 to 1995, but since then has increased (Section 3.3.4). A marginal role in financing is also played by voluntary health insurance (VHI) (Section 3.3.3).

**Table 3.6 National health expenditure by financial source (%), 1955–2005**

	1955	1965	1975	1985	1995	2005
Total national health expenditure	100	100	100	100	100	100
Tax						
Total	15.9	25.9	33.5	33.4	31.7	36.4
Central government	11.6	22.1	28.9	26.6	24.2	25.1
Local governments	4.2	3.9	4.6	6.8	7.5	11.4
Premium						
Total	45.5	53.5	53.5	54.3	56.4	49.2
Employers	23.5	26.1	25.1	23.4	24.5	20.2
Employees (incl. Self-employed)	22.0	27.4	28.4	30.9	31.9	28.9
Patient cost sharing	38.7	20.6	13.0	12.3	11.9	14.4

Source: Ministry of Health, Labour and Welfare, 2006b

### 3.3.1 Health insurance premiums

Japan's health insurance system is administered by a multitude of insurers: the Social Insurance Agency (the GMHI fund was separated from the Social Insurance Agency to the newly established JHIA in October 2008), 1584 SMHI funds, 76 MAS funds, 1835 municipal NHI funds and 166 NHI society funds, each with different premium contribution rates in 2005.

The contribution rate of GMHI is 8.2% of monthly gross salary (the average monthly salary was 283 624 yen in 2004) equally shared between employers and employee (4.1% each). The contribution rates of MAS-managed HI vary from as low as 3% to as high as 10%, with an average of 7.4%. The ceilings of the gross monthly salary and the biannual bonus payments are 1.21 million yen (the average monthly salary was 283 127 yen in 2005) and 5.4 million yen, respectively. All employees also pay premiums for pension (13.6%) and employees aged 40 or over are also required to pay a premium for the Long-term Care Insurance (1.2%). Overall, salaried workers over 40 years of age will see 11.5% (half of a total of 23.0%) of their monthly pay cheques withheld for insurance, in addition to tax.

Note that the contribution rate of 8.2% is for the GMHI, which insures small to medium-sized corporations. Since the salary level of employees of

small to medium-sized corporations tends to be lower than those with large corporations which have their own health insurance funds, the premium revenue alone is not enough to finance their health care cost. To supplement the deficit incurred, government subsidy covers 13% of the total costs (the subsidy rate is 16.4% for people over 70 years).

### 3.3.2 Taxation

Over one third of health care costs in Japan are covered from general taxation. Japan's tax revenue in 2004 was 81 642 billion yen (48 103 billion yen or 58.9% for the central government and 33 539 billion yen or 41.1% for local governments): approximately 22.5% of national income or 16.4% of GDP (national income was 367.6 trillion yen; GDP was 498.3 trillion yen). The ratio of direct to indirect taxes levied by the central government was approximately 2.4. As this higher-than-international ratio suggests, Japan's taxation system has traditionally been dependent on direct tax. It was in 1989 when Japan first introduced general indirect tax, which was initially 3% and was raised to 5% in 1997. Whether the rate should be raised further continues to be a prolonged political debate.

The budget of the Ministry of Health, Labour and Welfare was 20.82 trillion yen in 2005, which represents approximately 25% of the general national budget (82.18 trillion yen), and a 3.1% increase over the previous year. The budget spending of the Ministry can be broken down into 40% on health care, 31% on pensions, 17% on welfare and social assistance, 9.6% on long-term care and 2.3% on employment.

The public health budget for local governments in 2004 was 5.78 trillion yen, which was approximately 6.3% of their entire budget (91.2 trillion yen), an 8.7% decrease over the previous year. Spending of public health budgets by local governments consisted of 55.3% for personal health services, 39.8% for waste disposal, 4.3% for public health centres and 0.6% for anti-TB projects. It is important to note that the national health expenditure includes only curative medicine reimbursed by health insurance and does not include preventive health activities. The local government public health budget includes a broader range of health-related costs such as waste disposal.

As discussed above, the subsidy from central and local tax revenue constitutes a considerable portion (34.8%) of Japan's total health expenditure (11 trillion yen out of a total of 32 trillion yen in 2004). As the total tax revenue for both central and local governments was 77 trillion yen in 2004, this means a seventh of the entire tax revenue was allocated to health care. Although no taxes are specifically earmarked for health care, one implication of this considerable government contribution to health care is that the Ministry of

Finance has a strong voice in health care; every year, the Ministry of Finance continues to put pressure on the Ministry of Health, Labour and Welfare for more stringent cost-containment in order to alleviate the accumulating national debt.

As shown in Fig. 3.1, Japan's tax burden is lower than most European countries and is as low as the United States. Particularly noteworthy is Japan's low individual income tax rate (6.6% of national income in 2006). For most Japanese workers, income tax is small in comparison with social insurance premium for health and pensions, which is typically 23.0% of their salary.

### **3.3.3 Voluntary health insurance**

Given the universal coverage and comprehensive benefit package of Japan's health insurance system, one would expect little demand for additional private health insurance. However, VHI does exist and covers some of the out-of-pocket payments required for hospitalization and surgery (Section 3.3.4). A per diem cash benefit is provided during hospitalization and a lump sum cash payment in case of major surgery. The amount of per diem cash benefit ranges from 1000 yen to 30 000 yen and the lump sum for surgery is typically expressed as a certain number of times of the per diem cost. Major surgeries such as those for malignancy qualify for as much as 40 times.

These VHI schemes are operated by for-profit life insurance companies and are promoted coupled with their life insurance policies. Enrolment is subject to their health examination; therefore some applicants will be denied on the basis of pre-existing conditions. There are few, if any, group enrolment schemes through employers. In general, most employers feel that their compulsory contributions to health and pension insurance premium for their employees are high enough. National estimates of expenditure do not account for private insurance, and OECD estimates suggest that approximately 2.5% of total health expenditure pursuant to the OECD SHA was derived from private insurance in 2005, up from 0.3% in 2002 (there was a break in the series of estimates between 2002 and 2003 onwards). Before 2003, the estimate was derived from "SHA-consistent national health accounts"; from 2003 onwards, the estimate was derived from "Joint OECD–Eurostat–WHO SHA collection". The recent 2003–2005 data were extracted from the "Life Insurance Business in Japan" by the Japan Life Insurance Association (OECD, 2008).

### **3.3.4 Out-of-pocket payments**

When the NHI system was introduced in 1961, the reimbursement rate was 100% for the insured and 50% for dependants of those covered by health

insurance schemes for employees or NHI for the self-employed. From 1968, the reimbursement rate was raised to a minimum of 70% for all insured, and from 1973, co-insurance for patients was waived for individuals aged 70 years or over. In 1975, a coverage for monthly co-insurance higher than 30000 yen was introduced, which covered all insured. Subsequently, in 1981, the reimbursement rate for the dependants of the insured of the health insurance schemes for employees rose to 80% for hospital care. In 1984, the reimbursement rate for those covered by the health insurance schemes for employees was reduced, for the first time, to 90%. In 1997 it was reduced further to 80%, and in 2003 the reimbursement rate for all insured was unified to 70%.

As shown in Table 3.6, approximately 15% of health care costs are paid directly from patients to providers in the form of co-insurance, but this estimate does not include payments for services not covered by the insurance system. Co-insurance is required for all goods and services covered by health insurance. The co-insurance rate is determined by law and although it did at one time vary across different schemes, it was unified to 30% in April 2003. The co-insurance rate is reduced to 20% for children under 3 years of age and to 10% or 20% (the latter for those with high income) for individuals aged 75 years or over. Indigent people who cannot afford the premium for municipal NHI may qualify for the means-tested welfare system called the Livelihood Protection Scheme (approximately 1% of population receive care not from health insurance but from the scheme) and no co-insurance is required.

Although 30% co-insurance may appear heavy, particularly for prolonged hospitalization, the financial burden is mitigated by the “catastrophic coverage system” for high co-insurance. If the monthly co-insurance exceeds a certain ceiling, the excess will be refunded upon request. The ceiling is typically set at 80 100 yen (approximately US\$760) plus 1% of the balance between the actual cost and 267 000 yen per month.<sup>22</sup>

The financial burden through cost sharing may also be mitigated through tax breaks. Annual health care costs exceeding 100 000 yen may be deducted from annual taxable income up to a maximum of 2 million yen. For example, if a person spends 1 million yen in a given year on co-insurance and direct payments, he or she can deduct 900 000 yen from taxable income. If the tax rate of the applicable income bracket is 15% (10% for central, 2% for prefecture and 3% for municipal governments), 135 000 yen will be reduced from his or her tax owed ( $900\,000 \times 0.15$ ). However, this tax break is by no

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<sup>22</sup> The ceiling is lowered to 35 400 yen (US\$330) for low-income households and is raised to 150 000 yen plus 1% of the balance between the actual cost and 500 000 yen for high-income households whose monthly salary exceeds 530 000 yen or annual income exceeds 6 million yen. The income threshold is uniform across insurance schemes.



means a panacea: it does not apply to those who do not pay taxes because of their low income status. Therefore, in practice, this tax break tends to be used for discretionary health services not covered by insurance, the most typical of which is orthodontics.

Patients also face surcharges for accessing certain specialty hospitals without referral forms from their physicians (see also Section 6.4). According to a survey conducted by the Ministry in July 2004, 1138 hospitals surcharged patients, with the price ranging from as low as 210 yen (5% tax included) to the highest of 5250 yen, with an arithmetic mean of 1760 yen (approximately US\$15). Such surcharges are charged only once, at the first visit.

Some specific population groups, such as patients with one of the 45 diseases targeted in 2003 and victims of the Hiroshima/Nagasaki atomic bombs, are exempt from cost sharing (Section 6.12).

### **Cost sharing for older people**

Under the new Health Services for the Elderly Act, individuals aged 70 years and over pay 400 yen per month for outpatient care, and 300 yen a day for hospital care during the first two months. These payments were 800 yen and 400 yen with no limit of duration from 1987 and then changed to 1020 yen and 710 yen in 1996. Since 1997, through the legal revisions, older people had to pay 500 yen per each outpatient care and 1000 yen a day for hospital care in 1997, 1100 yen in 1998 and 1200 yen in 1999. Since 2001, older patients have had to pay fixed rate of 10% of health care cost.

In April 2008, the Health Services for the Elderly Act was entirely revised to the Elderly Health Care Security Act and the 10% co-insurance was introduced for those who were 75 years or older. For the “young-old”, aged 65–74 years, the cost sharing was increased to 30%, equal to the general insured.

## **3.4 Pooling of funds**

There is one mechanism of pooling and redistribution of funds that attempts to adjust for the relatively higher costs of older people in the insurance funds that form part of the municipal NHI. Since most salaried workers retire around the age of 60, and with the increasing number of older people, more people will be covered by the municipal NHI (which includes pensioners), leading to a greater financial burden on the municipal NHI. To balance this inequality across different insurers, a financial redistribution mechanism for half of the total health care cost (later becoming 100%) was established in 1982 and was administered by the Social Insurance Payment Fund. The insurers with less

than the national average enrolment of those over 70 years contribute more than they are otherwise responsible, while the insurers with higher than national average enrolment will contribute less than they are otherwise responsible. As a result, the employment-related insurance plans transfer approximately a quarter of their premium revenue to the pooling fund for the elderly (Ikegami and Campbell, 1999).

This pooling fund was replaced by the financial redistribution mechanism among health insurers for the young-old aged 65–74 years and by the independent Health Care System for the Old-old under the newly created Elderly Health Care Security Act in April 2008.

### **3.5 Purchasing and purchaser–provider relations**

The relationship between providers (hospitals, clinics, pharmacies, etc.) and payers is through “contract”, which states that (1) providers agree with the price and selection of services covered under the NHI system (this implies that providers are not allowed any balance billing) and (2) providers (most notably doctors) agree with the practising rules enforced by the government. All contractual content is dictated by law and there is no room for individual negotiation. Almost all providers have no other choice but to enter into the contractual relationship with the government because Japan’s NHI system will not reimburse for any non-participating providers; most providers find it almost impossible to operate without such a contract.

The government monitors and reviews the claims submitted by providers and will quickly terminate the contract when fraud and abuse are detected. Such termination in many cases ends a provider’s career. Some cases of contract termination have occurred: the contracts with 27 hospitals and clinics, 19 dental clinics and 2 pharmacies were cancelled in 2004 (*National Health Insurance Weekly*, 2006). Cancellation of contract does not necessitate the revocation of doctors’ licences, but many of them will also be sanctioned with revocation of licences.

Through this contractual relationship with individual providers as well as by setting the uniform fee schedule, the government exerts a powerful control over the national health care system and, consequently, health care costs. Ikegami (2007) argued that, “while this (uniform fee system) may seem unfair, it has contributed to a more even distribution of health care workers”.

Selective contracting between individual providers and insurers was not permitted for many years through this strong government intervention. This intervention was somewhat relaxed in response to demand by conservative economists and some health insurance funds in May 2003, but no such direct

contractual relationship (termed “Japanese managed-care”) has been realized yet because of the red tape imposed by the government.

## 3.6 Payment mechanisms

### 3.6.1 Paying for health care

The reimbursement system in Japan has traditionally been fee-for-service (retrospective payment), but a diagnosis-related group (DRG)-style payment system has been advocated, mainly by insurers, for acute care hospitalization. In 1998, the first trial of a Japanese DRG system was launched in selected acute care hospitals. DRG is a case payment system in which a fixed cost is paid to hospitals regardless of the length of stay. However, it became apparent that such a flat fee payment was not appropriate for Japan because there was considerable variation in lengths of stay even among acute care hospitals.

In 2003, a system known as diagnosis procedure combination (DPC, so-named because classification is made by diagnoses and procedures given) was introduced in university hospitals. DPC is not a case payment, but instead it is a per diem payment based on patient classification. Hospitals continue to receive payment in proportion to the length of stay at a fixed cost. The cost is not entirely fixed: it is scaled in three stages, with the first phase of hospitalization at a 15% higher rate and stays beyond the average length of stay for the disorder at a 15% lower rate to discourage prolonged hospitalization. Further, if the hospitalization is prolonged beyond the specified period, the DPC will not be applied any longer and hospitals can charge in a traditional fee-for-service system.

The DPC does not cover all hospital costs but only bundles the hospital fee portion (room and board, nursing and laboratory costs), leaving the portion for doctors’ fees (surgery, evaluation, management and rehabilitation) and outpatient services to the traditional fee-for-service system. Another feature of the DPC system is that differential pricing by hospitals was introduced, for the first time in the history of health insurance in Japan. According to data reported to the Central Social Insurance Medical Care Committee in April 2006, of 130 participating hospitals, Keio University Hospital received a 18% higher fee and Nagoya University Hospital received a 3.24% lower fee than the standard for the same hospitalization for the same patient classification, reflecting the historical charges to guarantee the same level of reimbursement as before the DPC. In 2006, the number of hospitals using DPCs was extended, and 360 hospitals started to bill using DPC as of July 2006. The number of inpatients billed by DPC was 974 163 in 2005.

Although the DPC is not a prospective payment mechanism and is not likely to be a strong incentive to shorten the average length of stay, it has shown some effects on the length of stay in participating hospitals. A comparison of the three-month period before and after DPC demonstrated that 80 out of 82 hospitals showed a reduction in the average length of stay, along with a linear relationship between the before and after length of stay: that is, those hospitals with longer stay before DPC showed a greater reduction in length of stay after DPC (Okamoto, 2005b).

One of the main difficulties in implementing the DPC system nationally is the limited information systems in hospitals on cost and diagnoses. Moreover, few hospitals have cost data or accurate records of patient diagnoses; only 40% of hospitals write discharge summaries (Ikegami and Campbell, 1999); and only 10% of all hospitals use the ICD (WHO, 1994) coding systems (Ikegami and Campbell 2004).

### **3.6.2 Paying health care personnel**

The reimbursement to doctors is based on a national uniform fee schedule. The distinction between doctors in clinics and those in hospitals is poorly developed and there is no difference between them in terms of reimbursement.

The fee schedule is revised every two years through negotiations among stakeholders including the insurers, such as the federations of insurers, and the provider professional organizations, such as medical, dental, pharmaceutical and nursing associations, hospital organizations and consumer organizations. The revision of the fee schedule is an important health policy tool because it not only changes the price but also makes it possible for the government to implement certain health policy by giving incentives through price setting. For example, the government may be able to encourage doctors over the country to provide more house calls by raising the price for house calls. The year 2004 coincided with the year for revision of the fee schedule, and charges of typical cases are presented in Table 3.7.

The Central Social Insurance Medical Care Committee, a collective negotiation table between providers and payers, conducts an economic survey on providers and insurers for reference in changing the fee schedules. The latest findings conducted in June 2005 surveyed 550 clinics owned as a sole proprietorship by a practising doctor and found that they made, on average, 2.27 million yen (approximately US\$20 000) in the survey month. Calculated into an annual figure, this gave an estimate for the average annual income of a practising doctor as 27 million yen (approximately US\$240 000). In comparison with doctors, dentists are less well reimbursed: their average monthly income derived from figures for 642 dentists was 1.35 million yen,

**Table 3.7 Charges for typical cases, 2004**

<b>Case</b>	<b>Fee (yen)</b>
<i>1 A 29-year-old patient with acute appendicitis, emergency surgery and hospital stay for 4 days</i>	
Hospital charge (4 days)	17 280 × 4
Other	8 130
Surgery (appendectomy)	62 100
Anesthesia	10 500
<b>Total</b>	<b>149 850</b>
Patient co-payment (30%)	44 960
<i>2 A 57-year-old patient with diabetes, visiting outpatient clinic once a month, direct dispensing of medications</i>	
Lifestyle-related disease management fee	12 800
Follow-up visit	600
Other	520
<b>Total</b>	<b>13 920</b>
Patient co-payment (30%)	4 180
<i>3 A 78-year-old patient with hypertension, visiting outpatient clinic twice a month, on medication</i>	
Medical care	
Evaluation and management fee for patients over 75 years of age	6 000
Follow-up visit	720 × 2
Other	520
Prescription fee	680 × 2
<b>Total (medical care)</b>	<b>9 300</b>
Pharmaceutical care	
Patient co-payment (10%)	930
Pharmacist management fee	400 × 2
Add-on for generic dispensing	40 × 2
Compliance management	350 × 2
Information on generic drugs	100
Dispensing fee	650 × 2
Drug charge	420 × 2
<b>Total (pharmaceutical care)</b>	<b>3 820</b>
Patient co-payment (10%)	382

Source: *Nikkan Shakai Hoken Sinpo (Social Insurance Daily)*, 2008

or 16.2 million yen annually (approximately US\$140 000). It should be noted that these are overall income of doctors and dentists practising as a provider. Many private hospitals and clinics are incorporated as medical corporations, where doctors, including administrators, will be employees of the corporation and receive a monthly salary.

Payment for health professionals employed by hospitals and clinics are by salary, plus some bonus payment. According to the annual survey on salaried workers conducted by the National Personnel Authority, the average monthly salary in April 2004 for hospital doctors was 910 558 yen (derived from 2175 doctors, average age 37.9 years) and for nurses 338 859 yen (9813 nurses, average age 34.3 years). The salary for doctors who were hospital presidents was 1.56 million yen (124 doctors, average age 58.4 years). One should be cautious in comparing the annual salary between doctors and nurses. Nurses, as well as most other salaried workers, receive bonus payments worth three to four months' salary in a year whereas doctors are more likely to receive monthly salaries excluding bonuses or simply the annual income divided by 12. Therefore, the gap between salaried doctors and nurses may not be as large as it appears.

A large gap between clinic doctors and hospital doctors may be explained by the difference in the profit margin, since the national fee schedule sets the same fees for services for hospital and clinic practice settings. Hospitals tend to have higher expenses because they employ more staff and invest in facilities, while clinic doctors tend to have minimal equipment. In addition, the relatively favourable price for practices mainly set in clinics may also explain the gap. If the reimbursement level is similar between them, it would inevitably result in higher earnings for clinic doctors.

## 4 Regulation and planning

Regulation of the health care system is two dimensional: human and capital resources are regulated by the Medical Care Act and financing is regulated by the Health Insurance Act. Regulatory bodies consist of a three-tier system, in which the central government, prefecture governments and major city governments share different levels of authority. Financing (reimbursement by health insurance) is regulated almost solely by the central government. Human and capital resources are regulated through inspection by government at the prefecture and major city levels through public health centres.

Since 1985, prefecture governments have set up health care planning pursuant to the Medical Care Act, and national and prefecture plans for health promotion were developed in 2000 pursuant to the Health Promotion Act. These plans eventually evolved to more advanced forms of planning in April 2008. The plans are known as national and prefectural “health care cost-containment plans”, effectively integrating health promotion, health care provision and health care cost-containment. A National Plan for Cancer was established in 2006.

### 4.1 Regulation

#### 4.1.1 Regulation and governance of third-party payers (insurers)

All insurers are regulated by the Ministry of Health, Labour and Welfare and their latitude is quite limited. In the NHI system, there are 1835 municipal NHI funds (enrolling the self-employed and unemployed) and 166 NHI Society funds (enrolling professionals such as doctors and lawyers). In the SMHI system, there are 1584 health insurance funds (for employees of

medium-to-large corporations) and 76 MAS funds (enrolling civil servants). Finally the government itself is by far the largest insurer (the GMHI): the Social Insurance Agency, a subsidy of the Ministry, operates a single insurance system enrolling 35.6 million people who are employees of small-to-medium corporations as well as their dependent family members. However, the GMHI was delegated to JHIA, a new quasi-governmental agency, in October 2008 as part of the abolition of the Social Insurance Agency.

Insurance funds (corporate-based health insurance funds, NHI Society funds for self-employed professionals and MAS funds for civil servants and private school teachers) are tax-exempt non-profit public corporations, independent from their parent corporations. They are governed by an assembly consisting of representatives from both employers and employees. For-profit insurance companies do sell VHI, but holding VHI will not exempt an individual from mandatory enrolment to the social health insurance scheme, and the role of VHI remains supplementary to the social health insurance benefit packages (Section 3.3.3).

### **Enrolment**

Enrolment in an insurance system is mandatory. Employees of major corporations are automatically enrolled in the health insurance fund covering all employees of the corporation. The non-employed population, including part-time workers and pensioners, are automatically enrolled in the municipal NHI system run by the municipal government for the area in which they reside. Enrolment includes dependent family members.

### **Premium setting**

Rules for premium setting vary between public insurers, are determined by law and are levied according to the income of those enrolled, but premium rates vary across all the 3662 insurers. For corporate-based health insurance funds, the variation is limited to between 3% and 10% of monthly salary (shared equally between employers and employees) according to the regulation by the Health Insurance Act. Municipal insurers tend to have more varied premium schedules, and the premiums may differ considerably even for households of the same family size and annual income. Variations in premium rates are considerable even among major cities. If one takes a household paying local income tax of 50 000 yen (approximately 2 million yen annual income), their annual premium would be 200 000 yen in Tokyo, but they would have to pay 405 000 yen in Osaka (the second largest city).



**Benefits package**

The insurance benefits package as well as cost sharing is determined by law and the national uniform fee schedule dictated by the Ministry of Health, Labour and Welfare after collective negotiation between insurers and providers at the Central Social Insurance Medical Care Committee and incorporating the budgetary cap set by the Ministry of Finance. Therefore, there is little discretion for insurers. The addition of a slightly more generous benefits package, such as refunding of some of the co-insurance, is adopted by some health insurance funds whose financial conditions permit them.

**Preventive services**

Insurers have been given relative independence for designing preventive health services, which are not included in the fee schedule. Provision of such preventive health activities was discretionary, although some insurers did provide extensive health screening programmes. As part of the health care reform enacted in 2006, provision of preventive health services and disease management became mandatory for all insurers, effective from April 2008.

**4.1.2 Regulation and governance of providers**

The government enacts the health laws, which regulate all aspects of the health care system. The laws delegate regulatory authority over the health workforce and over facilities such as hospitals, clinics and pharmacies to prefectures and major city governments, which conduct inspection pursuant to the Medical Care Act. Professional organizations such as the Japan Medical Association have no regulatory authority because they are voluntary organizations. Providers are a mix of public, private for-profit and private not-for-profit organizations (see Section 5.2.1).

**Regulation at central government level**

Supervision and regulation of health care providers (hospitals and clinics) regarding health insurance is almost exclusively in the realm of central government. This includes the assignment and cancellation of health insurance contracts with providers. Since the majority of health care is financed through health insurance, hospitals and clinics, through the supervision system, can be sanctioned over fraud and abuse. Note that the regulatory power of the central government is entitled through making the financial incentive dependent on the Health Insurance Act.

Pharmaceutical manufacturing and imports are also within the jurisdiction of the central government, although evaluation of new drug applications is

delegated to the Pharmaceutical and Medical Device Agency (Section 4.2.2). The government also supervises the pharmaceutical industry over manufacturing, clinical trials and post-marketing surveillance. These regulations are administered based on a variety of rules, called good manufacturing practice, good clinical practice and good post-marketing study practice, through eight Divisions of the Ministry.

### **Regulation at prefecture level**

The Medical Care Act delegates regulation of health care providers (hospitals, clinics, pharmacies and health care homes) to the prefecture governments. From the viewpoint of health care providers, they face two-tier regulation: for health insurance reimbursement by the government and for other aspects of health service management, such as personnel, facility, supplies and medical malpractices, by prefecture governments. For most public health activities, prefecture governments stand in the forefront of activities and responsibilities. These activities include infectious disease control, food sanitation and environmental health, and are administered through public health centres.

### **Regulation at major city level**

An exception in the regulation of health care providers occurs for major cities, where the city governments are delegated authority over hospitals, clinics and pharmacies in their jurisdiction. These major city governments have their own public health centres and share authorities and responsibilities for public health activities with prefecture governments. There are 57 such cities, which have 115 public health centres. (In the massive *Escherichia coli* O157 food poisoning outbreak, Sakai City, not Osaka Prefecture, stood in the forefront of damage control because Sakai City was one such major city).

### **4.1.3 Regulation and governance of the purchasing process**

Contracts for the insurance system with providers are made between the government (Ministry of Health, Labour and Welfare) and individual providers, and there is little room for the discretion of the insurers. Contracts are not terminated unless providers violate the law. Since contracts can only be set up through the central government, the government possesses sole purchasing power over health insurance practices. This regulation was loosened slightly in May 2003, when selective direct contracting between providers and insurers was permitted. This revision was in response to the call for deregulation to allow so-called “managed care”, in which insurers negotiate with providers for bulk discount in exchange for increased patient volume. However, this

deregulation did not remove the need for government approval and, because of the heavy accompanying regulations, no selective contracts have been made so far.

#### **4.1.4 Regulating quality of care**

The Medical Care Act sets the minimal standards of health care based on structural indicators such as health personnel and hospital facilities, the violation of which may result in criminal charges. It is important to note that the standards set by the Act do not include process or outcomes and, hence, there are no strong imperatives to improve quality. There are no regulatory bodies responsible for process or outcomes in central or local levels and, therefore, no explicit incentives for quality improvement. The JCQHC is a private, voluntary organization that helps hospitals to improve their quality. The efforts made by such “accreditation” organizations are gradually bearing fruit but it should be noted that such organizations have no enforcing power. Rather, hospitals and clinics were barred from advertising their quality until 2001, when the Act was revised to deregulate restrictions on advertisement.

## **4.2 Planning and health information management**

As discussed in Section 2.2.2, health policy in Japan has been characterized by relatively little planning and loose regulations until 1985; this resulted in a geographical inequality in health care facilities and personnel.<sup>23</sup> Supply of hospital beds are regulated by regional health planning by prefecture governments.

### **4.2.1 Levels of provision**

#### **National level**

In spite of the lack of early planning, health care financing has been dominated by the health insurance system (the role of VHI has largely been relegated to a supplemental one), providing the government with an effective, albeit indirect, control over the behaviour of health care providers; the national uniform fee

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<sup>23</sup> Geographical inequality can be most vividly illustrated by hospital beds. There is a 2.8-fold difference between the most-served and least-served prefecture for general acute beds (Saitama Prefecture with 873.9 beds versus Kochi Prefecture with 2457.2 beds per 100 000 population), and 3.6-fold difference for psychiatric beds (Shiga Prefecture with 158.5 beds versus Kagoshima Prefecture with 566.9 beds per 100 000 population).

schedule is revised every two years by the central government. The key concept is that the fee schedule revision has both the macro-management function of setting overall price level and the micro-management function of introducing various economic incentives.

By intentionally increasing and decreasing the prices of certain clinical procedures or pharmaceutical products, the government can easily macro-manage the behaviour of hospitals and clinics nationwide. Providers cannot escape from the price control imposed by government because extra billing is strictly prohibited except for authorized items such as amenity beds. Hence, the fee schedule not only macro-manages the behaviour of the health care providers through “invisible hands”, but also exerts strong price control and effectively keeps the national health care expenditure within an affordable limit.

The fee schedule is drafted by the Medical Economics Division of the Ministry subject to the approval by the Central Social Insurance Medical Care Committee, a tripartite body whose members represent public interest, providers and insurers such as the Japan Medical Association and the Federation of Health Insurance Funds. Therefore, the Committee has long been perceived as a de facto planning body of health care on a national level.

Macro-management through economic incentives by the fee schedule has been effective on several occasions (such as in encouraging home care) but not always. A recent failure in policy-making was the introduction of selective pricing over surgery fees in April 2002, with the main aim of improving quality and effectiveness of surgery by way of a “scale merit”: concentrating difficult surgical procedures to a smaller number of facilities. Medical officers of the Medical Economics Division of the Ministry might have been motivated by evidence from abroad to the effect that surgical outcomes and number of cases handled are correlated. Under the scheme, hospitals were paid different prices for the same surgical operations according to the number of surgical operations performed. However, this seemingly good idea was so unpopular and had to be abandoned four years later. In a bitter reflection over the lack of convincing evidence, the Committee is reported to be starting its own data collection and analysis efforts (*Social Insurance Daily*, 2006).

### **Prefecture level**

Given the strong control by the fee schedule set by the central government, it is not surprising that prefecture governments, officially endowed with authority over supervision and regulation of health care services, felt little need for their involvement in health policy planning. However, it has increasingly been realized that the fee schedule has been effective in many circumstances but

is not always sufficient. Reducing hospital charges on the end period of a prolonged stay did shorten the length of stay, but it was not effective enough to eliminate regional differences entirely. The current health care reform, therefore, calls for more involvement of the prefecture governments, with the belief that regionalization will bring about better effects in combating certain kinds of disease as well as in health care cost-containment (Section 6.4 and Chapter 7).

The revision of the Medical Care Act in 1985 introduced prefectural planning for health care provision for the first time. However, the planning was mostly intended to control the unbridled increase of hospital beds, and the planning at that time was effectively hospital bed control plans. In addition to prefectural health care plans pursuant to the Medical Care Act, the prefectural long-term care plans pursuant to the Long-term Care Insurance Act in 1997 and prefectural health promotion plans according to the Health Promotion Act in 2002 have added to the responsibility of prefecture governments.

Most recently, the Health Care Cost-Containment Plan was generated as part of the health care reform in 2008. The plan is intended to “make health expenditure appropriate” and, therefore, can be interpreted both as a cost-containment measure and as an attempt to increase efficiency. This plan was proposed as an alternative to the global budget or putting a cap on the national health expenditure. The Ministry and Japan Medical Association did not accept the simplistic approach of capping the expenditure and instead chose a more difficult and challenging task: reducing the number of patients with metabolic syndrome (excessive accumulation of visceral fat in the abdominal cavity) by 25% by 2015 and reducing the regional differences in average length of stay.

Cost-containment plans integrated the three prefectural plans (health care plans, long-term care plans and health care cost-containment plans) and adopted the “plan–do–see” approach. In other words, the goals were set in 2008 and every prefecture enforced the prefectural plans to achieve the target. Performance will be evaluated at the end and middle of each year. Prefectures failing to achieve the target may be penalized by a form of reduced fee schedule.

### **Municipal level**

While prefecture governments have jurisdiction over public health activities such as infectious disease control, environmental health and food sanitation, preventive health services for lifestyle-related diseases as well as maternal and child health activities have been delegated to municipal governments since 1978, with the introduction of community health centres. Preventive health services by municipal governments were strengthened with the enactment

of the Health Services for the Elderly Act in 1982 to provide a variety of activities including health check-ups, health education and cancer screening. In 2002, the Health Promotion Act was enacted, which called for developing community health promotion planning at the municipal level. This was intended to strengthen the national campaign called *Healthy Japan 21*, which started in 2000 and set the target to be achieved by 2010 (Section 6.1).

#### **4.2.2 Health technology assessment**

Health technology assessment (HTA) encompasses the objective assessment of any technology, whether it is surgical procedures or new drugs, before it is included in the insurance coverage, not only to protect patient rights but also to allocate scarce financial and physical resources most effectively. The idea of HTA for interventions except pharmaceuticals was not readily adopted by the health insurance system of Japan, in which the fee schedule had long been regarded as a product of political negotiation. Also, economic analyses such as cost-effectiveness analysis or cost-benefit analysis as an indispensable portion of HTA was not recognized as important in the Japanese context. In 2000, the Ministry of Health, Labour and Welfare proposed to establish an evidence-based medicine centre at the National Institute of Public Health, following the example of the National Institute for Health and Clinical Excellence in the United Kingdom.

However, the philosophy of HTA was gradually understood by researchers and policy-makers, and an information centre (the Medical Information Network Services) to collect and disseminate clinical practice guidelines was established at the JCQHC in 2004 and is now fully operational. To date, it is not known how much such guidelines have contributed to health care decision-making, if at all. More importantly, clinical epidemiology in Japan is still poorly developed and its contribution to evidenced-based medicine research worldwide is regrettably small.

#### **Regulating clinical trials for new drug development**

Pharmaceutical products, cosmetics and medical equipment are subject to regulation by the Pharmaceutical Affairs Act. The Act was amended in April 1993 to allow public subsidies for research and development of orphan drugs as well as accelerated review. New drug applications are subject to preliminary review by a special agency, the Pharmaceutical and Medical Equipment Evaluation Centre and then final review by the Pharmaceutical Affairs Committee. The final decision is left to the discretion of the Minister of Health, Labour and Welfare. Regulations on clinical trials were tightened

by the amendment of the Pharmaceutical Affairs Act in June 1996 in response to a series of misconducts exposed in the preceding years (Section 6.7).

This tightened regulation coupled with the low interest of doctors in clinical research discouraged doctors from clinical trials. Deregulation to accept foreign research data added to this trend: multinational pharmaceutical companies prefer to conduct clinical trials outside Japan and then obtain a new drug approval later by “importing” data to Japan. As a result, a considerable number of new drugs remain unavailable for Japanese patients even after they are approved elsewhere in the world. Furthermore, allowing foreign research data may not always be appropriate because the same drug may have different effects in different ethnic groups. One example is omeprazole (a proton pump inhibitor), where a higher prevalence of carriers of the genetic type *CYP 2C19*, poor metabolizers, in Japanese people makes the drug more effective at lower dosage.

To revitalize clinical trials, the Pharmaceutical Affairs Act was revised to initiate “doctor-sponsoring” clinical trials, which took effect in July 2003. Until then, only pharmaceutical companies could apply to run clinical trials. Even if doctors wanted certain indications added to existing drugs, they were not authorized to conduct clinical trials by themselves (prescribing drugs to patients for unapproved indications is prohibited as an off-label prescription) and pharmaceutical companies would not be interested in conducting expensive clinical trials without considerable commercial promise.

Another measure taken by the government was to develop a large-scale network of clinical trials to enable participating hospitals and doctors to share resources such as data centres and institutional review boards. A supporting organization, the Japan Clinical Research Assist Centre, was established together with its Data Management Centre in 2001. The Japan Clinical Research Assist Centre is currently assisting seven clinical trials through data management, data analysis, provision of institutional review board and training of clinical research coordinators.

In April 2003, the Ministry published a “3-year plan for vitalizing clinical trials” to facilitate clinical trials in medical school-affiliated hospitals and in August 2003 reached an agreement with the Japan Medical Association for promoting doctor-sponsoring clinical trials in community hospitals.

### 4.2.3 Information systems

The main health statistical and surveillance systems used in Japan are:

*National Census*, once every five years

*Vital Statistics Survey*: births, deaths, stillbirths, marriages and divorces; published yearly since 1871

*Basic Survey of People's Lives*: households, health, income and savings; once every three years since 1986

*National Health and Nutrition Survey*: basic conditions of people's nutrition and health; once a year since 1945

*Patient Survey*: names of diseases, duration of treatment, method for payment, reason for discharge; once every three years through medical institutions since 1948

*Survey of Medical Institutions*: locations, owners, specializations, facilities, number of employees; once every three years since 1948

*Survey of Doctors Dentists, and Pharmacists*: gender, age, specialty, workplace; once every two years since 1948.

These systems have been comprehensive in content and methodologically rigorous. The results have a good reputation in terms of their accuracy and continuity. The analysed results are made public but the original micro-data are not accessible.

For people with disabilities, the Information Network for Persons with Disabilities (Normanet) has been in operation for information exchange among people with disabilities since 1996. In addition, the Information System for Disability, Health and Welfare Research, which provides information on domestic and international research results regarding the health and welfare of people with disabilities, has also been in operation on the Internet since 1997. In 1999, a multimedia system that could simultaneously provide written, voice and image data in a set via the Normanet was developed.

The Basic Plan for Promoting Information-oriented Administration was amended in December 1997 to reflect the improved information infrastructure within the government and the rapid development of an information-oriented society. In April 1999, the government sent out a circular permitting the storing of medical records in a computerized system to promote use by patients, effectiveness of services and quality of health care. According to the *Survey of Medical Care Institutions* conducted in October 2005, 470 out of 9026 hospitals (5.2%) had full computerized health care record systems; of these, 105 hospitals were using the system to provide information to patients and 52 hospitals were using it for effective data sharing with other providers (Ministry of Health, Labour and Welfare, 2005). However, it is also noteworthy that as many as 6813 hospitals (75.5%) had no plan to introduce one either at that time or in the future. Through the enforcement of the Health Care Reform Act 2008, the government will have more capacity for collecting, analysing and disseminating information on health care.



Since Japan has a national uniform insurance system and, hence, a national uniform claims format, it should be possible to establish a large patient-level database by computerizing the annual 1.6 billion health insurance claims and analysing them. Japan did propose computerization (online submission and transaction) of health insurance claims as far back as 1983. Unfortunately, this did not advance as many had hoped, mainly because of the reluctance of providers, who feared that computerization would lead to stringent claims review. In 2001, the national information technology (IT) strategy was set, aiming to be the world's most advanced IT country by the year 2005. The Ministry published a *Grand Design for Health Care Information Technology*, claiming that more than half of hospital claims should be submitted electronically by 2004. However, evaluation in 2005 revealed that only 10% of medical claims and 50% of pharmaceutical claims were submitted electronically, a far cry compared with Korea, which had achieved nearly 100% computerization as well as sophisticated data warehousing by that time. The IT headquarter of the Cabinet Office took the lead and demanded the Ministry to set a time schedule with full computerization to be achieved by 2011. The IT headquarters went further: they demanded that computerized claims should be developed into a national database to enhance preventive medicine and quality improvement of health care. In early 2008, a study group compiled a final report calling for the establishment of a national database by the time full computerization has been achieved. If properly developed, Japan's national database of health insurance claims will lead to improvement of the health care system.

## 5 Physical and human resources

### 5.1 Physical resources

#### 5.1.1 Hospitals and clinics

The Medical Care Act delineates the medical care institutions as hospitals and clinics. Hospitals are further classified into acute general hospitals, psychiatric hospitals and TB sanatoriums. Clinics are classified into medical and dental clinics and are approved to have 19 or fewer beds. The licensing of health facilities is undertaken by local governments (Section 4.1.2).

The total number of hospitals was 9077 in 2004, of which 304 were established by national agencies, 1377 by public organizations (such as prefecture or municipal governments), 129 by social insurance groups, 5644 by non-profit medical corporations, 760 by private organizations as their sole proprietorship, and 863 by others, including non-profit public corporations, non-profit school corporations and private medical schools (Table 5.1). The number of hospitals of all categories declined by more than 1000 hospitals since a peak of 10 096 in 1990, reflecting mergers and acquisitions in recent years. The number of clinics was 97 051 in 2004, of which 14 765 had beds and 82 286 did not. The number of dental clinics was 66 557 in 2004, of which 54 had beds.

The total number of hospital beds was 1.63 million (1278 per 100 000 population) in 2004, of which 912 193 were general beds, 349 450 were for long-term care, 354 927 were for psychiatric disorders, 1690 were for infectious disease and 13 293 were for TB (Table 5.2). The total number of beds in clinics was 181 001 and in all medical institutions was 1 812 722 (equivalent to 1278 per 100 000 population). It is important to note, however, that there has historically been little distinction in the Japanese health system

**Table 5.1 Number of hospitals and clinics by establishing organizations, 1990–2004**

	1990	2000	2002	2003	2004
Total					
Hospitals	10 096	9 266	9 187	9 122	9 077
General clinics	80 852	92 824	94 819	96 050	97 051
Dental clinics	52 216	63 361	65 073	65 828	66 557
National agency					
Hospitals	399	359	336	323	304
General clinics	487	581	586	594	620
Dental clinics	1	1	1	1	1
Public organizations					
Hospitals	1 371	1 373	1 377	1 382	1 377
General clinics	3 842	4 237	4 185	4 171	4 119
Dental clinics	340	331	326	320	310
Social insurance group					
Hospitals	136	131	130	129	129
General clinics	805	840	828	813	776
Dental clinics	15	17	12	12	13
Non-profit medical corporation					
Hospitals	4 245	5 387	5 533	5 588	5 644
General clinics	8 025	24 031	27 108	28 330	29 528
Dental clinics	2 465	7 310	7 499	7 891	8 281
Private organization					
Hospitals	3 081	1 173	954	838	760
General clinics	60 731	53 646	52 326	52 118	51 730
Dental clinics	49 105	55 378	56 934	57 292	57 610
Others <sup>a</sup>					
Hospitals	864	843	857	862	863
General clinics	6 962	9 489	9 785	10 024	10 278
Dental clinics	290	324	301	312	342

Source: Ministry of Health, Labour and Welfare, 2005

Note: <sup>a</sup> Other organizations include non-profit public corporations, non-profit school corporations, and private medical schools

**Table 5.2** Number of beds by type of institutions, 1990–2004

	1990	2000	2002	2003	2004
Total	1 949 493	1 872 518	1 839 376	1 820 212	1 812 722
Hospitals	1 676 803	1 648 217	1 642 593	1 632 141	1 631 553
Proportion per 100 000 population	1 358.9	1 297.8	1 289.0	1 278.9	1 277.8
General beds	1 253 909	1 022 913	996 364	919 070	912 193
Beds for long-term care	-	241 160	272 217	342 343	349 450
Psychiatric beds	359 087	358 153	355 966	354 448	354 927
Infectious disease beds	12 119	2 396	1 854	1 773	1 690
Tuberculosis beds	42 210	22 631	17 558	14 507	13 293
General clinics	272 456	216 755	196 596	187 894	181 001
Proportion per 100 000 population	220.4	170.8	154.3	147.2	142.0
Dental clinics	234	170	187	177	168

Source: Ministry of Health, Labour and Welfare, 2005

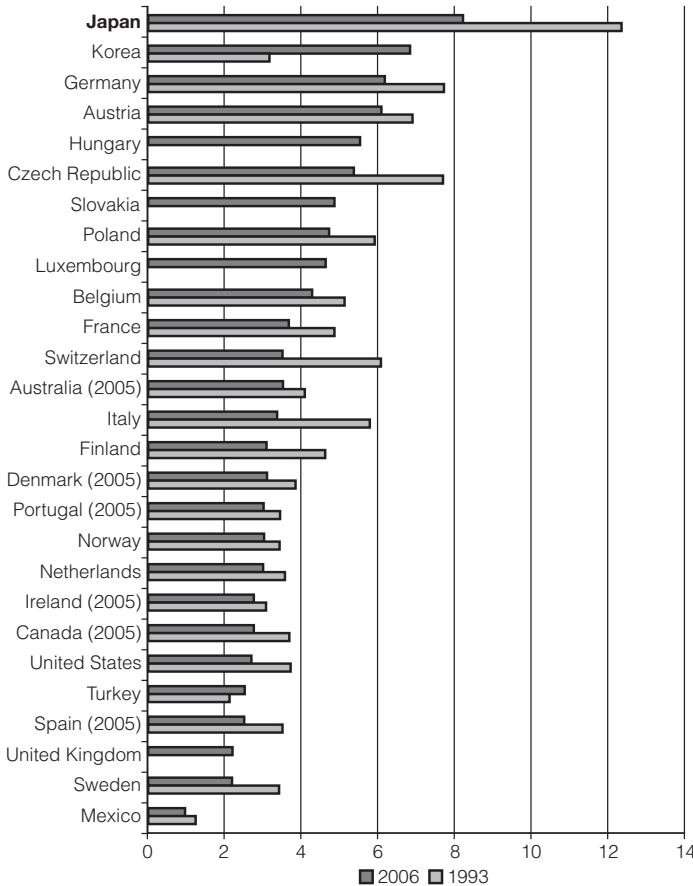
between acute and long-term care hospitals. Moreover, “general” beds refer to beds for services that are not otherwise specified and may thus also include patients requiring long-term care.

Compared with other OECD countries, Japan has a greater number of inpatient beds for its population, although the number has somewhat declined from the peak of 1.95 million beds in 1990, chiefly as a result of hospital bed control, which was promoted in the area health planning enforced by the Medical Care Act (Section 4.2 and Chapter 7). In 2006, Japan had 8.2 acute hospital beds per 1000 population, compared with the OECD average of 4.1 (only including countries with available data) and 2.2 in the United Kingdom, 2.2 in Sweden and 6.8 in Korea (OECD, 2008). Figure 5.1 shows the number of acute hospital beds per 1000 population in OECD countries in 1993 and 2006.

There were 96 050 medical clinics in 2004, of which 15 371 were clinics with 19 or fewer inpatient beds and the rest were clinics without beds. These clinics with beds effectively function as small hospitals. However, the number of clinics with beds has been constantly declining while the number of clinics without beds has steadily increased.

The ownership of hospitals and clinics in Japan is predominantly in the private sector. However, since the average size of national and public hospitals tends to be larger, the public sector accounts for approximately 45% of hospital beds. Private ownership is either by sole proprietorship or by non-profit medical corporations. Medical corporations incorporated pursuant to the Medical Care Act are similar to for-profit corporations in that they are

**Fig. 5.1 Beds in acute hospitals per 1000 population in Japan and selected other countries, 1993 and 2006**



Source: OECD, 2008

established by direct investment from private shareholders, but they differ in that they are prohibited from disbursing profit to shareholders in the form of dividends. However, the corporate assets of corporations are the shareholders’ property, and they are entitled to claim refund at its market value at anytime. Non-profit medical corporations are also subject to regulation and supervision by prefecture governments as to their businesses and operations. In general, for-profit corporations are prohibited from owning and operating hospitals and clinics based on the so-called “not-for-profit principle” and presumably dictated by the Medical Care Act. Actually, the Act does not explicitly prohibit hospital ownership by for-profit corporations, but the government champions the non-profit principle based on this presumption.

Japanese hospitals are in general well equipped with high-technology devices: two out of three hospitals, including psychiatric and TB hospitals, have whole-body computed tomographic scanners. The percentages of hospitals owning high-technology medical equipment are 23% for nuclear magnetic resonance computed tomography (magnetic resonance imaging), 27% for angiography and 72% for fibre scopes for the upper gastrointestinal tract (Ministry of Health, Labour and Welfare, 1999). This dissemination of high-technology equipment may be beneficial to patients in terms of easy access but may not be efficient. An important challenge facing health policy-makers is how to disseminate such high-technology equipment in a cost-effective manner while securing easy access for patients. To date, there have been no regulations on construction of private hospitals, with some restrictions placed on increasing the number of hospital beds according to health care planning at the prefecture level.

Inpatient care in Japan is characterized by a prolonged length of stay, which was an average of 35 days for all hospital beds in 2006, longer than any other OECD country (the average across OECD countries with available data was 9.6 days (OECD, 2008)); this mainly reflects the use of acute care hospitals for long-term care for older people. The average length of stay has steadily been declining because of the increase of care in health care or welfare homes for the elderly covered by the Long-term Care Insurance. For acute hospital beds only, the average length of stay was 19 days in 2006, compared with the OECD average of 7 days (OECD, 2008). In addition, accounting systems have only recently been developed in hospitals, thus allowing for increased transparency of hospital financing.

Clinics fulfilled a general dispensing function and are usually very well equipped with apparatus for X-rays, electrocardiography and blood and urine tests. The clinics that have beds effectively function as small-sized hospitals and their inpatient beds constituted 9.9% of the total beds in 2004. This comprehensive function of clinics is an important basis for primary health care in Japan. People can avail themselves of very convenient services at affordable cost almost anywhere in the country and receive treatment at a comparatively early stage of illnesses.

### **5.1.2 Accreditation programme for hospitals and clinics**

The lack of a quality assurance mechanism, amenities of hospital wards and patient rights such as access to medical records has been increasingly criticized in recent years, particularly after a series of serious malpractice cases. There had been no formal accreditation programme to evaluate and certify hospitals and clinics in Japan until 1997, when the JCQHC started its official

accreditation programme. However, accreditation is voluntary and hospitals that wish to undergo accreditation must apply and pay the accreditation fee. As of April 2007, 2333 hospitals (approximately 25.8% of all hospitals) were accredited and met the standards set by the organization. The JCQHC does not disclose the accreditation rate nor identify the hospitals that failed to be accredited. The JCQHC emphasizes that accreditation is intended to help hospitals to improve their quality voluntarily and is not intended to sieve them out. Hospitals which failed to meet the standards are encouraged to make further efforts and challenge the accreditation on a second trial.

### 5.1.3 Information technology

Contrary to the belief that Japan has widespread advanced computer technology, IT has not been well developed in health care. As of October 2002, a computerized medical records system was used in 109 hospitals and 2417 clinics, or only 1.2% and 2.6%, respectively, of the total facilities nationwide, according to the *Survey of Medical Institutions* (Ministry of Health, Labour and Welfare, 2002). The survey also revealed that only 10.2% of hospitals and 2.8% of clinics replied that they were planning to introduce a computerized system for medical records; the vast majority reported that they had no plans to do so.

A computerized ordering system is more developed than computerized medical records: 1323 out of 9187 hospitals (14.4%) use some form of computerized ordering system according to the survey. Of 1323 hospitals, 1179 hospitals (89.1%) use the system for prescription, 989 hospitals (74.8%) for laboratory orders and 801 hospitals (60.5%) for booking of patient appointments (Ministry of Health, Labour and Welfare, 2002).

Far more extensive is the computerized insurance billing system. Almost all hospitals are presumably using it (although this information was not included in the survey) and 62.2% of the 94 819 general clinics and 60.3% of the 65 073 dental clinics used this system despite the high costs for computers, software and maintenance. Since an insurance billing system is particular and software must be updated regularly, hospitals are paying 3.05 million yen per month, or approximately 1% of their operating expenses, for insurance billing according to the *Medical Economics Survey* conducted in June 2003 (Ministry of Health, Labour and Welfare, 2003a).

Unfortunately, the active utilization of computers for billing does not translate into efficiency of the billing system between providers and insurers because claims are still also transacted in paper form and processed manually. Electronic data interchange of insurance claims has been advocated since 1991 but the implementation process has been slow.

In January 2001, the government enacted the Information Technology Initiative Act and campaigned for the “e-Japan initiative”. The Ministry published a “Health Care IT Grand Design” in December 2001 (Ministry of Health, Labour and Welfare, 2001), setting a national goal to achieve “computerized medical records in 60% of hospitals and clinics, and Electronic Data Interchange of health insurance claims in 70% of hospitals claims by the end of fiscal year 2006”. In retrospect, the schedule set by this document was somewhat too ambitious. However, electronic data interchange of health insurance claims is steadily developing. According to the Social Insurance Payment Fund (a clearing house for insurance claims), 25.8% of hospital claims and 65.5% of pharmacy claims were submitted electronically in March 2006.

The Health Care System Reform Proposal in December 2005 specified the full electronic data interchange of insurance claims by the financial year 2010 and the “New IT Strategy” set out by the Cabinet in January 2006 went so far as to suggest establishing a national database of computerized claims data for the purpose of epidemiological research. The New IT Strategy further called for developing an information system to enable individuals to monitor their health data for their lifetime health maintenance by financial year 2007. Use of IT in health care is essential for effective disease management of metabolic syndrome and can, therefore, be a key to long-term health care cost-containment.

## 5.2 Human resources

### 5.2.1 Health care personnel

The number of health care personnel in Japan is outlined below. Table 5.3 outlines the trends in the number of doctors, dentists, pharmacists and nurses between 1960 and 2006. Health care in Japan is staffed with 277 927 doctors (217.5 per 100 000 population), 97 198 dentists (76.1 per 100 000), 252 533 pharmacists (197.6 per 100 000) and 1 194 121 nurses (934.6 per 100 000) as of December 2006.

#### Doctors

The total number of doctors and the number per 100 000 population, respectively, were 118 990 and 114.7 in 1970, 211 797 and 171.3 in 1990, and 262 687 and 206.1 in 2002. In 2006, there were 168 327 (60.6% of total number) doctors in hospitals, 95 213 (34.3%) in clinics, 3377 (1.2%) in offices for public health,



**Table 5.3 Trends in number and proportion of doctors, dentists, pharmacists and nurses, 1960–2006**

	1960	1970	1980	1990	2000	2002	2004	2006
Number								
Doctors	103 131	118 990	156 235	211 797	255 792	262 687	270 371	277 927
Dentists	33 177	37 859	53 602	74 028	90 857	92 874	95 197	97 198
Pharmacists	60 257	79 393	116 056	150 627	217 477	229 744	241 369	252 533
Public health nurses	13 010	14 007	17 957	25 303	36 781	38 366	39 195	40 191
Midwives	52 337	28 087	25 867	22 918	24 511	24 340	25 257	25 775
Nurses	185 592	273 572	487 169	745 301	1 042 468	1 097 325	1 146 181	1 194 121
Proportion (per 100 000 population)								
Doctors	110.4	114.7	133.5	171.3	201.5	206.1	211.7	217.5
Dentists	35.5	36.5	45.8	59.9	71.6	72.9	74.6	76.1
Pharmacists	64.5	76.5	99.1	121.9	171.3	180.3	189.0	197.6
Public health nurses	13.9	13.5	15.3	20.5	29.0	30.1	30.7	31.5
Midwives	56.0	27.1	22.1	18.5	19.3	19.1	19.8	20.2
Nurses	198.7	263.8	416.2	602.9	821.4	861.1	897.6	934.6

Source: Ministry of Health, Labour and Welfare, 2006c

2891 (1.0%) in health care homes for the elderly, 5319 (1.9%) in institutions for education and research, and 2785 (1.0%) elsewhere (Table 5.4). One third of doctors work in single practices providing primary care.

There were 50 medical schools in Japan in 1970 and 80 in 1981. The number of first-year medical students per year was 4380 in 1970 and reached a peak of 8360 in 1981. In 1986, a special committee of the then Ministry of Health and Welfare, the Committee on Provision of Doctors (set up in 1984), recommended that the number of new doctors should be reduced by 10% before 1995 in anticipation of a large increase in the number of graduates. Responding to this recommendation, the Ministry of Education and Science decided to reduce the number of medical students. The proposal to reduce the class size of medical schools was supported by the Committee on Provision of Doctors, which did not welcome the inflation of health care cost and future surplus of medical doctors. The class size of enrolment to the 80 medical schools was reduced to 7700 in 2004.

**Table 5.4 Number of doctors by institutions in 2006**

	Total	Per 100 000 population
All	277 927	100.0
Medical institutions	263 540	94.8
Hospitals	168 327	60.6
Clinics	95 213	34.3
Health care homes for the elderly	2 891	1.0
Other than hospitals and health care homes for the elderly	8 696	3.1
Public health and administrative institutions	3 377	1.2
Others	2 785	1.0
Unknown	15	0.0

Source: Ministry of Health, Labour and Welfare, 2006c

Compared with other high-income countries, Japan has a relatively low supply of doctors (Fig. 5.2) with an estimated two practising doctors per 1000 population in 2006 compared with the OECD average of 3.1 for that year.

### Dentists

The number of dentists and their number per 100 000 population, respectively, were 37 859 and 36.5 in 1970, 74 028 and 59.9 in 1990, and 95 197 and 74.6 in 2004. The number of female dentists was 18 192 (19.2% of total number) in 2006.

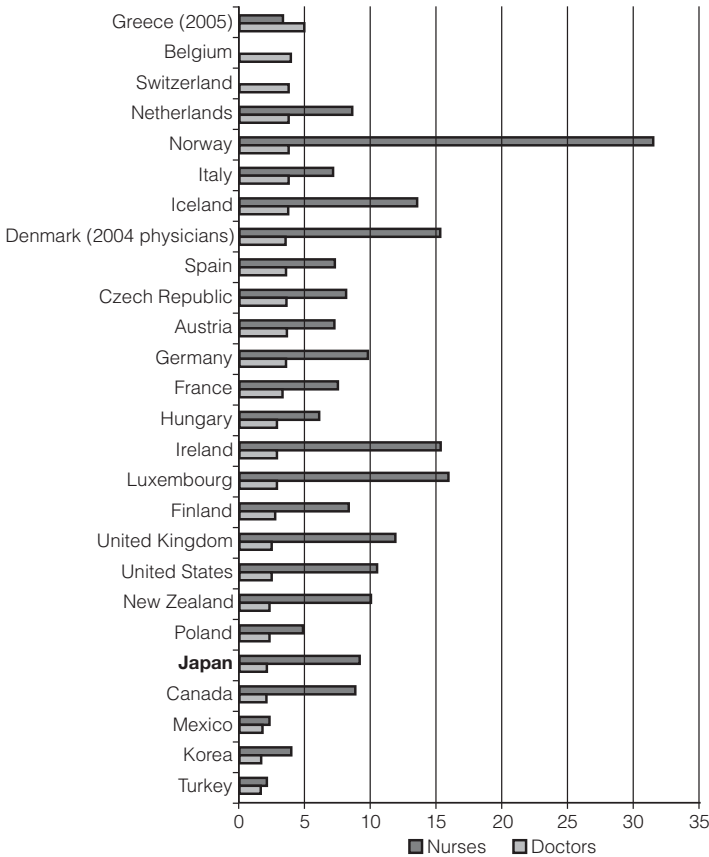
### Pharmacists

The number of pharmacists and their number per 100 000 population, respectively, were 79 393 and 76.5 in 1970, 150 627 and 121.9 in 1990, and 241 369 and 189.0 in 2004. There were 153 731 (60.9% of total) female pharmacists in 2006. Recently, the Ministry of Education and Science introduced a six-year course for pharmacist education that is currently being offered by some universities.

### Nurses

There were 273 572 nurses practising in Japan in 1970 (263.8 per 100 000 population), which rose to 1 194 121 (934.6 per 100 000 population) in 2006, representing a 4-fold increase in 30 years. The number of public health nurses and their number per 100 000 population, respectively, were 14 007 and 13.5 in 1970, 25 303 and 20.5 in 1990, and 40 191 and 31.5 in 2006; number of

**Fig. 5.2** Number of practising doctors and nurses per 1000 population in OECD countries in 2006



Source: OECD, 2008

midwives, respectively, were 28 087 and 27.1 in 1970, 22 918 and 18.5 in 1990, and 25 775 and 20.2 in 2006.

Facing the rapid increase in the elderly population, it became very important for the government to make provision to attain the required number of nurses. The Nurse Provision Act was passed in 1992, and at present the nursing workforce is a focus of discussion among policy-makers. The number of schools for registered nurses and the number of students per year, respectively, were 876 and 111 917 in 1990, and 1077 and 172 417 in 2006.

Nursing professionals, including public health nurses and midwives, are usually graduates of specified professional schools rather than universities. This was not considered to be a satisfactory education system for health professionals who will share with the medical profession the care of people in

the 21st century. The Ministry of Education and Science, therefore, established nursing departments in national universities, starting in Chiba University in 1975, which was considered as a pioneer at that time. Many prefectures started to build new university-level schools for health professionals from around the 1990s. The number of nursing universities has increased rapidly recently from 76 in 1999 to 146 in 2006.

Compared with other countries, Japan has an average supply of nurses. The OECD estimate of practising nurses per 1000 population in Japan in 2006 was 9.3, compared with an average of 9.8 among OECD countries (Fig. 5.2).

### **5.2.2 Education and training of doctors**

Medical education in Japan is a six-year course enrolling high school graduates. New technologies have been rapidly developed, particularly in recent years, and new specialized departments have been established in many medical schools so that the curriculum is now shared among these various departments. As a result, it has become difficult for medical schools to maintain a curriculum that familiarizes students with the general principles needed for future primary health care practice. The Ministry of Education and Science published a core curriculum model in 2001 to encourage medical schools to promote standardized education in order to graduate students with general common knowledge focused on primary health care.

Primary care is not recognized as an academic discipline in Japan. As a result, Japanese medical schools have no established departments of primary care. However, many medical schools have set up a department of general comprehensive care, where doctors learn to treat patients from a general diagnostic point of view and to provide patients with the appropriate referrals for hospital care.

Postgraduate medical training has been poorly developed in Japan. However, from April 2003, two years of postgraduate training became mandatory, and a matching programme to recruit new medical graduates and clinical training hospitals was developed.

At the suggestion of the General Headquarters of the Occupation Army in 1946, the Council for Medical Education was founded in the Ministry of Education and Science. Following its recommendation that a department of public health independent of the department of hygiene should be set up in each medical school, the first departments were established at the Universities of Tokyo, Osaka, and Niigata in July 1947. By 1981, there were 80 medical schools in Japan, and the study of hygiene and public health was shared between two departments in most of these schools.

For the sake of providing continuing training for professional staff working for public health centres and municipal health centres, the Ministry maintains the National Institute of Public Health. The institute expanded its size and scope after merging with National Institute of Hospital Management in April 2002 and was consolidated in a new campus in Wako City in the suburb of Tokyo. The new institute provides a variety of professional training and research activities in the field of hospital management and social welfare as well as public health. The National Institute of Public Health started postgraduate training comparable to Western schools of public health in 2004. The new course consists of six subspecialties: health and welfare administration, community health and welfare, environmental health, biostatistics, hospital administration, and international health, all of which award CPHP (Certified Public Health Professional) degrees. The international health course accepts international JICa (Japan International Cooperation agency) trainees as well as Japanese students and all courses are taught in English.

### **5.2.3 Registration and licensing**

All health professionals are regulated and licensed by the Ministry of Health, Labour and Welfare. The only exception is for “enrolled nurses”, who are licensed by prefectural governors. Enrolled nurses, accounting for approximately 30% of 1.15 million nursing professionals, are the same as registered nurses in their professional capacity but are subject to supervision by doctors or registered nurses. They are also underprivileged by being licensed by prefectural governors, not by the Minister, even if they are authorized to practise anywhere in the country. The Japan Nursing Association has consistently advocated abolishment of enrolled nurses and unification to registered nurses.

The Minister is authorized to discipline health professionals, with temporary suspension or revocation of the licence in cases of misconduct. With regard to medical malpractices, such sanctions were imposed only where the case generated criminal prosecution. However, in response to a growing outcry, the Minister took such a disciplinary action against doctors who committed serious malpractices in 2004 even if they had not been tried in a criminal court (Okamoto, 2005a).

## 6 Provision of services

### 6.1 Public health

For the 60 years after the Second World War, public health in Japan had a tendency to direct substantial efforts towards people at specific risk. However, it has been recognized that public health should be concerned more with enhancing a healthy lifestyle. Responding to this historical demand for public health, in 1994 the Public Health Center Act (1947) was abolished and the new Community Health Act passed. The Community Health Act defines the responsibilities and organizations for public health services and outlines that municipalities are principally responsible for providing community health services to their residents.

#### 6.1.1 Maternal and child health

In 1947, the Child Welfare Act was passed outlining the following regulations.

- The governor of each prefecture is to promote services for health education during pregnancy and baby care.
- The governor is to ensure that health examinations for babies and infants are carried out.
- Pregnant women are to register their pregnancy and receive a Maternal and Child Health Handbook, which has two purposes: providing educational material and facilitating record-keeping.
- Institutional care is to be provided for all pregnant women who need it, even if they cannot afford it.

A specialized centre for maternal and child health care was needed to meet these regulations. Therefore, by 1958, many maternal and child health centres

had been built by municipal governments in areas located far from hospitals or health centres. Based on the positive results achieved with the Child Welfare Act, the Maternal and Child Health Act was subsequently passed in 1965. This Act called for health examinations of children aged 3 years to be carried out by health visitors in the public health centres. From 1977, examinations for children aged 18 months were also conducted by health visitors in the municipal authority facilities. These Acts have provided the basis for maternal and child health services in Japan. For schoolchildren, the School Meals Act was passed in 1954 and the School Health Act in 1958. These reforms occurred alongside a decline in the historically high infant mortality rate (Section 1.4.5).

Infant mortality in Japan used to be as high as 150–160 per 1000 live births until the early 20th century, but declined sharply to below 10 per 1000 live births in 1975. The figure of 2.6 in 2006 is one of the lowest even among developed countries. This may well be regarded as a triumph of maternal and child health policy in post-war Japan (Section 1.4.5).

According to the 1965 Maternal and Child Health Act, pregnant mothers are required to report to the municipal governments and Maternal and Child Health Handbooks are issued. The handbook is a convenient health record into which all health professionals who care for mothers and babies are required to write important health records (such as vaccination records) to be shared by other professionals. The Maternal and Child Health Act also entitles babies to have publicly funded free health guidance and preventive health activities and the maternal and child health handbook serves as a health record for the child through the course of pregnancy and after birth. Health guidance and consultation by public health nurses may continue after birth, especially when the newborns weigh less than 2500g, in which case parents are required to report to the local public health centres to notify them for prompt attention.

All newborns are entitled to have publicly funded mass screening to detect congenital metabolic diseases such as phenylketonuria. Babies born to mothers who are positive for hepatitis B virus have been provided with immunoglobulin and vaccination since 1985; this has been carried out as part of health insurance benefit since 1995. In 1994, nearly 2500 newborns out of 1.127 million received immunoglobulin and vaccination for hepatitis B. To detect preventable causes of intellectual impairments, such as phenylketonuria, a mass screening programme for neonates has been conducted since 1977. By 1998, 5672 cases of cretinism, 2330 of neuroblastoma and 371 of phenylketonuria were detected and assured prompt treatment. However, questions were raised as to the effectiveness of mass screening for neuroblastoma and the programme was discontinued in 2004. In contrast, intrauterine diagnoses of Down' syndrome and other detectable anomalies are not actively performed.

For babies of very low birth weight who require intensive care after birth, health insurance coverage starts on the day of their birth under their dependent family status in their parents' health insurance. The usually required 20–30% co-insurance is waived by public funding for babies whose birth weight is below 2000g.

All babies are entitled to free well-baby check-ups twice, at 1.5–2 years and at 3–4 years; these are provided by municipal governments. The earlier examination includes physical growth, nutritional status, spine and thorax, skin diseases, oral health, motion of four limbs, mental development, speech development and history of vaccination. For those aged 3–4 years, ophthalmic and ear, nose and throat examinations are added to the list. These well-baby check-ups are typically provided at municipal health centres employing doctors on an ad hoc basis.

Japan is a “pro-choice” country for abortion. The Maternity Protection Act authorizes certified doctors to perform artificial abortion on women up to 21 weeks of pregnancy when the following conditions are met.

- Pregnancy or delivery is likely to jeopardize the pregnant woman's health either physically or economically.
- The woman became pregnant because of criminal acts.

Whether the requesting woman meets the above conditions is up to the certified doctor's judgement. Doctors have to report the number of abortions performed pursuant to the Maternal Protection Act. If the aborted fetus is 13 weeks or older, it will be treated as a still birth and doctors will have to issue certificates of still birth.

Penal Codes in Japan penalize illegal abortions (Penal Code section 212–216). Abortions performed pursuant to the law are exempted from such penalty. The number of reported abortions in 2006 was 276 352, of which only 126 were for pregnancies from criminal acts. All others were performed for the protection of maternal health, either physically or economically. The majority of abortions are performed in the early stage (11 weeks of gestation) of pregnancy, at which time reporting of still births is not required.

The number of abortions has declined to a quarter of that in 1955, when the number reached 1.17 million. However, the number of abortions in teenagers aged 15–19 years has steadily increased, perhaps because of younger sexual activities and non-use of oral contraceptive pills (which had not been approved until quite recently). Approximately 8.8 teenage girls per 1000 underwent abortion in 2006, which was more than double the figure in 1995. The Ministry aims to reduce unwanted pregnancies and abortions in teenagers by half by 2013.



### 6.1.2 Public health services for the elderly

Although the Health Services for the Elderly Act was proposed as a patchwork for financial redistribution of the health care costs of older people among different health insurers (Sections 3.2 and 3.4), it also has clauses on country wide publicly funded preventive health services starting from the age of 40 years. The preventive health services have proved to be a major boon for the public health field in Japan. Mass health examination programmes for cardiovascular diseases and cancer were much enhanced under these initiatives. The public health services outlined in the Act are provided directly by municipalities or contracted out to providers including non-profit companies and local medical associations. On the basis of this Act, services for delivery of health notes, health education, health counselling, health examinations (including general health check-ups and screening tests for gastric and cervical cancers), rehabilitation programmes and home visits have been commenced by municipal authorities for residents aged 40 years or over in 1983. Screening tests for lung and breast cancers were implemented during 1987–1991, followed by screening tests for colon cancer between 1992 and 1999. These services have played an important role in health promotion for residents and have been the essential basis of health care in Japan. The number of persons who used public health services is shown in Table 6.1.

**Table 6.1** Number of users of public health services by Health Services for the Elderly Act, 1983–2003

	Number of users (thousands)				
	1983	1987	1992	2002	2003
Health handbook	7 686	8 962	10 727	15 791	15 123
Health education	3 614	8 614	11 274	8 795	8 797
Health counselling	5 466	8 889	8 813	7 188	7 034
Health examinations					
Basic health examination	6 168	8 516	9 368	12 330	12 941
Screening for gastric cancer	2 205	3 631	4 152	4 372	4 508
Screening for uterus cancer	2 638	3 675	3 982	3 863	4 087
Screening for lung cancer	–	2 662	5 870	7 490	7 841
Screening for breast cancer	–	1 434	2 853	3 337	3 488
Screening for colon cancer	–	–	2 539	6 052	6 404
Rehabilitation	581	1 315	1 875	2 368	2 371
Home visit	517	829	899	955	944

Source: Health and Welfare Statistics Association, 2005

These services have come to be widely used in the past few years. The number of people who used general health check-ups in 1983, the first full year for which the Act was in effect, and in 1987, the end of the first five-year period for the Act, were 6.17 million and 8.52 million, respectively. The Act has been a key part of governmental efforts to prepare for the rapid increase in the absolute and relative number of older people projected for the near future. Middle-aged people were covered in this Act because of the belief that maintenance of health in middle-aged people will contribute to health when these people age.

### **6.1.3 Health promotion**

After achieving basic infectious disease prevention, activities for health promotion taken in the period after the Second World War were mainly directed towards enhancement of better nutrition and physical fitness. However, once the average lifespan became 80 years around 1978, the purposes of such activities gradually shifted towards improvement of quality of life rather than prolongation of lifespan.

The national government called for national health promotion programmes. The First National Movement for Health Promotion was launched in 1978. One of the major measures taken in the first wave was the establishment of a municipal health centre in every municipality as the facility for health promotional activities in addition to the existing public health centre. The second wave, termed “Active 80 Health Plan”, was launched in 1988 and its purpose was to improve the health of older people. After more than 20 years since inception, these health promotional activities are beginning to bear fruit. The third wave of the national health promotion programme, “Healthy Japan 21” (from 2000 to 2010), is currently being actively promoted and has a defined set of goals. In this most recent wave, emphasis is placed on the prolongation of “healthy lifespan”, meaning extending the number of years lived without disabilities. This emphasis reflects concern about a considerable number of older people with disabilities in the context of the world’s longest lifespan.

#### **Promotion of physical fitness**

To promote physical fitness, the qualification of “healthy exercise trainer” was initiated in 1988. Health trainers possess knowledge of both medical and physical science to prescribe physical activities tailored to individual conditions and medical needs. Also, fitness clubs that satisfy certain requirements such as having a certain number of qualified healthy exercise trainers may be given

special designation by the government. Although such designation does not entitle them to health insurance benefits, the membership fee for patients with chronic diseases such as hypertension, diabetes and hyperlipidaemia will be tax exempt if their physical activity regimen is prescribed by attending doctors and supervised by qualified health trainers.

### **Health information systems**

A variety of health information systems, including the cancer treatment support system, cardiovascular treatment support system, the surveillance system for TB and infectious diseases and the treatment support system for intractable diseases, have been provided by the Japan Health Promotion and Fitness Foundation since 1997. These information systems are available through the Internet (<http://www.health-net.or.jp>) or the closed network between the Ministry and local public health centres (WISH net) (see Section 4.2.3).

### **Health Promotion Act**

As the legal basis of promoting the Healthy Japan 21, the Health Promotion Act was enacted in 2002 and took effect in May 2003. The Act declares that the nation must be aware of their health status and make life-time efforts to promote their health recognizing the importance of the life-style over their health status (Sec.2). Prefectural and municipal governments are required to develop 'health promotional plans' to enhance the health of local residents (Sec.3). The Act intends to coordinate health activities conducted by different providers under different schemes by designating different providers such as health insurers, school health, maternal and child health and occupational health as 'health promotional activities providers' (Sec.6). The Act also stipulates the National Health and Nutritional Survey (Sec.10) and encourages both central and local governments to monitor the prevalence of lifestyle related diseases for effective health promotion (Sec.16). The Act requests organizations controlling public spaces such as restaurants and transportation companies to make efforts to prevent the adverse-health effects associated with second-hand smoke by separating smoking and non-smoking areas in all public spaces (Sec.25). Also this Act mentions that the effort to promote health is the duty of the people. The new law makes the formats of health screening records uniform to assure consistent record keeping for every individual. The law also stipulates recording of the *National Health and Nutritional Survey* and encourages both central and local governments to monitor the prevalence of lifestyle-related diseases for effective health promotion.

### **Tobacco control**

Smoking rates are very high among men in Japan. According to the *National Health and Nutritional Survey* (Ministry of Health, Labour and Welfare, 2004a), the smoking rate in Japan was 43.3% for men and 12.0% for women (adults aged 20 years and over) in 2004. The smoking rate for men over 60 years has been steadily declining, but the rate for men aged 20–50 years is more than 50% and has not declined since the mid-1990s. The rate of smoking among males is still higher than in most developed countries (see Section 1.4.6). The smoking rate for women is lower than most developed countries and is somewhat stable overall, but the smoking rate among young women in their twenties and thirties is increasing significantly. Even more alarming is the smoking rate among schoolchildren. According to a survey on junior and senior high school students conducted by the government in 2004, the rate of “smoking in the last one month” in all grades was significant, with 21.7% of male and 9.7% of female students of the 12th grade admitting smoking during the last one month. Moreover, 13.0% of male and 4.3% of female students of the 12th grade said they smoke everyday.

Despite the health risks of smoking, the government has not traditionally been supportive of tobacco control, mainly because the tobacco industry was a monopolistic government enterprise and hence a valuable source of tax revenue. The government only started to tackle the problem after the government enterprise was privatized in 1985 to the present Japan Tobacco. An action plan for tobacco control was initiated in 1995. In cooperation with the plan, the tobacco industry voluntarily withheld night-time operation of vending machines in 1997 and refrained from television advertising in 1998. The plan also called for separation of smoking and non-smoking spaces as part of the anti smoking efforts. The separation is enforced according to the type of facility and is mandatory for health facilities and public facilities. The Health Promotion Act of 2002 also endorsed the prevention of passive smoking by way of separated smoking. The WHO convention in May 2003 adopted the *Tobacco Control Framework Convention*, which Japan ratified in June 2004, joining the other 40 ratifying countries. Taxes on tobacco are administrated by the Ministry of Finance.

### **Alcohol consumption**

Alcohol consumption represents an important health threat in Japan. The number of heavy drinkers (defined as drinking 150 ml pure alcohol daily) is increasing and was estimated to be approximately 2.4 million in 1997. According to the *Patient Survey*, a nationwide sampling survey on hospitals and clinics conducted every three years, the number of patients with alcoholism under medical treatment increased from 14 720 in 1968 to 19 100 in 2005

(alcoholic psychosis 2400 plus alcohol dependency 16 700). Although the figures may appear small in comparison with the estimated number of heavy drinkers (2.4 million), the majority of patients with alcoholism are considered to be under treatment for alcohol-related conditions such as liver diseases. Japan has a Prohibition against Drinking for Minors Act, which prohibits drinking among, or selling alcohol to, those younger than 20 years. However, its effectiveness is seriously hampered by ubiquitous vending machines for alcohol. In 1993, the government Public Health Committee urged the total ban of vending machines and for limits to be set for alcohol sales over the counter. Despite this recommendation, alcohol beverages are still readily available from ubiquitous vending machines.

#### **6.1.4 Measures against lifestyle-related diseases**

Chronic diseases such as cancer, cardiovascular diseases and diabetes were once referred to as ageing related diseases because the incidence increases with ageing. However, the new paradigm of lifestyle-related diseases was proposed by a report by the Public Health Committee in 1996, to emphasize primary prevention over secondary prevention. The rationale for creating the new paradigm of lifestyle-related diseases is that the term ‘ageing related diseases’ may give a false impression that such diseases are inevitable with ageing, and encourage a sense of resignation that they are not preventable and can only be countered with early detection at best.

##### **Diabetes mellitus**

The majority of diabetic patients in Japan have type II or non-insulin-dependent diabetes, which is heavily dependent on lifestyle. Although its rank in the causes of death is only 10th according to vital statistics, it is a major risk factor for other major causes of death such as cardiovascular diseases or cerebrovascular diseases. Diabetes also contributes to various forms of disability such as renal failure and blindness. Diabetic nephropathy accounted for approximately a third of newly initiated dialysis patients in 1996 (approximately 9500) and the number is still increasing. Also, as many as 3000 people lose vision annually from diabetic retinopathy, which is the greatest cause of blindness. For the first time in November 1997, a nationwide survey on prevalence of diabetes was conducted as part of the *National Nutritional Survey*. According to the survey result applied to the national total population of 125 million, the number of suspected cases of diabetes defined as “HbA1c 6.1% or over or patients already under medical treatment” was estimated to be 6.9 million and the number of potential cases, defined as “HbA1c 5.6% or over”, was estimated to be 13.7 million. The survey was repeated five years later in November 2002

and the preliminary report has just been released. Applying the same criteria, the number of suspected cases increased to 7.4 million and potential cases to 16.2 million, chiefly a result of the ageing of population.

### **Hypertension**

According to the result of the *Fifth National Survey on Diseases of the Circulatory System* conducted in 2000 (Ministry of Health, Labour and Welfare, 2000b), the prevalence of hypertension has increased slightly in total numbers apart from in men aged 60 years or over and women aged 40 years or over. However, the proportion of people with hypertension who are currently under medical treatment has increased, possibly reflecting the effective health examination programme commonly conducted in the previous two decades. Japan used to have a high prevalence of cerebral apoplexy until as late as the 1970s. The health indices concerning apoplexies, as measured by mortality and prevalence, have improved dramatically since then as a result of the great efforts made to control high blood pressure. A series of five nationwide sampling surveys, at 10-year intervals, have been conducted to examine the long-term trend of blood pressure among the Japanese from 1961 to 2000. Each time, blood pressure was measured on subjects aged 30 years or over who were randomly sampled from the entire population. The long-term trend in blood pressure bears witness to the effects of public health activities in a community. The average systolic pressure of men aged 60 to 69 years was nearly 160 mmHg in 1961 but it has consistently declined to 143 mmHg in 2000.

### **Hyperlipidaemia**

According to the *Patient Survey* conducted in October 1996, the number of patients under treatment for hyperlipidaemia was approximately 280 patients per 100 000 population and peaked in the age group 70–74 years (Ministry of Health, Labour and Welfare, 1997). This figure severely underestimates the actual number of those with hyperlipidaemia. Such survey results must be viewed with caution as the survey is cross-sectional, it only covers a single day and the number identified only reflects patients with hyperlipidaemia as their primary diagnoses. The majority of those being treated for hyperlipidaemia are receiving such treatment secondary to other primary diagnoses.

### **Obesity**

The Japanese Society for Obesity has defined obesity as a body mass index of 26.4 or higher. According to this definition, the *National Nutritional Survey* conducted in 2000 (Ministry of Health, Labour and Welfare, 2000a) identified

25.5% of men and 20.5% of women as obese among those aged 15 years or over. When compared with 20 years previously, there was a marked increase of obesity among men in all age groups but not in women. Since the prevalence of obesity will increase in the later stages of life, obesity should be considered as a major public health concern in combating lifestyle-related diseases.

### **Circulatory diseases**

Cerebrovascular disease was the most common cause of death until 1980. However, it is now ranked third owing to a sharp decline in mortality that is particularly a result of a dramatic decrease in cerebral bleeding achieved through better blood pressure control. Ironically, the improvement in survival rate for cerebrovascular diseases has increased the number of surviving patients under treatment and the subsequent number of disabled people. Primary prevention of cerebrovascular diseases and tertiary minimization of disability, such as through acute phase rehabilitation, remain a major challenges for public health in Japan.

Japan used to have a low prevalence of ischaemic heart disease as a cause of death; this has been increasing since 1993 even when viewed as age-adjusted figures.

### **Cancer**

Cancer has been the leading cause of death since 1981. Age-adjusted mortality shows a slight but gradual increase for males, while a slight decrease is observed for females. Site-specific cancer mortality shows that mortalities from stomach and uterine cancers are declining, but those of lung and colon cancers are rising, suggesting effects of lifestyle changes. Incidence information for cancer cannot be derived from the vital statistics collected, particularly when the survival rate of cancer is improving. According to some cancer registries, such as the one being conducted in Osaka, stomach cancer is still by far the commonest cancer for males and second commonest for females. However, stomach cancer is no longer the most common cause of death from cancer in males because of improvements in its survival rate. For females, stomach cancer is still the largest killer.

### **6.1.5 Occupational health**

The origin of occupational safety and health in Japan can be traced back to the Factory Act in 1911 (became effective in 1916), which was intended to protect young or female workers from exhaustive and dangerous working conditions mostly in the then burgeoning textile industry. The scope of the

Act was gradually expanded, but the all-encompassing Act to protect workers of all industries was not enacted until after the Second World War. The Labour Standard Act was enacted in 1947. In later years, the increasing number of work-related accidents, most prominent among which were large-scaled gas explosions in coal mines, prompted a series of enactments for improving working conditions. Outbreaks of chronic work-related diseases, such as pneumoconiosis among mine workers and Raynaud's disease among forest workers using chain saws, alerted industries to the importance of implementing preventive measures for the health of workers. In 1955, special Acts for workers suffering from silicosis and traumatic spinal injuries were enacted to promote such measures. In 1972, separating from the Labour Standard Act, the Occupational Safety and Hygiene Act was passed, and occupational health was regulated as a medical specialty.

Under the Occupational Safety and Health Act, employers who employ 50 or more workers are required to contract an occupational doctor. Also, those who employ 1000 or more workers (including employers in certain industry who employ 500 or more workers) must employ an occupational doctor on a full-time basis. Occupational doctors are responsible for health maintenance of all workers and must conduct an on-site inspection of the working conditions to make sure the conditions are safe and healthy. Occupational doctors are charged with offering professional opinions to employers and managers with regard to safety and health maintenance of the workers, although these opinions are not legally binding. All employers, regardless of industries, are required to conduct regular health check-ups once a year for their employees. For workers working under special conditions, additional examinations must be carried out with the health check-ups. The number of death caused by work-related accidents was 1472 in 2006. The construction industry accounted for 40% of the death toll.

According to the Labour Standard Act, employers are held responsible for any financial damage caused by work-related accidents. To guarantee the financial liability, the Ministry of Health, Labour and Welfare operates the Workers' Accident Compensation Insurance, with insurance premiums paid wholly by employers. This not only covers medical cost for treatment of diseases and injuries but also pay monetary damages for lost wages and disabilities plus an annuity for bereaved family members.

When workers die or are disabled by cerebrovascular diseases and ischaemic heart disease, these deaths and disabilities may qualify for benefits under the Workers' Accident Compensation Insurance if the underlying conditions were worsened by excessive working stresses. However, it is often difficult for workers to identify the cause and effect relationships. Although the government does have its own arbitration process, disputes infrequently



lead to litigations. Bereaved family members who attribute the death of their relative to excessive working conditions and fatigue claim the causality by calling the death “*Karo-shi*”, or death from excessive work. To facilitate the determination of causality and avoid disputes, the government presets some criteria for common work-related diseases, such as noise deafness, asbestosis and neck–shoulder disorders. For cerebrovascular and ischaemic heart diseases, the criteria were first introduced in 1987 and were later revised in 1995.

Also controversial are work-related cardiovascular diseases and psychiatric diseases. In September 1999, the criteria for determining work-related causality for psychiatric disorders were published. In view of the importance of prevention of *Karo-shi*, the Workers’ Accident Compensation Insurance Act was amended in 2000 to expand health check-ups to add secondary examinations for workers who showed some abnormalities in regular health check-ups.

### **6.1.6 Infectious disease surveillance**

Governed by the Infectious Diseases Prevention Act, a surveillance system has been operational since 1981. It consists of two components: mandatory reporting for serious infectious diseases and voluntary reporting for less-serious ones such as measles or influenza. For the latter, participating hospitals will report the number of diagnosed cases on a weekly basis. The result is published on the website by the National Institute of Infectious Diseases in English (<http://idsc.nih.go.jp/kanja/index-e.html>). For example, influenza is shown in a weekly report as the average number of new cases per “sentinel” institution (approximately 5000 nationwide). The new Infectious Diseases Act was implemented in 1999 and was revised in 2003. The Infectious Diseases Prevention Act, Sexually Transmitted Diseases Prevention Act and AIDS Prevention Act were consolidated into this new Act. According to the Infectious Diseases Act, 29 infectious diseases and other diseases regulated by the Ministry order were divided into 5 categories, and an outbreak of the diseases shown in this Act must be reported to the public health centre (Section 4.2.3).

### **6.1.7 Mass vaccination programme**

Japan has achieved great public health success in infectious disease control in the past, the most notable of which was the emergency import of polio live vaccine in 1961 when Asia had been hit by a large polio epidemic. Mass vaccination was also provided for schoolchildren for influenza in 1962 and became mandatory in 1977. The rationale behind the mass vaccination

for schoolchildren was to strengthen herd immunity to control the influenza epidemic. Excessive deaths in older people were suppressed as a result of this mass vaccination programme for schoolchildren, which was promoted as a national policy. However, mandatory vaccination was eased in 1985 and discontinued in 1994 in response to public requests that decision-making about the use of immunization should be taken by people themselves. Possibly because of the reduced herd immunity, Japan saw a large resurgence of influenza in the 1998–1999 seasons, resulting in estimated 20 000 deaths, most of whom were older people. In 2001, the Act was amended again to encourage influenza vaccination for the elderly on a voluntary basis. For child infectious diseases, Japan has higher incidence of measles than most developed countries despite a well-developed vaccination programme. The reason is probably the timing of the programme: the officially endorsed vaccination time is one to two years old, by which age most children contract the disease. However, sporadic outbreaks of measles were observed among college students in 2006 due to the weakened herd immunity. To strengthen the herd immunity, two times vaccination of composite vaccine against measles and rubella was introduced in April 2006 and five to seven years old children started to receive the second vaccination. In February 2007, a national goal was set to eradicate measles by 2012 and, with a time limit of five years, since April 2008, students in the first year of junior high schools (13 years old) and in the 3rd year of senior high schools (18 years old) were added to receive the second vaccination to achieve this goal (those with definite history of measles and rubella as well as those who already received two vaccinations will be exempted).

## 6.2 Patient pathways

Patients can choose either a clinic or a hospital as their first point of contact with the health system. If patients require surgical interventions or highly specialized diagnostic procedures, they can be referred to hospitals. Most hospitals have outpatient departments where patients regularly consult with their physicians following surgery. However, some patients are referred back to their previous physicians at clinics. No national telephone-based clinical services exist.<sup>24</sup>

Japan's health care system emphasizes "free access". This does not mean that patients can receive care free of charge, but instead patients may choose any provider of their choice; there is no system of GP gate-keeping. However, Japan's emphasis on free access does not come without disadvantages. Because

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<sup>24</sup> An example of such a telephone-based clinical service is *NHS Direct* in England.

of poorly developed referral systems, the distinction between specialists and generalists has not evolved as it has in other developed countries. Hospitals cannot rely on referrals from practitioners as sources for patients and they therefore develop large outpatient departments to try to attract patients. Consequently, hospitals and clinics come into conflict over attracting patients. “Doctor shopping” and duplicate patient visits are abundant and many believe that such redundancy brings much waste.

The introduction of a system of gate-keeping based on family physicians was first advocated by the then Ministry of Health and Welfare in 1985. However, the proposal was not received favourably by the Japan Medical Association, who feared the title of family physician would lead to the development of “second class” doctors. The proposal of “family physicians” was eventually abandoned and the Japan Medical Association continued to avoid the term, to date preferring instead the terminology of “attending doctors”.

### **6.3 Primary/ambulatory care**

In Japan, there is little distinction made between primary and secondary care; primary health care is not a single discipline but a comprehensive function to be fulfilled by various specialties. The concept of general practice as developed in other countries such as the United Kingdom has not gained a foothold in this country. Primary health care services for residents in a community are made up of various specialties such as internal medicine, surgery, paediatrics, ophthalmology, otorhinolaryngology and gynaecology. Residents can, therefore, use specialist services directly at an affordable cost without the referral procedures. This is a very convenient system for the local population and has made it possible to detect disease and provide treatment by the specialist at an early stage. This is arguably an important reason for the achievement of a longer life expectancy in Japan. However, it may also have generated unnecessary medical services and thus a major increase in health care costs. Even so, it should be noted that health expenditures as a proportion of GDP has traditionally been relatively low.

Health care in Japan is characterized by timely access, free choice of providers (with no gate-keeping) and equality of treatment opportunities. Against these advantages, outpatient clinics tend to be crowded, particularly in the absence of an appointment system. There is no formal queuing to receive treatment, but patients must endure a long time in the waiting room. However, as there have been few complaints about waiting times, it is not perceived to be a problem.

Ambulatory care is provided both at clinics and at hospitals. A survey of 2066 persons aged 65 or over in a city in Osaka Prefecture in 1998 asked respondents to name the person consulted first when having a health problem. The most common answer was their families (82.0%); the next most common answer was the family doctor (48.2%) and then the municipal health centre (22.3%) (Settsu City, 1999). Therefore, family doctors and municipal health centres continue to play a very important role in primary health care in Japan.

The *Patient Survey* in 2005 estimated that 3.95 million and 1.87 million patients, used ambulatory services at clinics and at hospital outpatient departments on the survey day, respectively (Ministry of Health, Labour and Welfare, 2006a). Since the end of the 1990s, utilization of hospital outpatient departments has been gradually decreasing, while that of clinics has increased. This trend in utilization corresponds to an increase in the number of clinics, increasing to 97 442 by 2007, of which 52% are established by physicians, 31.8 % by medical corporations, 5.5% by public corporations and 10.7 % by others. Recently, the number of clinics established by medical corporations has increased (Ministry of Health, Labour and Welfare, 2008b). Clinics provide a different health service. For example, 35.5 % clinics provide visiting health services. Some clinics are heavily equipped with magnetic resonance imaging, computed tomography or positron emission tomography. Computers are used to handle insurance claims in 66.1 % of clinics but few of them use computers to handle medical records (Ministry of Health, Labour and Welfare, 2008b).

Patients generally use the outpatient service of hospitals without referrals, and hospital outpatient departments provide regular consultations to patients. The government has made an effort to introduce a referral system for the use of hospital services through clinic services. However, they could not succeed in promoting this policy, mainly for two reasons. First, hospital care in Japan has depended largely on the involvement of the private sector. Private hospitals have financial incentives to receive more patients at outpatients and to accept patients without referrals. This tendency may be aggravated by the fact that specialized health services requiring referrals are predominantly provided by the public sector. Second, doctors in a community are very cautious about the possibility that they could lose their equal status with hospital doctors if they are called “a gate-keeper doctor for the hospital”. At present, patients who want to visit large hospitals with special functions, such as university hospitals or a national centre, are requested to have a referral letter; if they do not have it, they have to pay an extra fee at the hospital (Section 3.3.4).

## 6.4 Inpatient care

The Medical Care Act, passed in 1948, is the basis of present-day health care in Japan. It made the following provisions:

- differentiation between hospitals and clinics on the basis of the number of beds; institutions with 20 beds or more are hospitals, and those with fewer than 20 beds are clinics where patients are not expected to stay for longer than 48 hours (this 48-hour rule was repealed in 2006);
- establishment of general hospitals with 100 beds or more and at least the following five departments: medicine, surgery, obstetrics, ophthalmology and otorhinolaryngology (the definition was repealed in 1996);
- establishment of midwiferies;
- establishment of an inspection system for medical institutions (Section 4.1.2);
- regulation of the number of personnel and facilities in hospitals (Section 4.2); and
- establishment of public hospitals.

The private sector owns over half of the total number of hospital beds, and hospital care in Japan has depended largely on the private sector. According to a survey in October 2005 (Ministry of Health, Labour and Welfare, 2005), approximately 70% of hospitals and 55% of hospital beds were in the private sector (either medical corporations or doctors' sole proprietorship). This is an important characteristic of health care in Japan and one with a unique history (Section 2.2).

Hospitals are established by various organizations, including medical corporations, local and national governments, individuals and other bodies. Since national and public universities have been transferred from direct control by the national and local governments to independent corporations since 2004, the management of university hospitals has also been transferred. Local governments that own hospitals have been changing the organizational structure of their hospitals. First, some local governments contract out hospital management to non-profit organizations. Second, some of them establish agencies to manage those hospitals. Finally, they give more discretion to hospital executives to achieve high performance. At the central level, the Ministry of Internal Affairs and Communication supervise their performance. Hospitals owned by medical corporation and individuals can enjoy autonomous management but need to balance their budgets. Since there has been little regulation on investment in hospitals, they are free to buy new instruments if they can afford them.

After the Second World War, demand for hospital care rapidly increased and the government published hospital plans that depended on a hierarchical pyramid system. However, the government was in a very difficult financial situation especially after the war and the Medical Care Act was amended in 1950 to approve the establishment of non-profit medical corporations in the private sector to make it easy for doctors to raise their financial resources systematically. This amendment was most important for the private sector to enable organizational trials for the enhancement of hospital building. Moreover, the Japan Medical Association held negotiations with the government about the acceptance of an NHI system that would be compulsory and cover all residents. The Association requested the government to accept the policies to regulate the increase in the number of beds in hospitals owned by the public sector and also to introduce a special tax treatment in favour of doctors' incomes. The Association succeeded in the negotiations under the strong leadership of the Chairman of the Association, Dr Taro Takemi, and the universal coverage system, called *Kokumin Kaihoken*, was achieved in 1961. These two political decisions provided an essential basis for private sectors to enhance their power in health care in a community. Facing the rapid ageing of the population, beds in hospitals increased substantially, particularly from 1975 to 1985. In just 10 years, there was an increase of 330 000 beds in addition to the 1.2 million beds already in existence; 80% of this increase was in the private sector.

In 1985, the Medical Care Act was amended in an attempt to regulate the rapid increase of hospital beds. Responding to these movements, in 1986 the Health Services for the Elderly Act was amended and the idea of the health care home for the elderly was born. Now it is expected that people will have changed from the traditional view of hospitals and will now see hospitals as places to receive treatment for acute diseases and not for stays of long duration.

The revised Act required a health care plan to be developed by each prefecture and for that plan to define medical regions in the prefecture and to regulate the number of beds in each region (beds for psychiatry and TB were controlled by the 47 prefectures). By March 1989, all prefectures had published such health care plans, and 345 regions were set up in the whole country. The total number of beds needed for general use, mental disorders and TB were set at 1.16 million, 350 000, and 63 000, respectively. As a result of the new Act, the rapid increase of beds in hospitals has been largely moderated, and medical care in Japan has taken a new direction in response to the needs of the ageing population.

As of March 2005, the country was divided into 370 regions that would control the number of acute general hospital beds. Of these, 215 regions had

more hospital beds than the objectively assessed number of necessary beds and so were subject to restrictions on new construction that increased bed numbers. It is important for hospitals to promote their own strategic plan to overcome this strict regulation.

Health care planning by the prefectures was chiefly intended for controlling the number of hospital beds and not necessarily intended for achieving good quality of care. Twenty years after its inception, the Health Care Structural Reform Act was passed in June 2006 and introduced detailed descriptions and indicators on health service resources, utilization and outcomes for four diseases (cancer, stroke, acute myocardial infarction and diabetes) and five areas of health care (emergency medicine, disaster medicine, rural medicine, prenatal medicine and child health care) into prefectural health care plans to ensure well-coordinated health care services (Matsuda, 2007).

Secondary care is assigned to 106 regional health care hospitals and tertiary care to 80 special tertiary hospitals (mostly university hospitals). Special tertiary hospitals are almost synonymous with university hospitals and have more than 500 hospital beds. Although these secondary and tertiary hospitals should devote their resources to patients referred from primary care facilities, there are no restrictions on patients seeking such secondary care and tertiary care without referrals.

## **6.5 Health care for the elderly**

With the Health Services for the Elderly Act 1982, key policies were implemented to cope with the future increases in elderly beneficiaries. The changes required people aged 70 years or older to pay a fixed co-payment for health care (400 yen per month for ambulatory care and 300 yen a day for hospital care) and provided for financial redistribution between insurers to account for higher costs of health care for the elderly depending on the proportion of the elderly among the insured for each fund.

The health care costs of the elderly are shared among insurers by a mutual adjustment scheme based on the proportion of people insured aged 70 years or over. The large increase in costs for this group was the most serious problem to be overcome because many insurers could not pay the cost for adjustment under the current very poor economical condition of the industries organizing insurance. The government has received strong requests to reorganize the mutual adjustment scheme and to create a new insurance system for health care services for the elderly. It is noteworthy that the health service system for the elderly has ameliorated the financial plight of the municipal NHI system

but eventually has proved to be only a patching remedy, without achieving total unification of the health insurance system. This unification is needed to achieve radical reform in the field of long-term care as envisaged in the Long-term Care Insurance Act, which effectively unifies insurers with municipal governments.

To cater for the growing need for long-term care, the health services and welfare services for the elderly need to be effectively integrated at municipal level. In 1990, laws for both health services and welfare services were amended to require all municipal governments to develop comprehensive action plans based on objective need assessments and the service levels to be achieved. Under this initiative, all municipal governments conducted need assessment for long-term care in the community setting in and around 1993. This survey was unprecedented in that it covered the entire population of disabled elderly dwelling in home settings and served as a baseline for the later development of the Long-term Care Insurance system (Section 6.8).

In October 2002, the Health Services for the Elderly Act was revised to increase the age for coverage by the Act from 70 to 75 years and to reduce the reimbursement rate for all insured from 80% to 70%. In June 2006, a new Act was passed to establish an independent system for health care services for the elderly by separating health care for the elderly aged 75 years or older completely from that for younger people and to ensure the necessary subsidy from the central government. It is indeed very difficult to devise the financing mechanisms in order to improve cost-effectiveness, efficiency and quality of health services for the elderly. To contain health expenditures for the elderly, arguably the most effective method is to promote a policy for the prevention and early detection of diseases for younger people and enhance the health of the elderly.

## 6.6 Emergency care

In Japan, anyone can call ambulance services by dialling 119; these are provided by the municipal governments as public services. The ambulance services are defined as “emergency transportation” pursuant to the Fire Prevention Act. By this definition, ambulance services are not health care services, instead they are free and rapid transportation to the nearest available health care facilities. Until 1991, when the Emergency Medical Technicians (EMTs) Act was enacted and experienced fire fighters became authorized to perform resuscitation manoeuvres, ambulance staff were not authorized to perform any medical services. Furthermore, the ambulance services were intended for



transporting accident victims and it was only in 1986 when the ambulance services were officially acknowledged to transport patients with disease. Resuscitation manoeuvres authorized for EMTs were also quite limited in the beginning and invasive treatment such as intubation was only authorized in July 2004. Since April 2006, administration of adrenaline has been authorized for certified EMTs. Tertiary emergency departments were established in 201 tertiary hospitals as of January 2007 and they receive referred or transferred patients.

## **6.7 Pharmaceutical care**

A positive list is used to define which medical drugs are included in the benefits package of the health insurance fee schedule. Patients are required to pay 30% of the cost of drugs (Section 3.3.4). Over-the-counter medicines are sold at drugstores and there are no price regulations for these. The government sets prices of all drugs reimbursed by the health insurance system. The list of reimbursable drugs includes nearly 14 000 items for oral, injection and ointment use. To calculate the price, the government is authorized by the Pharmaceutical Affairs Act to conduct a market survey every year. This survey is conducted with close cooperation with wholesalers, who submit their transaction records with health care providers. The official reimbursement price will be set at the weighted average of the transaction price plus a reasonable margin, which is usually set at 2%. For newly approved drugs, the price will be set by comparison with other drugs of the same therapeutic effect. For a limited number of innovative drugs, some bonus prices may be awarded on a case-by-case basis.

Because Japan imports pharmaceutical products heavily from the United States, the transparency of price setting has occasionally become the centre of the trade negotiations between two countries. In 2001, an accord was reached named “The US–Japan Economics Partnership for Growth”, in which both sides agreed on enhancing transparency of drug price setting by ensuring for the American industries the access to the raw data on which the price setting was based, as well as streamlining the new drug approval process.

### **6.7.1 Separation of prescribing and dispensing**

As part of the tradition of oriental medicine, doctors directly dispense drugs to their patients. This tradition has been considerably modified by government efforts through economic incentives created by manipulating the uniform

fee schedule. Pharmaceutical regulation, however, has sometimes been discredited by iatrogenic disasters involving adverse effects, for example the sorivudine scandals in 1993 and iatrogenic HIV infection through imported blood products in the 1980s.

Traditionally, Japanese doctors commonly have dispensed drugs directly to patients. This has been welcomed by both doctors and patients because doctors can raise profit through the mark-up between wholesale prices and reimbursement prices set by the government and patients can save time by receiving all necessary care at one time. This non-separation of prescription and dispensing may partly explain the high share of pharmaceuticals in the National Health Care Expenditure and the fact that the per capita consumption of drugs is among the highest in the OECD (OECD, 2008; see Chapter 3). The government and the Japan Pharmacist Association have endeavoured to enhance the separation since the mid-1970s, for example by rewarding higher prescription fees to doctors who choose to issue prescriptions rather than directly dispensing drugs. However, initial efforts to enhance separation between prescription and dispensing were hampered by doctors' resistance. To encourage "pure" independence of pharmacies, "carrots and sticks" measures have been taken: penalizing doctors who develop collusive arrangement with pharmacies and rewarding pharmacies that have fewer ties with particular hospitals or doctors.

Under health insurance policy, the official reimbursement prices have been repeatedly reduced to discourage doctors from direct dispensing by reducing the pharmaceutical markets. In addition, generic substitution has been promoted by listing drugs by generic names rather than brand names in the official reimbursement list for the products. For inpatient care, the all-inclusive per diem reimbursement system is increasingly suppressing the share of pharmaceutical cost in the inpatient health care cost. In 2003, 51.6% of outpatient prescriptions were dispensed by pharmacies, the remainder directly by physicians (Section 2.2).

### **6.7.2 Clinical trials**

Pharmaceutical products, cosmetics and medical equipment are subject to regulation by the Pharmaceutical Affairs Act. The Act was amended in April 1993 to allow public subsidies for research and development of orphan drugs as well as accelerated review for drugs. New drug applications will be subject to preliminary review by a special agency, the Pharmaceuticals and Medical Equipment Evaluation Centre and then finally reviewed by the Pharmaceutical Affairs Committee. The final decision is at the discretion of the Minister of Health, Labour and Welfare. The strict regulations on clinical trials coupled

with the increasing reliance on foreign trial data have led to a considerable number of new drugs remaining unavailable for Japanese patients even after they have been approved elsewhere in the world. Efforts have been made to increase the incentives for clinical trials in Japan (Section 4.2.2).

### 6.7.3 Pharmaceutical monitoring and surveillance

The history of pharmaceuticals in Japan has been tainted by repeated tragedies concerning drug side-effects, and the Ministry vowed to prevent it by establishing a monument of “No more drug tragedies” in front of its office building in 1998. Therefore, pharmaceutical monitoring surveillance is of utmost importance. Adverse drug reaction reporting has been mandatory for pharmaceutical companies, but reporting from health care providers was initiated in 1967 in the wake of the WHO resolution of 1963. Monitors were expanded to include pharmacies in 1973 and the then Ministry started a periodic newsletter to inform health care providers of adverse drug reactions in 1974. A new standard for post-marketing surveillance for pharmaceutical companies was established in 1993. However, it failed to prevent the sorivudine tragedy, in which 16 patients died within a month of this new drug being put into the market. Originally, adverse drug reaction reporting was limited to certain monitoring hospitals, and the number of reports was somewhat stagnant until 1997, when reporting was broadened to include all doctors and pharmacists. Although reporting was voluntary, the number of reports from doctors and pharmacists has increased. In July 2003, adverse drug reaction reporting became mandatory for all doctors and pharmacists. All reported cases are evaluated by a subcommittee of the Central Pharmaceutical Affairs Committee. The Ministry publishes *Pharmaceutical Safety Information* every other month and issues *Emergency Safety Information* in an ad hoc manner.

### 6.7.4 Blood products

Consumption of blood products per capita in Japan is higher than in most industrialized countries. Basically all blood products consumed domestically should be supplied by donated blood. However, donated blood alone is not sufficient to fulfil domestic demands, and much of the blood necessary for production of plasma fraction products such as albumin and globulin is imported. As of 2002, only 36.4% of albumin and 83.3% of globulin are supplied by domestic blood donation.

Japan saw a sharp increase in blood product usage in the late 1970s. This excessive use may be partially to blame for the spread of iatrogenic HIV infection in the mid-1980s. Controlling excessive use of blood products has

been attempted through practice guidelines and utilization reviews. In spite of this, there is still a large geographic variance in the per capita use of fresh frozen plasma and albumin products.

Much effort has been directed at controlling iatrogenic infection through blood products. After the outbreak of bovine spongiform encephalopathy in Europe, people who had ever lived in any of 10 European countries for longer than six months after 1980 were banned from donating blood after 2001. In addition, since November 2002, and in the wake of the West Nile fever outbreak in the United States, anyone returning from abroad has been banned from blood donation for three weeks. Further, the Pharmaceutical Affairs Act was amended to require all health professionals as of July 2003 to report infections suspected of transmission through blood products.

## 6.8 Long-term care

Japan has been reliant more on hospitals and less on social services for long-term care. This imbalance may be explained by the difference in financing system, in which hospitals are financed by health insurance while social services are financed by taxation. Being financed by taxation, social services have consistently been restrained by budget and occasionally subject to means-testing. From the viewpoints of family caregivers, putting the disabled elderly into hospitals involved less social stigma than putting them into welfare homes for the elderly, such as nursing homes. Consequently, Japan's geriatric hospitals came to serve as quasi-nursing homes, and the number of geriatric hospitals increased to cater for the growing demand generated by population ageing. In 1985, it was estimated that the number of bed-bound older people aged 65 years or over would reach 1 million (4.5% of older people) by 2000. The number of older people with dementia was 1 million in 1990, increasing gradually to 1.3 million in 1995 and 1.6 million in 2000; the estimated prevalence of dementia in the population aged 65 years or over was 6.8%, 6.9% and 7.2% in 1990, 1995 and 2000, respectively. However, the geriatric hospitals turned out to be unsuitable for long-term care because of their poor amenities and lack of appropriate rehabilitation functions. Moreover, prolonged hospital stays for most geriatric patients were increasingly viewed as unnecessary and came to be called "social hospitalization".

To promote community care for the frail elderly, the government amended the Health Services for the Elderly Act in 1986 and developed a policy to build new institutions, named health care homes for the elderly; there were 822 of these (69 333 beds) in October 1993. These institutions were newly created

hybrids of hospitals and welfare homes for the elderly: similar to hospitals in that they are financed by health insurance and similar to welfare homes for the elderly in their amenity and staff requirements. In 1989, the Ministry published a *10-Year Strategic Plan for Health and Welfare Services for the Elderly*, known as the *Gold Plan*, for the implementation of individual and institutional services, with special financial emphasis on welfare services.

In 1989, the Ministry amended the Welfare Services for the Elderly Act and seven related Acts to promote cooperative care between various sectors for the elderly in institutions and their own residences on the basis of the *Gold Plan*. Every municipal government had to plan their own “Health and Welfare Plan for the Elderly” starting in 1994. The plans were intended to encourage municipal governments to develop sufficient supplies of domestic services to meet the need assessed by national standards. Local authorities in Japan were given much autonomy in the execution of policies. All municipal governments conducted a field survey to estimate the number of the non-institutionalized disabled elderly and assess their need in 1993 to enable evidence-based, objective assessment of the care need of the community.

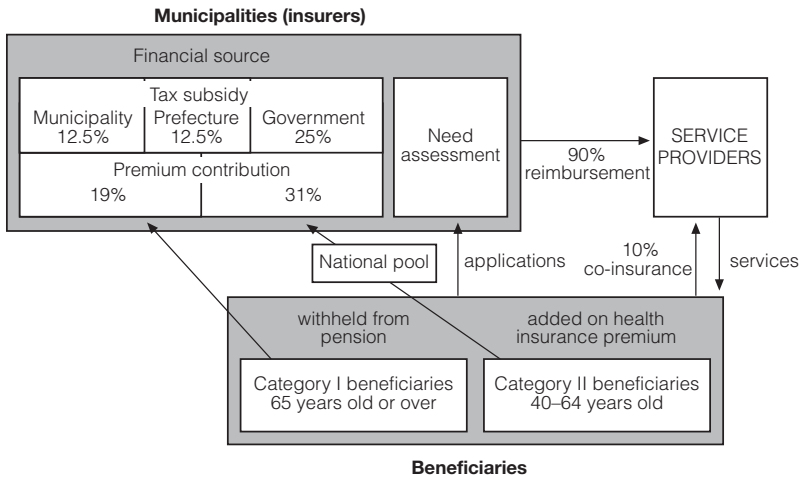
The 10-year *Gold Plan* covering the decade of 1990–1999 did enhance the development of social services by municipal governments. However, the reliance of the financing system of social services on taxation, and hence its subjection to budget restraints, remained unchanged. Although health care homes for the elderly and visiting nursing services were added to health insurance benefits in 1988 and 1990, respectively, domestic services provided by non-health professionals were still not covered. To further enhance the development of long-term care, the Ministry came to realize that a new financing mechanism would be necessary, with the choice then of whether it should be tax or insurance.

The Long-term Care Insurance Act was passed in 1997. In April 2000, the much-awaited Long-term Care Insurance took effect to offer institutional or domiciliary services for people aged 65 or over (category I) and some people aged 40–64 with specific disabilities (category II) (Fig. 6.1). The new system will not only expand the long-term care services but also include some innovative aspects not seen in traditional health insurance system.

### **6.8.1 Administrative structure (insurers)**

In contrast to the health insurance system, which has a fragmented structure with different insurers covering different segments of population, the Long-term Care Insurance system has a uniform structure: it is administered by municipal governments (there are three categories of municipal governments, cities, towns

Fig. 6.1 Structure of the Long-term Care Insurance System



and villages, depending on population size). Municipal governments insure all residents aged 40 years or older. For example a 45-year-old male worker of some company will be insured by the company for health insurance but will be insured by the municipal government where he resides for the Long-term Care Insurance. He will have to switch to a different insurer for health insurance coverage if he leaves the company but will continue to be insured by the same municipal government for the Long-term Care Insurance as long as he does not move to another municipality. Because all beneficiaries are consolidated to municipal governments, it is possible for municipal governments to draw a long-range plan to cope with long-term care. All municipal governments are required by the Long-term Care Insurance Act to develop a strategic plan with a five-year time frame to make a sound actuarial prospect. The central government, prefectures, health insurers and pension insurers must provide continuous support and assistance to them.

### 6.8.2 Financing and beneficiaries

Although the Long-term Care Insurance may be classified as social insurance, it is an amalgam of both the German and the British models in terms of financing: half of the finance comes from tax and half comes from premium contributions. The beneficiaries are divided into two categories: category I beneficiaries are the elderly aged 65 or over and category II beneficiaries are people aged 40 to 64 years. Premium is levied on all beneficiaries, but the method of levying varies between the two categories. For the category I beneficiaries, most of whom are pensioners, the premium is withheld from

their pension payment. For the category II beneficiaries (aged 40–64), most of whom are employed, health insurers levy the premium by adding it to the health insurance premium. There are a small number of category I beneficiaries who do not receive a pension, and they are required to pay voluntarily to the municipal government. Because municipal governments administer the insurance system, the premium level also varies across municipalities. The average monthly premium is approximately 3000 yen, and ranges from 1500 to 5000 yen. In each municipality, the premium is scaled to the beneficiaries' income with a three times difference between the lowest and the highest in five income brackets.

### **6.8.3 Needs assessment**

Unlike health insurance, the benefit of the Long-term Care Insurance is not automatically granted on showing an insurance card. To be eligible for the benefit, the beneficiary must apply to the municipal government for needs assessment. Only after the person is assessed as disabled will he or she be entitled to the benefit. A beneficiary must apply to the municipal government, and the municipal government dispatches a surveyor to the applicant. The surveyors must be qualified care managers and on-site survey will be conducted using the uniform assessment tool, which consists of 73 survey items to measure activities of daily livings and behaviours. The surveyors may record any particular findings to be considered for final assessment, but they have no authority to make any judgement. The recorded assessment tools will be evaluated by computer to give preliminary assessment (independent, borderline 1 and 2, and care levels 1 to 5). The municipal governments will also ask attending doctors who are designated in the application forms to submit their professional opinions. The doctor's opinion is particularly important for the category II beneficiaries because the disability must be caused by 16 specifically designated ageing-related diseases such as early-stage dementia and cerebrovascular disorders in order to qualify for the benefits. The Needs Assessment Review Committee, consisting of around five health and welfare professionals, will review the surveyor's findings and the doctor's opinion to decide whether the preliminary assessment should be altered.

What is important about the assessment process is that although the Committee has an authority to make the final assessment, the members do not start their review from scratch. They decide whether the preliminary assessment should be altered or not by reviewing the surveyor's findings and doctor's opinion. In 80% of cases, the preliminary assessment will be final. The need assessment is valid only for the specified period, usually six months. Therefore, beneficiaries must apply for renewals to stay eligible for the benefit.

### **The assessment tool**

Objective evaluation of the individual's eligibility for benefit was a premeditated policy throughout the design of the Long-term Care Insurance system. This reflects a bitter reflection over some of the drawbacks of the health insurance system, the most prominent of which is the "medically unjustifiable" prolonged hospitalization ("social hospitalization"). Because of chronic shortage of beds in welfare homes under the Welfare Services for the Elderly Act, many older people who lack adequate informal care at home are institutionalized at geriatric hospitals without clear medical necessity. Although all health insurance claims are subject to rigorous review, such medically unjustifiable prolonged hospitalization is seldom denied payment, chiefly because it is difficult to challenge the doctor's judgement without an objective evaluation tool. The German Long-term Care Insurance also has an assessment tool, but the tool used in Japan is far more complex. An evidence-based approach was adopted to develop the assessment tool: a radical departure from traditional negotiation-oriented policy-making. A field survey was conducted on a sample of residents of selected welfare homes to quantify the care need by means of a one-minute time study and correlate it with measurement of activities of daily living. The product was the assessment tool, which consists of 73 items that will predict the individual care need with certain accuracy. The tool is fully computerized to facilitate the assessment process and is now used nationwide to determine the eligibility for the benefit.

### **6.8.4 Benefits**

Benefits of the system are divided into institutional services and domiciliary services. Domiciliary services are characterized by integration of health (medical) care and welfare services within the same individually assessed budgetary cap (benefit limits). Health care includes visiting nursing, visiting rehabilitation and ambulatory rehabilitation, all of which must be provided by health professionals such as nurses and physiotherapists according to prescription by doctors. Welfare services include home help services, catering bathing and day services, all of which may be provided by non-health professionals without prescription by doctors.

Health and non-health care were not in a competitive relationship before the system was implemented: health care was reimbursed by the Health Services for the Elderly system and non-health care was financed by welfare system. However, the Long-term Care Insurance system brought both sectors into a competitive relationship in which one's gain is another's loss, because they have to compete over the fixed budgetary cap. The monetary benefit limits are



metered to the level of care need. The level of care need will determine the per diem cost for institutional services.

### **6.8.5 Providers**

Japan has a policy called the “non-profit principle” for health care, which does not permit investor-owned hospitals or clinics. This principle holds true for health care services covered by the Long-term Care Insurance. However, this principle does not apply to welfare services covered by this insurance. For-profit corporations are permitted to provide home help, catering bathing and day services. Some publicly owned corporations have a large market share but they have been increasingly criticized after fraud and abuse scandals surfaced.

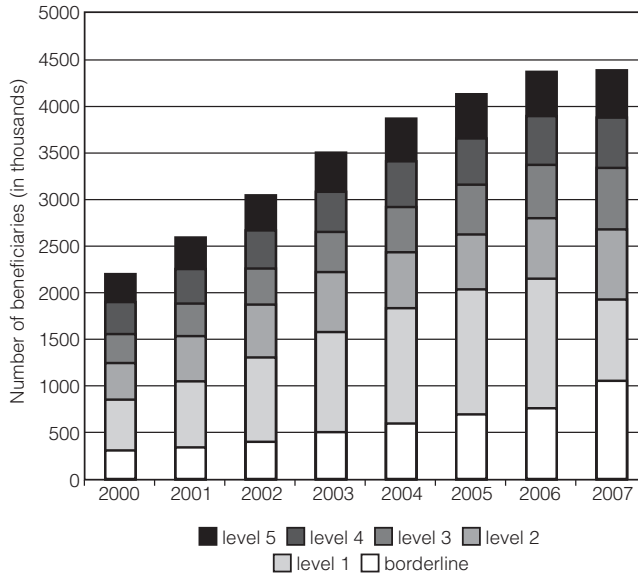
### **6.8.6 Care management**

Another key policy of the Long-term Care Insurance in Japan is care management. Care management is a professional service to coordinate different services provided by different providers to accommodate geographically dispersed home settings within a limit of allocated budget. To build capacity for needs assessment and care management, a considerable number of skilled experts were needed. A new professional called a care manager was created and the first qualification examination was held in September 1998. Already three examinations have taken place and the number of care managers has grown to over 200 000. Qualification will be given professionals who already possess health- or welfare-related licences and have at least five years of clinical experience.

### **6.8.7 Five-year review**

As more and more beneficiaries became familiar with the new system, the number of beneficiaries who applied for need assessment and qualified for the benefit also increased gradually. As of April 2007, approximately 4.4 million beneficiaries were assessed as eligible for the benefit. This figure is approximately 16% of the total number of potential beneficiaries (25 million). Trend and distribution of level of care need for eight years is shown in Fig. 6.2. The number of eligible beneficiaries increased at a faster rate than the increase in the elderly population. This does not mean that an increasing number of Japanese older people are in need of care. The graph shows that the growth is more evident in lower levels of care need, suggesting the so-called “woodwork” effects: more people were prompted to apply for need assessment as they gain more knowledge of the system.

**Fig. 6.2** Trend in number of eligible beneficiaries of Long-term Care Insurance (see the text for categories), 2000–2007



Source: Ministry of Health, Labour and Welfare, 2008a

Not all eligible beneficiaries actually utilize services. Approximately 76% of those eligible do not actually utilize services. Not surprisingly, beneficiaries in lower levels of care need are less likely to actually use services.

The system in Japan is a large social experiment of unprecedented scale. The law dictated that the system must be reviewed five years after its inception in 2000. In 2005, the system was reviewed and revised. To sustain financial stability, the revision emphasized the necessity of prevention of disability. Rather than simply providing care or assistance to accommodate the need of beneficiaries, the revised Long-term Care Insurance provides services to prevent the elderly from disability (*Kaigo-yobou*). Another financial measure was the coordination between Long-term Care Insurance benefit and pension benefit, particularly for institutionalized elderly because continuing to pay the full pension to the institutionalized elderly means duplicate benefit. Also the role of care managers was strengthened. They are expected to serve as neutral agents representing clients' interests rather than as "sales agents" of providers.

## 6.9 Mental health care

The Mental Health Act was passed in 1950. After this, the number of psychiatric hospital beds gradually increased, reaching 44 250 in 1955. The *National Survey of Mental Health* in 1963 showed that the estimated number of persons diagnosed with mental disorders was 1.24 million and the number per 1000 population was 12.9 (Ministry of Health and Welfare, 1963). Of these, 280 000 needed institutional care and 480 000 needed outpatient care. Based on the findings of the survey, the Mental Health Act of 1950 was amended in 1965. The main amendments were as follows.

- The prefectures were to build mental health centres.
- The cost of outpatient care would be subsidized.
- The supervisors of public health centres were given the responsibility for ensuring that there is adequate counselling and instruction for patients with mental disorders; to achieve this, mental health counsellors would work at the centres.
- A Council for Mental Health was to be established in each prefecture.

Although policies based on these points were implemented in Japan, the Mental Health Act was amended in 1987 to stress the protection of human rights of individuals with mental disorders. In 1993, the Mental Health Act was amended again, when particular emphasis was given to care of patients in the community, and authorization was given to build group homes with shared living accommodations.

In the face of rapid changes and the complicated structure of modern society, factors that cause stress and anxiety, particularly among adolescents and young adults, are increasing. Refusal to go to school, violence in the family, suicide, bullying, misdeeds, violence in the school, anorexia and maladaptation to the workplace among the younger generation are becoming serious problems in Japan as in many other industrialized countries. To cope with these challenges, 44 mental health centres in various prefectures are trying to strengthen counselling activities for the young, and “life-line” telephone services were started in 1990. These measures reflect the alarmingly high incidence of suicide. In 2006, 32 155 people killed themselves, the highest number recorded in Japan’s *Vital Statistics* surveys. The crude mortality rate from suicide has hovering around 25 per 100 000 since 1998, one of the highest rates in industrialized countries. Suicide prevention has, therefore, become a top issue in the public health agenda, leading to an enactment of the never-heard-of “Anti-suicide Act” in June 2006.

Mental health is notoriously characterized by its heavy reliance on hospitalization: Japan has the highest per capita psychiatric hospital beds in the

world (355 269 beds in 2003 or 277.5 beds per 100 000 population; occupancy 92.9%); the average length of stay in psychiatric hospitals was 348.7 days in 2003, and the number of psychiatric patients in hospitals accounts for approximately 0.26% of the entire population. This institutionalism may be partially explained by a historical accident in late 1960s, in which the then United States ambassador was stabbed by a psychiatric patient. This accident provoked a public outcry against the hazards of letting potentially dangerous psychiatric patients into the community and a call for the construction of psychiatric hospital beds to segregate the psychiatric patients from the rest of the society. Then the generally perceived “safety” of society might partially be secured but at the expense of the rights of psychiatric patients.

A series of scandals involving abuse in some psychiatric hospitals prompted arguments over potential violation of human rights of psychiatric patients. Therefore in 1997, the Mental Health Act was amended again to assure more emphasis on protection of human rights for psychiatric patients by tightening the conditions of involuntary hospitalization. Under the new Mental Health and Welfare Act, five forms of hospitalization are stipulated as involuntary hospitalization: detention hospitalization, emergency detention hospitalization, custodial hospitalization, immediate therapeutic hospitalization and observational hospitalization.

The most restrictive form of involuntary hospitalization – detention hospitalization – can be granted if the psychiatric patient presents “clear and present” danger to self and/or public, as agreed by more than one qualified psychiatrist (to qualify, a doctor must have at least five years of clinical experience and three years of psychiatric practice, fulfilling a certain training course and passing examinations). Emergency detention hospitalization will be granted for up to 72 hours on the same conditions as detention hospitalization but with diagnosis by only one qualified psychiatrist. Custodial hospitalization may be ordered by an attending psychiatrist without consent of the patient if the legal custodians agreed. Immediate therapeutic hospitalization may be ordered by an attending psychiatrist for prompt treatment of the disease. Observational hospitalization will be granted for temporary observation to allow time for the psychiatrist to make diagnoses.

Detention hospitalization accounted for 36.1% of total psychiatric hospitalization in 1965 but has declined sharply since then. In 2003, 63.8% of psychiatric inpatients were voluntary, and 34.7% were in custodial hospitalization. Detention hospitalization accounted for only 0.8%. Appropriateness of detention is monitored by psychiatric treatment review committees established in each prefecture. Further, effective treatment technology has been incorporated into the national fee schedule: occupational therapy and day care in 1974, social rehabilitation for psychiatric patients in

1975, outpatient rehabilitation in 1982 and group therapy and night care in 1986. Particularly, day care and night care are considered to be effective for prevention of recurrence. Day care, by definition of the fee schedule, is typically provided for six hours by four professionals (one psychiatrist plus at least one psychiatric social worker) for up to 50 patients a day. Night care is intended for patients who work in daytime and typically provides for four hours by two staff including at least one psychiatrist for up to 20 patients a day. According to the survey conducted by the Ministry on 30 June 2002, there were 1147 day care facilities (814 hospitals, 289 clinics and 44 others) and 142 night care facilities (89 hospitals, 51 clinics and 2 others). To encourage discharge from psychiatric hospitals and “normalization” of psychiatric patients living in the community, a generous subsidy is awarded to the co-payment for outpatient treatment. The number of psychiatric patients who are treated in outpatient care has increased dramatically. Broken down by diagnosis, depression and eating disorders have seen a sharp rise while the number with schizophrenia remains constant.

Regrettably, there have been sporadic criminal acts committed by psychiatric patients living in community. Pursuant to the Penal Code, crimes committed in unconsciousness are exempt from criminal prosecutions or may receive a non-guilty verdict. A new law titled the Treatment and Observation for Mentally Incapable Committers Act took effect in July 2003 to assure proper health care treatment and observation for those who escaped prosecution through mental incapacity.

## 6.10 Dental care

Oral health activities date back to Taisho Era (1912–1925) when educational activities to emphasize oral hygiene started. In the period after the Second World War, oral health activities were provided by public health centres as part of the mother and child health programmes. Today, dental care is covered by health insurance although some restrictions apply to the materials which can be used. Dental health care costs (2577 billion yen) made up 7.8% of national health expenditure in 2005 (Section 3.1).

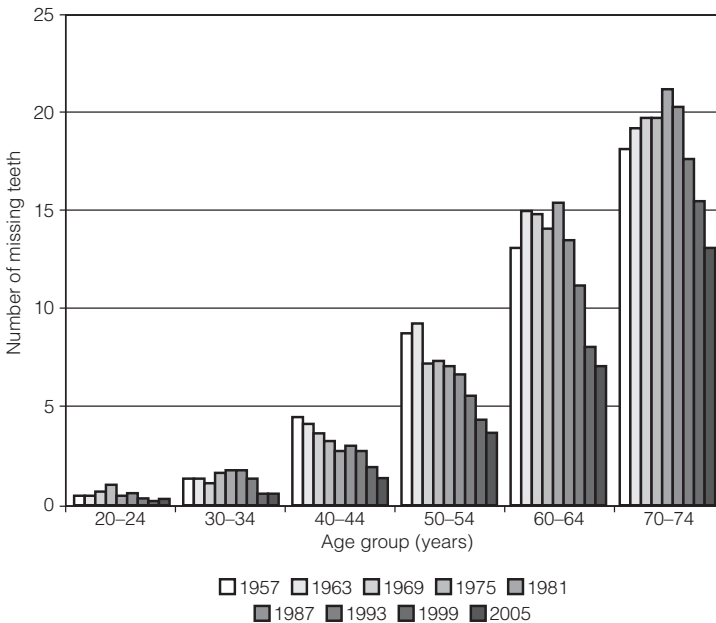
People can use the dental health care services provided by the health insurance system and dentists are paid by fee for service. However, orthodontics is not covered by health insurance and all costs must be paid out of pocket by patients (Practicing Rules Section 21). Consequently, all orthodontists practise outside the health insurance system. The majority of dentists are contracted by health insurance funds but there are some who choose not to participate

in the health insurance system. There are no reliable statistics for such non-participating dentists. According to the result of the *Medical Economics Survey* in 2003 (Ministry of Health, Labour and Welfare, 2003a), income gained through the private dental care occupied 11.4% of the total income of dental clinics. There are 86 939 dental hygienists and 35 147 dental technicians who assist practice for 97 198 dentists in 2006.

In 1989, the “8020” (eight zero, two zero) campaign was started, which aims at “maintaining 20 teeth by the age of 80”. Since it was deployed as part of elderly health, it aimed at bed-ridden elderly who have a risk of deteriorating teeth and consequent malnutrition.

The Ministry conducts a nationwide sampling survey on oral health every six years. The latest 1999 survey results show that 57.9% of males and 61.6% of females have at least one missing permanent tooth (Fig. 6.3). For those with at least one missing tooth, the average number of missing teeth was 5.6 for males and 6.1 for females. The historical trend of missing teeth since the first survey in 1957 provides interesting facts. While the number of missing teeth in younger generations has steadily declined, the number of missing teeth in the elderly increased until 1987. The sharp decline afterward should have reflected the dramatic effect of the “8020” campaign. Overall, oral health in

Fig. 6.3 Age-specific number of missing teeth, 1957–2005



Source: Ministry of Health, Labour and Welfare, 1957–present

Japan has improved, particularly for the elderly. The goal set by the “8020” appears feasible.

## **6.11 Complementary and alternative medicines**

The prevalence of complementary and alternative medicines (CAM) has not been well documented until recently. The Ministry of Health, Labour and Welfare funded research in 2005 which revealed that a considerable proportion of patients with cancer used CAM. According to a questionnaire survey of patients treated at 16 cancer centres and 40 palliative care units, 44.6% of patients with cancer and 25.5% of those with benign tumours who replied to the questionnaire used some form of CAM. For patients with cancer, 96.2% used products such as mushrooms, herbs and shark cartilage, a much higher prevalence than qigong (3.8%), moxibustion (3.7%) and acupuncture (3.6%). Positive effects were experienced by 24.3% of CAM users with cancer, although all of them received conventional cancer therapy concurrently. However, CAM products were used without sufficient information by 57.3% of users with cancer and without a consultation with a doctor by 60.7% of users (Hyodo et al., 2005).

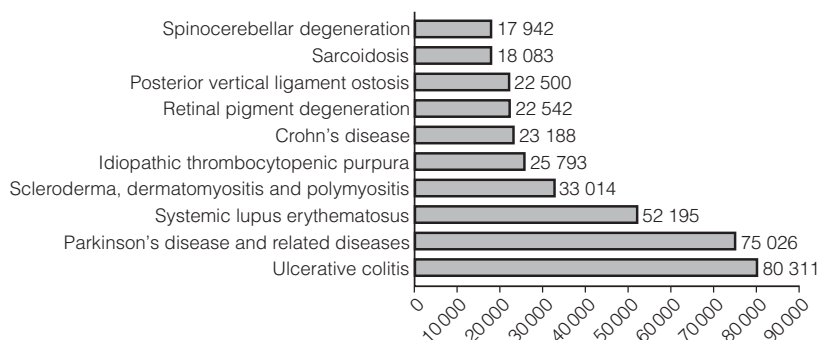
Japan has a national certification programme for CAM providers. Japan’s health law system dictates that curative health care must be provided by doctors or dentists supplemented by co-medical professionals such as nurses, therapists or dental hygienists. However there are government-certified professionals who practise “quasi-health care services” independently. The most typical are massage therapists, acupuncturists, moxa cauterists and judo chiropractitioners. They are authorized to open their clinics and to obtain reimbursement from health insurance through prescriptions from doctors. As of 2006, there were 38 693 judo chiropractitioners (30.3 per 100 000 population), 101 039 massage therapists (79.1), 81 361 acupuncturists (63.7) and 79 932 moxa cauterists (62.6).

## **6.12 Health care for specific populations**

### **6.12.1 Research and public subsidies for diseases of scientific interest**

Japan has disease-specific research and public subsidies programmes for certain diseases. These diseases are called “diseases of scientific interest” and

**Fig. 6.4** Number of eligible patients for studies under the diseases in the special interest programme, 2005



Source: Health and Welfare Statistics Association, 2006

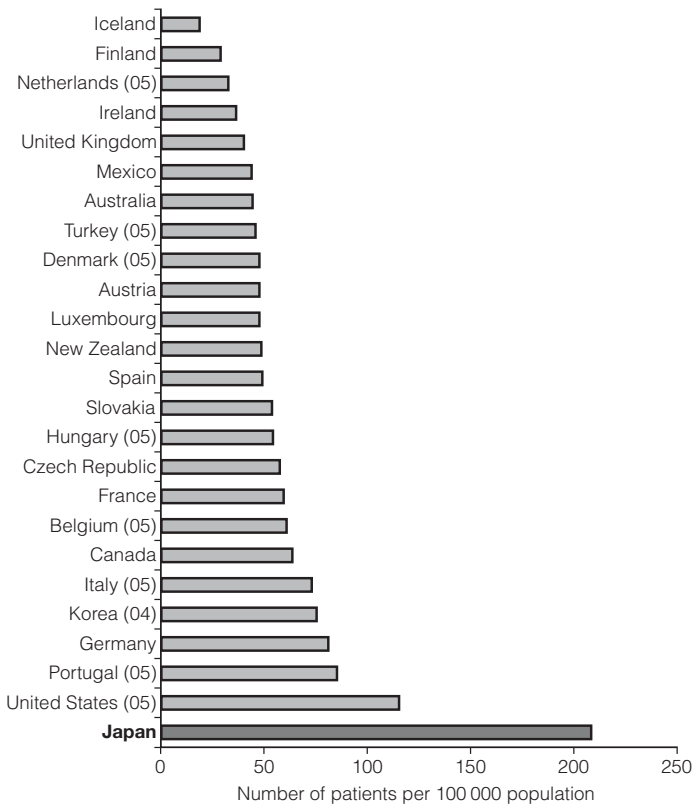
45 diseases are listed as of 2005. Programmes aimed at these diseases consist of two parts: research grants and public subsidies for patients. Public subsidy for patients effectively waives the co-payment of 20–30% of health care cost under the health insurance system for the treatment related to the diseases on condition that the patients cooperate with the research programme. This programme is a cornerstone for the epidemiological survey for such diseases. The latest figures for the number of patients with the main 10 diseases eligible for the subsidy are listed in Fig. 6.4.

### 6.12.2 Public assistance for victims of the atomic bombs

In recognition of the special situations of the atomic bomb exposure in Hiroshima and Nagasaki in August 1945, the victims are entitled to special public assistance not available for other war casualties. These victims include those who were exposed intrauterinely at the time of the bomb blast and those who entered into the bombed area within two weeks. The number of listed victims has declined somewhat through ageing and was 266 598 as of March 2005. The benefits include public subsidies to waive cost sharing for health insurance, and cash benefits of 33 800 yen (approximately US\$300) per month for those with chronic diseases, including diseases not necessarily related to atomic bomb exposure such as cardiovascular diseases (approximately 80% of those eligible are receiving this cash benefit). With regard to research activities to study the long-term effect of radiation exposure, a research institute was established under cooperation between Japan and the United States in 1975 and its findings are contributing much to the development of radiation exposure standards and protection.



**Fig. 6.5 International comparison of number of patients receiving dialysis in 2006**



Source: OECD, 2008

### 6.12.3 Renal failure

Japan had 108 570 dialysis units and 275 119 patients receiving dialysis at the end of 2007, which accounts for approximately 0.2% of the entire population and approximately one fifth of the world’s dialysis patients (Fig. 6.5). This reflects the small number of kidney transplants that occur (only 994 in 2005, of which only 144 were cadaver transplants) and the generous coverage under the health insurance system for renal dialysis in that the patient’s co-payment is capped at 10 000 yen (approximately US\$90) per month.

Renal failure used to be considered fatal until December 1962, when dialysis was included in the health insurance benefits. Even then, health insurance subjected the patients to 20–30% co-insurance, which would accumulate to a considerable sum for a long-term treatment such as dialysis. In October

1972, a public subsidy was introduced to help to ease the financial burden of dialysis and in October 1984, the Health Insurance Act was amended to cap the monthly co-insurance for long-term treatment such as dialysis and for haemophilia at 10 000 yen.

Worldwide on a population basis, Japan is ranked top in terms of the number of patients undergoing dialysis and bottom in terms of kidney transplants. Dialysis (costing 5 million yen per patient annually) costs approximately 1.3 trillion yen or 4% of total health care expenditure in Japan. More alarmingly, the increasing trend does not show signs of easing. The increase is mainly attributable to diabetic nephropathy, suggesting that there is an urgent need for controlling diabetic complications.

#### **6.12.4 Organ transplantation**

Kidney transplantation was included in health insurance benefit in 1978, but cadaver transplantation was not available in the absence of a law that authorizes removal of organs from corpses. The Cornea and Kidney Transplantation Act was enacted in 1980 to authorize removal of cornea and kidney from corpses on certain conditions, but the dissemination of cadaver transplantation was still hampered by prohibition of organ removal from brain-dead bodies. Surgeons had to wait until the heart beat completely stopped before they could remove the donated organs, which compromised the success rate of transplantation, although cadaver transplantation was somewhat enhanced by establishing the organ-sharing information network in 1983. The removal of other organs such as heart, lungs and livers were not yet permitted. Some patients resorted to travelling abroad to receive transplants, provoking public protest in some countries and commercial organ transactions in others. Even corneal transplants rely on as much as 40% of corneas to be imported from abroad.

In October 1997, the long-awaited Organ Transplantation Act was enacted to authorize removal of donated organs from brain-dead bodies. As a peculiar twist of legal reasoning, the law authorizes brain death only for those who expressed their wish to donate organs of their choice and consent to acknowledge brain death as their time of death. Moreover, the declaration of brain death may only be made after following strict guidelines set out in the law. The law also prohibits buying and selling of organs for commercial purposes. In February 1999, the first organ transplants of heart, liver, kidney and cornea removed from a brain-dead body were performed under the new law. The number of patients on waiting lists as of May 2005 were 11 995 for kidney, 73 for heart, 86 for liver and 102 for lungs.

A bone marrow bank, a database of HLA (human leukocyte antigen) typing of potential bone marrow donors, was established in December 1991 and the database contained over 204 000 potential donors in March 2005. The bank was able to match the cumulative number of 6339 patients who underwent bone marrow transplants by March 2005. The bank could successfully match 78% of patients with potential donors and is aiming at 300 000 potential donors, which will achieve a 90% matching rate.

## 7 Principal health care reforms

### 7.1 Analysis of recent reforms

The Structural Health Care Reform Act in 2006 was associated with a radical revision of the Health Services for the Elderly Act, which was renamed the Elderly Health Care Security Act. Major structural reforms are as follows: establishment of the Health Care System for the Old-old within prefectures, introduction of the “health care cost-containment plans” within prefectures and delegation of health check-ups from municipal governments to health insurers (Table 7.1).

Table 7.1 Major health care reforms and policy measures

Year	Reform
1961	Completion of the universal coverage of health insurance
1982	Health Services for the Elderly Act (financial redistribution for elderly care among insurers, and public health services by municipal governments)
1985	First revision of the Medical Care Act (introduction of hospital bed control)
1992	Second revision of the Medical Care Act (introduction of hospitals with special functions supported by high technology and beds for the recovery of long-stay patients)
1997	Long-term Care Insurance Act (taking effect in April 2000)
1997	Third revision of the Medical Care Act (emphasis on informed consent, differentiation of regional tertiary hospitals)
2000	Fourth revision of the Medical Care Act (improved requirement of staffing and amenity of hospital beds)
2002	Health Promotion Act (promotion of health of the people by improvement of the daily lifestyle)
2006	Structural Health Care Reform Act (Fifth Revision of the Medical Care Act, Revision of the Health Services for the Elderly Act and other health insurance-related Acts)

### **7.1.1 Cost control through health promotion**

One of the main features of the recent reforms in health care is cost-containment while maintaining the health of the population. Originally, economists in the government committee proposed a global cap on the national health care expenditure. Neither medical societies nor the Ministry accepted such an overly simplistic and straightforward measure to contain costs. The proposal was not adopted and, instead, the reform plan adopted a more ambitious measure: reducing health care cost by keeping people healthy.

The reform requires all prefecture governments to develop a five-year plan known as the health care cost-containment plan. The plan consists of three sections: introduction of health promotion activities to reduce the number of people with metabolic syndrome (excessive accumulation of visceral fat in the abdominal cavity) by 25% in five years (2008–2013); reduction of the number of hospital beds utilized for long-term care to shorten average length of stay; and upgrading the prefectural health care plans to improve quality of care for four diseases (diabetes, acute myocardial infarction, apoplexy and cancer) and five categories of health care (emergency medicine, disaster medicine, rural health, obstetric care and perinatal care). To achieve this seemingly challenging task, preventive health services were delegated from municipal governments to health insurers. The outcome of the plans will be evaluated in 2010 for an interim report to be used for the development of the second phase, and in 2013 for a final report. Some financial penalty may be imposed on insurers who fail to achieve the expected goals. By combining prevention and health insurance, the proposal intends to facilitate the health promotion programme. Under the proposed programme, findings of health screening provided by health insurers will be recorded in a specific format and will be retained through a patient's course of life (the data will be transferred when the insured person switches from one insurer to another). Penalties may be imposed on prefectures that fail to fulfil the target by 2013, these being in the form of a reduced fee schedule for health insurance covering health care.

### **7.1.2 Restructuring of health insurers**

The ultimate policy goal of the reform is to integrate the fragmented health insurance system at the prefecture level. To this goal, three policies were set: privatization of the GMHI system, the largest single insurer in Japan, into the JHIA in October 2008; creation of the independent Health Care System for the Old-old at prefecture level; and integration of the financially struggling corporate-based health insurance funds at prefecture level. The newly created JHIA will remain as a single insurer but will adopt prefecture level financing

and premium setting, thereby facilitate competition between prefectures (Matsuda, 2007a). The much-longed-for consolidation of the fragmented health insurance system has been facilitated by active merger of municipal governments. The number of municipal governments was 3232 in March 1999 and 1844 in March 2006.

The new Health Care System for the Old-old is administered as a partnership of all municipal governments in a prefecture and will insure the elderly aged 75 years or older. A crucial difference of the new system from the previous system under the Health Services for the Elderly Act is that the new system is an independent insurance system that has three bases for finance: subsidy from the government (50%), contribution from health insurance (40%) and premiums from the elderly themselves (10%). The previous system did not levy premiums from the elderly beneficiaries, instead it was financed by subsidies from all the health insurance system, which levied premiums on a household not an individual basis. Under the new system, the actuarial relationship between premium and health care cost is expected to be more evident than in the previous system: the elderly living in a prefecture with high per capita health care cost will be required to pay higher premium than those living in a prefecture with less per capita health care cost.

Delegation of responsibility for providing health check-ups from municipal governments to health insurers may alter ideology about public health. For specific public health needs such as infectious diseases or mental health, public health centres will continue to be in the forefront. For maternal and child health and cancer prevention, municipal governments will continue to play major roles. However, for lifestyle-related diseases such as hypertension, diabetes and hyperlipidaemia, the responsibility will shift from municipal governments to health insurers. Municipal governments will remain insurers of the municipal NHI and hence will continue to assume responsibility for providing health check-ups for those enrolled with them and aged 40 to 74 years. However, the responsibility of providing health check-ups for residents who are insured by other insurers (approximately 60% of the residents) will shift from municipal governments to the health insurers they are enrolled with (Matsuda, 2007b).

Japan's fragmented health insurance system has chronically suffered from an imbalance of the elderly enrolment. The Health Services for the Elderly System established in 1982 was intended to have a financial risk-adjustment mechanism for inequalities in enrolment of the elderly, particularly between municipal NHIs for non-employees and health insurance for the employees. The Structural Health Care Reform Act executed in 2008 introduced the new system by separating the elderly aged 75 or over from the fragmented health insurance system, thereby putting an end to the long-debated issue of the

inequality of elderly enrolment. Even so, a considerable number of “young-old” (65–74 years) people will remain insured by municipal NHIs and the new Elderly Health Care Security Act will incorporate a financial risk-adjustment mechanism for this age group.

### **7.1.3 Restructuring the Central Social Insurance Medical Care Committee**

The Central Social Insurance Medical Care Committee has long been regarded as a venue for political negotiation between insurers and providers, and committee members representing public interest have been relegated to the role of neutral mediators. In a bitter reflection of the bribery scandal in 2004, involving the Vice President of the Federation of Health Insurance Funds and the President of the Japan Dental Association, a proposal was put forward to strengthen the role of neutral members. Not only will the number of neutral members increase from 4 to 6, out of a total of 20 seats, the neutral members will analyse the economic impact of any fee schedule revision. The restructured Committee is expected to enforce health policy in a more evidence-based manner.

### **7.1.4 Medical safety through the official complaint resolution mechanism**

As discussed in Section 2.5.4, medical safety support centres are being set up in prefecture governments and major cities. According to the report entitled *Comprehensive Measures for Promotion of Medical Safety* proposed by the Safety in Health Care Committee in April 2002, the centres are intended to serve both as an official complaint resolution mechanism and as promoters of medical safety through supervision and inspection of providers.

### **7.1.5 Improvement of disciplinary actions and administrative sanctions on doctors**

Doctors, as well as all other health professionals, may be sanctioned through a form of revocation or temporary suspension of their licence if they commit a crime. However, doctor’s malpractice has seldom been sanctioned provided that the case remains a civil dispute, and calls for something to be done about “repeaters” of such malpractice have become more intense. A proposal delegates to the Ministry a law enforcement power to search on suspicions of malpractice and to impose sanctions or disciplinary actions against the doctors in such alleged malpractice. Alongside this, effective re-education

and retraining programmes will be created to improve the quality and skills of doctors who have been sanctioned. Furthermore, to facilitate disclosure of information concerning doctors, a database of personal information of doctors will be set up with Internet access.

## 7.2 Future developments

### 7.2.1 Promotion of Healthy Japan 21

Historically, community level health promotion activities in Japan have been mainly planned under the guidance handed down by the central government. However, as a result of the Alma-Ata Declaration by WHO in 1978, the Japanese Government published the *National Health Promotion Plan* in that year, in which the promotion of local autonomy and community involvement was strongly emphasized. It was recommended that a committee for community health promotion should be established in every municipal authority. This committee must include members from the local medical association, private agencies and resident groups. At the moment, almost all municipal authorities in Japan have organized their own committee to discuss and decide their community health plan.

For improvements in community involvement, it is essential to provide opportunities for residents to obtain information about health planning promoted in their community. This has yet to be fully implemented in Japan, although residents may have had such opportunities in the various actions for health education organized by public health nurses in their community.

It is a great achievement for Japan to have attained the longest life expectancy in the world. In a society with a long life expectancy, people are apt to think that they do not need strong protection from the central or local governments. As a result, when decentralization is given first priority in government policy, people may think that they should be given autonomous power in every process of decision-making in a community.

*Healthy People 2000* was published in the United States in 1990 and reported that among people aged 20 years and over, cigarette smoking prevalence had been declining steadily at 0.5 percentage points per year since 1965; smoking prevalence for the entire population aged 20 years or over was 29% in 1987 (US Department of Health and Human Services, 1990). The *Healthy People 2000* campaign had a strong influence on public health policies in Japan and the *National Health Promotion in the 21st Century (Healthy Japan 21)* was published in March 2000 to promote a policy depending not only on the



structure developed by laws or directives but also on the autonomous power of the people based on their knowledge and awareness (Japan Health Promotion and Fitness Foundation, 2000).

*Healthy Japan 21* has offered a vision for the new century in nine areas (nutrition, exercise, leisure, smoking, alcohol, dental health, diabetes, circulatory disease, cancer) for four basic policies requiring participation and responsibility by the people. These four policies are:

- emphasis on primary prevention through enhancement of educational and community-involved programmes;
- building supportive environment through local plans to be initiated at prefecture and municipal levels;
- promotion of effective collaboration among related agencies in the implementation of health services; and
- promotion of health services on the basis of scientific evidence.

In Japan, accessible health care services and comprehensive public health services have contributed to the longevity of the people by preventing premature deaths in a community. However, health care in this country finds itself in a new situation, where creative and scientific collaboration between public health and health care services needs to be developed through a comprehensive programme, *Healthy Japan 21*. The bridge spanning the two services must consist of the participation and responsibility of the people themselves.

### 7.2.2 An effective information system

In the *World Health Report* published by WHO in 2000, Japan was ranked highest in two indicators: health status (disability-adjusted life expectancy) and overall goal attainment. However, Japan fell to 10th in the assessment of “Overall health system performance”, where France was ranked first. In the OECD *Health Care Quality Indicators Project*, Japan’s status was mixed and some of Japan’s indices fell short of those of the majority of developed countries, such as incidence of vaccine-preventable diseases and mammography rate (OECD, 2006a). Generally, Japanese nationals enjoy a high standard of health but this cannot be attributed solely to the performance of the health care system. It is important to highlight that few, if any, studies have been undertaken to critically measure the performance of the health system. Many researchers, doctors and economists alike, continuously advocate the need for such an appraisal. However, these calls have been hampered by the lack of effective data collection systems. One encouraging move in this direction has been the government’s recent decision to develop a

national database to monitor the utilization of services, disease epidemics and quality of care by 2010.

Given the rapid ageing of the world population, the provision of health care services will inevitably have to cater to the needs of the elderly. Catchwords popular among the world's medical society, such as evidence-based medicine, HTA, clinical practice guidelines, disease management and generic substitution, will inevitably be incorporated into future health policy discussion in Japan. Whatever the choices, an effective information system is indispensable and is not yet available. An often overlooked item in the agenda included in *Structural Health Care Reform 2008* is the creation of “national database of computerized insurance claims and health check-ups/guidance data” and experts hope that it will contribute to better quality of care in the future in Japan.

## 8 Assessment of the health system

Since April 1961, all persons in Japan have been covered by some kind of health insurance, allowing them to visit a doctor of their choice. Generally, doctors in a community have dispensed drugs for their own patients (see below). This arrangement has allowed doctors to have financial resources to purchase necessary professional labour and expensive medical equipment. For this reason, the sanctioned and protected role of doctors as dispensers of medication is felt to have been a particular factor in Japan underpinning the provision of relatively convenient and affordable primary health care. This is arguably an important contributor to Japanese longevity, because it has made it possible for people to visit doctors at an early stage of disease and to receive comprehensive treatment. This is thought to be an important factor in allowing the society to develop a long life expectancy. However, the health insurance system does not accept a person if he or she has no symptoms and usually people do not visit their doctors if they have no symptoms. When a person visits a doctor with symptoms caused by a lifestyle-related disease, it is usually too late in the disease path for treatment to be effective. This has created a society with a high mortality and morbidity associated with lifestyle-related diseases. Consequently, the public should understand that there is a strong need for prevention programmes in a society that depends on a health insurance system for health care.

### 8.1 Objectives of the health system

Health policy in Japan is based on Article 25 of the Constitution, stating that all people shall have the right to maintain a certain standard of healthy and cultured life, and to achieve this purpose, the state shall try to promote and improve the conditions of social welfare, social security and public health.

Based on this, the objective of the health system is to improve population health.

A recent document entitled *A Vision for Health Care Reform* was published in 2005 by the joint committee of the ruling party and the government and stated the general principles of health care. To summarize, these were: to develop secure and reliable health care with emphasis on preventive measures; to contain health care expenditure with the ageing population; and to restructure health insurance schemes for more sustainable funding.

## **8.2 Distribution of costs and benefits across the population**

There is limited empirical evidence of the distribution of costs and benefits across the population. Relatively high rate of co-insurance (30%) may constitute a financial barrier to accessing health care for many individuals and be a regressive method of financing, although the majority of financing through taxation and social insurance premiums is likely to be progressive or at least proportional. Some features of Japan's health system are worth mentioning here relating to the accessibility of specialist care and prescription of drugs through the non-separation of prescribing and dispensing policy.

### **8.2.1 Specialist care in the community**

Health care clinics in Japan fulfilled a general dispensing function and are usually very well equipped with apparatus for radiography, electrocardiography, and blood and urine tests. Primary care services for residents in a community comprise various specialties such as internal medicine, surgery, paediatrics, ophthalmology, otorhinolaryngology and gynaecology. Therefore, people can avail themselves of specialist services directly at affordable cost under insurance almost anywhere in the country. This is a very convenient system for the local population and has made it possible to detect disease and provide treatment at an early stage. This is thought to be an important factor in the achievement of a longer life expectancy in Japan, and such a system must have grown on the financial power secured by the profit gained through dispensing services. However, it may have generated unnecessary health services utilization and increased health care costs.

New technologies have been rapidly developed, particularly in recent years, and new specialized departments have been established in many medical schools, so that the medical school curriculum is now shared by various

such departments. Unfortunately, this has resulted in difficulties for medical schools in maintaining a curriculum that can familiarize students with the general principles needed for primary health care. The Ministry of Education and Science published a core curriculum model in 2001 to encourage medical schools to promote standardized education in order to graduate students with general common knowledge focused on primary health care. General medical practice is not recognized as an academic discipline in Japan. Hardly any Japanese medical schools have as yet established a department of general practice. However, many medical schools have recently started to create departments of general comprehensive care, where doctors learn to treat patients from various diagnostic points of view and to provide patients with the appropriate orientation for using hospital care. The concept of general medical practice as seen in the United Kingdom has not gained a foothold in Japan, where it is thought that general medical practice is not a single discipline but a comprehensive function to be fulfilled by various specialties.

### **8.2.2 Non-separation of prescribing and dispensing functions in primary health care**

Japanese economic conditions have forced the country in recent years to adopt a policy of reforming the various systems from the bottom in the name of globalization with hardly any regard for their own historical background. The modern health care approach in Japan started in the 19th century and has continued ever since in efforts to improve the health of the people. Each country develops its own health care system, according to the needs of the people and cultural factors, and people are proud of the developments and characteristics of the system in their country.

One of the most basic features of the health system in Japan is that the responsibilities of doctors towards their patients' health care include both prescribing and dispensing functions. Based on this non-separation system, Japanese doctors have provided comprehensive care for their patients. This system likely played an important role in the Japanese achievement of long life expectancy (Tatara, 1995). Nevertheless, the government has a strong intention to promote the separation of prescribing and dispensing functions. Such separation reached 26.0% in 1997, from 14.1% in 1992. Approximately 51.6% of all prescriptions in Japan were dispensed by pharmacies in 2003. Should doctors in Japan allow the popular concept of doctors' responsibilities towards patients, which is rooted in the long history of traditional medicine in this country, to disappear? The integration of drug dispensing within health care services may invite over prescription of drugs, which raises the health care costs and may cause iatrogenic problems. However, even if the government

establishes an independent dispensing system organized by pharmacists, it is not clear that this system will succeed in saving costs because of the added costs of pharmacist payments and maintenance of pharmacies. In addition, such a separation would be less convenient for patients and it is not clear whether it would prevent over prescription by doctors.

### **8.3 Efficiency of resource allocation**

Health expenditure as a share of GDP in Japan is approximately 8.0%, which is low compared with other OECD countries and suggests that the long average life expectancy has been attained by comparatively low health cost. The rate of outpatient consultations in Japan is high, and the hospital admission rate is very low in spite of the very high number of hospital beds. The low admission rate and high bed supply relates to the use of hospital beds instead of nursing homes for older people requiring long-term care services (Ikegami and Campbell, 1999). This situation is gradually changing as care for older people is being shifted to nursing homes (i.e. welfare homes for the elderly or health care homes for the elderly).

### **8.4 Technical efficiency**

Some indications of inefficiency in Japan's health system relate to the reliance on the fee-for-service payment method for providers, prolonged average length of hospital stay, incentives for high consumption of pharmaceuticals and reliance on specialist care in the community.

Providers, both hospitals and clinics, are paid fee for service according to a national fee system; however, the biennial revisions to the schedule have been effective in curbing the cost escalation incentives of this payment system. Recently a per diem payment based on patient classification has been introduced for hospital payment thereby discouraging prolonged hospital stay. This DPC payment includes only the hospital fee and does not include doctor's fee. A differential pricing system across hospitals is in place to keep the reimbursement level more in line with historical levels, thus limiting the incentives to improve efficiency. There is some evidence of decreased length of stay, in particular among the hospitals with particularly long average length of stay prior to implementation of the new payment scheme. Overall, the

average length of stay has declined somewhat, in part as a result of the Long-term Care Insurance programme and the new hospital payment system.

A high proportion of health care spending is in the pharmaceutical sector, which may relate to the traditional role of physicians as both prescribers and dispensers of drugs and the associated financial incentives for physicians. There have been attempts to encourage the separation of prescribing and dispensing by rewarding higher prescription fees to doctors who choose to issue prescriptions rather than directly dispensing drugs, and penalizing doctors who develop collusive arrangement with pharmacies and rewarding pharmacies that have fewer ties with particular hospitals or doctors (Section 6.5).

Financial incentives associated with high-technology diagnostic tests (national fees set higher than costs) has also led to a wide diffusion of high-cost equipment, although costs have been effectively kept down through continual downward revisions of the fee schedule.

Current debates centre on the reliance on specialist physicians and high-technology services at the first point of care for patients, which, on the one hand, may encourage unnecessary care and increase costs but, on the other hand, may be effective in providing timely and effective health care (see above). Moreover, continuity of care across the system is undermined by the relative lack of coordination between ambulatory and inpatient care, with clinics and hospitals operating independently with no referral system (Ikegami and Campbell, 1999; Gauld et al., 2006).

## **8.5 Quality of care**

An important shortcoming with the Japanese health system is the poor measurement and evaluation of quality, with very few hospitals undergoing formal quality assurance programmes. The Safety in Health Care Committee 2002 report recommended a set of guidelines to hospitals and clinics with inpatient beds with regard to measuring and reporting patient safety, formalized in the 2006 revision of the Medical Care Act (Section 2.5.5).

## **8.6 Contribution of the health system to health improvement**

Japan has achieved the longest life expectancy in the world. To some extent, this achievement can be attributed to the health care system: international

comparisons of mortality from avoidable causes among 19 OECD countries in 2002–2003 showed that Japan had the eighth lowest rate of avoidable deaths for males (and the lowest rate of deaths from ischaemic heart disease among males). Moreover, Japan has the lowest rate of avoidable deaths among females, and the second lowest for deaths from ischaemic heart disease (Nolte and McKee, 2008). Arguably further improvements to the health of Japanese people require continued efforts in disease prevention and in strengthening public health.

More than 20 years have passed since the Health Services for the Elderly Act came into effect to provide health services as a key part of governmental efforts to prepare for the rapid increase in the number of elderly projected in the future. These health services include general health check-ups. People aged 40 years and over are covered by the services, and the number of people who had used check-ups had reached 13 million in 2005. Here general health check-ups refers to examinations provided directly by municipal governments or by contracted local physicians as a result of the Act of 1982 for all residents aged 40 or older who request a health check up; it includes general physical examinations by doctors, measurement of blood pressure, urine analysis, assays of red blood cell count, haemoglobin concentration, packed cell volume, total serum cholesterol concentration, blood glucose concentration (including HbA1c), liver function tests (aspartate aminotransferase and alanine aminotransferase), electrocardiography and an eye examination.

It is uncertain as to whether general health check-ups for residents over 40 years of age improve their health and reduce their need for further health services. In 1991, it was reported that health check-up services starting in middle age had decreased the use of inpatient care of the elderly (Tatara et al., 1991). The main results shown were as follows.

- In cities with relatively high rates of use of general health check-ups, both the mean annual bed days and the mean inpatient cost for the elderly tended to be low.
- Correlation coefficients between the rates of use of general check-ups and mean bed days used by the elderly by size of cities were all negative.
- Correlation coefficients between improvement indices of rate of use of check-ups and both mean bed days and mean inpatient cost were higher in cities with higher rates of use.

There were 8.5 million elderly people aged 70 years or over insured by some kind of health insurance in 1986, and the nationwide rate of use of general health check-ups has increased from 25.5% in 1985 to 27.6% in 1986. Calculations from the corresponding regression line showed that the mean bed days per elderly person in 1985 and 1986 were 19.42 and 19.16, respectively.

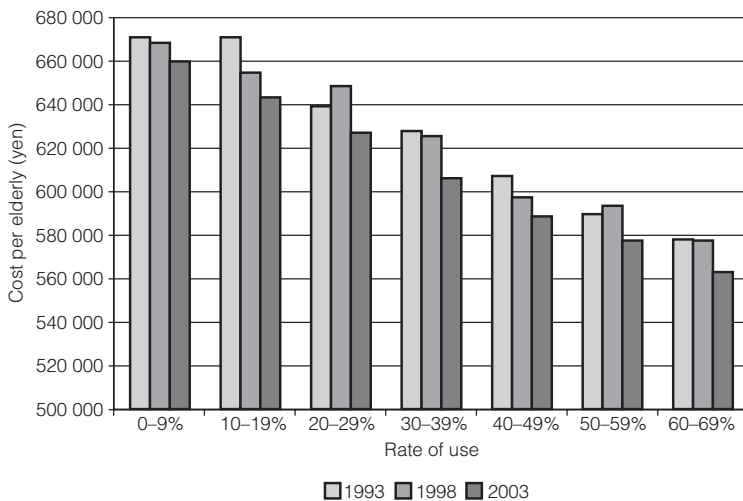


The reduction in mean bed days per elderly person between these years was 0.26 bed days. For the total number of the elderly insured by any insurance, it was estimated that the reduction was approximately 2.21 million bed days.

Recently, reductions in medical costs as a result of the use of general health check-ups has been reported (Tatara, 2006). The annual reports of the municipal NHI and of the Health Services for the Elderly were used to obtain the relevant data on health care cost per elderly person and on the rate of use of health check-ups for all municipalities in 1993, 1998 and 2003. Mean health care cost per elderly person covered by the municipal NHI was lower for municipalities with a higher rate of use of check-ups (Fig. 8.1). The main results shown were as follows.

- In 1993, 1998 and 2003, respectively, mean health care costs per elderly person for municipalities with a rate of less than 10% were 670 749, 667 449 and 659 855 yen; for those with a rate of 60% or more, they were 577 541, 576 856 and 562 742 yen.
- If the difference between mean health care costs reflects the difference in the rate of use of check-ups, the totals saved by the use of check-ups in 1993, 1998 and 2003, respectively, were 47.0 billion, 66.9 billion and 112.7 billion yen; this indicates nationwide savings on total health expenditure for the elderly in 1993, 1998 and 2003, respectively, of 6.5, 6.6 and 10.6%.

**Fig. 8.1** Health care cost per elderly by rate of use of general health check-ups of municipalities.



Note: <sup>a</sup> Number of municipalities participating in the surveys was 3252 for 1993, 3243 for 1998, and 3138 for 2003

Holland and Stewart (1990) stated that, given the strong influences largely outside the control of individuals, governments cannot avoid a large measure of collective responsibility for the health of their citizens. Health check-ups provided under the Health Services for the Elderly Act constitute a large measure promoted by the government to cope with health problems of the Japanese people. Marmot and Haines (1991) stated that “Health check-ups for all? Given time, the results of Japanese screening might provide the answer”. Although the mere existence of unrecognized cases of illness may not be sufficient reason for screening, early detection of disease may result in less radical treatment and prolonged lives.

## 9 Conclusions

Japan has achieved a high level of population health. A strong public health system has played an important role in reducing mortality and disease. People can make use of preventive services such as immunization, maternal and child care and health examinations at the public health centres, municipal health centres or clinics. People can use general health check-ups and health education services provided in communities and workplaces. In every municipal area, a committee for community health promotion has existed since 1978 to establish the community health plan and promote the participation of the public in implementing the plan. Long life expectancy in Japan is largely the result of a reduction in infant mortality and deaths from TB and cerebrovascular diseases. The recent decline in deaths from cerebrovascular diseases reflects the strong network of community activities, with an important role of public health nurses (Tatara et al., 1984).

One of the challenges that is faced by a society with a long life expectancy is that the majority of deaths are from lifestyle-related diseases such as circulatory disease and cancer. There is a need, therefore, for Japan to adopt policies that target the health of the population by encouraging individuals to adopt healthier lifestyles. To meet this challenge, the Japanese Government published the *Healthy People 21* policy in March, 2000 (Japan Health Promotion and Fitness Foundation, 2000). This policy advises people to set their own goals in nine health-related areas and to attain them by their own efforts. In addition, the government decided to abolish the Health Services for the Elderly Act in 2006 and to establish a new health insurance system that also had the responsibility for promoting the health of the people. This means that the system based on tax was abolished and a system based on the insurance was selected as a foundation for health promotion of people in the 21st century. The underlying concept is that health promotion should be implemented not by the government but by the people themselves (Tatara, 2002).

Japan's health system provides universal coverage to the population while containing costs at a macro-level. A cornerstone enabling the universal coverage of health insurance lies in the municipal NHI system. By holding each municipality responsible for insuring residents not otherwise covered, all residents are guaranteed access to health care with limited co-insurance. Such a key role of municipal governments developed with the autonomy well balanced with the strong control of the central government.

The control over the health care expenditure is achieved through two mechanisms: the uniform fee schedule and the mixed financing, from both the insurance premium and the government subsidy. The uniform fee schedule is the key factor why Japan has been successful in controlling the national health care expenditure at a level affordable for most people. In many countries, doctors believe in their autonomy over price setting and tend to resist the uniform fee schedule set by the government. In Japan, such a paternalistic policy authorizing the government to intervene into the free economy and set the price of doctors has been widely accepted by both doctors and patients. Approximately one third of the national health care expenditure is financed by the governmental subsidy. Hence, the prospect of the total annual health care expenditure becomes a budget item and the government sets the annual ceiling over the health care expenditure.

Japan's health care system faces some important challenges. One challenge is the lack of economic incentives for quality assurance and efficiency. Although patients have full freedom of choice of providers, there are few incentives for quality improvement and little competition among providers on quality and costs. Japan's health care system has generally been successful in providing affordable health care services to the entire population. However, given the rapid ageing of the population, health care expenditure will inevitably rise and the hitherto overlooked weaknesses will become threats to continued population health improvement. Current policy conflicts are between ensuring affordability alongside improved quality of care, and finding the appropriate balance between public services and private activities.

## 10. Appendices

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## 10.2 Principal legislation

The year shown in this list is the year when the Act was first passed.

Medical Act 1874 (*Isei*, now *Ishiho*)

Regulations of Examination for Medical Practice 1879

Infectious Diseases Prevention Act 1897 (consolidated to the Infectious Diseases Act)

Mining Industry Act 1905

Dentists' Act 1906

Leprosy Prevention Act 1907 (now defunct)

Factory Act 1911

TB Prevention Act 1919 (consolidated to the Infectious Diseases Act)

Health Insurance Act 1922

Prohibition against Drinking for Minors Act 1922

Pharmacists Act 1925

Relief for the Poor Act 1929

Workers' Impairments Assistance Act 1931 (succeeded by the Workers' Accident Compensation Insurance Act)

Maternity and Child Protection Act 1937

Public Health Center Act 1937 (succeeded by the Community Health Act)

National Health Insurance Act 1938

Seamen's Health Insurance Act 1939

Child Welfare Act 1947

Food Sanitation Act 1947

Labour Standard Act 1947

Local Government Act 1947

Workers' Accident Compensation Insurance Act 1947

Act for Public Health Nurses, Midwives and Nurses 1948

Fire Prevention Act 1948

Maternity Protection Act 1948

Medical Care Act 1948

Mutual Aid Society for Central Government Officers Act 1948

Sexually Transmitted Diseases Prevention Act 1948 (consolidated to the Infectious Diseases Act)

Vaccination Act 1948

Livelihood Protection Act 1950  
Mental Health Act 1950 (succeeded by the Mental Health and Welfare Act)  
School Meals Act 1954  
Practicing Rules for Panel Doctors (Ministerial Order pursuant to the Health Insurance Act 1957)  
School Health Act 1958  
Pharmaceutical Affairs Act 1960  
Welfare Services for the Elderly Act 1963  
Maternal and Child Health Act 1965  
Occupational Safety and Health Act 1972  
Cornea and Kidney Transplantation Act 1979 (consolidated to the Infectious Diseases Act)  
Health Services for the Elderly Act 1982 (succeeded by the Elderly Health Care Security Act)  
AIDS Prevention Act 1989 (consolidated to the Infectious Diseases Act)  
Emergency Medical Technicians Act 1991  
Nurse Provision Act 1992  
Community Health Act 1994  
Long-term Care Insurance Act 1997  
Mental Health and Welfare Act 1997  
Organ Transplantation Act 1997  
Infectious Diseases Act 1999  
Information Technology Initiative Act 2001  
Health Promotion Act 2002  
Personal Data Protection Act 2003  
Treatment and Observation for Mentally Incapable Committers Act 2003  
Anti-suicide Act 2006  
Elderly Health Care Security Act 2006  
Structural Health Care Reform Act 2006

## 10.3 Useful web sites

Available in English from February 2009.

Central Federation of National Health Insurance: [www.kokuho.or.jp/english/](http://www.kokuho.or.jp/english/)

Health Care Science Institute: [www.iken.org/english/misson.html](http://www.iken.org/english/misson.html)

Health Policy Institute, Japan: [www.healthpolicy-institute.org/en/](http://www.healthpolicy-institute.org/en/)

Institute of Health Economics and Policy: [www.ihep.jp/english/](http://www.ihep.jp/english/)

Japan Dental Association: [www.jda.or.jp/en/](http://www.jda.or.jp/en/)

Japan Medical Association Research Institute: [www.jmari.med.or.jp/english/about\\_E.html](http://www.jmari.med.or.jp/english/about_E.html)

Japan Medical Association: [www.med.or.jp/english/](http://www.med.or.jp/english/)

Japan Nursing Association: [www.nurse.or.jp/jna/english/](http://www.nurse.or.jp/jna/english/)

Japan Pharmacist Association: [www.nichiyaku.or.jp/e/default.html](http://www.nichiyaku.or.jp/e/default.html)

Japan Public Health Association: [www.jpha.or.jp/jpha/english/apha/top.html](http://www.jpha.or.jp/jpha/english/apha/top.html)

Ministry of Health, Labour and Welfare: [www.mhlw.go.jp/english/](http://www.mhlw.go.jp/english/)

Ministry of Justice, Immigration Bureau: [www.moj.go.jp/ENGLISH/IB/ib-01.html](http://www.moj.go.jp/ENGLISH/IB/ib-01.html)

National Institute of Health and Nutrition: [www.nih.go.jp/eiken/english/](http://www.nih.go.jp/eiken/english/)

National Institute of Infectious Diseases: [www.nih.go.jp/niid/index-e.html](http://www.nih.go.jp/niid/index-e.html)

National Institute of Population and Social Security Research: [www.ipss.go.jp/index-e.html](http://www.ipss.go.jp/index-e.html)

## 10.4 HiT methodology and production process

The Health Systems in Transition (HiT) profiles are produced by country experts in collaboration with the Observatory's research directors and staff. The profiles are based on a template that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data sources, and examples needed to compile HiTs. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The most recent template is available online at: [http://www.euro.who.int/observatory/Hits/20020525\\_1](http://www.euro.who.int/observatory/Hits/20020525_1).

Authors draw on multiple data sources for the compilation of HiT profiles, ranging from national statistics, national and regional policy documents,

and published literature. Furthermore, international data sources may be incorporated, such as those of the Organisation for Economic Co-operation and Development (OECD) and the World Bank. OECD Health Data contain over 1200 indicators for the 30 OECD countries. Data are drawn from information collected by national statistical bureaux and health ministries. The World Bank provides World Development Indicators, which also rely on official sources.

In addition to the information and data provided by the country experts, the Observatory supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on the European Health for All database. The Health for All database contains more than 600 indicators defined by the World Health Organization (WHO) Regional Office for Europe for the purpose of monitoring Health for All policies in Europe. It is updated for distribution twice a year from various sources, relying largely upon official figures provided by governments, as well as health statistics collected by the technical units of the WHO Regional Office for Europe. The standard HFA data have been officially approved by national governments. With its summer 2004 edition, the Health for All database started to take account of the enlarged European Union (EU) of 25 Member States.

HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

A typical HiT profile consists of 10 chapters.

- 1 Introduction: outlines the broader context of the health system, including geography and sociodemography, economic and political context, and population health.
- 2 Organizational structure: provides an overview of how the health system in the country is organized and outlines the main actors and their decision-making powers; discusses the historical background for the system; and describes the level of patient empowerment in the areas of information, rights, choice, complaints procedures, safety and involvement.
- 3 Financing: provides information on the level of expenditure, who is covered, what benefits are covered, the sources of health care finance, how resources are pooled and allocated, the main areas of expenditure, and how providers are paid.
- 4 Regulation and planning: addresses the process of policy development, establishing goals and priorities; deals with questions about relationships between institutional actors, with specific emphasis on their role in regulation and what aspects are subject to regulation; and describes the process of health technology assessment (HTA) and research and development.

- 5 Physical and human resources: deals with the planning and distribution of infrastructure and capital stock; the context in which IT systems operate; and human resource input into the health system, including information on registration, training, trends and career paths.
- 6 Provision of services: concentrates on patient flows, organization and delivery of services, addressing public health, primary and secondary health care, emergency and day care, rehabilitation, pharmaceutical care, long-term care, services for informal carers, palliative care, mental health care, dental care, complementary and alternative medicine, and health care for specific populations.
- 7 Principal health care reforms: reviews reforms, policies and organizational changes that have had a substantial impact on health care.
- 8 Assessment of the health system: provides an assessment based on the stated objectives of the health system, the distribution of costs and benefits across the population, efficiency of resource allocation, technical efficiency in health care production, quality of care, and contribution of health care to health improvement.
- 9 Conclusions: highlights the lessons learned from health system changes; summarizes remaining challenges and future prospects.
- 10 Appendices: includes references, useful web sites, legislation.

The quality of HiTs is of real importance since they inform policy making and meta-analysis. HiTs are the subject of wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to:

- A rigorous review process (see the following section).
- There are further efforts to ensure quality while the profile is finalized that focus on copy editing and proof reading.
- HiTs are disseminated (hard copies, electronic publication, translations and launches). The editor supports the authors throughout the production process and in close consultation with the authors ensures that all stages of the process are taken forward as effectively as possible.
- One of the authors is also a member of the Observatory staff team and they are responsible for supporting the other authors throughout the writing and production process. They consult closely to ensure that all stages of the process are as effective as possible and that the HiTs meet the series standard and can support both national decision making and comparisons across countries.

## 10.5 The review process

This consists of three stages. Initially the text of the HiT is checked, reviewed and approved by the research directors of the European Observatory. The HiT is then sent for review to two independent academic experts and their comments and amendments are incorporated into the text, and modifications are made accordingly. The text is then submitted to the relevant ministry of health, or appropriate authority, and policy-makers within those bodies are restricted to checking for factual errors within the HiT.

## 10.6 About the authors

Kozo Tataru, MD, FRCP, has been Professor of the Open University of Japan since April 2004. He studied the National Health Service in England at the Health Services Research Unit, University of Kent in Canterbury, from 1979 to 1980. He was given an Oxford University Litchfield Lecturership with Title in October 1987. He was given a Fellowship from the Royal College of Physicians of London in May 2000. He was a Professor of the Department of Public Health, Osaka University Medical School, from 1987 to 2004 and Chairman of Japanese Society of Public Health from 1999 to 2005. He has been a Member of the Health Promotion and Nutrition Committee of the Ministry of Health, Labour and Welfare since 2001.

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### Key

All HiTs are available in English.  
When noted, they are also available  
in other languages:

- a* Albanian
- b* Bulgarian
- c* French
- d* Georgian
- e* German
- f* Romanian
- g* Russian
- h* Spanish
- i* Turkish
- j* Estonian
- k* Polish



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